



# Anatomical classification of Arctic driftwood

# Diplomarbeit zur Erlangung des akademischen Grades einer Diplom-Geographin in der Studienrichtung Geographie

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Abstract

### **Abstract**

Arctic driftwood represents a unique palaeo-archive within the emerging arena of global climate change research. It provides high-resolution information on both terrestrial and marine environments. Driftwood predominantly represents the circumpolar boreal forest zone, as it likely entered the Arctic Ocean through one of the large river systems, and subsequently was ice drifted to its final deposition. Carefully identified and absolutely dated samples may allow spatiotemporal dynamics of ocean currents and postglacial uplift rates to be reconstructed over several millennia. Data replication, anatomical evaluation and geographical location, however, appear indispensable for any further interpretation.

Here, we present the world's largest compilation of ~1400 Arctic driftwood samples from Svalbard and the east coast of Greenland. All wooden remains were *in situ* differentiated between natural (with root-collar) and artificial (logged) material, and include a maximum variety of sample dimensions and characteristics. Each sample was macro- and microscopically analysed and anatomically identified. Tree-ring widths of ~100 logged pines were measured and cross-dated against regional chronologies from Siberia. Fungi infestation was investigated and ancient DNA extracted on selected subsets.

Results reveal the existence of five coniferous (*Pinus sylvestris, Pinus sibirica, Picea sp., Larix sp., Abies sp.*) and three deciduous species (*Populus sp., Salix sp., Betula sp.*). Anatomical differentiation between *Picea* and *Larix* was generally possible, but species-specific separation between e.g., *Larix sibirica* and *L. laricina* and *Picea abies, P. obovata* and *P. glauca*, is anatomically impossible. *Pinus sylvestris* represents >40% of the driftwood and likely originates from Eurasia, which was confirmed by first cross-dating trials.

Our study indicates the importance of precise wood anatomical identification, together with the consideration of the detailed boreal species distribution and complex ocean current patterns. Moreover, we emphasize the palaeoclimatic relevance of Arctic driftwood, and also stress the importance of massive sample replication.

## 1. Introduction and Motivation

During the 20<sup>th</sup> century a global temperature increase of 0.6 +/- 0.2°C and since the late 1950s a raise in global surface temperatures of 0.1°C per decade has been recorded (ALBRITTON ET AL. 2001). Climate is changing all over the world but different regions show various reactions than others. The Polar Regions, meaning the Arctic and the Antarctic, appear to be the most sensitive regions. Small scale variations implicate immediately large effects on the different components of the polar ecosystems.

This study focuses on the Arctic. Different ways of defining the southern boundaries of the Arctic exist, e.g. the Arctic Circle, the northern treeline in the landmasses adjoining the Arctic Ocean, climatic delimitation, or the extent of continuous permafrost on land and sea ice on the Ocean. Generally the Arctic includes the Arctic Ocean with its ice, the northern parts of the bordering landmasses of Eurasia and North America and the straits to the North Atlantic and the Pacific (cf ACIA 2005). During the past century an increase of the average surface temperature of 0.09°C per decade was recorded in the Arctic (ACIA 2005). The Arctic warming is above the global mean warming during the beginning of the 20<sup>th</sup> century (KAUFMAN ET AL. 2009, MCCLIMANS ET AL. 2012) and temperature changes due to higher greenhouse gas concentrations in the atmosphere are and will be faster in the Arctic than in other regions (SERREZE & FRANCIS 2006). The warming is enhanced and intensified by the melting of snow and ice and the subsequent lower albedo. The Arctic is even more sensitive than the Antarctic due to its warmer conditions and the hence closer position at the melting point (cf SERREZE & FRANCIS 2006). Complex large-scale interactions between atmospheric and oceanic circulation cause that the climate across the northern hemispheric mid-latitudes is strongly influenced by variations of Arctic climate and of ocean currents. The Arctic responds rapidly to any changes in our climatic conditions (cf SPIELHAGEN ET AL. 2011) and variations there will soon be remarkable in our climate (SERREZE & FRANCIS 2006). Changes in the Arctic Ocean affect the rate of deep-water formation in the North Atlantic, which influences the global ocean circulation and consequently, the global climate (ACIA 2005).

The general knowledge about impacts on Arctic Ocean currents, ice-drift and their reactions to changing conditions is relatively low. Many studies are accomplished regarding specific elements, e.g. the response of the Arctic Ocean to the North Atlantic Oscillation (DICKSON ET AL. 2000), wind-driven circulation regimes (PROSHUTINSKY & JOHNSON 1997, PROSHUTINSKY & JOHNSON 2001) and ice-drift in the Arctic Ocean (BISCHOF & DARBY 1997) or freshwater influences on ocean currents (MORISON ET AL. 2012); but the general coherences over long-term periods in the Arctic Ocean are not fully understood.

The ability to build scenarios for the future requires that past climatic circumstances and variations are well-known and understood. In the Polar Regions, there are many different

marine and terrestrial proxies, e.g. sea water isotopes, ice cores, sediment cores, or trees. Long reconstructions of climate are possible using proxy records (KAUFMAN ET AL. 2009). Analysing sediment cores regarding e.g. grain size, grain composition, or mineral type leads to conclusions about glacial, deglacial and interglacial periods in former times (STEIN 2008). The study of pollen content in sediments enables the assessment of the dominant type of vegetation in the past, even though knowledge about the circumstances before the last glaciations is rare because of the lack of continuous records (DE VERNAL & HILLAIRE-MARCEL 2008). Ice cores from Greenland show annually resolved records extending to about 12'000 years before present and with some parameters, e.g. isotopic composition of the ancient air, past conditions can be measured directly, not only as a proxy (cf Leuenberger et al. 1998). An advantage of such natural archives is that they exist even in regions where no or only few meteorological and climatological stations were installed, like in the Arctic (Hughes 2002).

Dendrochronology, working with trees as proxies, is useful for many scientific disciplines like climatology, ecology or history. Due to the dependence of the growing level of a tree on light, water and temperature and on chemical conditions of the environment, tree rings can be used for dating if tree-ring chronologies are available for the origin areas. Chronologies are curves representing the mean growth pattern of a species in a certain region. Besides, tree-ring widths can be used as a palaeo-archive for reconstructing past changes in temperature and precipitation (DOUGLASS 1941, SCHWEINGRUBER 1988, SCHWEINGRUBER 1996). The first attempts in chronology building were realised by J. Kapteyn around 1880 with oaks (DOUGLASS 1920, SCHULMAN 1954). Since the 1920s, when DOUGLASS (1920, 1941) accomplished his studies, tree rings are an important paleoclimatic archive for the recent Holocene period, which means for the last 10'000 years (LEUENBERGER ET AL. 1998). The patterns of ring widths reflect different climatic conditions in terms of wide and narrow rings. In dendroclimatology, as part of the more general dendrochronology, climate reconstructions based on tree-ring patterns are produced. Thereby trees are qualified for the reconstruction of paleoclimate with an annually resolution. Trees enable the possibilities of uncomplicated measurements, of calibrations with climate data and of exact annual dating (cf FRITTS 1976). Since tree rings show variabilities, it is important to calibrate the data before any climatic reconstruction (LEUENBERGER ET AL. 1998). Estimations of past climate from tree rings are very important for areas where no meteorological records are available, but they can also complement existing meteorological records. Generally trees growing in one area respond similarly to changing conditions, therefore their growth patterns can be used for chronology building and for provenancing. Even dead wood like timber built in houses or driftwood can be cross-dated with living trees so long as their life spans show an overlap (cf FRITTS 1976). The advantage of tree rings as proxy records is that they are widely distributed and available in annual resolution. Even shrubs in the Arctic show annually growth patterns and are appropriate for tree-ring research (WEIJERS 2012). Growth patterns of trees also reflect other environmental conditions like wind, fire, ground frost changes and snow or soil creeping through scars or compression wood (SCHWEINGRUBER 1996).

Trees showing high variations in tree-ring width caused by even small climatic changes are most suitable for dendroclimatological analyses (PILCHER ET AL. 1990). Since Arctic driftwood is derived from the boreal forest zone, where the trees grow at their climatic distribution limit, and therefore show strong effects of small climatic variations, this wood is very appropriate for dendroclimatological analyses.

Tree rings are used for dating and for reconstructing climatic conditions for a long time (DOUGLASS 1920, DOUGLASS 1941, FRITTS 1976, SCHWEINGRUBER 1988) but the combination of dating and provenancing of wood, and at the same time investigation of ocean currents, which is enabled by the study of Arctic driftwood, is unique.

In 2010, an Arctic driftwood project has been started at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL in Birmensdorf, Switzerland, led by Ulf Büntgen (WSL) and Willy Tegel (Institute for Forest Growth IWW, Freiburg, Germany). The aim of the project is to create and interpret a large dataset of Arctic driftwood. The driftwood originates in the boreal forest zone where it enters one of the large river systems and is deposited on the Arctic beaches after a journey over the ocean. The boreal zone exists only on the Northern Hemisphere between about 50° and 70° N. Canada, Alaska, Scandinavia, North-Russia and Siberia belong totally or partially to the boreal zone. Figure 1.1 shows the vegetation of the Arctic and adjoining regions, meaning the boreal forest zone. The vegetation period, when temperatures reach 5°C or more, lasts four to five months. In the biome, the annual precipitation is between 250 to 500 mm. The rivers have a discontinuous drainage, because of the snow melting in spring when the water cannot penetrate the frozen soil, and reach their drainage maximum in April or May. In the summer, they carry little water since there is not much precipitation. The runoff becomes larger in autumn when evaporation decreases, is lowered again over the winter because of snowfall, and reaches the minimum just before the snowmelt in spring. The zonal plant type is the boreal forest. Across the boreal forest, conifers are the most prevalent vegetation type with Picea sp., Pinus sp., Larix sp. and Abies sp.. Larix sp. is the only not evergreen conifer, most commonly found in the continental East Siberia and builds the polar timberline across all of Siberia. Besides the conifers, many shrubs exist in the boreal forest, mainly represented by Betula sp., Populus sp., Salix sp., Sorbus sp., Alnus sp. and Fraxinus sp. (cf SCHULTZ 2005).

Each different species has different requirements for optimal growing conditions. *Picea sp.*, for example, does not need much light but humid soil, rich in nutrients. It can easily stand frozen ground because of its superficial root system. *Pinus sp.*, on the other hand, requires lots of light but is tolerant regarding soil conditions and can grow well on sandy, boggy or rocky soils. Due

to its light-loving, *Pinus sp.* often occurs together with *Betula sp.* or *Populus sp.* where *Picea sp.* dominated forests have been felled or burned down (cf BERG 1950).

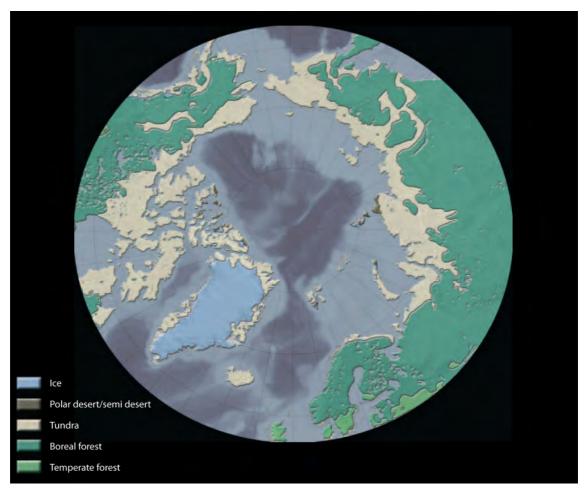


Fig. 1.1 Present day natural vegetation of the Arctic and neighboring regions (adapted from ACIA 2005).

These boreal species can occur among Arctic driftwood. Due to its limited buoyancy, wood has to be transported in or on the ice, suggesting why only in the Arctic huge amounts of driftwood exist, which have been transported over very long distances. Driftwood can possibly derive from the boreal forest area, where it has to enter one of the large river systems to reach the Arctic Ocean. These river systems in North America are the Mackenzie and the Yukon River and in Eurasia the Kolyma, Lena, Yenisei, Ob and Pechora River (from east to west). The buoyancy is dependent on the wood density and ranges from six to ten months for pine, larch and most of the deciduous woods and up to seventeen months for spruce (HÄGGBLOM 1982). After this period, the wood is only able to cross the Arctic Ocean within the ice. The voyage takes from two to five years for driftwood coming from Siberia and 6 to 7 years for driftwood from North America (FUNDER ET AL. 2011). This leads to the conclusion that in ice-free periods throughout the Holocene no driftwood was transported over the Arctic Ocean.

AGARDH was the first in 1869 who worked with driftwood and identified different species by wood anatomical analysis (HÄGGBLOM 1982, JOHANSEN 1998). During some expeditions in the

following years, driftwood from the Arctic was collected and analysed (FISCHER 1883, INGVARSON 1911). Though some studies were conducted by the 20<sup>th</sup> century, there is no continuously developed investigation. Around 40 studies were so far realised on Arctic driftwood during the time period from the end of the 19<sup>th</sup> up to the 21<sup>st</sup> century. The number of samples generally was not high, up to today not more than 100-500 samples were analysed per study per region. The most detailed assessments of driftwood from Canada, Svalbard, Jan Mayen, Greenland, Siberia, and Norway were accomplished during the past decades (EGGERTSSON 1993, 1994, 1994, EGGERTSSON & LAYENDECKER 1995, DYKE ET AL. 1997, DYKE & SAVELLE 2000, JOHANSEN 1998, 1999, 2001). Prior to this study, no more than two other surveys with only few samples were implemented for driftwood from Greenland. Data replication and precise wood anatomical assessment, which both appear indispensable for all further investigations, were often neglected in earlier studies.

In 2011, FUNDER ET AL. published a study about a 10'000-year record of Arctic Ocean sea-ice variability, which was based on a collection of ~80 driftwood samples from two regions in northern Greenland. The survey is based on the assumption that driftwood is able to reach the beaches only within ice-free periods and that spruce generally comes from North America and larch from Siberia, eastward of the Yenisei-region. All samples were, however, only dated via C14, and classical dendrochronological analyses were ignored (cf FUNDER ET AL. 2011).

In this study, the author focuses on the fact that trees can be used as proxies even after crossing the Arctic Ocean. Along the coasts of the Arctic huge amounts of driftwood can be found. After the journey through water and ice, the wood is somehow modified, e.g. by fungi or rot, but still appropriately preserved for subsequent species identification and ring-width measurements. Driftwood delivers valuable information on the conditions of growth in the boreal forest areas that include temperature, precipitation; in some cases even geomorphology, or fungi infestation. Furthermore, it provides information about ocean currents and ice after the arrival at beaches somewhere in the Arctic. Since the ice-cover plays an important role in the polar climate and for the connections between the polar and the global climate system, the reconstruction of earlier ice-extent and -drift is essential for modelling future trends (MELLING 2012). Through dating and provenancing of the wood these fields can be combined. As a result the analysis of Arctic driftwood entails an enormous potential of gaining high-resolution information on both, marine and terrestrial environments. Due to the fact that wood has been drifting over the Arctic Ocean "since the postglacial establishment of the boreal forests" (TREMBLAY ET AL. 1997), information about the past 10'000 years are theoretically achievable. Precise species identification is essential to determine the origin of the wood and is therefore the basis for all further investigations.

This survey attempts to reveal the potential of Arctic driftwood as a proxy for paleoclimatological and paleoecological investigations. The main research questions underlying this thesis are:

- Can the driftwood be allocated to origins in Eurasia and North America by exact species identification, is provenancing by comparison of tree ring patterns, and are conclusions about Arctic Ocean currents possible?
- Is annually dating of driftwood and hence the establishment of a circumpolar boreal millennia long tree-ring chronology for past environmental and climatic reconstructions possible?

The next chapter will provide information about the material and methods used for the analyses of the driftwood with a focus on wood anatomical features but also giving an indication about further investigation. In the third chapter the results of inventory and classification will be presented. The last part discusses the capacity of the methods, connects the results with the boreal species distribution and the Arctic Ocean currents and in the end gives an outlook on additional research questions and possibilities.

## 2. Material and Methods

The methodical part of this work includes field work, laboratory work and data analysis. The field work was realised during the summers of 1996, 2010 and 2011. In the winter of 2011/12 the first analyses of the driftwood samples including the establishment of an inventory, precise species identification, fungi investigation and some measurements were started. Potential for more detailed examination of the driftwood samples is large.

#### 2.1 Site selection

Driftwood was collected at three different sites in the Arctic between 1996 and 2011 (Tab. 2.1), along the coastlines of East Greenland (Traill and Scoresbysund) and Svalbard (Ny Friesland), resulting in a total of 1'445 samples. All material was gathered at sea level.

Table 2.1 The three different sampling sites: Characteristics and sampling dates.

Site	Scoresbysund	Traill	Svalbard
Country	Greenland	Greenland	Norway
Coordinates	70°30′N 25°0′W	72°32′N 23°10′W	78°54′N 18°1′O
Sampling year	2011	2010	1996
Record	802	253	390

Maps of the sampling sites are provided in figure 2.1.

West Greenland went through different phases of human migration and settlement during the past 4'500 years (D'ANDREA ET AL. 2011). Over a long time, the east coast to the contrary was almost free of humans; only one Greenlandic settlement existed there until the Danes built up a settlement in 1921. Scoresbysund was populated by Eskimos in former times and was later on chosen as a place for a settlement during the Danish colonization in 1924 (cf MIKKELSEN 1927). The relative absence of human populations on the east coast of Greenland provides the possibility of finding older driftwood than on the west coast, where more of the wood was used by people living there.

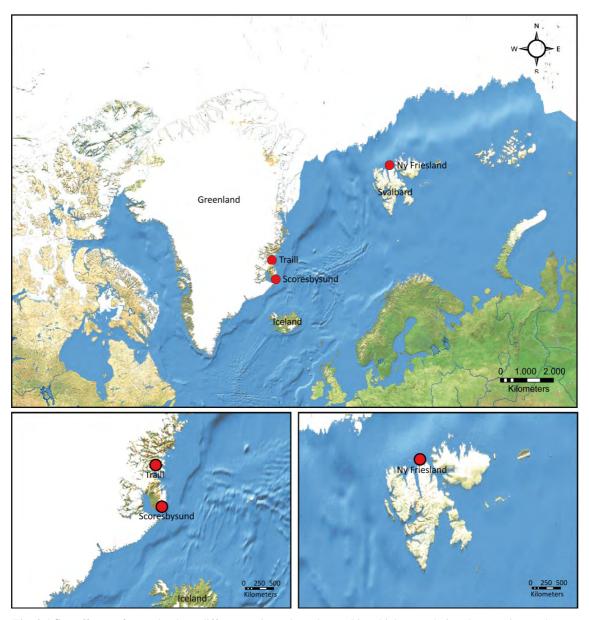


Fig. 2.1 Sampling regions: The three different regions altogether and in a higher resolution the two sites at the east coast of Greenland and in northern Svalbard (Projection: Mercator).

The sampling in Ny Friesland (North-East-Svalbard) took place in July and August of 1996 by Olafur Eggertsson and Hans Linderson. Their strategy was to collect all material at the beach, but with a focus on wood suitable for wood anatomical measurements and analyses. For many samples two radii exist. Most of the samples are labelled with S (sawn material from the timber industry) or R (root, natural wood) and 1 (recent wood) or 2 (old wood). A total of 390 samples were collected.

The fieldwork in Traill was conducted in August of 2010 by Ulf Büntgen and Willy Tegel. 253 samples of driftwood material were collected at three different sites. One disc was sawn from every stem, and pieces were sectioned later on to save space during transport. A differentiation between logged and natural wood was made in the field. Logged stems do not show a root collar

or branches and are sometimes marked with brands, probably from the logging companies (Fig. 2.2a).

Scoresbysund was the third region, sampled in August of 2011 by Ulf Büntgen, Willy Tegel and Fritz Schweingruber. Here the strategy was to sample everything from big stems to small branches at four different places in the fjord, which guaranties a great variety in dimensions and types of the samples (Fig 2.2c and d). From the small deciduous branches parts were cut, and from the stems discs were sawn. No coring was realized because discs are more useful for further analyses due to the fact that typical features like reaction wood or partly invaded fungi are better recognizable. The sampling was realised with a chainsaw (Fig. 2.2b). The pieces were also classified into logged and natural material.



*Fig. 2.2* Pictures of the sampling in Greenland, Scoresbysund: (a) Logged stem with a mark, probably from a logging company at the beach in Scoresbysund (b) Sampling of a driftwood-stem with the chainsaw (c) Collection of raw small samples (d) Collection of raw large samples (Pictures taken by Willy Tegel).

# 2.2 Sample preparation

The driftwood samples were sent to Switzerland and stored in dry conditions. Every sample was prepared for anatomical analyses by sanding with a grain size of 80 grains per cm<sup>2</sup>. After labelling a large inventory, including information for every single sample was compiled (see appendix). Some of the properties mentioned in table 2.2 are subjective, like growth level, site

competition or difference between early- and latewood. Others, like colour for example, are dependent on the treatment and change e.g. by sanding. The radius was measured with a folding meter stick; it is always the minimum value because one can never be sure how many rings are missing at the outer part and to the pith. For most of the stems only one sample exists, which means that we have only a single radius measurement. Since compression wood is frequent there might be different radii at different parts of the disc.

Table 2.2 Driftwood inventory: characteristics and macroscopic features

General information		Sample properties	Sample properties		
Site	Sampling date	Pith	Tree age	Holes/piddocks	
Site name	Region	Rings missing to pith	recent/old		
Field Code	Latitude	Fungi	logged/natural		
Lab Code	Longitude	Growth level	Radius		
Elevation		Site competition	Sapwood		

#### 2.3 Anatomical classification

With regard to the correct species identification a precise wood anatomical analysis of every piece is indispensable. Since some of the wood is rotten, fungi infected and some species are hard to identify, it is very useful to work with a large identification key and to come to the conclusion about the species on the basis of many different features. The identification key used here is based upon a key established by SCHWEINGRUBER (1990a). It was modified and expanded to become suitable for the identification of Arctic driftwood.

There are two ways of identifying wood: macroscopic and microscopic. Macroscopic features include everything one can see without using a microscope. As soon as a thin section of the wood is made, it is microscopic analysis. Only an approximate classification can be made from macroscopic features of the samples (SCHWEINGRUBER 1993). Macroscopic features are visible just by looking at the sanded wood. The important characteristics are generally colour, gloss, odour, hardness, weight and structure (SCHOCH ET AL. 2004). Some of them like odour or gloss cannot be reliably used for driftwood classification because of the different influencing and modifying factors on its way through the Arctic Ocean (e.g. the wood loses its odour and gloss and the colour may be altered). Especially morphological features of transverse sections are important for macroscopic classification. They allow a differentiation between deciduous and coniferous wood. The former has vessels, water conducting cells with perforation plates in the cell end walls, called pores in a cross section. It is possible to recognize deciduous wood macroscopically by this porosity (SCHWEINGRUBER 1990a). Coniferous wood does not have vessels. Inbetween the coniferous species one can macroscopically distinguish only between species with and without resin ducts (SCHWEINGRUBER 1990b). After sanding, a rough

differentiation between the genuses was made. Most of the features are visible to the unaided eye, e.g. colour or large resin ducts. To spot small resin ducts or the difference between early-and latewood more precisely, it is useful to work with a stereomicroscope with a magnification up to 10 what facilitates the detection of these features.

Most often microscopic features are required for an exact identification of wood (SCHWEINGRUBER 1993). Microscopic investigation can be made regarding three different sections: transversal or cross section, longitudinal section and radial section (Fig. 2.3). In a cross section all longitudinal elements like vessels or fibres are cut transversely and the rays running from the bark towards the pith are cut longitudinally. A tangential section cuts the longitudinal cells longitudinally and the rays transversely. The radial section shows all elements cut longitudinally.

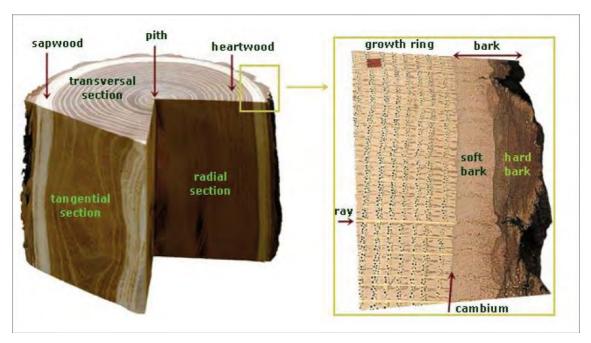


Fig. 2.3 Different directions of wood sectioning: transversal, tangential and radial (Source: SCHOCH ET AL. 2004).

The important features for microscopic determination of deciduous wood are density, distribution, number and size of pores, structure of the perforation plates at the end of the vessel elements, absence or presence of spiral thickenings, thickness of the fibres, shape of the parenchyma cells, and, as the most important features the width, height and cell form of the rays and the shape of the pits in vessel-ray intersections (SCHWEINGRUBER 1990b).

The significant microscopic features for conifer identification are growth rings, resin canals, inclusions in cells and most important rays and cell wall structures like spiral thickenings or bordered pits (SCHWEINGRUBER 1990b).

These features are explained for individual species in many wood anatomical publications (SCHWEINGRUBER 1990a, SCHWEINGRUBER 1990b, BENKOVA & SCHWEINGRUBER 2004) and

are not discussed in detail here. All driftwood samples were identified both macro- and microscopically.

Different methods were applied to figure out the most efficient way of microscopic identification. A subset of around 20 samples was cut with a microtome, which allows very thin sections (Fig. 2.4a). Wetting the sample with a brush facilitates thin cutting (Fig. 2.4b). The microtome sections were stained, dehydrated and embedded. After cutting, the sections can be covered with glycerol to avoid desiccating when they are not stained directly after the slicing. To prepare the sections for staining, all glycerol has to be washed off with water. The stain consists of a 1:1 mixture of Safranin and Astrablue (Fig. 2.4c) and dyes lignified cell structures red and unlignified structures blue. After four to five minutes it is washed out first with water, then with 75% and finally with 96% Ethanol (Fig. 2.4d). To ensure that the section is entirely free of water, several drops of hydrophobic Xylol are applied. If there is no water left in the section, the Xylol stays clear. If not, the washing with Ethanol has to be started again. It is very important to wash out all the water because it would deteriorate the image later on due to its refracting angle. Subsequently Canada balsam, which guarantees the durability of the sections after drying, is applied to the coloured sections and a cover glass cautiously placed on top (Fig. 2.4e). The slides are then put on an iron plate between heat resistant plastic stripes under a magnet and put into the oven at around 60°C (Fig. 2.4f). 20 to 24 hours later they are dried and permanent. This whole procedure is sophisticated and requires a large expenditure of time.



Fig. 2.4 Different working steps of sectioning and staining: (a) Core microtome without sample (b) Facilitating thin cutting by wetting the sample with a brush (c) Sections covered with Safranin/Astrablue-mixture (d) Leaching out of the colour with a pipette of water/ethanol (e) Dropping of Canada balsam onto the slides (f) Slides under magnets on an iron plate, ready for the oven.

For all other samples a radial cut was sectioned by hand using a box cutter, put on an object slide with some drops of water, and analysed with the microscope. These sections are not as thin as the microtome sections and since they were not stained, they are not permanent. The cutting and the resulting section are displayed in Figure 2.5a and b. Within this method wetting the sample also facilitates cutting. One can see that the result is worse than the stained microtome sections (see chapter 3.2) but since the important structures are still visible, this method is more efficient to identify many pieces of wood. The advantage is that this method does not require much time and so it is possible to analyse many samples in a relative short time period.



Fig. 2.5 Cutting by hand: (a) Radial cutting with the box cutter (b) Resulting section (*Larix sp.*) on an object slide with some drops of water under the microscope (Reflected light microscope with a magnification of 400).

The majority of the driftwood samples is invaded by fungi. The wood is very light and shows decay and irregularities in colour which is characteristic for fungi. The question regarding the different types of fungi is where and when the infestation took place. Hence a subset of samples was analysed regarding fungi type by Robert Blanchette (Department of Plant Pathology, University of Minnesota). He investigated the fungi both macroscopically and microscopically using an electron microscope.

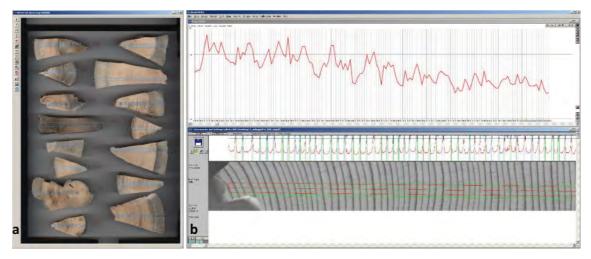
# 2.4 Tree-ring analysis

The age of a tree can be calculated by counting the growth rings of the stem. In general, trees from one species show approximately the same reactions to specific circumstances. The yearly variations between favourable and unfavourable ecological and climatological conditions are reflected in the sequence of wide and narrow rings. The resulting tree-ring patterns can be compared among trees from the same area. Tree-ring chronologies can be built by crossdating to assign correct calendar dates and then combining the growth curves of many trees in an area. This matching of patterns from different trees is necessary to detect missing or wedging rings or years where more than one ring has been formed. If the dying date of a tree is not known one can estimate it precisely by crossdating the ring pattern with a chronology from the same region (FRITTS 1976). Otherwise it may also be possible to discover the growing location of a tree by joining the measured growth curve with different chronologies.

A good sample preparation is very important for measuring the ring width (PILCHER ET AL. 1989). Once the surface is sanded smoothly with a grain size up to 400 grains per cm<sup>2</sup> many of the samples can be scanned with 2400 dpi and the ring width measured with the programme *Windendro* afterwards. This programme enables users to create a digital path from the pith (or the innermost ring when the pith is missing) to the outermost ring and to measure the rings in

be made afterwards, which means missing rings can be added or inappropriate rings can be rotated or moved. When a sample is broken, one can define a gap in *Windendro* to avoid incorrect measurements. Missing rings to the pith can be estimated by the program, but only if the number of missing rings is not high. The measuring results are saved in a textfile and as a TIF-Image, which can be used for controls later on. Since the curves of trees, for which the last year is not known, as it is always the case for driftwood material, have to be compared to existing chronologies from the same region (LEUENBERGER ET AL. 1998), the *Windendro*-files have to be converted into the *Tuscon*-format to work with the data in TSAP or any other crossdating-programme. The samples with rings too narrow for automated measurements have to be measured manually.

A subset of *Pinus sylvestris* samples from Scoresbysund was chosen for initial tree-ring measurements. Figure 2.6a shows the result of a scan of 15 samples on the left side. On 2.6b one can see a screenshot of *Windendro* with the measured sample in the lower panel and the growth curve for the actual sample in the upper panel.



*Fig. 2.6* Scanning and Windendro-measuring: (a) 15 *Pinus sylvestris* samples in the scanner, the bar on every sample is scanned for measuring (b) Windendro Screenshot with the growth curve (upper panel) of the measured sample (lower panel).

### 3. Results

# 3.1 Sample characteristics

This study represents the world's largest Arctic driftwood collection of 1'445 samples. The samples were collected at three different regions in East Greenland and Svalbard, following slightly different sampling strategies, which has to be taken into account during the interpretation.

Figure 3.1 shows the different amount of samples collected at each site and the spatial distribution of the total Arctic driftwood record. The majority of samples was collected in Scoresbysund. Scoresbysund "local" samples derive from site two and three and are mainly small branches and few timbers.

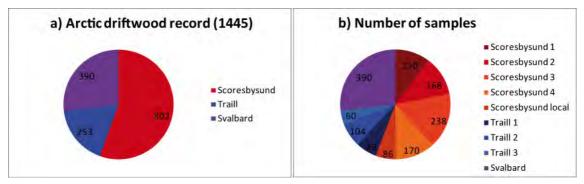


Fig. 3.1 Arctic driftwood record: (a) Number of samples from the three different sampling regions (b) Number of samples for the different sites.

#### 3.2 Anatomical features

An approximate classification can be made exclusively by macroscopic features of the samples (SCHWEINGRUBER 1993). After sanding it is easy to differentiate between the genuses. A grain size of 80 grains per cm<sup>2</sup> is sufficient.

Deciduous wood can be distinguished from conifers macroscopically by regarding porosity (vessels can be seen), tree rings (very low difference between early- and latewood) and weight (deciduous wood is very light) without using any magnification.

The most important features for conifers are colour, resin ducts and the difference between early- and latewood. Reddish colour can be a hint for larch, bright colour for spruce or fir. Pine always has large, spruce and larch small, and fir no or only small traumatic resin ducts. Traumatic resin ducts appear in one ring in a row as reaction to a wound. The transition from earlywood to latewood at times is very specific, especially for larch when the difference between the bright earlywood and the often reddish to dark reddish latewood is sharp.

Figure 3.2 displays two macroscopic pictures of every identified conifer species, one of the whole pieces and one at a higher resolution to make some macroscopic features more visible. Large resin ducts are obvious on the *Pinus sibirica* sample. On the *Larix sp.* picture the intense transition from early- to latewood and the reddish colour is apparent. For *Picea sp.* one can see the low transition between early- and latewood. *Abies sp.* has no resin ducts and white early- and brown latewood. It has to be kept in mind that these are typical features that can also differ between the species. These pictures show that apart from the distinction between species with and without resin ducts a rough classification in *Pinus sp.*, *Picea sp./Larix sp.* and *Abies sp.* is possible but to be sure microscopic analysis is indispensable.

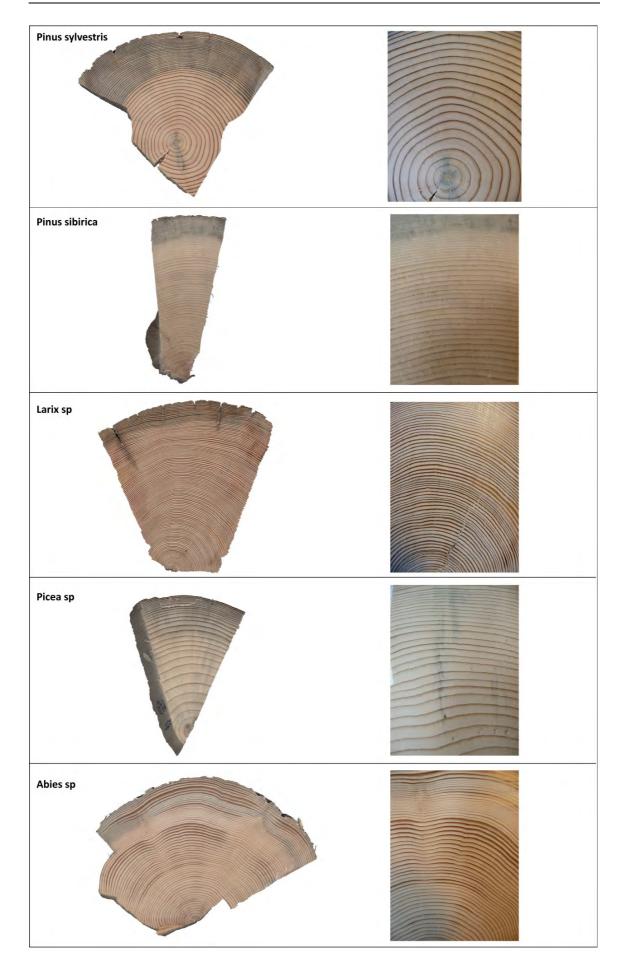


Fig. 3.2 Macroscopic pictures of every conifer species among the driftwood: left side: picture of the whole scanned sample, right side: foto with a higher resolution of every sample to display better the macroscopic features. Pinus sylvestris and Pinus sibirica: moderate difference between earlywood and latewood, intense blue stain and large resin ducts. Larix sp.: sharp transition from early- to latewood, reddish colour. Picea sp.: relative low early-latewood transition, bright colour. Abies sp.: intense difference between white early- and brown latewood.

Figure 3.3 shows the microscopic features that were used for identifying conifers in this study. A radial cut with horizontal rays is shown for each species. These cuts are sufficient for the identification of the boreal species, transversal and longitudinal cuts are not necessary. These pictures are stained for a better visualization, but with a practised eye it is easy to spot the features in unstained sections.

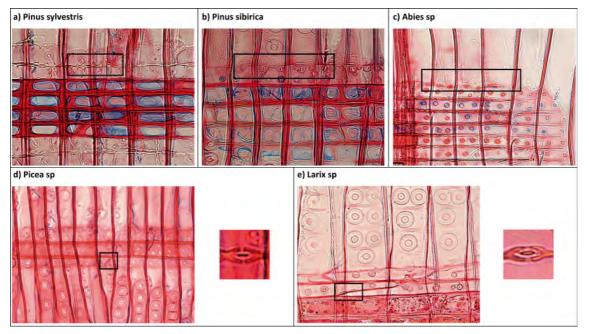


Fig. 3.3 Microscopic features of the conifer species among the driftwood (all microtome sections, except the zoom for *Picea sp.* and *Larix sp.* (razor blade sections), radial sections, stained with Safranin and Astrablue; reflected light microscope with a magnification of 400): (a) + (b) large pinoid pits in the rays, blue stained. (a) *Pinus sylvestris*: typical tooth-shaped tracheid walls. (b) *Pinus sibirica*: typical smooth tracheid walls. (c) - (e) small pitting in the rays. (c) *Abies sp.*: tracheid walls absent. (d) *Picea sp.*: tracheid walls present, angular shape of exterior borders of pits. (e) *Larix sp.*: tracheid walls present, smooth shape of exterior borders of pits.

The characteristic feature for pine is the large pitting in the cross fields of the rays (pinoid pits, stained blue in figure 3.3a and b). That differentiates pine from spruce, larch and fir; they show small pitting in the rays (Fig. 3.3 c-e). Looking at the transversal tracheid walls of the rays, one can also find out if the sample is *Pinus sylvestris* or *Pinus sibirica*. *Pinus sylvestris* has tooth-shaped tracheid walls and one pinoid pit per cross field, while the rays of *Pinus sibirica* have smooth tracheid walls and often two pinoid pits in one cross field. *Pinus banksiana* and *Pinus contorta* as prevalent pine species in northern North America have different ray structures than *Pinus sylvestris* and *Pinus sibirica* (pers. comm. with F. Schweingruber).

*Abies sp.* can be easily deliniated from spruce and larch. Primarily it has no resin ducts what can already be seen by the binocular. Besides the absence of resin ducts, one can be sure that a sample is *Abies sp.* if there are no tracheid walls around the rays (Fig. 3.3c).

Spruce and larch generally show the same ray structure with small pitting in the rays and transversal tracheids. One hint for spruce is the uniseriate and for larch the biseriate array of the intertracheid bordered pits (Fig. 3.3d and e). Biseriate pits together with a reddish colour and sharp transition from early- to latewood, make *Larix sp.* the most probable species. But both are not reliable features (ANAGNOST ET AL. 1994). The type of the bordered pits in the ray tracheids have to be controlled following BARTHOLIN's rules of angular and smooth shaped pit borders (BARTHOLIN 1979). According to ANAGNOST ET AL. (1994) this feature is the "most reliable anatomical characteristic for separating the wood of *Picea* and *Larix*". Figure 3.4 shows the schematic display of the shape; angular shape is a signal for *Picea*, smooth shape for *Larix*.

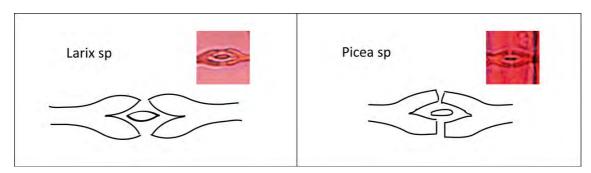


Fig. 3.4 Different shape of exterior borders of pits in ray tracheids transversely sectioned: Larix sp. with more or less smooth shaped borders. Picea sp. with more or less angular borders (microscopic details of razor blade sections with reflected light microscope with a magnification of 400).

Figure 3.5 shows macroscopic pictures of the three deciduous wood species among the driftwood. The difference to the conifers is clearly visible even on these macroscopic images. The distinction between early- and latewood is very low and one can slightly see the porosity. But it is also obvious that all three species have the same macroscopic features, so microscopic analyses are needed to identify them more specifically.

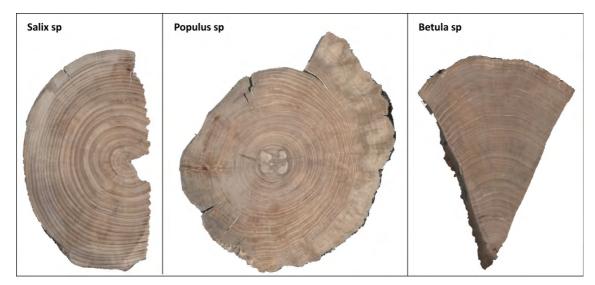


Fig. 3.5 Macroscopic (scanned) pictures of every deciduous species among the driftwood: Salix sp., Populus sp. and Betula sp. show the same macroscopic features: low difference between early- and latewood, high porosity and very light weight.

In figure 3.6 one can see the typical microscopic features used for the identification of deciduous wood, also a radial cut for all three species. *Populus sp.* and *Salix sp.* mainly have the same structure, simple perforation plates and large ray vessel pits, besides the shape of the ray cells. *Salix sp.* ray cells are heterogeneous which means that the cells at the edge are higher than the ones in the middle of the ray (Fig. 3.6a). In contrast, the cells in *Populus sp.* are all homogeneous which means that they all have the same size (Fig. 3.6b). For *Betula sp.* one can see the scalariform perforation plates that are the typical feature for this genus (Fig. 3.6c).

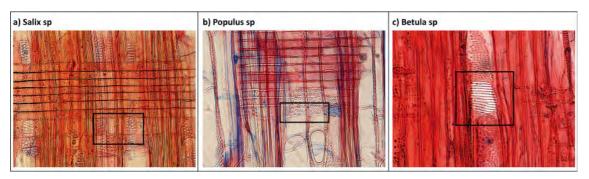


Fig. 3.6 Microscopic features of the driftwood deciduous species (radial microtome sections stained with Safranin and Astrablue, reflected light microscope with a magnification of 400): (a) Salix sp.: heterogeneous rays (b) Populus sp.: homogeneous rays (c) Betula sp.: scalariform perforation plates.

## 3.3 Species composition

An overview of the species occurring among the driftwood and the different ratio of coniferous and deciduous wood for every site, which appears to be strongly influenced by the sampling strategy, is provided by figure 3.7.

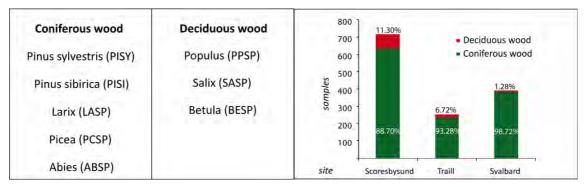


Fig. 3.7 Overview of the driftwood species and the ratio between coniferous and deciduous wood: Left side: Main coniferous and deciduous species occurring among the Arctic driftwood from Svalbard, Traill and Scoresbysund; right side: Amount of coniferous and deciduous wood among the driftwood for every site.

Resembling the species distribution in the boreal forest zone, conifers are most prevalent in the wood. The low ratio for the Svalbard samples indicates the focus on samples that are suitable for wood anatomical analysis during the sampling. However, in Scoresbysund, a more non-bias sampling strategy revealed a different distribution and this may closely resemble the true amount of deciduous wood among Arctic driftwood.

The distribution of species found in the driftwood does not vary much among the different sites. Results from Svalbard show very low amount of deciduous wood (1.3%) and the dominance of *Pinus sylvestris* with 50.3% (Fig. 3.8).

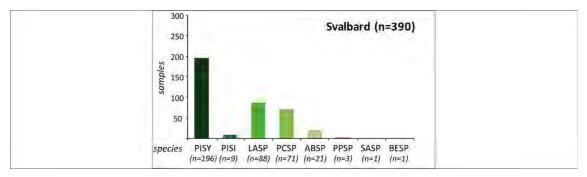


Fig. 3.8 Species composition among the driftwood samples from Svalbard: PISY: Pinus sylvestris (50.3%), PISI: Pinus sibirica (2.3%), LASP: Larix sp. (22.6%), PCSP: Picea sp. (18.2%), ABSP: Abies sp. (5.4%), PPSP: Populus sp. (0.8%), SASP: Salix sp. (0.3%), BESP: Betula sp. (0.3%).

The three different sites, where the samples were collected in Traill, show nearly the same species allocation. Noticeable is the large ratio of *Larix sp.* and *Picea sp.* compared to *Pinus sylvestris*. Samples from Traill 1 reveal more *Larix sp.* than *Pinus sylvestris* (39.9% compared to 23.6%, respectively). This is one of only two sampling sites where one can see this outweighing of *Larix sp.* (the other is Scoresbysund 4). At the second Traill site a greater proportion of *Picea sp.* exists than *Larix sp.* (29.8% compared to 24.0%, respectively). This is the only site where this dominance of *Picea sp.* can be seen.

Figure 3.9 shows the species distribution for all three Traill sites individually and of all Traill sites combined.

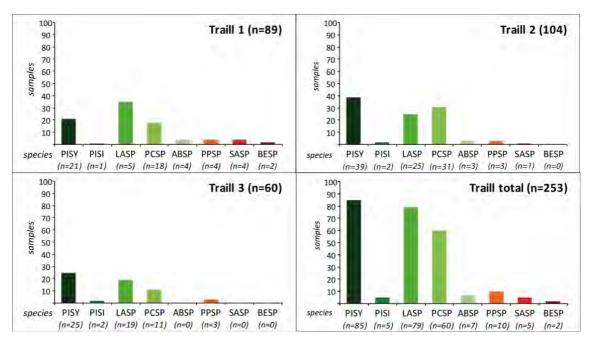


Fig. 3.9 Species composition among the driftwood samples from Traill for every site and for all sites combined: PISY: Pinus sylvestris (total 33.6%), PISI: Pinus sibirica (total 2.0%), LASP: Larix sp. (total 31.2%), PCSP: Picea sp. (total 23.7%), ABSP: Abies sp. (total 2.8%), PPSP: Populus sp. (total 4.0%), SASP: Salix sp. (total 2.0%), BESP: Betula sp. (total 0.8%).

The small branch samples from Scoresbysund which are mainly *Salix sp.* are called "local" material here because it is probable that these samples derive from Greenland. All sites at Scoresbysund reveal the same species distribution if the local material, coming from Scoresbysund 2 and 3, is not included in the analysis. *Pinus sylvestris* is the most prevalent species at all sites (besides site 4 where *Larix sp.* is dominating), followed by *Larix sp.* and *Picea sp.*. The amount of deciduous wood, especially *Salix sp.* is larger than at Traill and Svalbard. This is result of the different sampling strategies. The large percentage of *Salix sp.* among the small materials indicates this as local driftwood (Fig. 3.10).

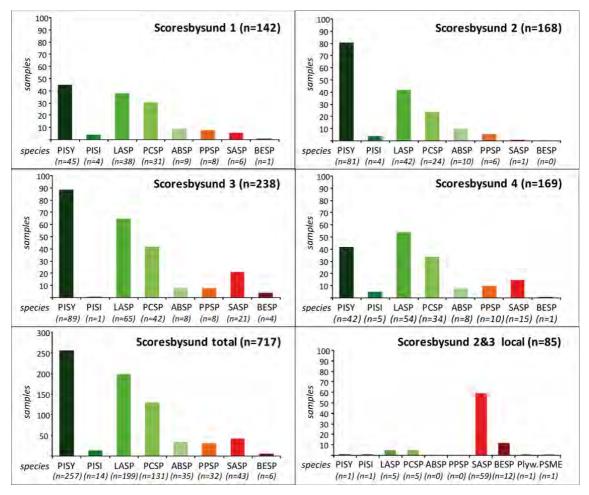


Fig. 3.10 Amount of the different species among the driftwood samples from Scoresbysund for every site, for all sites combined without the local material, and for the local material from site 2 and 3: PISY: Pinus sylvestris (total 35.8%, local 1.2%), PISI: Pinus sibirica (total 2.0%, local 1.2%), LASP: Larix sp. (total 27.8%, local 5.9%), PCSP: Picea sp. (total 18.3%, local 5.9%), ABSP: Abies sp. (total 4.9%, local 0%), PPSP: Populus sp. (total 4.5%, local 0%), SASP: Salix sp. (total 6%, local 69.4%), BESP: Betula sp. (total 0.8%, local 14.1%), Plyw.: Plywood (total 0%, local 1.2%), PSME: Pseudotsuga menziesii (total 0%, local 1.2%).

This local material is the explanation for the slightly different species distribution of the total Scoresbysund site compared with Svalbard and Traill. Figure 3.11 shows the species distribution for all Scoresbysund samples combined.

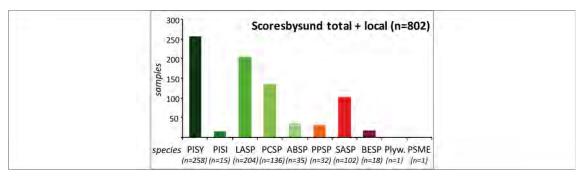


Fig. 3.11 Amount of the different species among all the driftwood samples from Scoresbysund: PISY: Pinus sylvestris (32.2%), PISI: Pinus sibirica (1.9%), LASP: Larix sp. (25.4%), PCSP: Picea sp. (17.0%), ABSP: Abies sp. (4.4%), PPSP: Populus sp. (4.0%), SASP: Salix sp. (12.7%), BESP: Betula sp. (2.2%), Plyw.: Plywood (0.1%), PSME: Pseudotsuga menziesii (0.1%).

The small branches also strongly influence the species distribution when all samples from Greenland are plotted together. *Pinus sylvestris* is found most frequently (32.5%), followed by *Larix sp.* (28.8%) and *Picea sp.* (18.6%). The fourth most frequent at all sites, and the main represented deciduous wood, is *Salix sp.* with a total of 107 samples, corresponding to 10.1%. Regarding the full driftwood record from Greenland and Svalbard combined, the results are shifted towards conifers. This is the effect of the different sampling strategy at Svalbard, where the focus was on collecting larger stems. *Pinus sylvestris* is therefore even more dominant with 37.3%. The percentage of *Larix sp.* and *Picea sp.* stays nearly the same with 25.7% and 18.5% respectively, but the percentage of *Salix sp.* is lower at 7.5% because of the small ratio of deciduous wood among the Svalbard samples (Figure 3.12).

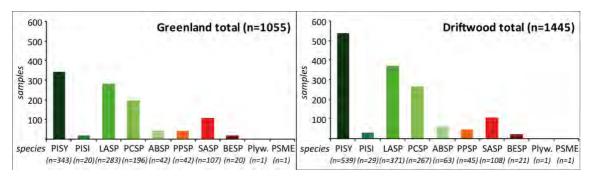


Fig. 3.12 Amount of the different species for all the driftwood samples from Greenland (left side) (G) and for Greenland and Svalbard combined (right side) (G+S): PISY: Pinus sylvestris (G 32.5%, G+S 37.3%), PISI: Pinus sibirica (G 1.9%, G+S 2.0%), LASP: Larix sp. (G 28.8%, G+S 25.7%), PCSP: Picea sp. (G 18.6%, G+S 18.4%), ABSP: Abies sp. (G 4.0%, G+S 4.4%), PPSP: Populus sp. (G 4.0%, G+S 3.1%), SASP: Salix sp. (10.1%, G+S 7.5%), BESP: Betula sp. (G 1.9%, G+S 1.4%), Plyw.: Plywood (G 0.1%, G+S 0.1%), PSME: Pseudotsuga menziesii (G 0.1%, G+S 0.1%).

# 3.4 Tree-ring dating

Rough provenance estimation can be made after identifying the genus of the wood, provided that the boreal species distribution is known. All conifer genuses among the driftwood exist in North America as well as in Siberia, so cross-dating with chronologies from the boreal forest

zone is necessary for a certain originating (Fig. 3.13). *Pinus sp.*, *Larix sp.*, and *Picea sp.* are all widespread in Eurasia and North America, but in different regions different species are dominating. *Abies sp.* has its habitat more south and is less common.

Since deciduous wood constitutes only a small percentage among the driftwood, these species are not displayed in the distribution maps to obtain a clearer illustration. *Salix sp.* is relatively dominant because of the small material from Scoresbysund but as mentioned before these branches are assumed to come mainly from the Arctic, so no boreal distribution map is shown for this species neither. Most of the following maps do not show the real distribution boundary in the south of Russia because most of the data just end at the border. But since for driftwood the higher latitude areas are important, these maps can be used here without doubts.

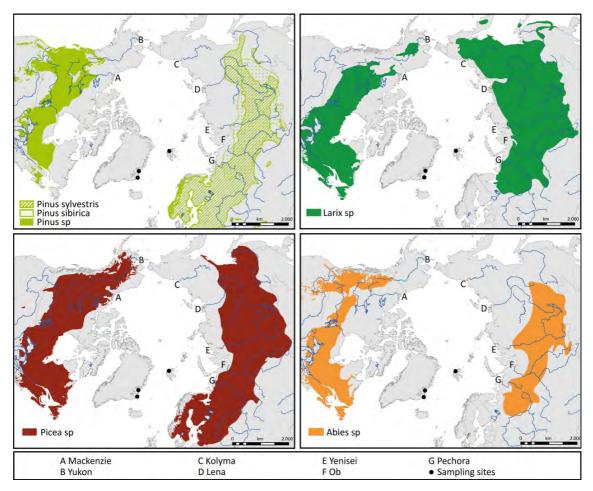


Fig. 3.13 Distribution maps for the four driftwood-relevant conifer species in North America and Eurasia: Pinus sp. (divided in Pinus sp. in North America and Pinus sylvestris/Pinus sibirica in Eurasia), Larix sp., Picea sp. and Abies sp.; with the sampling sites and the large river systems. (Data: EUFORGEN 2009, LITTLE 1971 & MALYSHEV 2008, Projection: North Pole Lambert Azimuthal Equal Area).

So far just *Pinus sylvestris* samples were measured and cross-dated. This species is absent in North America (Fig. 3.13), hence all these samples derive from Eurasia.

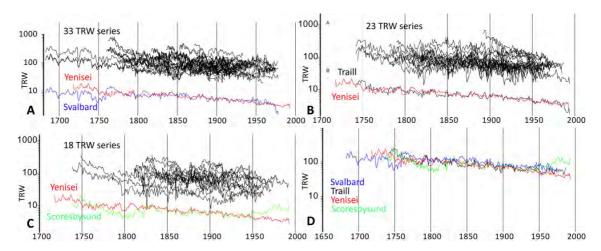
Out of the Svalbard samples a total of 33 annually resolved tree-ring width series could be compiled to cover 296 years continuously from 1683–1978 AD. The tree-ring patterns were

very similar, as reflected by the good interseries correlation (Rbar (correlation coefficient) = 0.41). Thus, all of the timbers likely originate from the same region (Fig. 3.14A).

253 years from 1742–1994 AD were continuously represented by 23 growth curves of the Traill samples. The interseries correlation is also good (Rbar = 0.46), which clarifies the similarity of the tree-ring patterns (Fig. 3.14B).

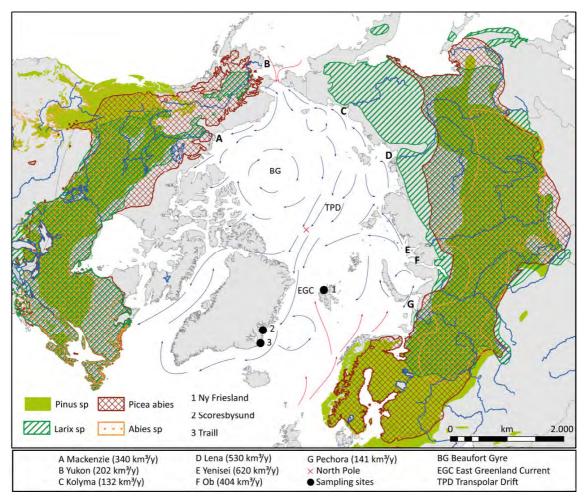
A total of eighteen annually resolved tree-ring width series of the Scoresbysund pine samples could be constructed to cover 255 years continuously from 1739–1993 AD. The tree-ring patterns were also similar, even though the interseries correlation is slightly lower (Rbar = 0.32), but this might be due to the small number of curves (Fig. 3.14C).

All three master chronologies were absolutely dated against the reference chronology from the Yenisei River Valley (Fig. 3.14D) (written comm. with W. Tegel).



*Fig. 3.14* Cross-dated PISY tree-ring width series: A. Svalbard (33 series over 296 years from 1683-1978), B. Traill (23 series over 253 years from 1742-1994), C. Scoresbysund (18 series over 255 years from 1739-1993), D. the mean chronologies of the three sites absolutely dated against the Yenisei reference chronology (1683-1993) (written comm. with W. Tegel).

Previously discussed aspects are synthezised in figure 3.15. The boreal species composition is obviously reflected by the sample. The circumpolar coniferous species distribution regarding to genus shows that all of them appear in Eurasia as well as in North America and that more rivers (Kolyma, Lena, Yenisei, Ob, Pechora Rivers) drain into the Arctic Ocean from Eurasia than from North America (only Mackenzie River directly, Yukon River indirectly through Bering Strait). Wood from Siberia is transported by the Transpolar Drift (TPD) in direction to Fram Strait and East Greenland Current (EGC), while wood from North America enters the Beaufort Gyre (BG) before the TPD.



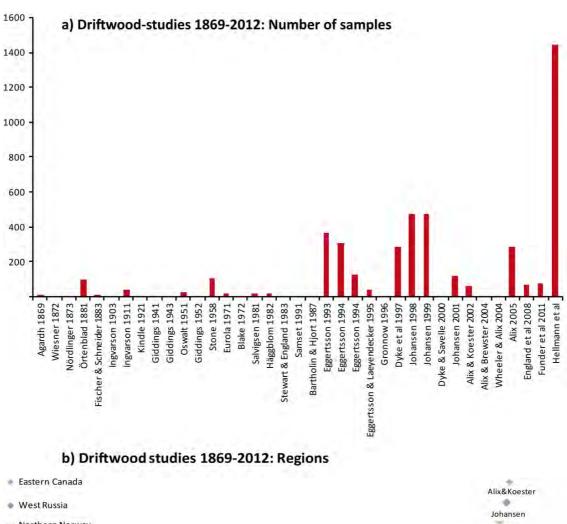
*Fig. 3.15* Summarising map of the results: Distribution areas of the driftwood-relevant conifer species combined with the large river systems, the Arctic Ocean currents and the sampling sites in Greenland and Svalbard (Data: EUFORGEN 2009, LITTLE 1971, MALYSHEV 2008 & ACIA 2005, GE ET AL. 2012, McCLELLAND et al. 2006, Projection: North Pole Lambert Azimuthal Equal Area).

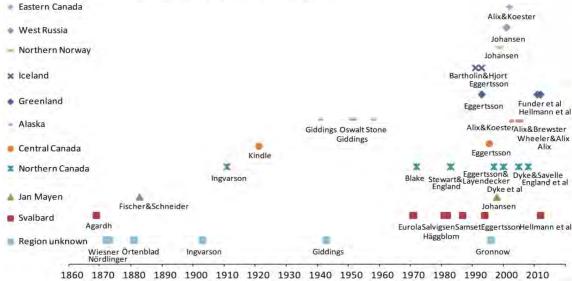
4 Discussion 28

## 4. Discussion

Figure 4.1a and b show an overview on driftwood studies, which have been realised in the past. 4.1a shows how many samples were analysed for every study. The first studies were conducted at the end of the 19th century. In the context of even five expeditions driftwood samples were analysed between 1869 and the beginning of the 20th century. Similar anatomical methods as today and very detailed investigations to identify the samples were realised by the explorers (e.g. FISCHER & SCHNEIDER 1883, INGVARSON 1911). All early surveys deal with few samples. EGGERTSSON (1993) was the first to analyse more than 300 samples from one location in 1993. From that on studies with up to almost 500 samples (JOHANSEN 1998, JOHANSEN 1999) were accomplished. Though it is always the total numer of samples, often only a part of them was identified (e.g. JOHANSEN 1998). Regarding the huge amount of driftwood existing in the whole Arctic, it is indispensable to analyse a large number of samples to get representative results and to come to reliable conclusions on currents. The work within the Arctic driftwood project has already developed the largest record of Arctic driftwood worldwide until now and it will be enlarged. However, even the 1'445 samples analysed in this study need to be expanded and complemented with samples from other regions to enable comparisons. Within this project so far no material from the north of Greenland or Iceland has been analysed. These regions contain lot of potential for future driftwood work. Until now no wood lying in the pack ice or at higher elevation could be collected. Dating of driftwood from different heights at the beach may enable reconstruction of postglacial uplift, especially on Iceland. Different sites, e.g. more northwards could result in a large age-amplitude. Wood ages varying all over the Holocene are an indication for the absence of settlers or trappers.

4.1b shows the different regions were driftwood studies were conducted from 1869 to 2012. Many surveys were performed for samples from Svalbard, Northern Canada and Alaska in comparison to Greenland and Iceland, where only few studies were accomplished until now. Often the samples analysed in one study were compared with former analyses of samples from other regions (e.g. EGGERTSSON & LAEYENDECKER 1995, JOHANSEN 1998, JOHANSEN 1998).





*Fig. 4.1* **Driftwood studies from 1869-2012:** (a) Number of samples analysed by the different authors (no bar = full text of the publication not available), (b) Different regions where driftwood studies were realised (Region unknown: full text of the publication not found).

## 4.1 Sample properties

The sample quality regarding further measurements is determined also by missing rings to the pith. Figure 4.2 shows the amount of samples with pith in comparison with samples with

missing rings to the pith. The sample quality is very good; most of the pieces do not miss the pith. Amongst all samples with missing pith 62.0% are estimated to be missing less than five rings, 20.7% are missing five to ten rings, and only 17.4% are estimated to be missing more than ten rings. For samples without pith the number of missing rings has to be estimated but for samples with pith precise dating is possible.

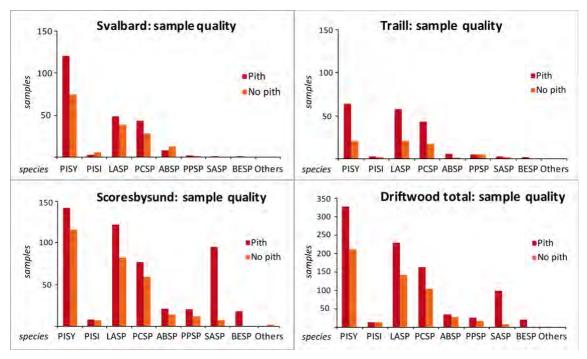


Fig. 4.2 Sample quality regarding pith offset per species for every site and the whole driftwood record: Svalbard (41.5% with pith), Traill (27.3% with pith), Scoresbysund (37.3% with pith) and the whole record (36.7% with pith).

The sampling strategy strongly influences the type and the amount of deciduous wood and logged wood among the samples. In previous studies, often only proper stems without fungi or rot and easily suitable for measurements were sampled. One must always consider this sampling bias in respect of the comparison and interpretation of the species distribution among driftwood. As mentioned previously, the structure of wood shows environmental conditions of the growing area. Due to wind, snow or unstable soil, trees show reaction wood. Conifer species react on creeping soil by forming compression wood on the lower side and deciduous species by forming tension wood on the upper side (whereas compression wood is more frequent than tension wood). If a constant wind is blowing from one side for some time, trees also build an eccentric stem cross-section. Irregular rings can also be the result of snow when a tree was buried and then tried to grow upwards again (SCHWEINGRUBER 1993). Figure 4.3 shows two examples of *Picea sp.* trees with compression wood. 4.3a has rings extending in different directions near the pith which could be the result of the shift between melted and frozen ground or different wind directions. Towards the outer part the compression wood becomes more regular towards one

side. 4.3b shows constant compression wood on one side, the tree might have grown on a hill with creeping soil, e.g. on a river slope.

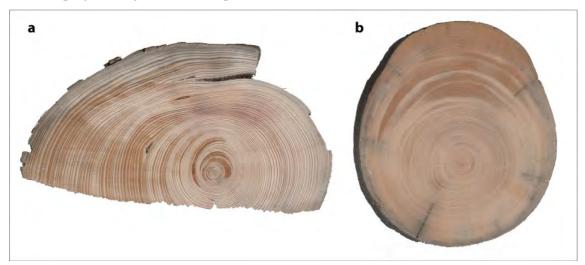


Fig. 4.3 Samples with compression wood (a) Picea sp. with changing directions of the compression wood and relative wide rings (b) Picea sp. with regular compression wood to one side and very narrow rings (Scanned samples).

Besides that driftwood samples are certainly in another condition than fresh samples. After their journey through water and ice they have obviously changed. Moreover, they naturally still show events which happened during the growth in their origin area, e.g. wounds or other stress factors. Conifers react on stress by forming traumatic resin ducts, even e.g. *Abies sp.* which normally does not have any resin ducts. After an injury the wound is sometimes filled with resin to protect it and the tissue starts to grow very fast to close the wound again (SCHWEINGRUBER 1993). Figure 4.4 features some samples with modification. 4.4a shows an *Abies sp.* sample with many holes, probably caused by piddocks. 4.4b is a *Larix sp.* with an already closed wound, while 4.4c is *Picea sp.*, with a wound filled with resin, which both have happened when the tree was still alive. 4.4d is also a *Larix sp.* sample with a wound, which must have been severe because the tree could not form rings at the side of the wound for some years, it took some time until the rings could be closed again. Additionally it shows many small holes at the outside, which might be caused by worms or mussels.

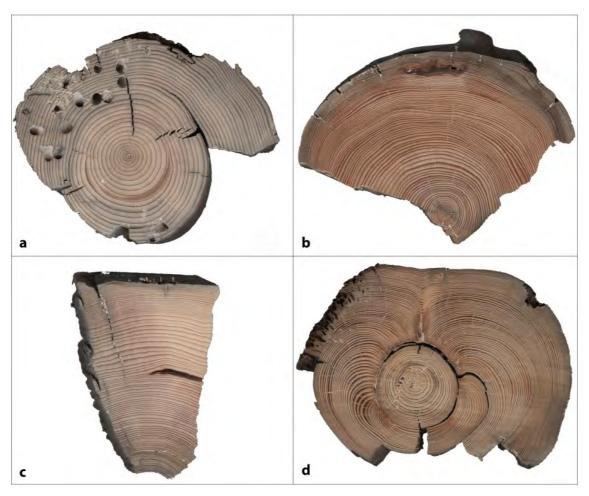


Fig. 4.4 Examples of modified wood: (a) Abies sp. with piddock holes (b) Larix sp. with a scar in the sapwood and some rings with compression wood (c) Picea sp. with a resin filled wound (d) Larix sp. with an extreme wound reaction (Scanned samples).

Few of the samples are roots. Root wood does not have a uniform structure and it can only in some cases be absolutely identified. Roots show a different structure depending on the distance to the stem, on the functionality (main or secondary root) and on the ecological conditions like water supply or depth (cf SCHWEINGRUBER 1990). In Figure 4.5 one can see four examples of root samples, 4.5a and b probably are *Larix sp.*, 4.5c likely *Picea sp.* and 4.5d could not be differentiated between these two species.

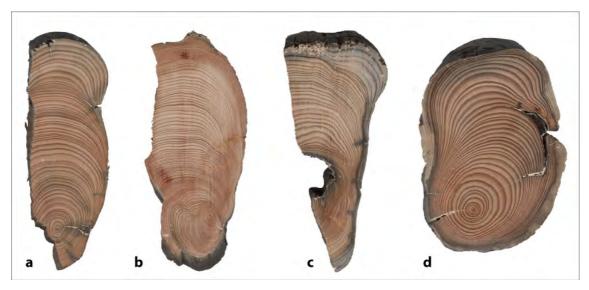
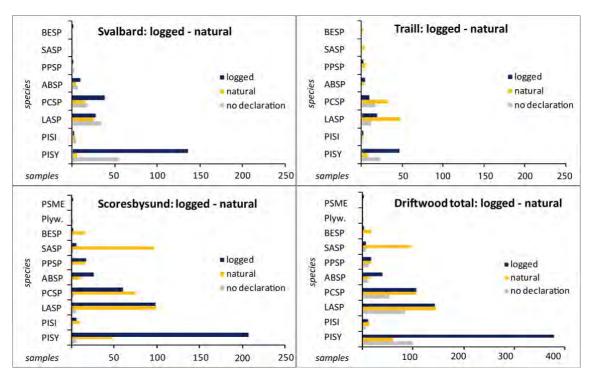


Fig. 4.5 Examples of root samples: (a) Larix sp. (b) Larix sp. (c) Picea sp. (d) Larix sp./Picea sp. (Scanned samples).

An important relation is between logged and non-logged samples and species. At all sites it is easy to recognize that the majority of *Pinus sylvestris* is logged. The percentage of logged *Pinus sylvestris* ranges from 60.3% at Traill to 69.4% at Svalbard and even 80.0% at Scoresbysund. Compared to the other species where the amount of logged and non-logged wood is often nearly the same (e.g. *Larix sp.* at Scoresbysund 48.0% logged) or the non-logged ratio is higher (e.g. 16.7% non-logged *Picea sp.* at Traill), this ratio for *Pinus sylvestris* is prominent. There is always also non-declared wood but since it is not much (totally 19.03%) and since the trends are obvious it can be ignored. The ratio between logged and natural wood for every site and for all samples together is featured in figure 4.6. Due to the high amount of *Pinus sylvestris* the percentage of logged samples among the whole record is extremely high with 48.9%.

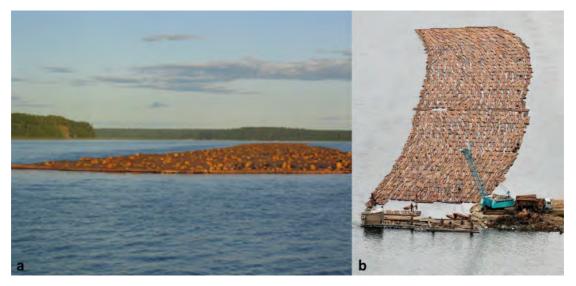


*Fig.* **4.6** Ratio of logged and non-logged wood for every site and the whole driftwood record: Svalbard (total logged 55.4%), Traill (logged total 27.3%), Scoresbysund (total logged 52.5%) and the whole record (total logged 48.9%).

The high amount of logged *Pinus sylvestris* together with the dating of the mean curves in the end of the 20<sup>th</sup> century must be connected with high logging activities in pine areas, especially in the Yenisei region. 34% of the harvest in Siberia is pine, whereas spruce (25%) and larch (24%) are less prominent (OBERSTEINER 1995). In Igarka, situated at the Yenisei around 160 km north of the polar circle, a harbour was established in 1929 and the place became a centre of forest production and transportation<sup>1</sup>. This could be a hint that logging started around this time. Industrial activities and dam constructions in this region, and also in the upper Angara River region, which is the headwater tributary to the Yenisei River, led to more logging activities from 1950 onwards (written comm. with O. Eggertsson). The main species in the Angara region is *Pinus sylvestris* (KORETS ET AL. 2011). The wood is transported by timber floating (Fig. 4.7), where probably stems get lost. Some of them are transported via the Yenisei into the Arctic Ocean and become driftwood. Regarding the high percentage of logged wood, the amount of lost wood during timber floating must be very high.

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http://www.mojgorod.ru/krsnjar\_kraj/igarka/index.html (21.04.2012, 16.53h)



*Fig. 4.7* Timber floating on the Angara river: Stems are tied together into rafts for the transport down the river (a) Source: http://www.ldk1.ru/images/bigimage12.jpg (b) Source: http://msnbcmedia.msn.com/j/MSNBC/Components/Photo/\_new/pb-110728-timber-rafts-eg.photoblog900.jpg.

#### 4.2 Anatomical uncertainties

The differentiation between *Pinus sp., Larix sp./Picea sp./Abies sp.* and deciduous wood is macroscopically possible. The microscopic identification of the wood is exactly possible for all different genus except *Larix sp.* and *Picea sp.*. The precise assignment to a genus is sometimes difficult for these two species because of similar physiological structures. When the wood is e.g. badly affected by fungi or compression wood it is sometimes not possible to see the typical features. For Scoresbysund, 26 of 204 larch samples (12.7%), and six of 136 spruce samples (4.4%), have not been absolutely identified. Regarding the Traill samples, one of 79 *Larix sp.* (1.3%) and four of 60 *Picea sp.* (6.7%) were not clearly assignable. In comparison, the Svalbard samples could be classified all as *Larix sp.* or *Picea sp.*. Since the percentage is not high and there is always a tendency towards one of the two species, the uncertain samples were not separated for the interpretation. The different sampling strategies are the reason for the higher percentage of not certainly identified samples at Scoresbysund and none at Svalbard. Samples of proper stems, which were collected mostly in Svalbard, are easier to identify. Amongst the Scoresbysund samples there are lots of small branches and roots as result of the sampling strategy to pick everything.

Generally it is not necessary to make a microtome cut for the microscopic identification; rather it is sufficient to cut with a razor blade or a box cutter. Some features like biseriately arranged pits for larch or the shape of the exterior borders of pits in the ray tracheids for the differentiation between spruce and larch are even easier to find in handmade than in microtome cuts. The species of the boreal forest zone can be identified with only a radial cut, which does not have to be stained. This is an advantage regarding the time needed for the analysis, as it is possible to analyse many samples in a relative short time period. The effort needed for one

sample depends on the quality of the sample. Compression wood and fungi infestation, especially in roots, complicate identification because they change colour and shape of the cells and destroy cell walls. Especially roots are difficult to treat because they do not show clearly typical wood anatomical features. However, as mentioned previously, the most important aspect is to determine the genus combining various features to avoid misclassification based upon not fully consistent features.

A large part of the driftwood samples is invaded by fungi. This could probably be the reason for the light weight of the wood. Many of the fungi, like the blue stain, can be seen without magnification due to the change of colour they cause in the wood.

The majority of the fungi are easily visible within the micro slides because of the fungal hyphae that often destroy the cell walls and result in rays taking on a yellowish colour.

Different types of fungi occur among the driftwood. Blue stain fungi are common and appear in both-, coniferous and deciduous wood. Around 100 fungi of the Asco- and Deutromycels can induce the stain. *Pinus sp.* is the most represented genus invaded by these fungi. In conifers it usually results in a bluish colour, in deciduous woods the fungi cause a more light black to grey colouration, which is mainly due to the pigments in the fungal hyphae. In heartwood species only the splint becomes infested because blue stain fungi subsist of active parenchyma cells and do not invade the heartwood. Since bark beetles act as a vector for blue stain fungi, it was probably introduced into the wood at the site of the origin. The minimum temperature tolerated by these fungi is between 0 to -3°C, so the degradation should take place at the origin and not during the transport in the ice. Probably they are able to continue to grow after the wood has reached a beach and melted out of the ice. These fungi causing the stain do not degrade cell walls (cf SCHMIDT 1994). The more rare red or pink stain is not frequent among the driftwood samples. It also does not cause cell wall degradation and is usually caused by a yeast-like fungus called Arthrographis, which likely derives from the origin area (written comm. with R. Blanchette).

Many of the samples are rotten. There are three types of rot: brown rot, white rot and soft rot. Brown rot is more common in coniferous wood and white rot in deciduous wood. Brown rot does not deplete lignin, which is the reason for the brownish colour. White rot degrades carbohydrates and lignin and leads to loss of weight (SCHMIDT 1994). Different types of soft rot are found, many samples show soft rot decay in different variations caused by different fungal species. Soft rot can be caused by around 300 different fungi. Some are more common for specific species.

Figure 4.8 shows pictures of fungi affected driftwood samples. 4.8a is a larch sample with blue stain penetrating from the sapwood and brownish areas in the heartwood that are caused by soft rot. 4.8b is a *Pinus sylvestris* with dark blue stain fungi invading from the sapwood. 4.8c is a willow sample with blue stain as an example for deciduous wood invaded by this fungi type.

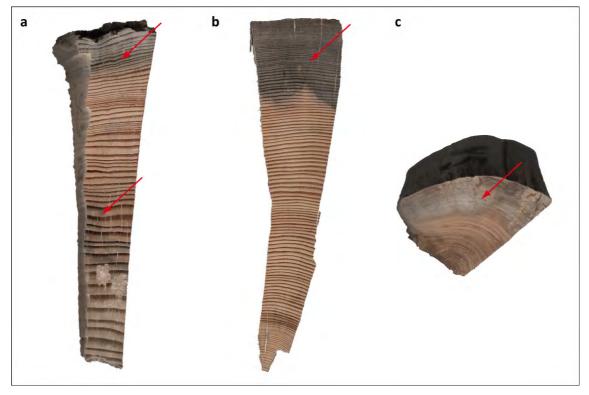


Fig. 4.8 Macroscopic pictures (Scans) of fungi invaded samples: (a) Larix sp. with blue stain fungi in the sapwood-part and brownish soft rot in the heartwood-part (b) Pinus sylvestris with blue stain fungi (c) Salix sp. with blue stain fungi in the outer part.

Figure 4.9 illustrates some pictures of fungi, taken of stained micro sections using a reflected light microscope with a magnification of 200. 4.9a shows a radial cut of *Larix sp.*, the spirals indicate soft rot fungi. 4.9b is another radial cut of a larch sample, invaded by blue stain fungi. This fungi type is always recognizable by the wormlike reddish to black objects growing through the cells. 4.9c features a radial cut of *Picea sp.* penetrated by blue stain and soft rot fungi. 4.9d shows a cross section of *Pinus sibirica* with blue stain fungi growing through the cells. In picture 4.9e and 4.9f one can see radial cuts of *Pinus sylvestris*; both with blue stain and soft rot. The different shape of the bordered pits, meaning the degraded bluish pit borders in the upper right part of 4.9e, is probably also the result of fungi infection.

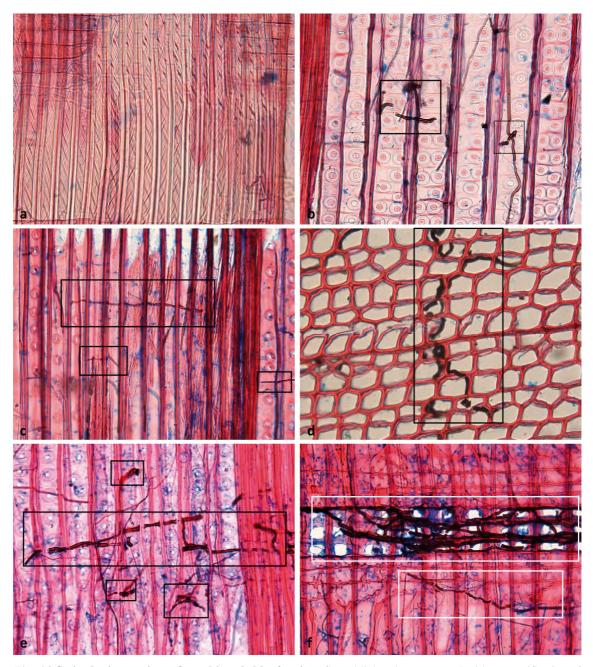


Fig. 4.9 Stained microsections of wood invaded by fungi (Reflected light microscope, a-d with a magnification of 200, e+f 400): (a) Larix sp. with soft rot fungi, recognizable by the spirals, radial section (b) Larix sp. with blue stain fungi, radial section (c) Picea sp. with blue stain and soft rot fungi, radial section (d) Pinus sibirica with blue stain fungi, transverse section (e) Pinus sylvestris with blue stain and soft rot, transverse section (f) Pinus sylvestris with blue stain and soft rot, radial section.

Figure 4.10 shows electron microscope pictures taken by Robert Blanchette. All slides are cross sections with different magnification. 4.10a to 4.10e are conifers while 4.10f to 4.10h are sections of deciduous wood. 4.10a shows a *Pinus sibirica* sample with a magnification of 180. The wood has a macroscopically visible red stain. The section appears sound with only small cavities in some cells; the red stain may be caused by a fungus that has no effect on the cell wall structure. 4.10b is also *Pinus sibirica*, but with a magnification of 600. This sample was attacked by soft rot fungi, in the secondary cell wall cavities with the hyphae causing the

degradation visible. 4.10c is a third picture of *Pinus sibirica* with a magnification of 250. The decay seen may be due to an attack of brown rot fungus. 4.10d shows a *Pinus sylvestris* sample with a macroscopically clearly visible blue stain (magnification of 900). The fungi causing blue stain do not degrade cell walls, but the large hyphae in the cell lumen are typical for blue stain fungi. One could also see the hyphae on the stained radial sections above. Image 4.10e displays *Picea sp.* with a magnification of 450 and only little degradation of the cell walls. The extraneous material inside the cells could be resin or sediments.

4.10f shows *Betula sp.*, with a magnification of 600. The cavities in the cells are due to soft rot fungi. 4.10g and 4.10h are *Salix sp.* samples. 4.10g exhibits a soft rot attack with the effect of large holes in the S2-layers (magnification of 700). In picture 4.10h (magnification of 400) all the secondary walls have been degraded leaving only the middle lamella of the cells (written comm. with R. Blanchette).

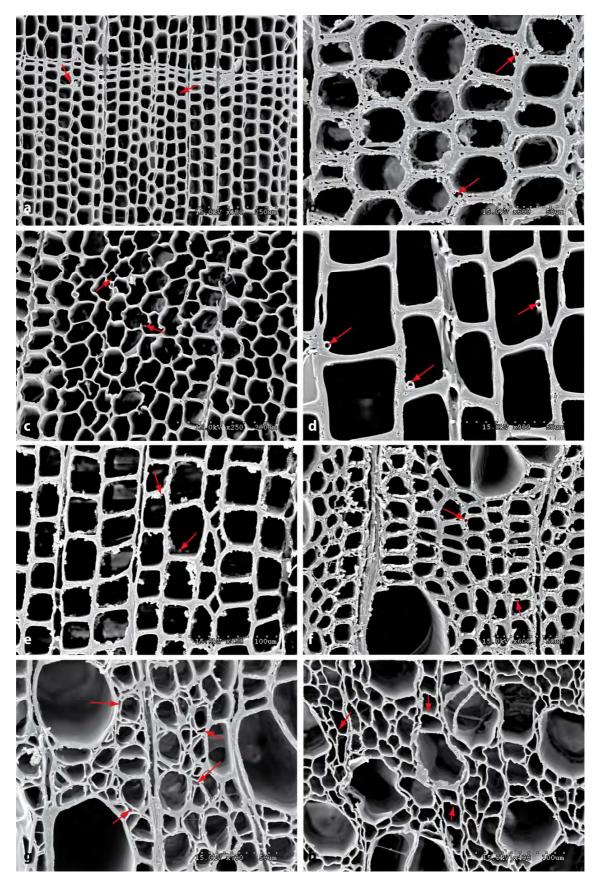
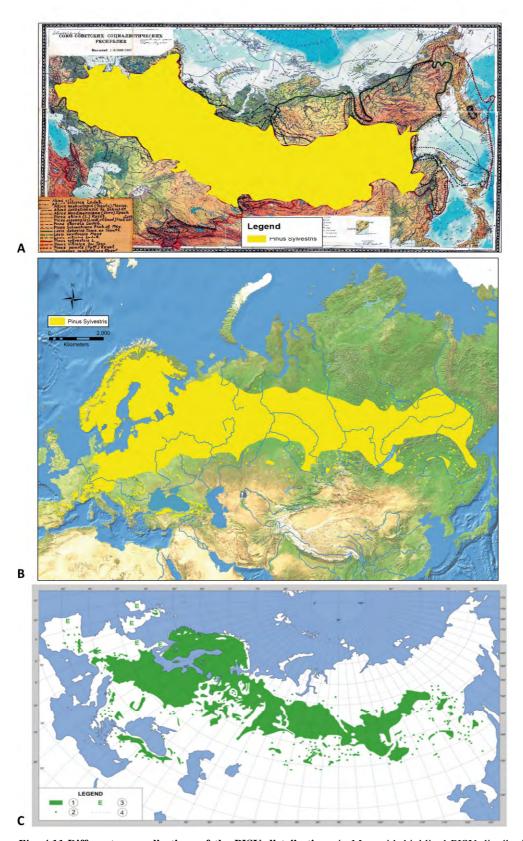


Fig. 4.10 Fungi invaded wood (Electron microscope pictures by R. Blanchette): (a) Pinus sibirica with red stain fungi, low cell wall degradation (magnification of 180), (b) Pinus sibirica with soft rot fungi (magnification of 600), (c) Pinus sibirica with brown rot fungi (magnification of 250), (d) Pinus sylvestris with the hyphae of blue stain fungi (magnification of 900), (e) Picea sp. with extraneous material in the cells and only little degradation (magnification of 450), (f) Betula sp. with soft rot (magnification of 600), (g) Salix sp. with soft rot (magnification of 700), (h) Salix sp. with only the middle lamella left due to fungi attack (magnification of 400); all transverse sections.

As the pictures described above reveal, there are different advantages of reflected light and electron microscopic images regarding fungi examination. In pictures of stained sections, taken by a reflected light microscope, the chemical composition of the fungi and the wood is visible. The structure of wood and fungi are much better displayed in electron microscopic pictures.

### 4.3 Provenancing uncertainties

Pinus sylvestris as the most frequent species among the driftwood samples is also the most widespread species in Eurasia. Its large habitat makes it difficult to display the growing area on a map. Three different distribution maps of Pinus sylvestris are displayed in figure 4.11. A and B show more generalised areas of Pinus sylvestris, while C shows the habitat more detailed. Both have advantages, more generalised maps are easier to modify and display, especially in combination with other species-habitats. But naturally one always looses information by making generalisations, so the detailed maps are closer to reality. This reveals that besides the correct wood identification it is important to consider the different distribution areas exactly. Despite that, Pinus sylvestris and Pinus sibirica are the only species that can be identified certainly by microscopic wood anatomical methods, and therefore the species that originate from Eurasia without fail.



*Fig. 4.11* Different generalisations of the PISY distribution: A. Map with highlited PISY distribution (yellow), originally drawn by S. Shyatov. B. Distribution of *Pinus sylvestris* (Data: EUFORGEN 2009, Projection: Mercator). C. Detailed map from Wikimedia Commons, Author: Nova. 1) Main range of the species 2) Isolated occurrences 3) Natural populations extinct due to human intervention 4) Arctic Circle.

In figure 4.12 one can see the ranges of the different larch species in Eurasia. Since the habitat of *Larix decidua* is small and limited to Europe, it can be neglected for driftwood analyses. The map clearly shows the border between *Larix sibirica* east and only a very small area in the west of the Yenisei River and *Larix dahurica* on the western side of this river. *Larix dahurica* has no special requirements regarding soil and moisture and elaborates a superficial root system, which facilitates growing in permafrost areas (BERG 1950). This explains the range into higher latitudes. Since it is not possible to distinguish the species wood anatomically, crossdating with chronologies from Pechora, Ob or Lena River could help defining the exact larch species because of the well separated distribution areas of the two species. Only the samples with growth patterns fitting to Yenisei chronologies would still be difficult to classify.

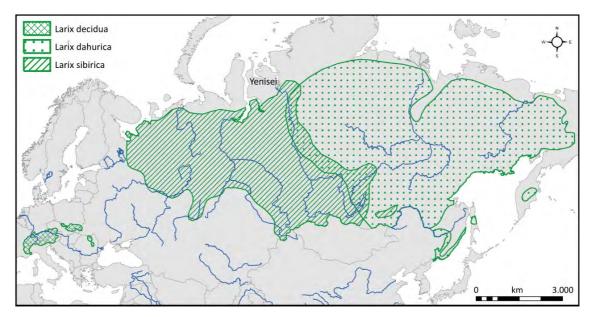


Fig. 4.12 Habitats of the different Larix species in Eurasia (Data: EUFORGEN 2009 & MALYSHEV 2008, Projection: Mercator).

Map 4.13 shows the ranges of all the driftwood-relevant species in Eurasia. In this map the species are summarized to their genus, also the two pine species *P. sylvestris* and *P. sibirica*. The distribution area of pine is large. But also *Picea abies* and *Larix sp.* are widely spread. The fact that *Pinus sylvestris* is still prevailing among the driftwood could be due to the preference of this species for the wood industry.

The cross-dated pine samples certainly have their origin in the Yenisei region. Regarding the total number of samples, the number of measured and cross-dated pieces is still low, but compared to other studies it is already high. Since not all *Pinus sylvestris* samples are yet measured, this is a first but important result that leads to the suggestion that many of the other pine sampes also derive from the Yenisei region.

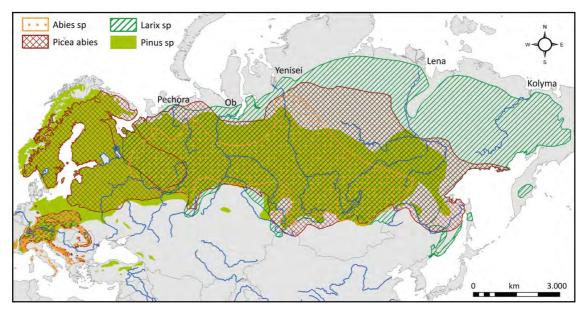


Fig. 4.13 Habitats of the conifer species which appear among the driftwood record for Eurasia (Data: EUFORGEN 2009 & MALYSHEV 2008, Projection: Mercator).

The map in figure 4.14 shows the habitats of the conifer species that are relevant for North American Arctic driftwood, meaning the species growing in the northern part of North America, especially in the drainage area of the Mackenzie River. It is clear, that *Picea sp.* is the dominant genus in North America but also that *Larix sp.* and *Pinus sp.* are present. The growing area of *Abies sp.* is located further south but still within the drainage area of the Mackenzie River.

Not only are the habitats important, but also dominating species in certain areas. This is not displayed on these maps. Despite in North America e.g. spruce and larch are common, spruce is the prevailing species in comparison to eastern Siberia e.g., where larch is most dominating.

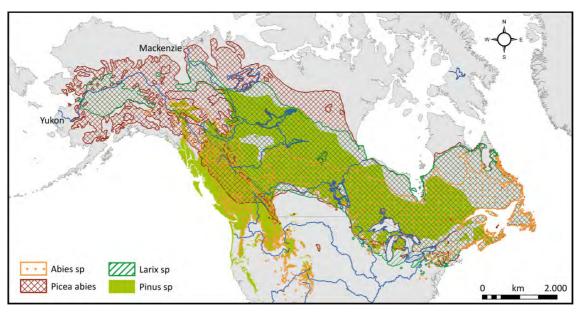


Fig. 4.14 Habitats of the conifer species which appear among the driftwood for North America (Data: LITTLE 1971, Projection: Mercator).

A summary of the different species growing in the drainage areas of the large rivers in North America and Siberia is provided by table 4.1. *Larix sp.* is featured around every large river, in Siberia as well as in North America. All rivers are encompassed by more than one species, except Kolyma River, which is located only in a larch area and Lena River, for which only the southern part is surrounded by other species than larch. Fir likely originates from western Siberia, meaning Yenisei, Ob or Pechora River. Together with the previous maps this table clarifies the problematic of originating by reference to the wood genus.

Table 4.1 Overview of the different species in combination with the large rivers in Eurasia and North America (PISP: Pinus sp. (North America), PISY: Pinus sylvestris (Eurasia), PISI: Pinus sibirica (Eurasia), LASP: Larix sp., PCSP: Picea sp., ABSP: Abies sp.).

		PISP	PISY	PISI	LASP	PCSP	ABSP
North America	Mackenzie	•			•	•	0
North Ameri	Yukon	0			•	•	0
beria	Kolyma				•		
East Siberia	Lena		0	0	•	0	0
ja Ja	Yenisei		•	•	•	•	•
West Siberia	Ob		•	•	•	•	•
	Pechora		•	•	•	•	0

majority of the river is located within this species habitat

Only the southern part of the river is located within this species habitat

The maps show that the species distribution in the boreal forest zone is more complex than considered in earlier studies. Wood anatomical analyses cannot certainly reveal the origin of Arctic driftwood due to the impossibility of differentiating between the species and the similarity of the genus distribution in North America and Eurasia. FUNDER ET AL. (2011) and TREMBLAY ET AL. (1997) assume any spruce arriving from a North American origin and larch from Siberia. TREMBLAY ET AL. (1997) also mention pine from western Eurasia but do not regard it in their analysis. They also assume no spruce occurance in Eastern Siberia, only in Western Siberia. The previous maps show that pine, larch, spruce and fir can theoretically derive from Eurasia as well as from North America. The different species growing on the different continents (e.g. *Picea abies* and *Larix sibirica* in Eurasia and *Picea glauca* and *Larix laricina* in North America, respectively) cannot be distinguished wood anatomically. Since the habitats of larch in North America and spruce in Eurasia are not small, it is too simple to determine that all driftwood-larch comes from Siberia and all driftwood-spruce from North America.

FUNDER ET AL. (2011) found only spruce and larch among their 80 driftwood samples from the North of Greenland. This would mean that no wood from western and central Siberia would reach the northern coast. It is not clear if different ocean currents influence the northern and eastern coast of Greenland or if the 80 samples do not include any pine by chance. As discussed in the next chapter it should be the same currents influencing the north and east coast of Greenland. Furthermore, the result of no pine among driftwood from Greenland contradicts EGGERTSSON's (1993) study, which already found pine driftwood at the east coast (Scoresbysund) and this survey, where pine is even the most frequent species.

#### 4.4 Ocean currents and ice-drift

The exploration of the Arctic began in the 16<sup>th</sup> century. Martin Frobisher conducted the first expedition in 1576 and afterwards around five more were accomplished until the beginning of the 17<sup>th</sup> century, eight during the 17th century and seven between 1700 and 1800. The majority of them had the goal to find the Northwest Passage. In the 19<sup>th</sup> century around 44 expeditions were accomplished, in the first half also in search of the Northwest Passage. After John Franklin's expedition failed in 1847, more than 50 expeditions were sent out to find him. Even many expeditions did not fulfil their goals, they often discovered new land, islands, and parts of the ocean or investigated e.g. the salinity of the water and ice temperature or motions or deepwater formation. The Northwest Passage was completed first by Robert McClure as he walked over the ice. At the end of the century, the aim of reaching the North Pole came into the focus of most expeditions. During his way through the Arctic 1903-05 Roald Amundsen was the first who completed the navigation of the Northwest Passage. In 1925 the exploration of the Arctic

from the air began and one year later the North Pole was found<sup>2</sup>. In the second half of the 20<sup>th</sup> century, scientific questions came into the focus of further Arctic expeditions, for example with the aim to investigate ice movements and deformation, eddies and oceanic temperatures. Amundsen tried to reach the North Pole in a vessel in 1919-25 but as he got stuck in the ice in the East Siberian Sea, he never reached his goal. Between 1955 and 1979 the entire Arctic Basin was investigated by aviation and drift stations (cf RUDELS ET AL. 2012).

The structure of the Arctic Ocean can be described in basins and ridges, which are influencing the deep currents (Fig. 4.15). The two main basins are the Eurasian and the Canadian Basin, separated by the Lomonosov Ridge. The first is parted into the Amundsen and the Nansen Basin by the Gakkel Ridge, the second into the Makarov and the Canada Basin by the Alpha and Mendeleyev Ridges (cf RUDELS ET AL. 2012). The Arctic Ocean together with the Labrador, Greenland, Bering, Norwegian and Iceland seas is called the Marine Arctic (ACIA 2005), the parts of the Arctic Ocean together with the Greenland and Iceland Sea, which are influenced by warm Atlantic water, are called the Arctic Mediterranean (AAGAARD 1985).

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<sup>&</sup>lt;sup>2</sup> http://www.south-pole.com/arctic00.htm (01.04.2012, 13:59h)

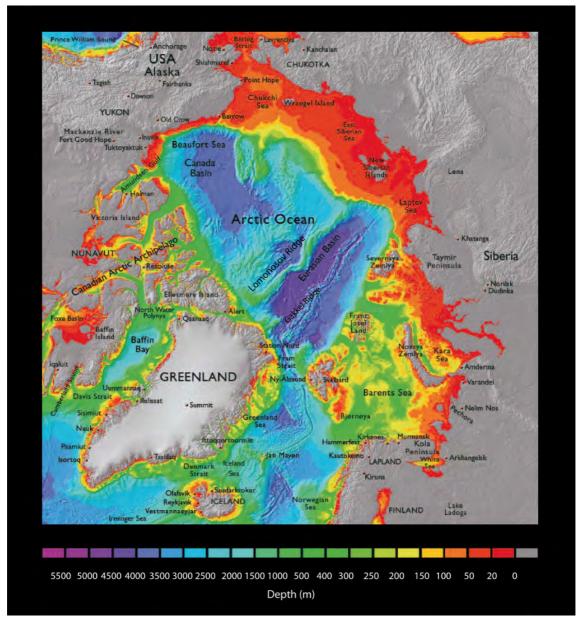


Fig. 4.15 Topographic features of the Marine Arctic: Depths of basins and ridges (adapted from ACIA 2005).

Thermohaline circulation occurs, when sea water is cooled or freezes and therefore the density gets higher until the waters sink and exchange with deep waters. In the Arctic the North Atlantic Deep water (NADW) is generated like this, mainly in the Labrador Sea, the Nordic Seas and the shelves. This cold deep water strongly influences the global thermohaline circulation (ACIA 2005). Cold low-salinity water coming from the Greenland Sea enters the Arctic Ocean west of Svalbard. This cold water is mixed with deep Arctic water. Since the Lomonosov-Ridge prevents this cold deep water from entering the Canadian Basin, the temperature, the salinity and the concentration of silica are higher there (AAGAARD ET AL. 1985).

River inflow into the Arctic Ocean has also effects on the circulation, especially on the formation of NADW. The discharge of the large river systems in Eurasia is influenced by changes in the North Atlantic Oscillation and in the surface air temperature. It has increased by

7% from 1936 to 1999. This could be the result of different factors like dams, permafrost thaw, or fires, but the most important explanation is the increased transport of moisture due to a global warming. The discharge of North American Arctic rivers is difficult to investigate due to missing records, but the similar warming trends over North America to Eurasian trends suggest increasing inflow from North America into the Arctic Ocean as well (cf McClelland et al. 2004, Peterson et al. 2002). This hypothesis is contradicted by Déry & Wood (2005), they analysed the trends in discharge of northern Canadian rivers from 1964-2003 and found a 10% decrease in the total annual river outflow to the Arctic and the North Atlantic Ocean. McClelland et al. (2006) summarise a total increase of 5.6 km³/y from 1964-2000 consisting of an increase from Eurasian Rivers and a small decrease from North American Rivers.

1'170 km³/year of water flows from North America to the Arctic Ocean. The main river system draining into the Arctic Ocean from Canada is the Mackenzie River, with 340 km³/y (IZMAILOVA 2003, AAGAARD & CARMACK 1989). This basin includes an area of 1'787'000 km² from central Alberta to the Arctic Ocean and the river empties in the Beaufort Sea through the second largest Arctic delta in the world (after the Lena-delta) (cf CULP ET AL. 2010). The Yukon River is draining into the Bering Sea, from a drainage area of 857'300 km², but even water is flowing northwards through Bering Strait it is not likely that driftwood is carried over this way into the Arctic Ocean. More probably the wood sinks before it could enter the Arctic Ocean and get frozen in the ice there.

The inflow into the Arctic Ocean from Eurasia is around 3'300 km³/y (AAGARD & CARMACK 1989). The largest rivers draining into the Arctic Ocean from Eurasia are the Kolyma, Lena, Yenisei, Ob and Pechora River. Figure 4.16 displays the different drainage amount of the large river systems in Eurasia and North America. The discharge does not always correlate with the size of the basin area. The catchment area of the Ob River is larger than the Yenisei area (2'950'000 km² compared to 2'440'000 km², respectively) (McClelland et al. 2006) but the discharge from the Yenisei is with 620 km³/y the highest into the Arctic Ocean (Peterson et al. 2002). This fact is reflected by the high amount of *Pinus sylvestris* which could be crossdated with trees from the Yenisei region and the high percentage of *Larix sp.* among the samples. The reason for the prevailing of *Pinus sylvestris* despite spruce and larch also grow in the Yenisei area could be explained with the dominance of this species and the felling in the Angara region mentioned in chapter 4.1.

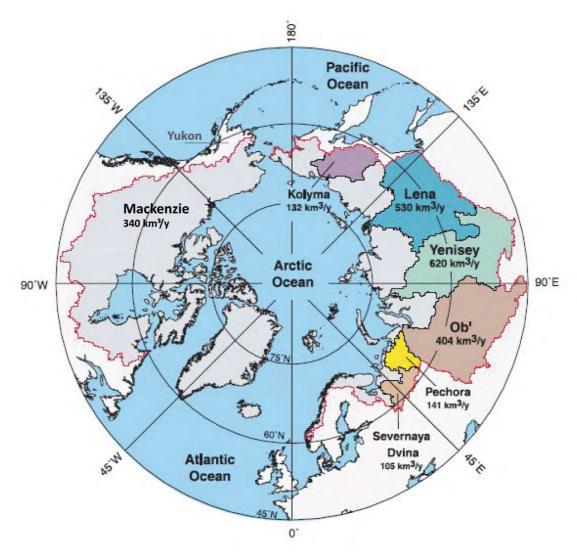


Fig. 4.16 Large river systems draining to the Arctic Ocean (adapted from Peterson et al. 2002, Aagaard & Carmack 1989).

Warm waters reach the Arctic Ocean from the Atlantic via Barents Sea and Fram Strait and from the Pacific via Bering Strait. The influx from the Atlantic is much higher. The main surface currents in the Arctic Ocean are the clockwise BG, circulating north of the Canadian Arctic Archipelago and the TPD, flowing from the Siberian coast over the North Pole in direction to Fram Strait (Fig. 4.17). They are strongly controlled by wind forcing (cf ACIA 2005). According to PROSHUTINSKY & JOHNSON (1997, 2001) two circulation regimes of the wind-driven Arctic Ocean exist, one cyclonic and the other anti-cyclonic, which alternate at five to seven year intervals with a ten to fifteen year period. The surface currents flowing along the coast are mainly counterclockwise, bringing water from the Pacific to the Atlantic on the North American coast and from the Atlantic to the Pacific on the Eurasian coast. Most water leaves the Arctic Ocean through the Canadian Archipelago and through Fram Strait. The water transported through the latter is flowing southward within the East Greenland Current (EGC) and joins the

water coming through the Canadian Arctic Archipelago west and south of Greenland to continue southwards (cf ACIA 2005).

Changes in the strength of the TPD influence the amount of ice export from the Arctic to the Greenland Sea, a broad TPD coupled with a weak BG means high ice export, whereas a weak TPD together with a strong BG leads to low ice export from the Arctic (TREMBLAY ET AL. 1997). The TPD becomes the EGC by leaving the Arctic Ocean through Fram Strait, and transports the wood further to the coasts of Greenland and Svalbard. By dating and provenancing of driftwood it should be possible to detect these variations between the two major Arctic Ocean currents.

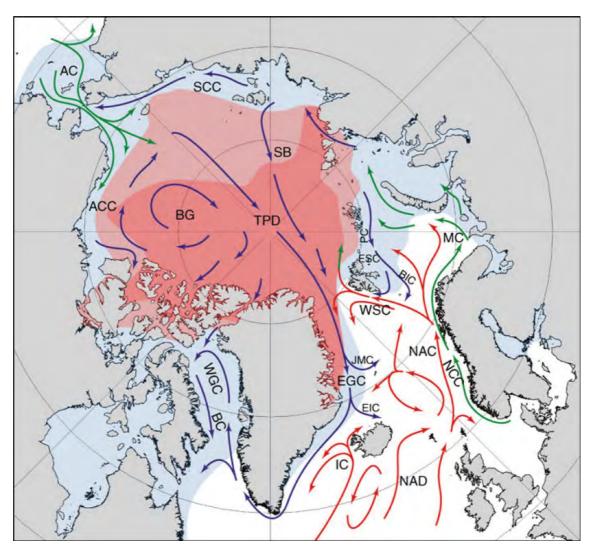


Fig. 4.17 Arctic upper layer circulation: red arrows: warm Atlantic currents, blue arrows: cold polar and arctic currents, green arrows: low-salinity currents; light blue: maximum ice extent, red: minimum ice extent, dark red: minimum ice extent 2007; AC: Anadyr Current, ACC: Alaskan Coastal Current, BC: Baffin Current, BIC Bear Island Current, BG: Beaufort Gyre, EGS: East Greenland Current, EIC: East Iceland Current, ESC: East Spitsbergen Current, IC: Irminger Current, JMC: Jan Mayen Current, MC: Murman Current, NAD: North Atlantic Drift, NAC: Norwegian Atlantic Current, NCC: Norwegian Coastal Current, PS: Persey Current, SB: Siberian branch (of the TPD), SCC: Siberian Coastal Current, TPD: Transpolar Drift, WGC: West Greenland Current, WSC: West Spitsbergen Current (Source: RUDELS 2012).

Wood from Siberia joins the TPD almost directly from the rivers and hence gets faster into the EGC than wood from North America, which has to go through the BG before entering the TPD and the EGC afterwards. Together with the fact that more rivers drain into the Arctic Ocean from Siberia than from Canada, this could be a reason for an overweight of driftwood from Siberia compared to North America.

Since driftwood needs to be transported in or on the ice, ice-drift is actually as important as ocean currents. The ice-drift in the Arctic Ocean mainly follows the currents. Corresponding to that, COLONY & THORNDIKE (1984) found by summarizing and calculating ice-motion observations from 1893 to 1983, that the general circulation is consistent with the mean annual surface atmospheric pressure field. That means an anticyclonic drift in most of the central Arctic and a linear drift in the Eurasian Basin (Fig 4.18). These two main drift-directions are over long time-scales convenient to the currents, meaning the BG and the TPD, on shorter scales, the ice-drift is following geostrophic winds (MELLING 2012).

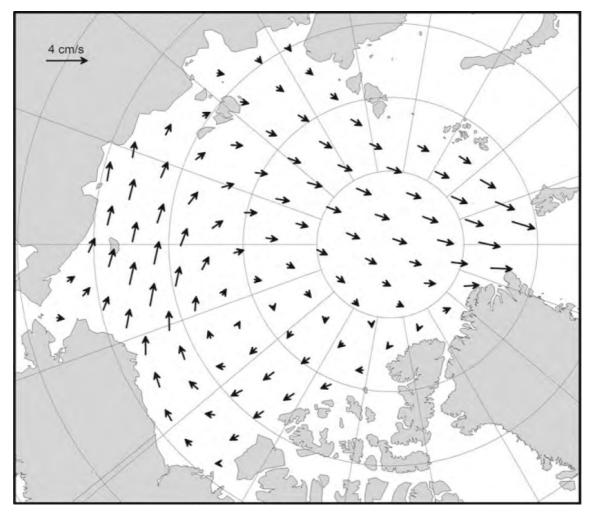
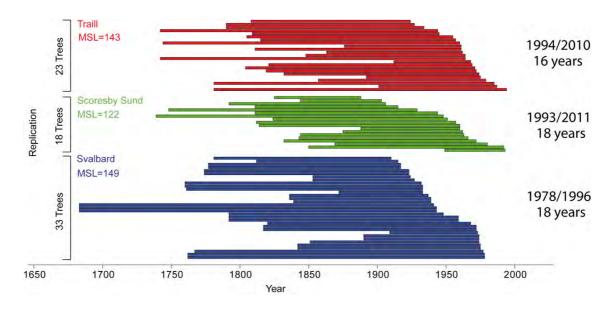


Fig. 4.18 The mean field of sea-ice motion in the central Arctic (Source: MELLING 2012).

Pack ice is leaving the Arctic Ocean through Fram Strait, the Canadian Archipelago or Bering Strait. Fram Strait seems to be the main passage, although it is important to keep in mind that more scientific surveys were realised in this area. But it is confident that Fram Strait is the passage where continuous in- and outflow happens (cf Melling 2012, Rudels et al. 2012). This explains the huge amount of driftwood on the coasts along Fram Strait, e.g. on Jan Mayen and on Greenland.

The mean segment length of the cross-dated *Pinus sylvestris* samples are summarized in figure 4.19. The difference between the dying year of the trees and the sampling year is between sixteen and eighteen years. Consequently, driftwood from the Yenisei region needs not more than eighteen years to arrive at the coasts of Greenland and Svalbard (written comm. with W. Tegel). By interpreting this one must always consider that the dying year could be too young in case of losing material at the outer part of the samples. Besides the time period, for which the samples already have laid at the beach, is unknown.



*Fig. 4.19* Mean segment lengths (MSL) of the measures and cross-dated *Pinus sylvestris* samples: Traill: dating from 1994-2010: maximum transport duration 16 years, Scoresbysund: 1993-2011: maximum transport duration 18 years, Svalbard: 1978-1996: maximum transport duration 18 years (written comm. with W. Tegel).

#### 4.5 Conclusions

Huge amounts of driftwood can be found in the Arctic. The wood must originate from the boreal forest zone and is transported by the large rivers in North America and Siberia into the Arctic Ocean. Further, it is carried by currents, in or on the ice, and reaches the beaches somewhere in the Arctic after several years. The TPD and the BG as the two major currents in the Arctic Ocean transport the wood from North America and Eurasia across the ocean into the EGC and to the coasts of Greenland and Svalbard.

Macro- and microscopic wood anatomical classification reveals different genuses among the wood. A species-specific classification is generally not possible, except for pine. Almost half of all samples are logged material, which got lost during wood industrial activities, probably timber floating. The majority of the samples is *Pinus sylvestris*, which is not only due to its large distribution area in Siberia, but also to its predomination in the wood industry. Other conifer species are, after its frequency, *Larix sp.*, *Picea sp.*, *Abies sp.*, and *Pinus sibirica*. Deciduous wood is represented by *Salix sp.*, *Populus sp.*, and *Betula sp.*. The sample reflects the species distribution of the boreal forest, whereas the ratio of coniferous and deciduous wood depends strongly on the sampling strategy. Most of the wood is invaded by fungi, which probably started to penetrate the wood already at its origin.

The species distribution in the boreal forest zone is complex. The same genuses appear in North America as well as in Eurasia, with always different species dominating. Cross-dating is additionally necessary to detect the origin of the wood and enables a spatiotemporal assignment.

#### 4.6 Outlook

The analysis of the 1'445 driftwood samples already revealed promising results but there is a lot more potential for further investigations. For precise provenancing all samples have to be measured and cross-dated with chronologies from the large river systems in North America and Eurasia. Since the existing chronologies do not go back very far in time, C14-dating would be necessary at least for some of the samples.

According to LIEPELT ET AL. (2006) "wood is an ideal target for ancient plant DNA studies applying the criteria of authenticity". They tested successfully whether DNA can be obtained from ancient wood and were able "to isolate and analyse authentic DNA from ancient wood of major European forest genera" (LIEPELT ET AL. 2006). These results contribute to the attempt of searching DNA in the driftwood samples. First tests reveal that ancient-DNA is still available in the driftwood samples, which is a good basis for additional experiments (written comm. with S. Hänsch). By analysing DNA it would be possible to define the species and therefore the origin of the wood accurately.

Plants record bio-physico-chemical processes in forms of different isotopic compositions. The most important stable isotopes for organic material are carbon, oxygen and hydrogen. Especially carbon isotope analyses can reveal information on past climatic variables like precipitation amount, temperature, and relative humidity (LEUENBERGER ET AL. 1998). Due to the high potential of this method, isotopic investigations will be made on the driftwood samples. All these different work stages should lead to the end goal of generating a boreal tree-ring chronology in combination with the reconstruction of boreal climate variations and Arctic currents (Fig. 20).

The isostatic rebound in different regions in the Arctic is not fully understood. Driftwood is always deposited on the beach at sea level. Wood from different height levels can therefore provide the possibility of exact spatio-temporal dating and quantifying of postglacial uplift. Getting the past isostatic rebound is very important for understanding future effects entailing warming temperatures and ice melting.

The fieldwork planned in 2012 on Greenland and Iceland has different aims. First, the number of driftwood samples from Greenland will be increased to assure a representative sample. Second, a vertical transect through the different vegetation forms at different height levels will be realised. Besides, driftwood will be collected at different height levels to potentially qualify and date the postglacial uplift, especially on Iceland.

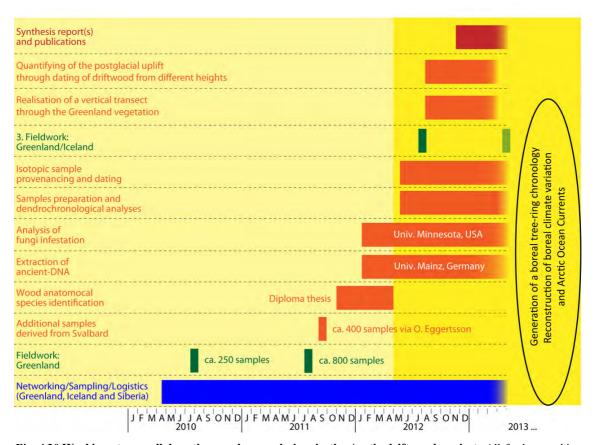


Fig. 4.20 Working steps, collaborations and general aims in the Arctic driftwood project: All further working steps should lead to the goals of generating a boreal tree-ring chronology and reconstructing boreal climate and Arctic Ocean Currents.

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Erklärung 62

## Erklärung

Ort, Datum

1)	Hiermit erkläre ich, <i>Lena</i> , <i>Hellmann</i> , geb. am 19.11.1985 in <i>Ausgburg</i> , diese Diplomarbeit selbständig verfasst und unter Verwendung ausschließlich der angegebenen Quellen und Hilfsmittel angefertigt zu haben. Alle Stellen, die wörtlich oder sinngemäß aus veröffentlichten oder nicht veröffentlichten Quellen entnommen wurden, sind als solche kenntlich gemacht.  Diese Arbeit wurde in keinem anderen Prüfungsverfahren eingereicht.
2)	Ich bin einverstanden, dass die von mir angefertigte Diplomarbeit einer breiten Öffentlichkeit zugänglich gemacht wird.
	Nein.
	Ja, nach Abschluss des Prüfungsverfahrens.

Unterschrift

Appendix 63

# Appendix

ABSP	Abies sp
Atech	anatomical technicque
BESP	Betula sp
ВР	bordered pits
CW	compression wood
EWLW	difference between earlywood and latewood
GL	growth level
L/N	logged/natural
LARred	reddishness of larch
LASP	Larix sp
macro	macroscopic
micro	microscopic
PCSP	Picea sp
perf. plates	shape of perforation plates
PISI	Pinus sibirica
PISY	Pinus sylvestris
PPSP	Populus sp
PR	pitting in rays
R/O	recent/old
RBC	razor blade cut
RD	resin ducts
RMTP	rings missing to pith
SASP	Salix sp
SC	site competition
Sec	thin section
SOBP	shape of exterior borders of pits in transverse section
SpTh	spiral thickenings
SW	sapwood
TT	transversal tracheids
TTW	transversal tracheid walls
WI	wood identification

Appendix 64

Svalbard samples: PISY 1

Field Code	Lab Code	species	nith	RMTP	funai	GL		SC	tree age	L/N	R/O	WI	macro	mior	o RBC	C Atech	) Sec	radius
SV96114 - S1 - 1m	SV-1	PISY	n	5-10		med	lium	-	100-200	L/N	R	RB						18 cm
SV96118 - S1 - 7	SV-1	PISY	n	<5	У	low	iluiti		100-200	L	R	RB	У	У	У	rc	n	17 cm
SV96150 - S1 - 2	SV-2	PISY	_	-	У	_			50-100	L	R	RB	У	y v	У	rc	n n	8.7 cm
SV96125 - S1 - 1	SV-5	PISY	y n	<5	y v	high		open	100-200	L	R	RB	У	V	У	rc	n	13.5 cm
SV96126 - S1	SV-8	PISY	V	-	V	high			50-100	L	R	RB	У	V	У	rc	n	10 cm
SV96015	SV-9	PISY	n	<5	,	med		open	100-200	-	- -	RB	У	V	У	rc	n	12.5 cm
SV96014	SV- 11	PISY	_	-	У				50-100	-	-	RB	У	,	У		n	18.3 cm
SV96128	SV- 11	PISY	У	-	У		high	open	100-200	-	-	RB	У	У	У	rc	n	10.3 cm
SV96026	SV- 12	PISY	У		У	med		open -	50-100	-	-	RB	У	У	У	rc		-
SV96108 - S1 - 0.5	SV- 14	PISY	n	>10	У	med			50- 100	L	- R	RB	У	У	У	rc	n	7.3 cm
	SV- 16	PISY	У	<5	У	med							У	У	У	rc	n	
SV96117 - S1 - 1,5m			n		У	med		open	100-200	L	R	RB	У	У	У	rc	n	15.5 cm
SV96025 - 1 - 1m	SV-20	PISY	У	-	-	high		open	100-200	-	R	RB	У	У	У	rc	n	16.7 cm
SV96011- S1- 5	SV-21	PISY	n	<5	У	high		-	50-100	L	R	RB	У	У	У	rc	n	17 cm
SV96135	SV-23	PISY	У	-	У	med		open	50-100	-	-	RB	У	У	У	rc	n	9.6 cm
SV96147 - S1-2	SV-24	PISY	У	-	n	high		- 1	50-100	L	R	RB	У	У	У	rc	n	9.7 cm
SV96127	SV-25	PISY	У	-	-	med	lium	-	50-100	-	-	RB	У	У	У	rc	n	6.7 cm
SV96107	SV-26	PISY	У	-	У	low		open	50- 100	-	-	RB	У	У	У	rc	n	11.5 cm
SV96106 - S1- 1	SV-28	PISY	У	-	У	med			100-200	L	R	RB	У	У	У	rc	n	10.5 cm
SV96104 - S - 4m	SV-29	PISY	У		У	med		open	50- 100	L	R	RB	У	У	У	rc	n	13.3 cm
-	SV-30	PISY	n	<5	-	med		-	100-200	-	-	RB	У	У	У	rc	n	10.5 cm
SV96112 - R2 - 0,5m	SV-31	PISY	У	-	У	med			50- 100	N	0	RB	У	У	У	rc	n	7.4 cm
SV960052 - S2/1 - 6	SV-32	PISY	n	<5	у	med	lium		>200	L	-	RB	У	У	У	rc	n	18.5 cm
SV96141 - S1 - 3m	SV-35	PISY	У	-	у	med	lium	open	50- 100	L	R	RB	У	У	У	rc	n	8.7 cm
-	SV-36	PISY	У	-	У	high		open	50-100	_	-	RB	У	У	У	rc	n	9 cm
													-					
Field Code	Lab Code	e species	s RD		_W	CW	PR	TT	TTW	BP	SOBP	SPT	h SW	/ (	others			
SV96114 - S1 - 1m	SV-1	e species PISY	s RD larg	e inter	<b>_W</b> nse	<b>CW</b>	PR large	TT present	TTW t tooth	<b>BP</b> bi	SOBP	SPT abse	h SW nt dist	inct	others			
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SV96114 - S1 - 1m SV96118 - S1 - 7 SV96150 - S1 - 2 SV96125 - S1 - 1 SV960126 - S1 SV96015 SV96014 SV96128 SV96026 SV96108 - S1 - 0,5 SV96117 - S1 - 1,5m SV96025 - 1 - 1m	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e med e inter e med e inter e inter e inter e med	LW USE	no no no no no no no no no no no no no n	large	present present present present present present present present present present	t tooth	BP bi bi uni uni uni uni uni uni uni uni	SOBP	abse abse abse abse abse abse abse abse	h SW nt disi nt disi nt disi nt disi nt disi nt - nt disi nt - nt disi	inct inct inct inct inct inct inct inct	others			
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SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV96126 - S1 SV96015 SV96014 SV96128 SV96026 SV96108 - S1- 0,5 SV9617 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-21 SV-23 SV-24	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e inter e inter e inter e inter e med e med e med e inter e inter e med	LW  anse ium ium ium isse ium anse ium anse ium	no n	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt dist	inct inct inct inct inct inct inct inct	others			
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SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV96126 - S1 SV96015 SV96014 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96127 SV96107	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-23 SV-24 SV-25 SV-26	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e med e inter e inter e inter e med e inter e med e med e inter e med e inter	LW  Inse ium ium ium ium ium ium ise ium ise ium ise iise iise iium ium iium iise iium iium iium iium iium iium iium iiu	no n	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt dist nt dist nt dist nt dist nt dist nt - nt dist nt - nt dist	inct inct inct inct inct inct inct inct	others			
SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV960126 - S1 SV96015 SV96014 SV96128 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96127 SV96107 SV96106 - S1- 1	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-23 SV-24 SV-25 SV-26 SV-28	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e med e inter e inter e inter e med e inter e med e med e med e med e inter e med	LW  Inse ium ium ium ium ium ise ium ise ium ise ise ium ium ise ium	no n	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt dist nt dist nt dist nt dist nt dist nt - nt dist nt - nt dist	inct inct inct inct inct inct inct inct	others			
SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV960126 - S1 SV96015 SV96014 SV96128 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96127 SV96107 SV96106 - S1- 1	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-23 SV-24 SV-24 SV-25 SV-26 SV-28 SV-29	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e med e inter e inter e inter e inter e inter e med e inter	LW  Inse ium ium ium ium ium ise ium ise ium ise iium ium ium ium ium ium ium ium ium iu	no n	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt disi nt disi nt disi nt disi nt disi nt - nt disi nt disi nt - nt disi	inct inct inct inct inct inct inct inct	others			
SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV96126 - S1 SV96015 SV96014 SV96026 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96127 SV96106 - S1- 1 SV96104 - S - 4m	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-19 SV-20 SV-21 SV-23 SV-24 SV-25 SV-25 SV-26 SV-28 SV-29 SV-30	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e med e inter e inter e inter e inter e med e med e inter e inter e med e med e med e inter e med e med e med e med e med e inter e med e med e med e inter e med e med e inter	LW  Inse ium ium ium ium ise ium ise iium ise iium ium ium ium ium ium ium ium ium iu	no few no few no no no few no few no no no no no few no few no no no few no no few no no -	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt disi nt disi nt disi nt disi nt disi nt - nt disi nt - nt disi	rinct inct inct inct inct inct inct inct	others			
SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV96126 - S1 SV96015 SV96014 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96107 SV96106 - S1- 1 SV96104 - S - 4m - SV96112 - R2 - 0,5m	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-23 SV-24 SV-25 SV-26 SV-26 SV-28 SV-28 SV-29 SV-30 SV-31	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e inter e inter e inter e inter e inter e med e med e inter e inter e med e inter e med e inter e med e med e inter e med	LW  Inse ium ium ium ise ium ise ium ise ium ise ium	no few no few no no no no no no few no no no no no few no no no few no no few no	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt dist nt dist nt dist nt dist nt dist nt - nt dist	/ inct inct inct inct inct inct inct inct	arge sca			
SV96114 - S1- 1m SV96118 - S1- 7 SV96150 - S1- 2 SV96125 - S1- 1 SV96126 - S1 SV96015 SV96014 SV96026 SV96026 SV96108 - S1- 0,5 SV96117 - S1- 1,5m SV96025 - 1- 1m SV96011- S1- 5 SV96135 SV96147 - S1- 2 SV96127 SV96107 SV96104 - S1- 1 SV96104 - S - 4m - SV96012 - R2 - 0,5m SV960052 - S2/1- 6	SV-1 SV-2 SV-4 SV-5 SV-8 SV-9 SV-11 SV-12 SV-14 SV-18 SV-19 SV-20 SV-21 SV-23 SV-24 SV-25 SV-26 SV-28 SV-28 SV-29 SV-29 SV-30 SV-31 SV-32	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e inter e med e med e med e inter e inter e inter e inter e inter e med e med e med e med e med e med e inter e med e med e inter e med	LW  Inse ium ium ium ise ium ise ise ise iium ise iium ise iium ium ise iium iium iium iium iium iium iium iiu	no few no few no no no no no no no no few no few no	large	present presen	t tooth	BP bi bi uni uni uni uni uni uni uni uni uni un	SOBP	SPT abse abse abse abse abse abse abse abse	h SW nt dist nt dist nt dist nt dist nt dist nt dist nt - nt dist nt d	rinct inct inct inct inct inct inct inct	arge sca			

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	mac	ro micro	RBC	Atech	Sec	radius
SV96133 - S1 - 7m	SV-37	PISY	٧	-	٧	medium	open	100-200	L	R	RB	У	У	٧	rc	n	10.7 cm
SV96120 - S1 - 6	SV-38	PISY	n	<5	У	high	open	100-200	L	R	RB	У	y	٧	rc	n	17.5 cm
SV96019 - S1	SV-39	PISY	n	<5	-	medium	open	100-200	L	R	RB	У	y	٧	rc	n	10.5 cm
SV96102	SV-40	PISY	n	<5	-	medium	open	100-200	-	-	RB	٧	y	v	rc	n	13.5 cm
-	SV-42	PISY	n	5- 10	-	high	-	50-100	-	-	RB	٧	v	V	rc	n	13 cm
SV96113 - S1 - 1m	SV-43	PISY	n	<5	У	medium	open	100-200	L	R	RB	٧	v	٧	rc	n	20 cm
SV96136 - S1 - 2m	SV-44	PISY	n	<5	У	high	-	50-100	L	R	RB	У	У	У	rc	n	13 cm
SV96149 - S1 - 3m	SV-45	PISY	n	<5	У	high	-	50-100	L	R	RB	У	У	V	rc	n	15.5 cm
SV96001- S1- 1	SV-46	PISY	n	5- 10	٧	medium	-	100-200	L	R	RB	٧	У	V	rc	n	23 cm
SV96124 - S1 - 5m	SV-47	PISY	n	5-10	٧	medium	-	50-100	L	R	RB	У	V	V	rc	n	-
SV96139	SV-48	PISY	V	-	У	high	open	50-100	-	-	RB	У	У	V	rc	n	17 cm
SV96121 - S1 - 15	SV-49	PISY	У	-	У	high	open	50-100	L	R	RB	У	У	У	rc	n	13.3 cm
SV96116 - S1 - 3	SV-50	PISY	n	<5	У	low	-	100-200	L	R	RB	У		У	rc	n	14 cm
SV96115 - S1	SV-51	PISY	n	<5	V	medium	open	100-200	È	R	RB	V	У	V	rc	n	15.5 cm
SV96140 - S1- 1	SV-52	PISY	n	<5	V	high	open	50-100	L	R	RB	V	y v	V	rc	n	13.3 cm
SV96153- S1- 5.5	SV-52	PISY	V	-	,	high	open	50-100	L	R	RB		,	,	rc	n	13.5 cm
SV96129 - S1 - 1m	SV-53	PISY	-	-	У	medium	-	50-100	L	R	RB	У	У	У		n	12.5 cm
SV96006 - S - 4m	SV-55	PISY	У	- <5	У		open	100-200	L	- -	RB	У	У	У	rc		23 cm
SV96006 - S - 4111 SV96151 - S1 - 5m	SV-55	PISY	n	<0	У	medium	open		L	- R		У	У	У	rc	n	
		PISY	У		У	high	open	50-100		- -	RB	У	У	У	rc	n	16.7 cm
SV96122 - S1/2 - 8m	SV-57	PISY	n	<5	У	medium	open	100-200	L	-	RB	У	У	У	rc	n	18 cm
SV96134	SV-58	_	У	-	У	medium	open	100-200	-	-	RB	У	У	У	rc	n	11.4 cm
SV96131 - S1 - 3m	SV-59	PISY	n	<5	У	high	open	50-100	L	R	RB	У	У	У	rc	n	11 cm
SV96013	SV-60	PISY	У	-	У	high	open	50-100	-	-	RB	У	У	У	rc	n	15.2 cm
SV96010	SV-62	PISY	n	>10	-	medium		100-200	<u> </u>			У	у	У	rc	n	-
Field Code	Lab Code		RD	EWLW		V PR	TT	TTW	BP	SOBF	SP		SW	others			
SV96133 - S1 - 7m				بمديناه محمد				4 41-					aliadia ad				
01/00400 04 0	SV-37	PISY	large	medium		nes large	present		uni	-	abs		distinct	-			
SV96120 - S1 - 6	SV-38	PISY	large	intense	no	large	present	tooth	uni	-	abs	ent	distinct	-			
SV96019 - S1	SV-38 SV-39	PISY PISY	large large	intense medium	no n zoi	large nes large	present present	tooth tooth	uni uni	-	abs abs	ent ent	distinct -	- reddish			
	SV-38 SV-39 SV-40	PISY PISY PISY	large large large	intense medium medium	no n zoi n no	large nes large large	present present present	tooth tooth tooth	uni uni uni	- - -	abs abs abs	ent ent ent	distinct - -	reddish			
SV96019 - S1 SV96102	SV-38 SV-39 SV-40 SV-42	PISY PISY PISY PISY	large large large large	intense medium medium medium	no n zoi n no n no	large nes large large large	present present present present	tooth tooth tooth tooth	uni uni uni uni	- - -	abs abs abs abs	ent ent ent ent	distinct - -	reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m	SV-38 SV-39 SV-40 SV-42 SV-43	PISY PISY PISY PISY PISY	large large large large large	intense medium medium medium medium	no no no no no	large nes large large large	present present present present present	tooth tooth tooth tooth tooth	uni uni uni uni uni	-	abs abs abs abs abs	ent ent ent ent ent	distinct distinct	reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44	PISY PISY PISY PISY PISY	large large large large large large	intense medium medium medium medium medium	no no no no no no no no fev	large nes large large large large v large	present present present present present present	tooth tooth tooth tooth tooth	uni uni uni uni uni uni	- - - -	abs abs abs abs abs	ent ent ent ent ent ent	distinct distinct distinct	reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45	PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	intense medium medium medium medium medium intense	no no no no no no fev	large nes large large large v large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni	-	abs abs abs abs abs abs	ent ent ent ent ent ent	distinct distinct distinct distinct	reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	intense medium medium medium medium medium intense intense	no n	large nes large large large large v large large large	present	tooth tooth tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni uni uni	- - - - -	abs abs abs abs abs abs abs	ent ent ent ent ent ent ent	distinct distinct distinct distinct distinct	reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large	intense medium medium medium medium medium medium intense intense medium	no n	large nes large large large large v large large large large	present	tooth	uni	- - - - - - -	abs abs abs abs abs abs abs	ent	distinct distinct distinct distinct distinct distinct distinct	reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	intense medium medium medium medium intense intense medium medium	no n	large nes large large large large v large large large large	present	tooth	uni	- - - - -	abs abs abs abs abs abs abs abs	ent	distinct distinct distinct distinct distinct distinct distinct distinct distinct	reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large	intense medium medium medium medium intense intense medium medium medium	non	large nes large large large large v large large large large	present present present present present present present present present present	tooth	uni	- - - - - - -	abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large	intense medium medium medium medium intense intense medium medium	non	large large large large large v large large large large large	present	tooth	uni	- - - - - - - -	abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large	intense medium medium medium medium intense intense medium medium medium	non	large	present	tooth	uni	- - - - - - - - -	abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52	PISY PISY PISY PISY PISY PISY PISY PISY	large	intense medium medium medium medium medium intense intense medium medium medium medium medium	non zoin no	large	present	tooth	uni	- - - - - - - - - -	abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large	intense medium medium medium medium medium intense intense medium medium medium medium intense	no n	large large large large v large	present	tooth	uni	- - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1 SV96140 - S1 - 1	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large	intense medium medium medium medium intense intense medium medium medium medium medium medium medium medium intense medium	no n	large large large large v large large large large large large large large v large	present	tooth	uni	- - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1 SV96140 - S1 - 1 SV96153 - S1 - 5.5	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52 SV-53	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large	intense medium medium medium medium intense intense medium medium medium medium medium medium medium intense medium	non zon non non non non non non non non	large large large large v large large large large large large large v large large large large large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish - reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1 SV96140 - S1 - 1 SV96153 - S1 - 5.5 SV96129 - S1 - 1m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52 SV-53 SV-54	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large large	intense medium medium medium medium intense intense medium	non zon non non non non non non non non	large large large large v large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish - reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96140 - S1 - 1 SV96153 - S1 - 5.5 SV96129 - S1 - 1m SV96006 - S - 4m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52 SV-53 SV-54 SV-55	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large large large	intense medium medium medium medium medium intense intense medium medium medium medium medium intense	non zon non non non non non non non non	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish reddish - reddish reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1 SV96153 - S1 - 5.5 SV96129 - S1 - 1m SV96006 - S - 4m SV96151 - S1 - 5m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52 SV-53 SV-54 SV-55 SV-56	PISY PISY PISY PISY PISY PISY PISY PISY	large	intense medium medium medium medium intense intense medium medium medium medium medium medium intense	no   no   no   no   no   no   no   no	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish - reddish - reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96116 - S1 - 3 SV96115 - S1 SV96153 - S1 - 5.5 SV96129 - S1 - 1m SV96006 - S - 4m SV96151 - S1 - 5m SV96122 - S1/2 - 8m	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-49 SV-50 SV-51 SV-52 SV-53 SV-54 SV-55 SV-56 SV-57	PISY PISY PISY PISY PISY PISY PISY PISY	large	intense medium medium medium medium medium intense intense medium	no   no   no   no   no   no   no   no	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish - reddish reddish - reddish			
SV96019 - S1 SV96102 - SV96113 - S1 - 1m SV96136 - S1 - 2m SV96149 - S1 - 3m SV96001 - S1 - 1 SV96124 - S1 - 5m SV96139 SV96121 - S1 - 15 SV96115 - S1 SV96140 - S1 - 1 SV96153 - S1 - 5.5 SV96129 - S1 - 1m SV96006 - S - 4m SV96122 - S1/2 - 8m SV96134	SV-38 SV-39 SV-40 SV-42 SV-43 SV-44 SV-45 SV-46 SV-47 SV-48 SV-50 SV-51 SV-52 SV-53 SV-54 SV-54 SV-55 SV-54 SV-55 SV-54 SV-55 SV-56 SV-57 SV-58	PISY PISY PISY PISY PISY PISY PISY PISY	large	intense medium medium medium medium medium intense intense medium	no   no   no   no   no   no   no   no	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -	abs abs abs abs abs abs abs abs abs abs	ent	distinct	reddish reddish reddish reddish reddish reddish reddish reddish - reddish reddish - reddish			

Field Code	Lab Code	e sneci	es pith	RMT	fungi	GL	SC	tree aq	e L/N	R/O	WI	ma c	ro mi	cro RBC	Atech	Sed	radius
SV96138 - S1 - 2	SV-66	PISY	у		y	high	open	50-100	L	R	RB	у	У	у	rc	n	11 cm
SV96012	SV-67	PISY	У	-	<b>y</b> -	high	open	50-100		- 11	RB	У	У	У	rc	n	12.5 cm
SV96003 - S1- 1	SV-69	PISY	n	5- 10	V	high	-	50-100	L	R	RB	У	V	У	rc	n	21cm
SV96101- S1- 3,3	SV-70	PISY	У	-	V	medium	open	100-200			RB	У	У	У	rc	n	12 cm
SV96119	SV-71	PISY	У	-	V	medium	open	50-100	-	_	RB	У	V	У	rc	n	13.3 cm
SV96103 - S1 - 1,5	SV-72	PISY	У	-	V	medium	open	100-200		R	RB	У	У	У	rc	n	12.3 cm
SV96144 - S1 - 2	SV-73	PISY	У	-	У	high	open	<50	Ĺ	R	RB	У	У	У	rc	n	8.8 cm
SV96043	SV-74	PISY	У		У	high	open	50-100	-	-	RB	У	У	У	rc	n	14 cm
SV960043	SV-75	PISY	У	-	У	high	open	50-100	-	-	RB	У	У	У	rc	n	13 cm
SV96010 - S1 - 1	SV-77	PISY	n	<5		medium	-	>200	L	R	RB				rc	n	20.5 cm
- S1- 1m	SV-78	PISY	У	-	y V	medium	open	50-100	- L	R	RB	y V	y	у	rc	n	8.7 cm
- S1- IIII - S1- 1,5	SV-80	PISY		-	,	high	open	50-100	L	R	RB		,		rc	n	9.5 cm
- S1- 1,5 - S1- 7	SV-87	PISY	У	-	У	-		50-100	L	R	RB	У	У	У			8.8 cm
- S1- 7 - S1- 1m	SV-88	PISY	У	-	У	high	open		L		RB	У	У	У	rc	n	
_	SV-88	PISY	У		У	medium	open	50-100		R		У	У	У	rc	n	8.2 cm
- S1- 1,5		_	У	-	У	medium	open	100-200		R	RB	У	У	У	rc	n	16 cm
- S1- 3	SV-93	PISY	У	-	У	high	open	50-100	L	R	RB	У	У	У	rc	n	9.9 cm
-	SV-96	PISY	У	-	У	high	open	50-100		-	RB	У	у	У	rc	n	8.5 cm
- S1- 2	SV-99	PISY	У	-	У	medium	open	100-200		R	RB	У	у	У	rc	n	11.5 cm
-	SV-102	PISY	у	-	У	low	close		-		RB	У	У	У	rc	n	11.8 cm
- S1- 2	SV-104	PISY	у	-	У	high	open	50-100	L	R	RB	У	У	У	rc	n	10.3 cm
- S1- 1,5m	SV- 106	PISY	у	-	У	medium	open	100-200		R	RB	У	У	У	rc	n	13.8 cm
- S1- 1m	SV- 107	PISY	у	-	У	medium	open	50-100	L	R	RB	У	У	у	rc	n	7.6 cm
- S1-	SV- 108	PISY	у	-	У	low	open	50-100	L	R	RB	У	У	у	rc	n	7 cm
- S1- 0,5	SV- 109	PISY	У	-	У	medium	open	50-100	L	R	RB	У	У	у	rc	n	6.6 cm
Field Code	Lab Code		s RD	EWLW		w	PR	TT	TTW	BP	sc		SPTh	SW	others		
SV96138 - S1 - 2	SV-66	PISY	RD large	<b>EWLW</b> mediun			PR large	TT present	TTW tooth	<b>BP</b> uni	S C		SPTh absent	SW distinct	others		
SV96138 - S1 - 2 SV96012	SV-66 SV-67	PISY PISY			n n					uni uni		ā	absent absent	distinct -	-		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1	SV-66 SV-67 SV-69	PISY PISY PISY	large	mediun mediun intense	n n n n	0	large	present	tooth	uni	-	ā	absent	distinct - distinct	- reddish		
SV96138 - S1 - 2 SV96012	SV-66 SV-67 SV-69 SV-70	PISY PISY PISY PISY	large large	mediun mediun	n n n n	0 0	large large	present present	tooth tooth	uni uni	-	6 6	absent absent	distinct - distinct distinct	-		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1	SV-66 SV-67 SV-69	PISY PISY PISY	large large large	mediun mediun intense	n n n n e fe	o o ew rings	large large large	present present present	tooth tooth tooth	uni uni uni	- - -	6 6 6	absent absent absent	distinct - distinct	- reddish		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1 SV96101 - S1 - 3,3	SV-66 SV-67 SV-69 SV-70	PISY PISY PISY PISY	large large large	mediun mediun intense low	n n n n e fe fo n n	o o ew rings ew rings	large large large large	present present present present	tooth tooth tooth tooth	uni uni uni uni	- - -	6 6 6	absent absent absent absent	distinct - distinct distinct	- reddish		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1 SV96101 - S1 - 3,3 SV96119	SV-66 SV-67 SV-69 SV-70 SV-71	PISY PISY PISY PISY PISY	large large large - large	mediun mediun intense low mediun	n n n n e fe fe n n	o o ew rings ew rings o o	large large large large large	present present present present present	tooth tooth tooth tooth tooth	uni uni uni uni uni	- - - -	6 6 6	absent absent absent absent absent	distinct - distinct distinct distinct	reddish reddish		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1 SV96101 - S1 - 3,3 SV96119 SV96103 - S1 - 1,5	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72	PISY PISY PISY PISY PISY PISY	large large large - large large	mediun mediun intense low mediun mediun	n n n n e fe fe n n n n	o o ew rings ew rings o o	large large large large large large	present present present present present present	tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni	- - - - -	6 6 6 6 6	absent absent absent absent absent absent	distinct - distinct distinct distinct distinct	reddish reddish reddish reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73	PISY PISY PISY PISY PISY PISY	large large large - large large large	mediun mediun intense low mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o ew rings ew rings o o o	large large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni	- - - - -	6 6 6 6 6 6	absent absent absent absent absent absent absent	distinct - distinct distinct distinct distinct distinct	reddish reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74	PISY PISY PISY PISY PISY PISY PISY PISY	large large large - large large large	mediun mediun intense low mediun mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o ew rings ew rings o o o o	large large large large large large large	present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni uni	- - - - - -	6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent	distinct - distinct distinct distinct distinct distinct distinct distinct	reddish reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75	PISY PISY PISY PISY PISY PISY PISY PISY	large large large - large large large large large	mediun mediun intense low mediun mediun mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o oew rings ew rings o o o o o	large	present present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni uni uni	- - - - - - -	6 6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent	distinct - distinct distinct distinct distinct distinct distinct distinct distinct	reddish reddish reddish - reddish -		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101- S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun mediun mediun mediun mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o	large	present present present present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth tooth tooth tooth	uni	- - - - - - - - -	6 6 6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent absent absent	distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct	reddish reddish reddish - reddish - - - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101- S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun mediun mediun mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o	large	present present present present present present present present present present present present present	tooth	uni	- - - - - - - - -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent absent absent absent	distinct - distinct	reddish reddish - reddish - - - - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101- S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-78	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present present present present present present present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth tooth tooth tooth tooth	uni			absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct	reddish reddish - reddish - - - - reddish - -		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-88	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present presen	tooth	uni			absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct	reddish reddish reddish - reddish - reddish reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1m - S1- 1m - S1- 1m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-88 SV-88	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent a	distinct - distinct	reddish reddish reddish - reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-80 SV-80 SV-80 SV-90 SV-93	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun mediun mediun mediun mediun mediun mediun mediun intense mediun mediun mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni			absent a	distinct - distinct	reddish reddish - reddish - reddish reddish reddish -		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96103 - S1- 1,5 SV96103 - S1- 1,5 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m - S1- 1,5 - S1- 3	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-87 SV-89 SV-90 SV-93 SV-96	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun mediun mediun mediun mediun mediun mediun mediun intense mediun mediun low low	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent a	distinct - distinct	reddish reddish - reddish - - - reddish - - - -		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1m - S1- 1m - S1- 1m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-80 SV-80 SV-80 SV-90 SV-90 SV-90 SV-90	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediun mediun intense low mediun mediun mediun mediun mediun mediun mediun mediun intense mediun low mediun	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent a	distinct	reddish reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m - S1- 1,5 - S1- 3 - S1- 2	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-80 SV-87 SV-88 SV-90 SV-93 SV-99 SV-99 SV-102	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium low low medium intense	n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni			absent a	distinct	reddish reddish reddish - reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m - S1- 1,5 - S1- 3 - S1- 2 - S1- 2	SV-66 SV-67 SV-69 SV-70 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-80 SV-90 SV-93 SV-99 SV-99 SV-102 SV-104	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense i	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent ab	distinct	reddish reddish - reddish - reddish		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m - S1- 1,5 - S1- 3 - S1- 2 - S1- 2 - S1- 2 - S1- 1,5m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-88 SV-90 SV-93 SV-96 SV-99 SV-99 SV-102 SV-104 SV-106	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense intense medium medium medium intense intense medium	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent a	distinct	reddish reddish - reddish - reddish reddish big scar		
SV96138 - S1- 2 SV96012 SV96003 - S1- 1 SV96101 - S1- 3,3 SV96119 SV96103 - S1- 1,5 SV96144 - S1- 2 SV96043 SV96004 SV96010 - S1- 1 - S1- 1m - S1- 1,5 - S1- 7 - S1- 1m - S1- 1,5 - S1- 3 - S1- 2 - S1- 2 - S1- 1,5m - S1- 1,5m	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-80 SV-87 SV-88 SV-90 SV-93 SV-96 SV-99 SV-99 SV-102 SV-104 SV-106 SV-107	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent a	distinct	reddish reddish - reddish - reddish		
SV96138 - S1 - 2 SV96012 SV96003 - S1 - 1 SV96101 - S1 - 3,3 SV96119 SV96103 - S1 - 1,5 SV96144 - S1 - 2 SV96004 SV96004 SV96010 - S1 - 1 - S1 - 1m - S1 - 1,5 - S1 - 1m - S1 - 1,5 - S1 - 2 - S1 - 2 - S1 - 2 - S1 - 2	SV-66 SV-67 SV-69 SV-70 SV-71 SV-72 SV-73 SV-74 SV-75 SV-77 SV-78 SV-80 SV-87 SV-88 SV-90 SV-93 SV-96 SV-99 SV-99 SV-102 SV-104 SV-106	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense intense medium medium medium intense intense medium	n n n n n n n n n n n n n n n n n n n	o o o o o o o o o o o o o o o o o o o	large	present	tooth	uni	- - - - - - - - - - - - - - - - - - -		absent a	distinct	reddish reddish - reddish - reddish reddish big scar		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	C tree	age	L/N	R/O	WI	macro	micro	RBC	Atech	Sec	radius
S1- 4	SV- 110	PISY	У		У	medium	ор		•	L	R	RB	У	У	У	rc	n	11 cm
S1- 2	SV- 111	PISY	y		У	high	op			L	R	RB	У	у	У	rc	n	10.7 cm
S1- 5	SV- 112	PISY	y	-	٧	medium	op			L	R	RB	У	V	У	rc	n	8.8 cm
· S1- 3	SV- 114	PISY	У	-	У	high	op			L	R	RB	У	У	У	rc	n	11 cm
- S1- 2	SV- 115	PISY	У		У	medium	ор			Ē	R	RB	У	У	У	rc	n	10.5 cm
- S1- 2m	SV- 117	PISY	У		-	medium	ор			L	R	RB	У	У	У	rc	n	14.7 cm
- S1- 1	SV- 118	PISY	У	-	У	low	op			L	R	RB	У	У	٧	rc	n	8.5 cm
- S1- 6	SV-120	PISY	У		٧	high	op			ī	R	RB	У	У	У	rc	n	12.5 cm
- S1- 3	SV-122	PISY	У		У	very high	op		00	L	R	RB	У	У	У	rc	n	11 cm
- S1- 2	SV-124	PISY	У		٧	high	op		00	L	R	RB	У	У	У	rc	n	11 cm
- S? 1/2 -	SV-125	PISY	у		У	medium	ор			-	-	RB	У	У	У	rc	n	8.8 cm
- Planka - 0,3	SV-132	PISY	-	>10	V	medium	-	50-1		L	-	RB	У	У	У	rc	n	-
- R2 -	SV-133	PISY	n	_	У	medium	ор			-	0	RB	У	У	y	rc	n	8 cm
- S - 1m - Be	SV-134	PISY	n		У	medium	- -	50-1		L	-	RB	У	У	у	rc	n	-
- ?2 - 1,5	SV-137	PISY	У		У	low	ор			-	0	RB	У	У	у	rc	n	8.5 cm
- ?2 - 2	SV- 145	PISY	У		V	medium	ор			_	0	RB	У	•		rc	n	12.3 cm
- ?2 - 0.5	SV- 143	PISY			,	medium	ор			-	0	RB	-	У	У	rc	n	7.4 cm
- ?2 - 0,5 - R2 -	SV- 148	PISY	y n	_	у -	high	opi	50-1		N	0	RB	У	У	у		n	13.5 cm
- nz - - Planka2 - 1m	SV- 149	PISY	n	<:0	-	medium		30-1	00	i	0	RB	У	У	У	rc	n	-
- S1- 1m	SV- 150	PISY		5-10	-	medium	-	50-1	00	L	R	RB	У	У	У	rc		8.5 cm
- 81- IIII - R2-	SV- 152	PISY	n	5- 10	У	medium	-			N	0	RB	У	У	У	rc	n	7.3 cm
			у		-		ор					_	У	У	У	rc	n	
- ?1/0 - 1m	SV- 159	PISY	n	<5	-	medium		100-		-	-	RB	У	У	У	rc	n	13 cm
1,5 1,5	SV- 161	PISY	n		У	high		50-1		-	-	RB	У	У	У	rc	n	12 cm
- R?2 - 1,5m	SV- 183	PISY	у		у	medium	ор				0	RB	у	У	У	rc	n	6 cm
Field Code - S1- 4	Lab Code SV-110	species PISY		EWLW	CV		PR	TT	TTW			SOBP	SPTh	S W distinct	otn -	ers		
- S1- 4 - S1- 2	SV- 111	PISY	large	intense			large	present	tooth				absent		-		-	
- S1- 2 - S1- 5	SV- 112	PISY	large	intense medium			large large	present	tooth		ni - ni -		absent	distinct				
- S1- 3 - S1- 3	SV- 112	IFIOI	large					procent	tooth					dictiont				
- S1- 3 - S1- 2		DICV						present	tootl				absent	distinct	-			
	_	PISY	large	intense	no		large	present	tootl	n u	ni -		absent	distinct	-	holoo		
	SV- 115	PISY	large large	intense medium	no n no		large large	present present	tootl tootl	n u n u	ni - ni -		absent absent	distinct -	-	holes		
- S1- 2m	SV- 115 SV- 117	PISY PISY	large large large	intense medium intense	no n no fev	rings	large large large	present present present	tooth tooth tooth	า	ni - ni - ni -		absent absent absent	distinct - -	- big l	holes		
- S1- 2m - S1- 1	SV- 115 SV- 117 SV- 118	PISY PISY PISY	large large large large	intense medium intense medium	no n no few n few	rings	large large large large	present present present present	tooth tooth tooth	n u n u n u n u	ni - ni - ni - ni -		absent absent absent absent	distinct - - distinct	big I	holes		
- S1- 2m - S1- 1 - S1- 6	SV- 115 SV- 117 SV- 118 SV- 120	PISY PISY PISY PISY	large large large large	intense medium intense medium intense	no n no few n few	rings	large large large large large	present present present present present	tooth tooth tooth tooth	n u n u n u n u n u	ni - ni - ni - ni - ni -		absent absent absent absent absent	distinct distinct distinct	- big l - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122	PISY PISY PISY PISY PISY	large large large large large	intense medium intense medium intense intense	no n no few n few no	rings rings	large large large large large large	present present present present present present	tooth tooth tooth tooth tooth	n u n u n u n u n u n u n u n u	ni - ni - ni - ni - ni - ni -		absent absent absent absent absent absent	distinct - distinct distinct distinct	- big I - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124	PISY PISY PISY PISY PISY	large large large large large large large	intense medium intense medium intense intense low	no no few no no no	rings	large large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	n u n u n u n u n u n u n u n u n u n u	ni - ni - ni - ni - ni - ni -		absent absent absent absent absent absent present	distinct - distinct distinct distinct distinct	- big I - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 -	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125	PISY PISY PISY PISY PISY PISY PISY	large	intense medium intense medium intense intense low medium	no no few no no no no no no no no	rings	large large large large large large large large	present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth	n u n u n u n u n u n u n u n u n u n u	ni -		absent absent absent absent absent absent present present	distinct - distinct distinct distinct distinct distinct distinct	- big I - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large small	intense medium intense medium intense intense intense low medium medium	no no few no no no no no few	rings rings rings	large large large large large large large large	present present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth tooth	n u n u n u n u n u n u n u n u n u n u	ni -		absent absent absent absent absent absent present present absent	distinct distinct distinct distinct distinct distinct distinct distinct	- big I - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 -	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large small large	intense medium intense medium intense intense intense low medium medium medium	no no few no	rings in ings	large	present present present present present present present present present present present	tooth	n u n u n u n u n u n u n u n u n u n u	ni -		absent absent absent absent absent absent present present absent absent	distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct	- big I - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large small large large	intense medium intense medium intense intense intense low medium medium medium medium	no n	rrings rrings	large	present present present present present present present present present present present present present	tooth	n unn unn unn unn unn unn unn unn unn u	ni -		absent absent absent absent absent absent present present absent absent absent	distinct - distinct	- big I - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large	intense medium intense medium intense intense intense low medium medium medium medium medium medium	no n	rrings rrings	large	present present present present present present present present present present present present present present	tooth	n u n u n u n u n u n u n u n u n u n u	ni -		absent absent absent absent absent absent present present absent absent absent absent	distinct - distinct	- big I	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large small	intense medium intense medium intense medium intense intense low medium medium medium medium intense	no n	rrings rrings	large	present present present present present present present present present present present present present present present	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent	distinct - distinct	- big I - - - - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S2 - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145 SV- 147	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large	intense medium intense medium intense intense low medium medium medium medium intense medium medium	no no few no	rrings rrings rrings	large	present present present present present present present present present present present present present present present present present present	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent	distinct - distinct	- big I - - - - - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 -	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145 SV- 147	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large large large	intense medium intense medium intense intense low medium medium medium medium medium medium medium intense medium intense	no no few no	rrings rrings rrings	large	present presen	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent	distinct - distinct	- big I - - - - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 - - Planka2 - 1m	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145 SV- 147 SV- 148 SV- 149	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large	intense medium intense medium intense intense low medium medium medium medium medium medium intense medium intense intense	no no few no	rrings rrings rrings	large	present present present present present present present present present present present present present present present present present present	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent absent	distinct - distinct	- big I - - - - - - - - - - - -	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 - - Planka2 - 1m - S1- 1m	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 122 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145 SV- 147 SV- 148 SV- 149 SV- 150	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large large large	intense medium intense medium intense intense intense low medium medium medium medium intense intense medium	no no few no	rrings rrings	large	present presen	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent absent absent absent	distinct - distinct	- big I	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 - - Planka2 - 1m - S1- 1m - R2 -	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 133 SV- 134 SV- 137 SV- 145 SV- 145 SV- 149 SV- 150 SV- 150	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large large	intense medium intense medium intense intense low medium medium medium medium medium medium intense medium intense intense	no no few no	rrings rrings	large	present presen	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent absent	distinct - distinct	- big I	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 - - Planka2 - 1m - S1- 1m - R2 - - ?1/0 - 1m	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 132 SV- 133 SV- 134 SV- 137 SV- 145 SV- 147 SV- 148 SV- 149 SV- 150 SV- 152 SV- 159	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large large large	intense medium intense medium intense intense intense low medium medium medium medium intense intense medium	no no few no	rrings rrings	large	present presen	tooth	n un	ni -		absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent absent absent absent	distinct - distinct	- big I	holes		
- S1- 2m - S1- 1 - S1- 6 - S1- 3 - S1- 2 - S? 1/2 - - Planka - 0,3 - R2 - - S - 1m - Be - ?2 - 1,5 - ?2 - 2 - ?2 - 0,5 - R2 - - Planka2 - 1m - S1- 1m - R2 -	SV- 115 SV- 117 SV- 118 SV- 120 SV- 122 SV- 124 SV- 125 SV- 133 SV- 134 SV- 137 SV- 145 SV- 145 SV- 149 SV- 150 SV- 150	PISY PISY PISY PISY PISY PISY PISY PISY	large small large large small large large large	intense medium intense medium intense intense intense low medium medium medium medium intense intense medium intense	no no few no	rrings rrings rrings	large	present presen	tooth	n un	ni -		absent absent absent absent absent present present absent	distinct - distinct	- big I	holes		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	ma c ro	micro	RBC	Atech	Sec	radius
S1- 2	SV- 184	PISY	У	-	у	high	open	<50	L	R	RB	У	у	у	rc	n	10 cm
R/S1-3	SV- 193	PISY	у	-	у	medium	open	50-100	-	R	RB	У	У	У	rc	n	6.5 cm
S1- 4,5	SV- 194	PISY	n	<5	у	medium	open	100-200	L	R	RB	У	У	у	rc	n	12.5 cm
S?1/2 - 1m	SV- 197	PISY	у	-	у	medium	open	50-100	-	-	RB	У	У	у	rc	n	8.5 cm
R?2 -	SV-200	PISY	у	-	-	high	closed	50-100	-	0	RB	У	У	у	rc	n	7.5 cm
S1- 5,5m	SV-201	PISY	n	5-10	у	high	-	50-100	L	R	RB	У	У	у	rc	n	24 cm
S1- 5	SV-202	PISY	У	-	у	medium	open	<50	L	R	RB	У	У	у	rc	n	7 cm
R?2 - 2m	SV-203	PISY	n	<5	-	medium	-	100-200	-	0	RB	У	У	У	rc	n	13 cm
S?1- 3	SV-206	PISY	у	-	-	high	open	50-100	-	R	RB	У	У	У	rc	n	6.5 cm
S1- 1,5	SV-211	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n	6.5 cm
R?1/2	SV-217	PISY	n	<5	у	medium	open	50-100	-	-	RB	У	У	У	rc	n	18 cm
S/R1- 1	SV-218	PISY	у	-	у	medium	open	50-100	-	R	RB	У	У	У	rc	n	6.1cm
R?1- 1m	SV-219	PISY	У	-	У	high	open	50-100	-	R	RB	У	У	У	rc	n	12.2 cm
?2 - 1,5	SV-220	PISY	n	<5	У	medium	-	50-100	-	0	RB		У	У	rc	n	8.5 cm
R1/2 - 3	SV-221	PISY	n	<5	у	high	-	50-100	N	-	RB	-	y	у	rc	n	17.5 cm
S1- 4	SV-222	PISY	У	-	У	medium	closed	50-100	L	R	RB	-	y	у	rc	n	10 cm
S1- 1m	SV-225	PISY	У	-	y	high	open	50-100	L	R	RB	-	y	y	rc	n	11.1 cm
· S1- 3m	SV-229	PISY	n	<5	y	medium	- '	100-200	L	R	RB	-	y	У	rc	n	11.5 cm
· R?2 -	SV-230	PISY	n	>10	y	medium	-	50-100	-	0	RB	-	y	У	rc	n	-
- S1 - 1m	SV-232	PISY	У	-	y	medium	closed	100-200	L	R	RB	-	-	y	rc	n	8.7 cm
S1- 5,5	SV-233	PISY	٧	-	У	medium	open	50-100	L	R	RB	-	У	У	rc	n	10.5 cm
· S1 - 1m	SV-234	PISY	٧	-	У	medium	open	50-100	L	R	RB	-	У	٧	rc	n	10.5 cm
S1- 2 Be	SV-236	PISY	n	>10	У	medium	-	100-200	L	R	RB	-	У	٧	rc	n	-
· S?1- 3	SV-237	PISY	У	-	У	medium	open	100-200	-	R	RB	-	-	У	rc	n	11.5 cm
Field Code	Lab Code	species		EWLW	CW		TT	TTW BF	SO	BP S	SPTh	SW	other				
· S1- 2	SV- 184	PISY	large	medium	no	large	oresent	tooth un	-	a	absent	distinct	-				
- R/S1- 3	SV- 193	PISY	large	medium	no	large	oresent	tooth un	i -	a	absent	distinct	-				
S1- 4,5	SV-194	PISY	large	medium	no	large	orocont			-	absent	-	-				
S?1/2 - 1m	SV- 197				110	large	oresent	tooth un	i -			-					
	O V - 137	PISY	large	medium	no		present	tooth un			absent	-	-				
· R?2 -	SV-200	PISY PISY	large large	medium medium		large			i -	a			-				
					no	large	oresent	tooth un	i - i -	á	absent						
S1- 5,5m	SV-200	PISY	large large	medium	no no	large   large   large	oresent oresent oresent	tooth un tooth un	i - i -	6 6	absent absent	-	-				
S1- 5,5m S1- 5	SV-200 SV-201	PISY PISY	large large large	medium intense	no no no no	large   large   large   large	oresent oresent oresent oresent	tooth un tooth un tooth un	i - i - i -	6 6	absent absent absent absent	- distinct	-				
S1- 5,5m S1- 5 R?2 - 2m	SV-200 SV-201 SV-202 SV-203	PISY PISY PISY	large large large large	medium intense medium intense	no no no no no	large   large   large   large   large	oresent oresent oresent oresent oresent	tooth un tooth un tooth un tooth un tooth un	i - i - i - i -	6 6 6	absent absent absent absent absent	- distinct	-				
S1- 5,5m S1- 5 R?2 - 2m S?1- 3	SV-200 SV-201 SV-202	PISY PISY PISY PISY	large large large large large	medium intense medium	no no no no no	large   large   large   large   large   large   large   large	present present present present present present	tooth un tooth un tooth un tooth un	i - i - i - i - i -	6 6 6	absent absent absent absent absent absent	- distinct distinct	- - -				
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211	PISY PISY PISY PISY PISY	large large large large	medium intense medium intense intense medium	no no no no no	large   large	oresent oresent oresent oresent oresent oresent oresent	tooth un	i - i - i - i - i - i -	6 6 6 6	absent absent absent absent absent absent absent	- distinct distinct - distinct distinct	- - - - -	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2	SV-200 SV-201 SV-202 SV-203 SV-206	PISY PISY PISY PISY PISY	large large large large large large	medium intense medium intense intense	no no no no no no	large   large	present present present present present present	tooth un	i - i - i - i - i - i - i - i -	6 6 6 6 6	absent absent absent absent absent absent	- distinct distinct - -	- - - - -	small ho	oles		
R?2 - S1 - 5,5m S1 - 5 R?2 - 2m S?1 - 3 S1 - 1,5 R?1/2 S/R1 - 1	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small small	medium intense medium intense intense medium intense intense	no no no no no no no no	large   large	present present present present present present present present present	tooth un	i - i - i - i - i - i - i - i - i - i -	6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent	- distinct distinct - distinct distinct distinct	- - - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219	PISY PISY PISY PISY PISY PISY	large large large large large small small large	medium intense medium intense intense medium intense	no no no no no no no no	large   large	present present present present present present present present present present	tooth un	i - i - i - i - i - i - i - i - i - i -	6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent absent	- distinct distinct - distinct distinct	- - - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large small small large large	medium intense medium intense intense medium intense medium intense	no no no no no no no no no no	large   large	present present present present present present present present present present present present present present present	tooth un	i - i - i - i - i - i - i - i - i - i -	6 6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent absent absent absent	- distinct distinct - distinct distinct - distinct distinct distinct distinct distinct distinct	- - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small small large large large	medium intense medium intense intense medium intense medium intense intense intense	no no no no no no no no no no no	large   large	present present present present present present present present present present present present present present present present	tooth un	i - i - i - i - i - i - i - i - i - i -	6 6 6 6 6 6 6 6 6	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	- distinct distinct - distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m - ?2 - 1,5 R1/2 - 3 S1- 4	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-221	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small small large large large	medium intense medium intense intense medium intense intense medium intense intense intense intense intense intense intense	no no no no no no no no no no no	large   large	present presen	tooth un	-   -   -     -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent	- distinct	- - - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S(R1- 1 R?1- 1m - ?2- 1,5 R1/2 - 3 S1- 4 S1- 1m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-225	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small small large large large large	medium intense medium intense intense medium intense intense medium intense intense intense intense intense intense intense intense intense	no no no no no no no no no no no no no n	large	present presen	tooth un	-   -   -   -     -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	- distinct distinct - distinct	- - - - - - full of s	small ho	oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S?1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3 S1- 4 S1- 1m S1- 3m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-225 SV-229	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small small large large large large large large	medium intense medium intense intense medium intense intense medium intense intense intense intense medium	no no no no no no no no no no no no no n	large   large	present presen	tooth un		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent a	distinct	- - - - - - - - - - - -		oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S?1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3 S1- 4 S1- 1m S1- 3m R?2 -	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-225 SV-229 SV-230	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large small small large large large large large	medium intense medium intense intense medium intense intense medium intense intense intense intense medium low	no no no no no no no no no no no no eno no no eno no eno no eno e	large   large	present presen	tooth un too	-   -   -     -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent a	distinct	- - - - - - - - - - - - - - - - - - -		oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3 S1- 4 S1- 1m S1- 3m R?2 - S1- 1m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-222 SV-225 SV-229 SV-230 SV-232	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense medium intense intense medium intense intense medium intense intense intense intense intense medium low medium	no no no no no no no no no no no no no n	large   large	present presen	tooth un too			absent ab	distinct	- - - - - - - - - - - - - - - - - - -		oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3 S1- 4 S1- 1m S1- 3m R?2 - S1- 1m S1- 3m R?2 - S1- 1m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-225 SV-225 SV-230 SV-232 SV-233	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense medium intense intense medium intense intense medium intense intense intense intense intense medium low medium medium	no no no no no no no no no no no no no n	large   large	present presen	tooth un too		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent a	distinct	- - - - - - - - - - - - - - - - - - -		oles		
S1- 5,5m S1- 5 R?2 - 2m S?1- 3 S1- 1,5 R?1/2 S/R1- 1 R?1- 1m ?2 - 1,5 R1/2 - 3 S1- 4 S1- 1m S1- 3m R?2 - S1- 1m	SV-200 SV-201 SV-202 SV-203 SV-206 SV-211 SV-217 SV-218 SV-219 SV-220 SV-221 SV-222 SV-222 SV-225 SV-229 SV-230 SV-232	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense medium intense intense medium intense intense medium intense intense intense intense intense medium low medium	no no no no no no no no no no no no no n	large	present presen	tooth un too	-   -		absent ab	distinct	- - - - - - - - - - - - - - - - - - -		oles		

9 cm 13.5 cm 8.5 cm 11 cm 7.8 cm 10 cm

9 cm 7.5 cm 13 cm 14 cm 10.5 cm 14 cm 9 cm

10 cm 8 cm

11.5 cm 17.5 cm 12 cm 9 cm 16 cm 11 cm 6 cm 10 cm

Field Code	Lab Code	specie	s pith	RMTP	fungi	GL	SC	tree age	L/	N R	O WI	macro	mic ro	RBC	Atech	Sec
- S1- 7m	SV-239	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 7	SV-241	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 2,5	SV-243	PISY	n	<5	у	medium	-	50-100	L	R	RB	У	У	У	rc	n
- S1- 7	SV-254	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 2	SV-255	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
-	SV-257	PISY	у	-	у	medium	open	50-100	-	-	RB	У	У	У	rc	n
- S1- 0,5	SV-258	PISY	у	-	у	medium	open	100-200	L	R	RB	У	У	У	rc	n
- R? - 2	SV-259	PISY	n	<5	у	medium	open	50-100	-	0	RB	У	У	У	rc	n
SV960xx - S1- 6	SV-261	PISY	n	<5	-	high	-	50-100	L	R	RB	У	У	У	rc	n
- S1- 5,5	SV-262	PISY	у	-	у	medium	closed	100-200	L	R	RB	У	У	У	rc	n
- S1- 3 - Be Ny	SV-263	PISY	n	>10	у	medium	-	50-100	L	R	RB	У	У	У	rc	n
- S1- 2m	SV-264	PISY	-	<5	у	high	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 1,5m	SV-265	PISY	у	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
- S1 - 15	SV-267	PISY	У	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 2	SV-270	PISY	У	-	у	low	open	100-200	L	R	RB	У	У	У	rc	n
- S1- 3	SV-272	PISY	n	<5	у	medium	open	100-200	L	R	RB	У	У	У	rc	n
- S1- 5,5	SV-274	PISY	у	-	у	high	open	50-100	L	R	RB	У	У	У	rc	n
- S1- 5	SV-277	PISY	n	<5	у	high	-	50-100	L	R	RB	У	У	У	rc	n
- 1/2 -	SV-278	PISY	у	-	у	medium	open	50-100	-	-	RB	У	У	У	rc	n
- S1- 7m	SV-279	PISY	n	<5	у	medium	open	100-200	L	R	RB	У	У	У	rc	n
- S1- 2	SV-280	PISY	у	-	у	medium	open	100-200	L	R	RB	У	У	У	rc	n
- S?1-	SV-281	PISY	У	-	У	medium	open	50-100	-	R	RB	У	У	У	rc	n
- S1- Ny	SV-282	PISY	n	5-10	У	medium	-	50-100	L	R	RB	У	У	У	rc	n
0,5	SV-283	PISY	n	5-10	У	medium	-	50-100	-	-	RB	У	У	У	rc	n
Field Code	Lab Code	species	RD	EWLW	CW	PR	TT	TTW E	3P 5	SOBP	SPTh	SW	othe	ers		
- S1- 7m	SV-239	PISY	large	medium	no	large	present	tooth u	ıni -		absent	distinct	-			
- S1- 7	SV-241	PISY	large	intense	no	large	present	tooth u	ıni -		absent	distinct	-			
- S1- 2,5	SV-243	PISY	large	intense	no	large	present	tooth u	ıni -		absent	distinct	-			
- S1- 7	SV-254	PISY	large	medium	no	large	present	tooth u	ıni -		absent	distinct	-			
- S1- 2	SV-255	PISY	large	medium	no	large	present	tooth u	ıni -		absent	distinct	-			
-	SV-257	PISY	large	medium	no	large	present	tooth L	ıni -		absent	distinct	-			
- S1- 0,5	SV-258	PISY	large	medium	no	large	present	tooth u	ıni -		absent	distinct	-			
- R? - 2	SV-259	PISY	large	medium	no	large	present	tooth u	ıni -		absent	distinct	-			
SV960xx - S1- 6	SV-261	DIOM	Lauren								absent	-	-			
- S1- 5,5		PISY	large	medium	no	large	present	tooth u	ıni  -		absent					
J . U,U	SV-262	PISY	large	medium	no		present present		ıni - ıni -		absent	distinct	-			
- S1- 3- Be Ny						large	•	tooth u					-		_	
,	SV-262	PISY	large	medium	no	large large	present	tooth u	ıni -		absent	distinct				
- S1- 3 - Be Ny	SV-262 SV-263	PISY PISY	large large	medium intense	no no	large large large	present present	tooth u tooth u tooth u	ıni - ıni -		absent absent	distinct distinct	- - -			
- S1- 3 - Be Ny - S1- 2m	SV-262 SV-263 SV-264	PISY PISY PISY	large large large	medium intense intense	no no no	large large large large	present present present	tooth u tooth u tooth u tooth u	ıni - ıni - ıni -		absent absent absent	distinct distinct distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m	SV-262 SV-263 SV-264 SV-265	PISY PISY PISY	large large large large	medium intense intense intense	no no no no	large large large large large	present present present present	tooth L tooth L tooth L tooth L tooth L	ıni - ıni - ıni - ıni -		absent absent absent absent	distinct distinct distinct distinct	-			
- S1- 3- Be Ny - S1- 2m - S1- 1,5m - S1- 15	SV-262 SV-263 SV-264 SV-265 SV-267	PISY PISY PISY PISY PISY	large large large large large	medium intense intense intense intense	no no no no	large large large large large large	present present present present present	tooth L tooth L tooth L tooth L tooth L tooth L	ini - ini - ini - ini - ini -		absent absent absent absent absent	distinct distinct distinct distinct distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2	SV- 262 SV- 263 SV- 264 SV- 265 SV- 267 SV- 270	PISY PISY PISY PISY PISY	large large large large large large	medium intense intense intense intense intense	no no no no no	large large large large large large large	present present present present present present	tooth L	ini -		absent absent absent absent absent absent	distinct distinct distinct distinct distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3	SV- 262 SV- 263 SV- 264 SV- 265 SV- 267 SV- 270 SV- 272	PISY PISY PISY PISY PISY PISY	large large large large large large large	medium intense intense intense intense intense intense	no no no no no	large large large large large large large large	present present present present present present present	tooth L	ini -		absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct - distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3 - S1- 5,5	SV- 262 SV- 263 SV- 264 SV- 265 SV- 267 SV- 270 SV- 272 SV- 274	PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	medium intense intense intense intense intense intense intense	no no no no no	large	present present present present present present present present	tooth L tooth L tooth L tooth L tooth L tooth L tooth L tooth L tooth L	ini -		absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3 - S1- 5,5 - S1- 5	SV-262 SV-263 SV-264 SV-265 SV-267 SV-270 SV-272 SV-274 SV-277	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large	medium intense intense intense intense intense intense intense intense	no no no no no no	large	present	tooth untooth	ini -		absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3 - S1- 5,5 - S1- 5	SV-262 SV-263 SV-264 SV-265 SV-267 SV-270 SV-272 SV-274 SV-277 SV-278	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense intense intense intense intense intense intense intense intense medium	no no no no no no no no	large	present present present present present present present present present present	tooth L tooth	-   -     -		absent absent absent absent absent absent absent absent absent absent	distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3 - S1- 5,5 - S1- 5 - 1/2 - - S1- 7m	SV-262 SV-263 SV-264 SV-265 SV-267 SV-270 SV-272 SV-274 SV-277 SV-278 SV-279	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense intense intense intense intense intense intense intense medium medium	no no no no no no no no no no	large	present present present present present present present present present present present present	tooth L tooth	-   -     -		absent absent absent absent absent absent absent absent absent absent absent	distinct	-			
- S1- 3 - Be Ny - S1- 2m - S1- 1,5m - S1- 15 - S1- 2 - S1- 3 - S1- 5,5 - S1- 5 - 1/2 - - S1- 7m - S1- 2	SV-262 SV-263 SV-264 SV-265 SV-267 SV-270 SV-272 SV-274 SV-277 SV-278 SV-279 SV-280	PISY PISY PISY PISY PISY PISY PISY PISY	large	medium intense medium medium intense	no n	large	present present present present present present present present present present present present present	tooth L tooth	Ini		absent absent absent absent absent absent absent absent absent absent absent absent	distinct	-	mish		

Field Code	Lab Code	species		RMTP	fungi	GL		sc	tree age	L/N	R/O		macro		RBC	Atech		radius
- S1- 4	SV-287	PISY		<5	у	hig		-	100-200	L	R	RB	У	У	У	rc	n	17.5 cm
- S1- 3	SV-288	PISY		<5	У	_	dium	open	100-200	L	R	RB	У	У	У	rc	n	20.3 cm
- S1- 3m Ny	SV-289	PISY	у -		У		dium	open	100-200	L	R	RB	У	У	У	rc	n	10.8 cm
- S1- 3	SV-290	PISY	у -		-	hig		open	50-100	L	R	RB	У	У	У	rc	n	8.7 cm
- 1-	SV-292	PISY	у -		у	_	dium	open	100-200	-	R	RB	У	У	У	rc	n	10.2 cm
- S?1-	SV-294	PISY	у -		у		dium	open	50-100	-	R	RB	У	У	У	rc	n	11.4 cm
- S1- 2m	SV-295	PISY	у -		у		dium	open	100-200	L	R	RB	У	У	У	rc	n	11 cm
- S1- 6m	SV-297	PISY		<5	у		dium	-	100-200	L	R	RB	У	У	У	rc	n	17 cm
- S1 - 1m	SV-298	PISY	у -		у		dium	open	100-200	L	R	RB	у	У	у	rc	n	17.8 cm
- S1? - 7	SV-299	PISY	n -		у	hig		-	50-100	L	-	RB	У	У	У	rc	n	13.5 cm
- S - 3	SV-300	PISY		<5	у	me	dium	-	50-100	L	-	RB	У	У	у	rc	n	9 cm
- S1- 1	SV-303	PISY	n <	<5	у		dium	open	50-100	L	R	RB	У	У	У	rc	n	10 cm
- S1- 2	SV-304	PISY	у -		у		dium	open	>200	L	R	RB	У	У	У	rc	n	10 cm
- S1- 1	SV-308	PISY	у -		у	me	dium	open	100-200	L	R	RB	У	У	У	rc	n	9.7 cm
- S1- 7	SV-309	PISY	y -		-	hig	h	open	50-100	L	R	RB	У	У	у	rc	n	13 cm
- S1- 3m	SV-312	PISY	у -		у	hig	h	open	50-100	L	R	RB	У	У	У	rc	n	11.2 cm
- S1- 6	SV-313	PISY	у -		у	hig	h	open	50-100	L	R	RB	у	У	У	rc	n	11.6 cm
- S1-	SV-314	PISY	n 5	5- 10	у	low	•	-	100-200	L	R	RB	у	У	У	rc	n	9.5 cm
- S1- 1	SV-315	PISY	у -		у	hig	h	open	50-100	L	R	RB	У	У	У	rc	n	11.8 cm
- S?1- 2	SV-316	PISY	у -		у	me	dium	open	50-100	-	R	RB	У	У	У	rc	n	8.1cm
- S?1- 1,5	SV-319	PISY	у -		-	me	dium	open	50-100	-	R	RB	У	У	у	rc	n	6.4 cm
- S1	SV-320	PISY	n <	<5	У	hig	h	open	50-100	L	R	RB	У	У	У	rc	n	8 cm
- S1- 6m	SV-321	PISY	n 5	5- 10	y	me	dium	-	100-200	L	R	RB	У	У	У	rc	n	15 cm
-	SV-322	PISY	٧ -		y	me	dium	open	100-200	-	-	RB	У	У	٧	rc	n	11 cm
Field Code	Lab Code	e specie:	-	EWL		CW	PR	TT	TTW	ВР	so	ВР	SPTh	SW	othe	rs		-
Field Code - S1- 4	Lab Code SV-287	e species PISY	-	EWL inten	W	_	PR large			<b>BP</b> uni	SO -				othe	rs		-
			s RD		<b>W</b> se	CW		TT	nt tooth				SPTh	SW		rs		
- S1- 4	SV-287	PISY	s RD large	inten	W se um	<b>CW</b> no	large	TT preser	nt tooth nt tooth	uni	-		SPTh absent	<b>SW</b> distinct	-	rs		
- S1- 4 - S1- 3	SV-287 SV-288	PISY PISY	s RD large large	inten medi	w se um se	CW no no	large large	<b>TT</b> preser	nt tooth nt tooth nt tooth	uni uni	-		SPTh absent absent	SW distinct distinct	-	rs		
- S1- 4 - S1- 3 - S1- 3m Ny	SV-287 SV-288 SV-289	PISY PISY PISY	s RD large large large	inten medii inten	w se um se se	CW no no no	large large large	preser preser preser	nt tooth nt tooth nt tooth nt tooth	uni uni uni	- - -		SPTh absent absent absent	distinct distinct distinct	-	rs		
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3	SV-287 SV-288 SV-289 SV-290	PISY PISY PISY PISY	s RD large large large large	inten medii inten inten	w se um se se se	no no no no	large large large large	preser preser preser preser	tooth tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni	- - -		SPTh absent absent absent absent	distinct distinct distinct	- - -	rs		
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1-	SV-287 SV-288 SV-289 SV-290 SV-292	PISY PISY PISY PISY PISY	large large large large large large	inten medii inten inten medii	w se um se se se um	no no no no no	large large large large large	TT preser preser preser preser preser	nt tooth	uni uni uni uni uni	- - - -		SPTh absent absent absent absent absent	distinct distinct distinct distinct distinct distinct	- - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1-	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294	PISY PISY PISY PISY PISY PISY	large	intensintensintensintensimedia media	W se um se se um um um	CW no no no no no no	large large large large large large	preser preser preser preser preser preser	nt tooth	uni uni uni uni uni uni	- - - - -		SPTh absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct	- - - -			
- S1- 4 - S1- 3 - S1- 3mNy - S1- 3 - 1- - S?1- - S1- 2m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295	PISY PISY PISY PISY PISY PISY PISY	RD large large large large large large large large large	intens medii intens intens medii medii medii	W se um se um um um se	no no no no no no no few	large large large large large large large	preser preser preser preser preser preser preser preser	tooth	uni uni uni uni uni uni uni	- - - - - -		SPTh absent absent absent absent absent absent absent	distinct distinct distinct - distinct distinct distinct	- - - - - - large			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297	PISY PISY PISY PISY PISY PISY PISY PISY	large	inteni medil inteni inteni medil medil inteni	w se um se se um um um se um	CW no no no no no no few zone	large large large large large large large large	preser preser preser preser preser preser preser preser preser	tooth	uni uni uni uni uni uni uni	- - - - - - -		SPTh absent	distinct	- - - - - - large			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298	PISY PISY PISY PISY PISY PISY PISY PISY	large	inteni medii inteni inteni medii medii inteni medii	w se um se se um um um se um	CW no no no no no no no to	large large large large large large large large large	preser preser preser preser preser preser preser preser	tooth	uni	- - - - - - - -		SPTh absent	distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - large l			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299	PISY PISY PISY PISY PISY PISY PISY PISY	large	inteni medii inteni inteni medii medii medii inteni medii medii	w se um se se um um um se um	CW no no no no no no no few zone no no	large	preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - -		SPTh absent	distinct	- - - - - - large			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S71- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300	PISY PISY PISY PISY PISY PISY PISY PISY	large small,	inteni medii inteni inteni medii medii inteni medii medii inteni	se um um se um	CW no no no no no no few zone no no few	large	preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - -		SPTh absent	distinct	-			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 1	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304	PISY PISY PISY PISY PISY PISY PISY PISY	large small, large	inten: medii inten: medii	Se um se um um se um um se um um um se um se uum um se uum um se uum um se uum um um	CW no no no no no no no few zone no no few no no	large	preser preser preser preser preser preser preser preser preser preser preser	tooth	uni	- - - - - - - - - -		SPTh absent	distinct	- - - - - - large   - - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 2	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308	PISY PISY PISY PISY PISY PISY PISY PISY	large small, large large	intensimedii intensimedii medii	Se	CW no no no no no no no few zone no no few no no no few no no no	large	preser preser preser preser preser preser preser preser preser preser preser preser	tooth	uni	- - - - - - - - - - -		SPTh absent	distinct -	- - - - - - large l			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-300 SV-304 SV-308 SV-309	PISY PISY PISY PISY PISY PISY PISY PISY	large	inten: medii inten: medii medii medii medii medii inten: medii medii medii inten: tr medii medii medii medii medii	Se um se um se um se um se um um se um um um se um um um se um um um se um um um um se se	CW no no no no no no no few zone no no few no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser	tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	distinct	- - - - - large   - - - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308 SV-309 SV-312	PISY PISY PISY PISY PISY PISY PISY PISY	large	inten: medii inten: medii medii medii medii medii inten: medii medii inten: tr medii medii medii inten:	W se um se se um um um se um um um se um um um se um	no no no no no no no few zone no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	sw distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - large   - - - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 1 - S1- 2 - S1- 3m - S1- 3m - S1- 6	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-309 SV-309 SV-312 SV-313	PISY PISY PISY PISY PISY PISY PISY PISY	large	inten: medii inten: medii medii medii medii medii inten: medii medii inten: medii medii inten: inten: inten: inten: inten: inten: inten:	W se um se um um um se um um um se um um se um um se se	no no no no no no no few zone no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	sw distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct	- - - - - large l - - - - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1?- 7 - S- 3 - S1- 1 - S1- 2 - S1- 1 - S1- 2 - S1- 3 - S1- 3m - S1- 3m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308 SV-309 SV-312 SV-313 SV-314	PISY PISY PISY PISY PISY PISY PISY PISY	large	inten: medii inten: inten: medii medii inten: medii inten: medii medii inten: tr medii medii inten: inten: inten: inten: inten: inten:	W se um se um um se um um se um um se um se um se se se se se se	CW no no no no no no no few zone no no few no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	distinct	- - - - - - - - - - - - - - - - - - -			
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S- 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m - S1- 6 - S1- 6 - S1- 1	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308 SV-309 SV-312 SV-314 SV-315	PISY PISY PISY PISY PISY PISY PISY PISY	RD large	inten: medii inten: inten: medii medii medii inten: medii medii medii inten: inten: inten: inten: inten: low medii	W se um se um um se um um se um um se um se um se um um se um um se um um se um um se se um um um	CW no no no no no no no few zone no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	distinct				
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S- 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m - S1- 3m - S1- 3m - S1- 3m	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-300 SV-303 SV-304 SV-308 SV-309 SV-312 SV-314 SV-315 SV-316	PISY PISY PISY PISY PISY PISY PISY PISY	large	intense medii intense medii intense inte	Se um um se um um se um um se um um um se um um um se um um um se se um um um se se se um um se se se um se se se um se se	no n	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni	- - - - - - - - - - - - - - - - - - -		SPTh absent	distinct				
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m - S1- 6 - S1- 1 - S1- 6 - S1- 1 - S1- 2 - S1- 1	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308 SV-312 SV-313 SV-315 SV-316 SV-319	PISY PISY PISY PISY PISY PISY PISY PISY	large small, small small small small	inten: medii inten: medii medii medii inten: medii medii medii medii inten: medii medii inten: inten	W se um se se um um um se	no n	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni			SPTh absent	distinct				
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1 S71 S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S- 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m - S1- 6 - S1- 1 - S1- 2 - S1- 1 - S1- 5 - S1- 1 - S1- 5 - S1- 1 - S1- 5 - S1- 1	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-300 SV-303 SV-304 SV-308 SV-312 SV-315 SV-316 SV-316 SV-319 SV-320	PISY PISY PISY PISY PISY PISY PISY PISY	large	inten: medii inten: medii medii medii inten: medii medii inten: tr medii medii inten: inten: inten: inten: inten: inten: inten: inten: inten: low medii	Se um um se um	no no no no no no few zone no no no no no no few no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni			SPTh absent	distinct				
- S1- 4 - S1- 3 - S1- 3m Ny - S1- 3 - 1- - S?1- - S1- 2m - S1- 6m - S1- 1m - S1? - 7 - S - 3 - S1- 1 - S1- 2 - S1- 1 - S1- 7 - S1- 3m - S1- 6 - S1- 1 - S1- 6 - S1- 1 - S1- 2 - S1- 1	SV-287 SV-288 SV-289 SV-290 SV-292 SV-294 SV-295 SV-297 SV-298 SV-299 SV-300 SV-303 SV-304 SV-308 SV-312 SV-313 SV-315 SV-316 SV-319	PISY PISY PISY PISY PISY PISY PISY PISY	large small, small small small small	inten: medii inten: medii medii medii inten: medii medii medii medii inten: medii medii inten: inten	Se um um um se um um um se um um um se se um um um se se um se se um se se um se se um um se	no n	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	nt tooth	uni			SPTh absent	distinct				

Field Code	Lab Code	species		RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	macr			Atech		
- S1- 7m	SV-325	PISY	У		у	medium	open	50-100	L	R	RB	У	У	У	rc	n	15 cm
- S1- 4	SV-326	PISY	n	<5	у	medium	-	50-100	L	R	RB	У	У	У	rc	n	10 cm
- S1- 3	SV-327	PISY	У	-	у	high	open	50-100	L	R	RB	У	У	У	rc	n	11.6 cm
- R?1- 1m	SV-328	PISY	У	-	у	medium	open	50-100	-	R	RB	У	У	У	rc	n	8.6 cm
- S1- 1- K	SV-330	PISY	n	<5	у	medium	-	100-200	L	R	RB	У	У	У	rc	n	15 cm
- S1- 6m	SV-331	PISY	n	5- 10	у	medium	-	50-100	L	R	RB	У	У	У	rc	n	12.5 cm
- S1- 5,5	SV-333	PISY	У	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n	13.5 cm
- S1- 3	SV-336	PISY	У	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n	11.2 cm
- S1- 1,5	SV-337	PISY	У	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n	8 cm
- S1- 7	SV-339	PISY	У	-	у	medium	open	50-100	L	R	RB	У	У	У	rc	n	14 cm
- S1- 1,5	SV-341	PISY	У	-	у	high	open	50-100	L	R	RB	У	У	У	rc	n	9.2 cm
- S1- 2	SV-342	PISY	У	-	у	high	open	50-100	L	R	RB	У	У	У	rc	n	10 cm
- S1- 4	SV-344	PISY	n	<5	у	high	-	50-100	L	R	RB	У	У	У	rc	n	11.5 cm
- R?1- 1,5	SV-347	PISY	у	-	у	medium	open	100-200	-	R	RB	у	У	У	rc	n	14 cm
- S1	SV-349	PISY	У	-	У	medium	open	50-100	L	R	RB	у	У	У	rc	n	7 cm
- S1- 1m	SV-351	PISY	У	-	У	medium	open	100-200	L	R	RB	У	У	У	rc	n	11 cm
- S1- 3,5	SV-352	PISY	У	-	У	medium	open	50-100	L	R	RB	У	У	У	rc	n	12.5 cm
- S1- 3	SV-359	PISY	n	<5	У	medium	-	50-100	L	R	RB	У	У	У	rc	n	8.5 cm
- S1- 6	SV-361	PISY	n	<5	У	low	-	50-100	L	R	RB	У	У	У	rc	n	8 cm
- S1- 1	SV-362	PISY	n	<5	У	medium	-	<50	L	R	RB	У	У	У	rc	n	6 cm
- S1-	SV-364	PISY	У	-	У	high	open	50-100	L	R	RB	У	У	У	rc	n	13.7 cm
- S1- 4 - Cory	SV-366	PISY	n	>10	У	medium	-	>200	L	R	RB	У	У	У	rc	n	10 cm
- S1- 8	SV-367	PISY	n	5- 10	У	medium	-	50-100	L	R	RB	У	У	У	rc	n	10.5 cm
- 1- 5	SV-369	DICV		_	_											-	10.7 cm
	34-369	PISY	У			medium	open	50-100	-	R	RB	У	У	У	rc	n	10.7 6111
Field Code	Lab Code	specie	RD	EWLW	v cv	V PR	TT	TTW	ВР	SOBF	SPI	Th S	SW	others	IC	rı	10.7 CIII
Field Code - S1- 7m	Lab Code SV-325	specie PISY	RD large	EWLW	V CV	V PR nes large	TT prese	TTW nt tooth	<b>BP</b> uni	SOBF	SP1	Th S	SW distinct	others	IC	11	10.7 CIII
Field Code - S1- 7m - S1- 4	SV-325 SV-326	specie PISY PISY	RD large large	EWLW intense intense	CV E ZO E no	V PR nes large large	prese	TTW nt tooth nt tooth	BP uni uni	SOBF - -	abso	Th Sent content of	SW distinct distinct	others -	ıc		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3	SV-325 SV-326 SV-327	specie PISY PISY PISY	RD large large large	intense intense mediur	CV E ZO E no m no	v PR nes large large large	prese prese prese	nt tooth nt tooth nt tooth	BP uni uni uni	SOBF	abso abso abso	Th sent coent coen	distinct distinct distinct	others - -	IC	ļII	10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m	Lab Code SV-325 SV-326 SV-327 SV-328	specie PISY PISY PISY PISY	RD large large large large	intense intense mediur mediur	V CV e zoi e no m no m no	PR nes large large large large	prese prese prese prese	nt tooth nt tooth nt tooth nt tooth nt tooth	BP uni uni uni uni	SOBF - -	abso abso abso abso	Th sent content conten	distinct distinct distinct distinct	others -	IC		10.7 6111
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K	SV-325 SV-326 SV-327 SV-328 SV-330	specie PISY PISY PISY PISY PISY	RD large large large large large	intense intense intense mediur mediur intense	CV E ZOI E NO	V PR nes large large large large large	prese prese prese prese prese	nt tooth	BP uni uni uni uni uni	SOBF	abse abse abse abse abse	Th sent comment commen	distinct distinct distinct distinct distinct distinct	others - -	ic		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m	Lab Code SV- 325 SV- 326 SV- 327 SV- 328 SV- 330 SV- 331	specie PISY PISY PISY PISY PISY PISY	RD large large large large large large	intense intense intense mediur mediur intense intense	CVE ZOIDE NO M NO	PR nes large large large large large large large	prese prese prese prese	nt tooth	BP uni uni uni uni uni uni	SOBF	abse abse abse abse abse abse abse	Th Sent coent coen	distinct distinct distinct distinct distinct distinct distinct	others - - -	IC .		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5	Lab Code SV- 325 SV- 326 SV- 327 SV- 328 SV- 330 SV- 331 SV- 333	specie PISY PISY PISY PISY PISY PISY	RD large large large large large	intense mediur mediur intense intense intense intense mediur	CVE ZOIDE NO	PR nes large large large large large large large	prese prese prese prese prese	nt tooth	BP uni uni uni uni uni	SOBF - - - -	abso abso abso abso abso abso abso abso	Th Sent coent coen	distinct distinct distinct distinct distinct distinct distinct distinct	others - - - -	IC		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large large large large large large	intense intense mediur mediur intense intense intense mediur mediur mediur mediur mediur mediur mediur	V CV e zole no m no m no e no e no m no n	PR nes large large large large large large large large large	prese prese prese prese prese prese	nt tooth	BP uni uni uni uni uni uni	SOBF - - - - -	abso abso abso abso abso abso abso abso	Th sent content conten	distinct distinct distinct distinct distinct distinct distinct distinct distinct	others - - - -	ĮIC.		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large large large large	intense mediur mediur intense intense intense intense intense mediur mediur mediur mediur mediur mediur mediur	V CV e zole no m no m no e no e no m no m no no no m no no m no m no m	PR nes large	prese prese prese prese prese prese prese	nt tooth	BP uni uni uni uni uni uni uni	SOBF - - - - - -	abso abso abso abso abso abso abso abso	ent coent co	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	others - - - -	TC .		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large large large large large large	intense mediur m	V CV e zole no m no m no e no m	v PR nes large	prese	nt tooth	BP uni	SOBF - - - - - -	abso abso abso abso abso abso abso abso	ent coent co	distinct distinct distinct distinct distinct distinct distinct distinct distinct	others - - - -			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5	Lab Code  SV-325  SV-326  SV-327  SV-328  SV-330  SV-331  SV-333  SV-336  SV-337  SV-339  SV-341	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large large large large large large small	intense mediur mediur intense intense intense intense intense mediur mediur mediur mediur mediur mediur mediur	V CV e zole no m no m no e no m	v PR nes large	prese	nt tooth	BP uni	SOBF	abso abso abso abso abso abso abso abso	ent coent co	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	others	TIC .		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2	Lab Code SV-325 SV-326 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	intense mediur m	V CV e zole no m no m no e no m	v PR nes large	prese	nt tooth	BP uni	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	others	TIC .		10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4	Lab Code SV-325 SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur mediur	CV e zoi e no m no e no e no m	v PR nes large	prese	nt tooth	BP Uni	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2	Lab Code SV-325 SV-326 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur mediur mediur	CV e zoi e no m no e no e no m	v PR nes large	prese	nt tooth	BP uni	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344 SV-349	specie PISY PISY PISY PISY PISY PISY PISY PISY	large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur intense mediur	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct d distinct distinct distinct distinct distinct distinct distinct d	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1 - S1- 1m	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344 SV-347 SV-349 SV-351	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense mediur mediur mediur mediur mediur mediur intense low	CV	v PR nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct distinct	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1	Lab Code SV-325 SV-326 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344 SV-347 SV-349 SV-351 SV-352	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur intense low mediur	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1 - S1- 1m	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344 SV-347 SV-349 SV-351	specie PISY PISY PISY PISY PISY PISY PISY PISY	large	EWLW intense intense mediur mediur intense intense intense mediur mediur mediur mediur mediur mediur intense low mediur intense	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1 - S1- 1m - S1- 3,5	Lab Code SV-325 SV-326 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-339 SV-341 SV-342 SV-344 SV-347 SV-349 SV-351 SV-352	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense intense intense intense intense intense mediur mediur mediur mediur intense low mediur intense mediur	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-349 SV-344 SV-347 SV-349 SV-351 SV-359 SV-361 SV-362	specie PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur intense low mediur intense mediur intense low	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1- 1,5 - S1 - S1- 3 - S1- 1,5 - S1- 3 - S1- 1,5	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-349 SV-344 SV-349 SV-351 SV-359 SV-361	SPECIE PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur mediur mediur mediur mediur mediur intense low mediur intense low mediur intense low mediur intense mediur intense mediur intense mediur	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 1- K - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1- 1m - S1- 3,5 - S1- 3 - S1- 6 - S1- 1	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-349 SV-344 SV-347 SV-349 SV-351 SV-359 SV-361 SV-362	SPECIE PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense mediur mediur mediur mediur mediur mediur intense low mediur intense intense intense intense intense intense intense intense	CV	nes large	prese	nt tooth	BP  uni uni uni uni uni uni uni uni uni un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII
Field Code - S1- 7m - S1- 4 - S1- 3 - R?1- 1m - S1- 6m - S1- 5,5 - S1- 3 - S1- 1,5 - S1- 7 - S1- 1,5 - S1- 2 - S1- 4 - R?1- 1,5 - S1 - S1- 1m - S1- 3,5 - S1- 3 - S1- 16 - S1- 6 - S1- 1	Lab Code SV-325 SV-326 SV-327 SV-328 SV-330 SV-331 SV-333 SV-336 SV-337 SV-349 SV-344 SV-347 SV-349 SV-351 SV-352 SV-361 SV-362 SV-364	SPECIE PISY PISY PISY PISY PISY PISY PISY PISY	RD large	EWLW intense intense mediur mediur intense intense mediur mediur mediur mediur mediur mediur mediur mediur intense low mediur low intense intense mediur	CV E ZOOE NO	nes large	prese	nt tooth	BP  Uni  Uni  Uni  Uni  Uni  Uni  Uni  Un	SOBF	abso abso abso abso abso abso abso abso	Th sent coent coen	distinct dis	others			10.7 CIII

Field Code	Lab Code	specie	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	macro	micro	RB	Atech	Sec	radius
- S1- 1,5 Ny	SV-370	PISY	n	<5	у	medium	-	50-100	L	R	RB	у	У	у	rc	n	9.5 cm
- S1- 1,5	SV-372	PISY	n	<5	у	medium	-	50-100	L	R	RB	У	У	У	rc	n	9.3 cm
- S1- 1	SV-378	PISY	n	<5	у	medium	open	50-100	L	0	RB	у	У	У	rc	n	8.2 cm

Field Code	Lab Code	species	RD	EWLW	CW	PR	TT	TTW	BP	SOBP	SPTh	SW	others
- S1- 1,5 Ny	SV-370	PISY	large	medium	no	large	present	tooth	uni	-	absent	-	-
- S1- 1,5	SV-372	PISY	large	medium	no	large	present	tooth	uni	-	absent	distinct	-
- S1- 1	SV-378	PISY	large	medium	no	large	present	tooth	uni	-	absent	distinct	-

Field Code	Lab Code	species	pith	RMTP	fungi	GL	S	С	tree age	L/N	R/O	WI	ma c ro	micro	RBC	Atech	Sec	radius
- R2 - 1m	SV-83	PISI	n	5- 10	-	mediun	1 -		50-100	N	R	RB	у	У	У	rc	n	12 cm
-	SV-95	PISI	У	-	У	high	op	en	50-100	-	-	RB	У	У	У	rc	n	11.5 cm
- S1- 3	SV-97	PISI	У	-	У	mediun	n op	en	100-200	L	R	RB	у	У	У	rc	n	10.3 cm
- R?2 -	SV- 156	PISI	n	<5	У	mediun	n op	en	50-100	N	0	RB	у	У	У	rc	n	8.5 cm
- R2	SV-226	PISI	n	<5	У	mediun	۱ -		100-200	N	0	RB	у	У	У	rc	n	10 cm
- S1- 1	SV-305	PISI	n	<5	У	mediun	۱ -		100-200	L	R	RB	у	У	У	rc	n	16.5 cm
-	SV-329	PISI	n	>10	У	mediun	۱ -		50-100	-	-	RB	У	У	У	rc	n	10.5 cm
- S/R1- 1	SV-348	PISI	У	-	У	medium	n op	en	50-100	-	R	RB	У	У	У	rc	n	10.5 cm
- ?2 - 0,5	SV-380	PISI	n	5- 10	У	medium	1 -		50-100	-	0	RB	У	У	У	rc	n	5.5 cm
Field Code	Lab Code	species	RD	EWLW	CW		PR	TT	TT	W	BP :	SOBP	SPTh	SW	0	thers		
- R2 - 1m	SV-83	PISI	large	medium	no		large	pres	ent sm	ooth	uni	-	absent	-	-			
-	SV-95	PISI	large	low	no		large	pres	ent sm	ooth	uni	-	absent	distino	et -			
- S1- 3	SV-97	PISI	large	low	no		large	pres	ent sm	ooth	uni	-	absent	-	-			
- R?2 -	SV- 156	PISI	small	low	no		large	pres	ent sm	ooth	uni	-	absent	-	-			
DO														411 - 411				
- R2	SV-226	PISI	large	low	no		large	pres	ent sm	ooth	uni	-	absent	distino	:[ ]:			
- K2 - S1- 1	SV-226 SV-305	PISI PISI	large large	low medium		rings	large	pres		ooth ooth	uni	- -	absent	distinc				
		_				rings			ent sm		-	- - -			t -			
	SV-305	PISI	large	medium	few	rings	large	pres	ent sm	ooth	uni	- - -	absent	distino	t - t -			

Field Code		_ab Code	species	pith	RMTP	fungi	GL	SC	tree	age	L/N	R/O	WI	macr	o mic ro	RBC	Atech	Sec	radius
SV96132 - S1 -	1m   S	SV-7	LASP	٧	-	У	medium	open	100-2	200	L	R	RB	У	У	У	rc	n	11.5 cm
SV96142	5	SV- 15	LASP	У	-	-	low	open	100-2	200	-	-	RB	У	У	у	rc	n	8.8 cm
SV96111- R2 - 2	2m 5	SV- 17	LASP	٧	-	-	low	open	100-2	200	Ν	0	RB	У	V	У	rc	n	10 cm
SV96017	5	SV-27	LASP	n	<5	-	medium	-	>200		-	-	RB	У	У	V	rc	n	27 cm
- S1- 1	5	SV-85	LASP	٧	-	٧	medium	open	50-10	0	L	R	RB	٧	V	У	rc	n	9.3 cm
- S1- 2	5	SV-89	LASP	٧	-	У	medium	open	50-10	0	L	R	RB	У	У	У	rc	n	7.8 cm
- S1- 2m	5	SV- 103	LASP	٧	-	-	medium	open	100-2	200	L	R	RB	٧	V	У	rc	n	10 cm
- R1/2 - 1.5	5	SV- 113	LASP	V	-	-	medium	open	50-10	0	N	-	RB	У	V	У	rc	n	10 cm
- R1- 3	5	SV- 128	LASP	V	-	У	low	closed	100-2	200	N	R	RB	У	У	У	rc	n	6.3 cm
- S2 - 0,5	5	SV- 136	LASP	n	>10	У	low	-	50-10	0	L	0	RB	У	У	У	rc	n	6.5 cm
- R?2 -		SV- 140	LASP	-	<5	-	medium	-	50-10		-	0	RB	У	У	У	rc	n	6 cm
- R? - 1		SV- 14 1	LASP	n	<5	-	medium	closed	50-10		N	0	RB	У	У	У	rc	n	5.4 cm
- R1- 4		SV- 142	LASP	٧	-	-	low	closed	100-2		N	R	RB	У	У	У	rc	n	6.3 cm
- S1- 1.5		SV- 143	LASP	V	-	-	medium	open	50-10		L	R	RB	У	У	У	rc	n	6.4 cm
- R/S2 - 2		SV- 144	LASP	n	>10	-	low	-	-	-	-	0	RB	У	У	У	rc	n	-
- R/S2 - 3		SV- 154	LASP	n	>10	У	medium	-	100-2	00	_	0	RB	V	V	У	rc	n	-
- R1- 5m		SV- 155	LASP	V	-	У	low	open	100-2		N	R	RB	У	У	V	rc	n	7 cm
- R1- 7		SV- 157	LASP	n	<5	У	medium	open	50-10		N	R	RB	У	У	У	rc	n	13 cm
- R/S2 - 3		SV- 158	LASP	V	-	У	medium	open	50-10	-	-	0	RB	У	У	y	rc	n	10 cm
- R2		SV- 160	LASP	n	<5	У	medium	-	50-10	-	N	0	RB	У	У	У	rc	n	9 cm
- R1/2 -		SV-162	LASP	n	>10	У	low		100-2	-	N	-	RB	У	V	V	rc	n	-
- R?2 - 1m		SV- 163	LASP	V	-	V	medium	open	50-10		-	0	RB	У	V	V	rc	n	7 cm
- R?2 - 111		SV- 163	LASP	n	<5	У	high	open	50-10		_	0	RB	У	У	V	rc	n	13 cm
- R2 - 0,5m		SV- 165	LASP	n	>10	У	medium	-	50-10		N	Ö	RB	У	У	V	rc	n	-
Lab Code	specie		EWLW		_	PR	TT			SOBP		SpTh	SV		LARred		ers		
SV-7	LASP	large	intense		2	small	present			mooth		absent		tinct	reddish	-	C13		
SV- 15	LASP	small	intense			small	present		-	mooth		absent	-	tillot	readisir				
SV- 17	LASP	small	intense		rings	small	present		-	mooth		absent	-		reddish	-			
SV-27	LASP	large	intense		riiigs	small	present			mooth		absent	-		reddish	-			
SV-85	LASP	small	intense			small	present		-	mooth		absent	die	tinct	brownish	-			
SV-89	LASP	small	intense			small	present		-	mooth		absent		tinct	brownish				
SV-103	LASP	small, tr	intense			small	present			mooth		absent	-	tiriot	brownish				
SV- 103	LASP	small, tr	intense			small	present			mooth		absent			DIOWITISH				
SV- 113	LASP	small	intense		rings	small	present			mooth		absent	dio	tinct	reddish				
SV- 126	LASP	small	intense		riligs	small	present			mooth		absent	uis	unct	bright				
SV- 130	LASP	large	medium			small	present			mooth		absent			bright				
SV- 141	LASP	small	intense		rings	small	present			mooth		absent			dk red				
SV- 141	LASP	small	intense		rings	small	present			mooth		absent			brownish				
SV- 142	LASP	small								mooth		absent	-		brownish	-			
SV- 143	LASP		intense		rings	small	present						-		-	-			
		small	medium		<i>i</i> rings	small	present			mooth		absent	- dia	tinat	-	-			
SV- 154 SV- 155	LASP	small	medium			small	present			mooth		absent		tinct	- roddiob	-			
	LASP	small	intense		nes vrings	small	present			mooth		absent		tinct	reddish	-			
SV- 157	LASP	small	intense		rings	small	present			mooth		absent		tinct	dk red	-			
SV- 158	LASP	small	intense		nes	small	present			mooth		absent	_	tinct	dk red	- la a l			
SV- 160	LASP	small	intense		rings	small	present			mooth		absent	- al:a	Line and	brownish	hole	98		
	LASP	small	intense		<i>i</i> rings	small	present			mooth		absent		tinct	dk red	-			
SV- 162																			
SV- 162 SV- 163	LASP	small	intense			small	present			mooth		absent		tinct	brownish	- 1			
SV- 162		small small small	intense intense intense	fev	v rings	small small	present present present	-	bi s	mooth		absent		tinct	brownish	hole	es		

Field Code	Lab Code	species	pith	RMTP	funai	GL	SC	tree age	L/N	R/O	WI	macr	o micro	RBC	Atech	Sec	radius
- ?2 - 1,5	SV- 166	LASP	n	<5	y	medium	-	50-100	-	0	RB	у	у	У	rc	n	7.5 cm
- R2 - 3	SV-167	LASP	n	5- 10	У	medium	<del>-  </del> -	50-100	N	Ö	RB	y	У	У	rc	n	7.5 cm
- S/R1/2 - 3	SV-169	LASP	У	-	У	low	open	100-200	-	-	RB	У	V	V	rc	n	9.5 cm
- S2 - 2	SV-172	LASP	У	-	-	medium	open	50-100	-	0	RB	У	V	V	rc	n	6 cm
- S/R2 - 1	SV- 173	LASP	V	-	V	medium	open	100-200	-	Ö	RB	У	V	V	rc	n	8.5 cm
-	SV-177	LASP	У	-	-	medium	open	50-100	-	-	RB	У	У	V	rc	n	7 cm
- R2 - 0,5	SV- 180	LASP	n	>10	У	medium	-	100-200	N	0	RB	У	У	У	rc	n	-
- R1- 7	SV-182	LASP	У	-	-	medium	open	50-100	N	R	RB	У	V	V	rc	n	5.5 cm
- R2 - 2m	SV-187	LASP	n	>10	У	medium	-	-	N	0	RB	У	У	У	rc	n	-
- R?2 - 2m	SV- 188	LASP	n	5- 10	٧	medium	-	50-100	N	0	RB	У	У	V	rc	n	-
- S1- 1m	SV- 189	LASP	У	-	-	medium	open	50-100	L	R	RB	У	У	У	rc	n	6 cm
- S/R2 - 1	SV-190	LASP	У	-	У	medium	closed		-	0	RB	У	У	У	rc	n	9 cm
- S1- 2	SV-192	LASP	n	<5	У	medium	open	100-200	L	R	RB	У	У	У	rc	n	11.3 cm
- R?2 -	SV- 198	LASP	n	>10	У	low	-	>200	-	0	RB	У	V	У	rc	n	-
- S2 - 4m	SV-205	LASP	у	-	-	medium	open	50-100	L	Ö	RB	У	У	У	rc	n	5.3 cm
- S?1- 1	SV-208	LASP	у	-	-	medium	closed	50-100	-	R	RB	У	У	У	rc	n	5.6 cm
- R?2 - 0.5	SV-210	LASP	У	-	V	low	open	100-200	-	0	RB	У	V	V	rc	n	8 cm
- R2 - 1m	SV-214	LASP	n	<5	V	medium	closed		N	0	RB	У	У	У	rc	n	6.8 cm
- S1- 2	SV-215	LASP	У	-	- y	medium	open	>200	L	R	RB	У	У	У	rc	n	13.5 cm
- R2 - 2m	SV-223	LASP	У	-	У	low	closed		N	0	RB	У	У	У	rc	n	9 cm
- S/R 2 - 1	SV-228	LASP	У	-	У	medium	open	50-100	-	0	RB	у	У	У	rc	n	8 cm
- S1- 7	SV-231	LASP	V	-	y -	medium	open	50-100	L	R	RB	У	V	V	rc	n	11.5 cm
- R1/2 - 4	SV-235	LASP	n	<5		medium	open	50-100	N	-	RB			V	rc	n	9.5 cm
- S1- 4			11	<0	_	medium		30- 100	IN			У	У	У	IC		
		IIACD	1/		W	high	onon	50 100	1		DD	1/	1/	V/	ro	n	17 5 cm
	SV-240	LASP	у	-  -	у	high	open	50- 100	L	R	RB	у	y	У	rc	n	17.5 cm
Field Code	Lab Code	species	RD		VLW	cw	PR	TT	TTW	BP	SOBI	, ,	SpTh	SW	LAR	re d	others
Field Code - ?2 - 1,5	Lab Code SV-166	species LASP	RD small	int	VLW ense	CW no	PR small	<b>TT</b> present		<b>BP</b> bi	SOBI	h a	SpTh absent		<b>LAR</b> brow	red rnish	
Field Code - ?2 - 1,5 - R2 - 3	<b>Lab Code</b> SV- 166 SV- 167	species LASP LASP	RD small small	int int	VLW ense ense	CW no no	PR small small	TT present present	TTW -	<b>BP</b> bi bi	SOBI smoot smoot	h a	SpTh absent absent	SW	LAR	red rnish	others -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3	SV- 166 SV- 167 SV- 169	species LASP LASP LASP	RD small small small	int int int	VLW ense ense ense	CW no no few rings	PR small small small	present present	TTW - -	BP bi bi uni	smoot smoot smoot	h a h a h a	SpTh absent absent absent	SW -	brow brow	red rnish rnish	others -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2	SV- 166 SV- 167 SV- 169 SV- 172	species LASP LASP LASP LASP	RD small small small small	int int int int	VLW ense ense ense ense	CW no no few rings no	PR small small small small	present present present present	TTW - - -	BP bi bi uni bi	smoot smoot smoot smoot	h a h a h a	SpTh absent absent absent absent	SW - - - distinct	brow brow brow	red rnish rnish rnish	others - - -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173	species LASP LASP LASP LASP LASP	RD small small small small small	int int int int int	VLW ense ense ense ense ense	CW no no few rings	PR small small small small small	present present present present present present	TTW - - -	BP bi bi uni bi bi	smoot smoot smoot smoot smoot	h a h a h a h a h a h a h	SpTh absent absent absent absent absent	SW -	brow brow brow dk re	red rnish rnish rnish	others - - -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1	SV-166 SV-167 SV-169 SV-172 SV-173 SV-177	species LASP LASP LASP LASP LASP LASP LASP	small small small small small small	int int int int int int	VLW ense ense ense ense ense ense	CW no no few rings no zones	PR small small small small small small small	present present present present present present present	TTW	BP bi bi uni bi bi bi	smoot smoot smoot smoot smoot smoot	h a h a h a h a h a h	SpTh absent absent absent absent absent absent absent	SW - - - distinct distinct	brow brow brow dk re brow	red rnish rnish rnish d rnish	others - - -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 R2 - 0,5	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small small,	int int int int int int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones	PR small small small small small small small small	present present present present present present present present present	TTW	BP bi bi uni bi bi bi	smoot smoot smoot smoot smoot smoot smoot	h	SpTh absent absent absent absent absent absent absent absent	SW - - - distinct	brow brow brow dk re brow dk re	red rnish rnish rnish d rnish	others - - -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small, small,	int int int int int int tr int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no	small	present present present present present present present present present	TTW	BP bi bi uni bi bi bi bi uni	smoot smoot smoot smoot smoot smoot smoot smoot	h	SpTh absent absent absent absent absent absent absent absent absent	SW distinct distinct - distinct	brow brow brow brow dk re brow dk re	red rnish rnish d rnish d rnish	others - - -
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small, small, small,	int int int int int int int int int tr int tr int tr int tr int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no	PR small	present	TTW	BP bi bi uni bi bi bi uni bi bi	smoot smoot smoot smoot smoot smoot smoot smoot smoot	h	SpTh absent	SW - - distinct distinct - distinct	brow brow dk re brow dk re brow dk re brow	red rnish rnish d rnish d rnish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small, small, small, small,	int int int int int int int int int tr int tr int tr int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings	PR small	present	TTW	BP bi bi uni bi bi bi bi bi bi bi bi bi	smoot smoot smoot smoot smoot smoot smoot smoot smoot	h	SpTh absent	SW - - distinct distinct - distinct -	brow brow dk re brow dk re brow dk re brow dk re	red rnish rnish d rnish d rnish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m	SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small small small, small, small, small small small	int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings	PR small	present	TTW	bi b	smoot smoot smoot smoot smoot smoot smoot smoot smoot	h	SpTh absent	SW  distinct distinct - distinct	brow brow dk re brow dk re brow dk re	rnish rnish d rnish d rnish d rnish d rnish	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1	SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190	LASP LASP LASP LASP LASP LASP LASP LASP	RD small sma	int int int int int int int int int tr int tr int tr int tr int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings	PR small	present	TTW	BP bi bi cuni bi	smoot	h a h a h a h a h a h a h a h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h h a h h h h a h h h h a h h h h a h	SpTh absent	SW distinct distinct - distinct	brow brow dk re brow dk re brow dk re chrow drow drow drow drow drow drow drow d	red rnish rnish d rnish d rnish d rnish ish	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small small small, small, small, small, small small small small small small, small, small, small, small, small, small,	int int int int int int int int int tr int tr int int int int tr int int int tr int int tr int int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings no	PR small	present	TTW	BP bi bi bi uni bi	smoot	h a h a h a h a h a h a h a h a h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h a h h h h a h h h h a h h h h a h h h h a h	SpTh absent	SW  distinct distinct - distinct	brow brow dk re brow dk re brow dk re chrow dk re drow dark redd redd dk re	red rnish rnish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S/R2 - 1 - S1 - 2 - R?2 -	SV- 166 SV- 167 SV- 169 SV- 172 SV- 177 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small, small, small, small small, small small, small,	int int int int int int int int int tr int tr int int int int tr int int int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings no no	PR small	present	TTW	BP bi bi uni bi bi bi uni bi	smoot	h	SpTh absent	SW distinct distinct - distinct distinct	brow brow dk re brow dk re brow dk re chrow dk re drow dark redd dk re	red rnish rnish d rnish d rnish d rnish ish ish	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 -	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int tr int tr int int int tr int tr int tr int tr int tr int tr int	VLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings no no few rings	PR small	present	TTW	BP bi bi uni bi	smoot	h	SpTh absent	SW distinct distinct - distinct distinct	brow dk re brow dark redd redd dk re redd dk re	red rnish rnish d rnish d rnish d rnish ish ish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 - 2 - S/R2 - 1 - S1 - 2 - R?2 - 4m - S?1 - 1	SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int int tr int int int tr int tr int tr int tr int tr int me	vLW ense ense ense ense ense ense ense ens	no no few rings no zones - zones no no few rings	PR small	present	TTW	BP bi bi uni bi bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct - distinct - distinct distinct	brow brow dk re brow dk re brow dk re drow dk re drow dark redd dk re dk re dk re dd redd	rried rnish rnish d rnish d rnish d rnish dish ish ish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 - 5 - R2 - 2 - S2 - 4m - S?1 - 1 - R?2 - 0,5	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int tr int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no no	PR small	present	TTW	BP bi bi uni bi bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct distinct distinct	brow brow dk re brow ds re brow dark redd redd dk re redd dk re	ried rnish rnish d rnish d rnish rnish d ish d ish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 S2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1m	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int int tr int int tr int tr int tr int tr int tr int me int me int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no	PR small	present	TTW	BP bi bi uni bi bi uni bi	smoot	h	SpTh absent	SW  distinct	brow brow dk re brow dk re brow dark redd dk re redd dk re	rred rnish rnish d rnish d rnish d rnish d rnish d ish d d d ish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 - 2 - S2 - 4 - S?1 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 0,5	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 177 SV- 180 SV- 187 SV- 187 SV- 189 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214 SV- 215	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int int tr int int tr int me int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no	PR small	present	TTW	BP bi bi uni bi bi bi uni bi	smoot	hh a hh	SpTh absent	SW  distinct - distinct distinct	brow brow dk re brow dk re brow dark redd dk re redd dk re	red rnish rnish d rnish d rnish d ish d ish d rnish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S?1 - 1m - S/R2 - 1 - S1 - 2 - R?2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1 - R2 - 1	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214 SV- 223	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int int int int int int int int tr int int tr int int tr int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no no no few rings no no no no no no no no	PR small	present	TTW	BP bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct distinct distinct distinct	brow brow dk re brow dk re brow dark redd dk re redd dk re redd redd redd redd redd redd	red raish raish d raish d raish d ish d ish d raish d raish d ish d ish d ish ish ish ish ish ish ish ish ish	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S/R2 - 1 - S/R2 - 1 - S1 - 2 - R?2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 1	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214 SV- 215 SV- 223 SV- 228	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small small small, small	int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no no no few rings no no no no no no no no	PR small	present	TTW	BP bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct distinct	brow dk re brow dark redd dk re redd dk re brow redd redd redd fredd redd fredd fredd fredd fredd dk re brow redd redd redd fredd	red rnish rnish d rnish d rnish ish ish d ish d rnish ish d ish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S2 - 2 - S/R2 - 1 - R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S1 - 1m - S/R2 - 1 - S1 - 2 - R?2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1 - S1 - 2 - R2 - 2m - S1 - 1 - R?2 - 0,5 - R2 - 1 - S1 - 2 - R2 - 1 - S1 - 2 - S2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1m - S1 - 2 - R2 - 2m - S/R2 - 1 - S1 - 7	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 173 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214 SV- 215 SV- 223 SV- 228 SV- 231	LASP LASP LASP LASP LASP LASP LASP LASP	RD small	int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no no no few rings no	PR small	present	TTW	BP bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct distinct distinct distinct	brow dk re brow dark redd dk re redd dk re brow redd redd brow dk re brow dk re redd dk re redd dk re brow redd dk re brow redd redd redd redd dk re brow redd redd redd redd redd redd redd red	rred rnish rnish d rnish d rnish d rnish d rnish ish ish d ish d rnish d rnish d	others
Field Code - ?2 - 1,5 - R2 - 3 - S/R1/2 - 3 - S/2 - 2 - S/R2 - 1 R2 - 0,5 - R1 - 7 - R2 - 2m - R?2 - 2m - S/R2 - 1 - S/R2 - 1 - S1 - 2 - R?2 - 4m - S?1 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 0,5 - R2 - 1 - R?2 - 1	Lab Code SV- 166 SV- 167 SV- 169 SV- 172 SV- 177 SV- 180 SV- 182 SV- 187 SV- 188 SV- 189 SV- 190 SV- 192 SV- 198 SV- 205 SV- 208 SV- 210 SV- 214 SV- 215 SV- 223 SV- 228	LASP LASP LASP LASP LASP LASP LASP LASP	RD small small small small small small small small, small	int	vLW ense ense ense ense ense ense ense ens	CW no no few rings no zones - zones no no few rings few rings few rings few rings few rings no no few rings no no no few rings no no no no no no no no	PR small	present	TTW	BP bi bi uni bi	smoot	h	SpTh absent	SW  distinct - distinct distinct distinct distinct	brow dk re brow dk re redd dk re brow redd dk re brow dk re dk re dk re dk re dk re dk redd dk re dk redd dk re dk re dk redd redd	rish rish d d d d d d	others

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	macro	mic ro	RBC	Atech	Sec	ra diu s	\$
- R2 -	SV-242	LASP	У	-	у	medium	closed	50-100	N	0	RB	У	У	У	rc	n	6 cm	
-	SV-246	LASP	n	<5	-	medium	-	50-100	-	-	RB	У	у	V	rc	n	8.5 cm	
- S?1- 3	SV-249	LASP	У	-	У	medium	open	50-100	-	R	RB	У	у	У	rc	n	11.3 cm	ı
-	SV-250	LASP	n	<5	-	medium	open	50-100	-	-	RB	У	у	У	rc	n	8.6 cm	
R2 - 0,5m	SV-252	LASP	n	<5	-	high	-	50-100	N	0	RB	У	у	У	rc	n	10.5 cn	n
- S1- 3	SV-266	LASP	У	-	-	medium	open	50-100	L	R	RB	У	у	У	rc	n	7.6 cm	
- S1-	SV-268	LASP	n	5- 10	-	medium	open	50-100	L	R	RB	У	У	У	rc	n	9 cm	
S1- 4,5	SV-271	LASP	У	-	-	medium	open	50-100	L	R	RB	У	У	У	rc	n	8 cm	
S1- 4m	SV-273	LASP	n	5- 10	-	high	-	50-100	L	R	RB	У	У	У	rc	n	17 cm	
S1- 4	SV-276	LASP	n	<5	У	medium	-	50-100	L	R	RB	у	У	У	rc	n	10.7 cn	n
S1- 4	SV-284	LASP	У	-	У	medium	open	100-200	L	R	RB	У	У	У	rc	n	12 cm	
S1- 5	SV-285	LASP	У	-	У	medium	open	100-200	L	R	RB	у	У	٧	rc	n	9.5 cm	
S1- 6	SV-286	LASP	n	<5	y	medium	-	100-200	L	R	RB	y	У	У	rc	n	10 cm	
R1- 5	SV-302	LASP	n	<5	V	very high	open	<50	N	R	RB	V	у	٧	rc	n	13.7 cn	n
S1- 5.5	SV-306	LASP	У	-	-	medium	open	50-100	L	R	RB	У	у	V	rc	n	10.5 cn	
S1/2 - 1	SV-310	LASP	У	-	У	medium	open	100-200	L	-	RB	У	У	У	rc	n	11.7 cm	
S1- 9	SV-318	LASP	У	-	-	medium	open	100-200	L	R	RB	У	У	٧	rc	n	16 cm	
S1- 2	SV-323	LASP	У	-	У	high	open	50-100	L	R	RB	У	У	٧	rc	n	10.4 cm	n
S?1- 1,5	SV-324	LASP	n	>10	-	medium	-	50-100	-	R	RB	У	У	٧	rc	n	9.5 cm	
?1/2 - 1	SV-332	LASP	У	-	V	medium	open	50-100	-	-	RB	У	У	٧	rc	n	7 cm	
S/R1- 2	SV-335	LASP	n	<5	У	high	open	50-100	-	R	RB	У	У	٧	rc	n	8.7 cm	
R/S2 - 0.5m	SV-345	LASP	n	<5	У	medium	open	50-100	-	0	RB	У	У	V	rc	n	7 cm	
S1- 7	SV-346	LASP	V	-	V	medium	open	100-200	L	R	RB	У	У	V	rc	n	12 cm	
S1- 7	SV-350	LASP	V		У	medium	open	50-100	L	R	RB	У	V	V	rc	n	15.5 cn	n
ield Code	Lab Code	species			EWLW	CW	PR				BP	SOBP	SpTh	SW		LARr		other
R2 -	SV-242	LASP	small		intense	large zone					oi	smooth	absent		tinct	dk red		-
	SV-246	LASP	small		intense	-	sm			-	oi Oi	smooth	absent	_			rownish	ninkish
S?1- 3	SV-249	_	small	tr							<b>J</b> 1		aboont			aan		Piiiidoi
0.1 0		HASP			intense	no	sm	all nrese	nt -	1	ıni	smooth	absent	dist	tinct	dk red		-
		LASP		,	intense	no few rings	sm				uni ni	smooth	absent		tinct	dk red	ish	-
B2 - 0.5m	SV-250	LASP	small	•	intense	few rings	sm	all prese	nt -	k	oi	smooth	absent	-	tinct	brown		-
	SV-250 SV-252	LASP	small small	•	intense intense	few rings no	sm sm	all prese	nt - nt -	k k	oi oi	smooth smooth	absent absent	-	tinct	brown reddis	h	- - -
S1- 3	SV-250 SV-252 SV-266	LASP LASP LASP	small small	, tr	intense intense intense	few rings no few rings	sm sm	all prese all prese all prese	nt - nt - nt -	k k	oi oi oi	smooth smooth smooth	absent absent absent	-	tinct	brown reddis brown	h ish	- - - -
S1- 3 S1-	SV-250 SV-252 SV-266 SV-268	LASP LASP LASP LASP	small small small small	, tr	intense intense intense intense	few rings no few rings no	sm sm sm	all prese all prese all prese all prese	nt - nt - nt - nt -	k k k	oi oi oi oi	smooth smooth smooth smooth	absent absent absent absent	- - - -	tinct	brown reddis brown brown	h ish	- - - -
S1- 3 S1- S1- 4,5	SV-250 SV-252 SV-266 SV-268 SV-271	LASP LASP LASP LASP LASP	small small small small small	, tr	intense intense intense intense intense	few rings no few rings no no	sm sm sm sm	all prese all prese all prese all prese all prese all prese	nt - nt - nt - nt - nt -	k k k k	oi oi oi oi	smooth smooth smooth smooth smooth	absent absent absent absent absent	-	tinct	brown reddis brown brown br red	h ish	- - - - - -
S1- 3 S1- S1- 4,5 S1- 4m	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273	LASP LASP LASP LASP LASP LASP	small small small small small small	, tr	intense intense intense intense intense intense	few rings no few rings no no	sm sm sm sm sm	all prese	nt - nt - nt - nt - nt - nt -	k k k k	oi oi oi oi oi	smooth smooth smooth smooth smooth	absent absent absent absent absent absent	- - - - -		brown reddis brown brown br red dk red	h ish ish	- - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276	LASP LASP LASP LASP LASP LASP	small small small small small small small	, tr	intense intense intense intense intense intense intense	few rings no few rings no no no few rings	sm sm sm sm sm	all prese	nt -	k k k k k	oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent	- - - - - - dist	tinct	brown reddis brown brown br red dk red brown	h ish ish	- - - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small	, tr , tr	intense intense intense intense intense intense intense intense	few rings no few rings no no no few rings	sm sm sm sm sm sm	all prese	nt -	k k k k k	oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent	- - - - - dist	tinct tinct	brown reddis brown brown br red dk red brown dk red	h ish ish	- - - - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small	, tr , tr	intense intense intense intense intense intense intense intense intense	few rings no few rings no no no few rings no zones	sm sm sm sm sm sm sm	all prese	nt -	k k k k k k k k k k k k k k k k k k k	oi oi oi oi oi oi oi uni	smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent	- - - - - dist dist dist	tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red	h ish ish	- - - - - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5 S1- 6	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small	, tr , tr	intense intense intense intense intense intense intense intense intense intense	few rings no few rings no no no no few rings no zones no	sm sm sm sm sm sm sm sm sm	all prese	nt -	k k k k k k k k k k k k k k k k k k k	oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent	- - - - - dist dist dist	tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis	h ish ish ish	- - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5 S1- 6 R1- 5	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small small	, tr , tr	intense intense intense intense intense intense intense intense intense intense intense intense	few rings no few rings no no no no few rings no zones no	sm sm sm sm sm sm sm sm sm	all prese	nt -	k k k k k k k k k k k k k k k k k k k	oi oi oi oi oi oi uni oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent	- - - - - dist dist dist	tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis dk red	h ish ish ish	- - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small small small	, tr	intense intense intense intense intense intense intense intense intense intense intense intense intense	few rings no few rings no no no no few rings no con no few rings no con zones no no no	sm sm sm sm sm sm sm sm sm sm	all prese	nt -	k k k k k k k k k k k k k k k k k k k	oi oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent	dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis dk red reddis	h ish ish ish	- - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense intense intense intense intense intense intense intense intense intense intense intense intense intense	few rings no few rings no no no few rings no zones no no few rings	sm sm sm sm sm sm sm sm sm sm	all prese	nt		oi o	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	dist dist dist	tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis reddis reddis	h ish ish ish h	- - - - - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-306 SV-310 SV-318	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense intense intense intense intense intense intense intense intense intense intense intense intense intense intense	few rings no few rings no no no few rings no zones no no few rings no zones no no no few rings	sm sm sm sm sm sm sm sm sm sm sm	all prese			oi  oi  oi  oi  oi  oi  oi  uni  oi  uni  oi  oi  uni  oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent	dist dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis reddis reddis dk red	h ish ish ish h	- - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1- 5,5 S1- 2	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense	few rings no few rings no no no few rings no zones no no few rings no few rings	sm sm sm sm sm sm sm sm sm sm sm sm	all prese			oi  oi  oi  oi  oi  oi  oi  uni  oi  oi  uni  oi  uni  oi  uni  oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent	dist dist dist dist dist dist - dist dist - dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red brown dk reddis reddis reddis reddis dk red dk red dk red dk red	h ish ish ish h	
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9 S1- 2 S1- 1,5	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323 SV-324	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense	few rings no few rings no no no no few rings no zones no no few rings no few rings no few rings no few rings	sm sm sm sm sm sm sm sm sm sm sm sm sm	all prese			oi oi oi oi oi oi oi oi oi uni oi oi oi uni oi oi uni oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent	dist dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red reddis reddis reddis dk red dk red dk red dk red	h ish ish ish h	
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9 S1- 2 S?1- 1,5 ?1/2 - 1	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323 SV-324 SV-323	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense	few rings no few rings no no no no few rings no zones no no no few rings no	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all prese			Di D	smooth	absent	dist dist dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red dk red dis reddis reddis reddis dk red dk red brown	h ish ish h h	- - - - - - - - - - - - - - -
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9 S1- 2 S?1- 1,5 ?1/2 - 1 S/R1- 2	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323 SV-323 SV-324 SV-335	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense	few rings no few rings no no no no few rings no zones no no few rings no	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all prese			oi oi oi oi oi oi oi oi uni oi oi oi uni oi oi oi oi uni oi	smooth	absent	dist dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red dk red dk reddis dk red dis reddis dk red dk red dk red dk red dk red dk red dk red	h ish ish h h	
S1- 3 S1- S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9 S1- 2 S?1- 1,5 ?1/2 - 1 S/R1- 2 R/S2- 0,5m	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323 SV-324 SV-332 SV-335 SV-345	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense medium	few rings no few rings no no no few rings no zones no no few rings no few rings no no no few rings no few rings no few rings no	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all prese			oi  oi  oi  oi  oi  oi  oi  uni  oi  uni	smooth	absent	- - - - - - - dist dist dist dist - - - dist - - - - - - - - - - - - - - - - - - -	tinct tinct tinct tinct tinct	brown reddis brown brown br red dk red brown dk red dk red dk red dk red dk red dk red dk red dk red brown dk red brown dk red brown dk red dk red dis reddi	h ish ish h h	- - - - - - - - - - - - - - -
R2 - 0,5m S1- 3 S1- 4,5 S1- 4m S1- 4 S1- 4 S1- 5 S1- 6 R1- 5 S1- 5,5 S1/2 - 1 S1- 9 S1- 2 S?1- 1,5 ?1/2 - 1 S/R1- 2 R/S2 - 0,5m S1- 7 S1- 3	SV-250 SV-252 SV-266 SV-268 SV-271 SV-273 SV-276 SV-284 SV-285 SV-286 SV-302 SV-306 SV-310 SV-318 SV-323 SV-323 SV-324 SV-335	LASP LASP LASP LASP LASP LASP LASP LASP	small	, tr , tr	intense	few rings no few rings no no no no few rings no zones no no few rings no	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all prese			oi oi oi oi oi oi oi oi uni oi oi oi uni oi oi oi oi uni oi	smooth	absent	dist dist dist dist dist dist dist dist	tinct tinct tinct tinct	brown reddis brown brown br red dk red dk red dk reddis dk red dis reddis dk red dk red dk red dk red dk red dk red dk red dk red dk red	h ish ish h h	- - - - - - - - - - - - - - - - -

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	ma c ro	mic ro	RBC	Atech	Sec	radius
SV96007-	SV-355	LASP	У	-	У	high	open	50-100	-	-	RB	у	у	у	rc	n	17.5 cm
- S1- 5	SV-357	LASP	У	-	у	medium	open	50-100	L	R	RB	y	у	у	rc	n	8.5 cm
- S1- 4	SV-360	LASP	У	-	-	medium	open	50-100	L	R	RB	у	у	У	rc	n	8 cm
- S?1- 2,5	SV-368	LASP	n	>10	у	medium	-	100-200	-	R	RB	y	у	у	rc	n	11.5 cm
- ?2 - 1,5	SV-374	LASP	У	-	У	medium	closed	50-100	-	0	RB	у	у	У	rc	n	7.4 cm
-	SV-375	LASP	У	-	-	medium	open	50-100	-	-	RB	у	у	У	rc	n	9.5 cm
- R2 - 0,5m	SV-376	LASP	У	-	у	medium	closed	50-100	N	0	RB	у	у	у	rc	n	4.4 cm
- R2 - ?	SV-377	LASP	n	<5	-	low	-	100-200	N	0	RB	y	у	у	rc	n	7 cm
- R2 - 1m	SV-382	LASP	n	5- 10	у	high	-	50-100	N	0	RB	y	у	у	rc	n	7 cm
- R?2 - 1	SV-383	LASP	у	-	У	low	open	100-200	-	0	RB	y	у	у	rc	n	7.6 cm
- R?2 -	SV-384	LASP	n	5- 10	У	medium	-	50-100	-	0	RB	y	у	у	rc	n	7.5 cm
- S?2 - 3	SV-385	LASP	n	5- 10	у	medium	-	50-100	-	0	RB	y	у	у	rc	n	7 cm
- R2 - 1m	SV-387	LASP	n	>10	У	high	-	50-100	N	0	RB	у	у	у	rc	n	3 cm
- R2 - 0,5m	SV-388	LASP	n	5- 10	У	low	-	100-200	N	0	RB	У	У	У	rc	n	9.5 cm
- R/S2 - 1	SV-389	LASP	У	-	У	low	open	100-200	-	0	RB	У	У	У	rc	n	5 cm
- R?2 -	SV-390	LASP	n	5- 10	У	medium	-	50-100	-	0	RB	У	У	У	rc	n	8 cm
Field Code	Lab Code	species	RD	EWLV	v c	W	PR	TT	TTW	BP	SOBP	Sp	Γh	SW	LAF	re d	others
SV96007-	SV-355	LASP	large	intens	e z	ones	small	present	-	bi	smooth	abs	ent	distinct	redo	ish	<u> </u>
- S1- 5	SV-357	LASP	small	intens	ο f	ew rings	II				smooth	abs	o n t	although a second		ich	_
- S1- 4		_,	oman		C   11	ew iii iya	small	present	-	uni	311100111	aus	ent	distinct	redo	1311	T -
	SV-360	LASP	small	intens		0		present	-		smooth	abs		aistinct -	redo		-
- S?1- 2,5	SV-360 SV-368				e n		small		- - -	bi			ent	aistinct - -		ish	-
		LASP	small	intens	e n m n	0	small small	present	- - -	bi bi	smooth	abs	ent ent	distinct - - distinct	redo	ish ish	-
- S?1- 2,5	SV-368	LASP LASP	small large	intens mediu	e n m n e n	0	small small small	present present	- - - -	bi bi bi	smooth smooth	abs abs	ent ent ent	-	redo	ish ish d	-
- S?1- 2,5	SV-368 SV-374	LASP LASP LASP	small large small	intens mediu intens	e n m r e n	0	small small small small	present present present	- - - -	bi bi bi bi	smooth smooth smooth	abs abs abs	ent ent ent ent	-	redo redo br re	ish ish d ed	-
- S?1- 2,5 - ?2 - 1,5	SV-368 SV-374 SV-375	LASP LASP LASP LASP	small large small small	intens mediu intens intens	e r m r e r e r m r	0	small small small small small	present present present present	- - - - -	bi bi bi bi bi	smooth smooth smooth smooth	abs abs abs abs	ent ent ent ent ent	- - distinct -	redo redo br re dk re	ish ish d ed nt	-
- S?1- 2,5 - ?2 - 1,5 - - R2 - 0,5m	SV-368 SV-374 SV-375 SV-376	LASP LASP LASP LASP LASP	small large small small small	intens mediu intens intens mediu	e rm re rme rme rme rme rme rme	0	small small small small small small	present present present present present	- - - - - -	bi bi bi bi bi uni	smooth smooth smooth smooth smooth	abs abs abs abs	ent ent ent ent ent ent	- - distinct -	redo redo br re dk re brigl	ish ish d ed nt ish	-
- S?1- 2,5 - ?2 - 1,5 - - R2 - 0,5m - R2 - ?	SV-368 SV-374 SV-375 SV-376 SV-377	LASP LASP LASP LASP LASP LASP	small large small small small small	intens mediu intens intens mediu intens	e rm re rm re rm	0	small small small small small small small	present present present present present present		bi bi bi bi bi uni bi	smooth smooth smooth smooth smooth smooth	abs abs abs abs abs	ent ent ent ent ent ent ent	- distinct - distinct -	redo redo br re dk re brigh redo	ish ded ed nt ish	-
- S?1- 2,5 - ?2- 1,5 - - R2- 0,5m - R2- ? - R2- 1m	SV-368 SV-374 SV-375 SV-376 SV-377 SV-382	LASP LASP LASP LASP LASP LASP LASP	small large small small small small small	intens mediu intens intens mediu intens intens mediu	e rm rne rne rne rne rne rnm rne rnm rne rnm rnm rnm rn	0	small small small small small small small small	present present present present present present present present		bi bi bi bi bi uni bi	smooth smooth smooth smooth smooth smooth smooth	abs abs abs abs abs abs	ent	- distinct - distinct - distinct	redo redo br re dk re brigh redo dk re	ish d ed nt ish ed ish	-
- S?1- 2,5 - ?2 - 1,5 - - R2 - 0,5m - R2 - ? - R2 - 1m - R?2 - 1	SV-368 SV-374 SV-375 SV-376 SV-377 SV-382 SV-383	LASP LASP LASP LASP LASP LASP LASP LASP	small large small small small small small small small small	intens mediu intens intens mediu intens intens mediu	e rm ree rm rmee rmee rmee rmee rmee rm	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	small small small small small small small small small	present present present present present present present present present		bi bi bi bi uni bi uni	smooth smooth smooth smooth smooth smooth smooth smooth	abs abs abs abs abs abs abs	ent	- distinct - distinct - distinct	redo redo br re dk re brigh redo dk re	ish d ed ish ed ish ed ish ish	-
- S?1- 2,5 - ?2 - 1,5 - - R2 - 0,5m - R2 - ? - R2 - 1m - R?2 - 1 - R?2 -	SV-368 SV-374 SV-375 SV-376 SV-377 SV-382 SV-383 SV-384	LASP LASP LASP LASP LASP LASP LASP LASP	small large small small small small small small small small small small, t	intens mediu intens intens mediu intens intens mediu intens	e r m r e r e r m r e r m r e r m r e r e r f f e r	o o o o o o o o o o o o o o o o o o o	small small small small small small small small small small small	present		bi bi bi bi uni bi uni uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth	abs abs abs abs abs abs abs	ent	distinct distinct distinct distinct distinct	redo redo br re dk re brigl redo dk re redo	ish d ed it ish ed ish ed ish ed	-
- S?1- 2,5 - ?2- 1,5 - R2 - 0,5m - R2 - ? - R2 - 1m - R?2 - 1 - R?2 - 2 - S?2 - 3	SV-368 SV-374 SV-375 SV-376 SV-377 SV-382 SV-383 SV-384 SV-385	LASP LASP LASP LASP LASP LASP LASP LASP	small large small small small small small small small small small, t small	intens mediu intens intens mediu intens mediu intens intens mediu r intens intens	e rm ree rm	o o o o o o o o o o o o o o o o o o o	small small small small small small small small small small small	present		bi bi bi bi uni bi uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abs abs abs abs abs abs abs abs	ent	distinct distinct distinct distinct distinct	redo redo br re dk re brigh redo dk re redo dk re	ish ish d d it ish ish id ish id ish ish	-
- S?1- 2,5 - ?2 - 1,5 - R2 - 0,5m - R2 - ? - R2 - 1m - R?2 - 1 - R?2 - - S?2 - 3 - R2 - 1m	SV-368 SV-374 SV-375 SV-376 SV-377 SV-382 SV-383 SV-384 SV-385 SV-387	LASP LASP LASP LASP LASP LASP LASP LASP	small large small	intens mediu intens intens mediu intens intens intens intens mediu r intens intens mediu mediu mediu mediu	e rm ree rm rm rm rm rm rm rm	o o o o o o o o o o o o o o o o o o o	small small small small small small small small small small small small	present		bi bi bi bi uni bi uni bi uni bi bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abs abs abs abs abs abs abs abs abs	ent	distinct distinct distinct distinct distinct distinct distinct	redd redd br re dk re brigl redd dk re redd dk re redd	ish ish d d nt ish ed ish ish ish ish ish ish	-

Field Code         Lab Code         species         pith         RMTP         fungi         GL         SC         tree age         L/N         R/O         WI         macro         micro         RB         Atect           SV96132         SV-3         PCSP         y         -         -         medium         open         50-100         L         R         RB         y         y         y         rc           SV96130         SV-13         PCSP         y         -         y         high         open         50-100         L         R         RB         y         y         y         rc           SV96146         SV-16         PCSP         y         -         y         medium         open         50-100         L         R         RB         y         y         y         rc           SV96148 - S1- 6m         SV-22         PCSP         y         -         y         medium         open         50-100         L         R         RB         y         y         y         rc		radius
SV96130         SV-13         PCSP         y         -         y         high open high open strength         50-100         L         R         RB         y         y         y         rc           SV96146         SV-16         PCSP         y         -         y         medium open strength         50-100         L         R         RB         y         y         y         rc	h Se	8.6 cm
SV96146 SV-16 PCSP y - y medium open 50-100 L R RB y y rc	n	7.5 cm
	n	11.2 cm
	n	13 cm
SV96020 SV-61 PCSP y - y high open 50-100 RB y y rc	n	15 cm
SV96109 - S1 - 2m	n	10 cm
SV96020 - S1 - 6	n	18.3 cm
SV96154 - S1 - 3m	n	11 cm
SV96137 - S1 - 4m SV-76 PCSP y - y medium closed 100-200 L R RB y y rc	n	12 cm
- S1- 3 SV-79 PCSP y - y high open <50 L R RB y y rc	n	12.2 cm
- R2 SV-84 PCSP n 5-10 - high - <50 N O RB y y rc	n	9 cm
- S1- SV-86 PCSP y medium open 50-100 L R RB y y y rc	n	9.3 cm
- S1- 3 SV-91 PCSP y medium open 100-200 L R RB y y y rc	n	9 cm
- S1- 1,5m SV-92 PCSP n <5 - medium open 50-100 L R RB y y rc	n	7.5 cm
- S1- 2 SV-98 PCSP y - y high open 100-200 L R RB y y rc	n	11 cm
- R2 - 2 SV-100 PCSP n 5-10 y low - 50-100 N O RB y y rc	n	8 cm
- R2 - 1m SV-101 PCSP y - y high open 50-100 N O RB y y y rc	n	12.7 cm
- S1- 3 SV-105 PCSP y - y medium open 100-200 L R RB y y y rc	n	10 cm
- S/R1/2 - 1,5 SV-119 PCSP y medium open 50-100 RB y y y rc	n	7.5 cm
- S1- 5 SV-121 PCSP y medium open 50-100 L R RB y y y rc	n	10.6 cm
- 1 - 8,5 - 2m SV-123 PCSP y - y very high open <50 - R RB y y y rc	n	14 cm
	_	5.6 cm
	n	
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y rc	n n	
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y rc - S1- 2m SV-129 PCSP y - y low open 100-200 L R RB y y y rc	n n n	7.8 cm 8.4 cm
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y rc - S1- 2m SV-129 PCSP y - y low open 100-200 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m         SV- 126         PCSP         y         -         -         medium open open open open open open open open	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y rc - S1- 2m SV-129 PCSP y - y low open 100-200 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP large medium few rings small present - uni angular absent distinct - SV96130 SV-13 PCSP large medium no small present - uni angular absent distinct - SV96146 SV-16 PCSP large medium few rings small present - uni angular absent distinct - SV96148 - S1- 6m SV-22 PCSP large medium few rings small present - uni angular absent distinct - SV96020 SV-61 PCSP large low few rings small present - uni angular absent distinct - SV96109 - S1- 2m SV-64 PCSP small medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent dist	n n	7.8 cm
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y rc - S1- 2m SV-129 PCSP y - y low open 100-200 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP large medium few rings small present - uni angular absent distinct - SV96152 - S1- 4m SV-3 PCSP large medium no small present - uni angular absent distinct - SV96146 SV-16 PCSP large medium few rings small present - uni angular absent distinct - SV96148 - S1- 6m SV-22 PCSP large medium few rings small present - uni angular absent distinct - SV96020 SV-61 PCSP large low few rings small present - uni angular absent distinct - SV96109 - S1- 2m SV-64 PCSP small medium no small present - uni angular absent distinct - SV96020 S1- 6 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small me	n n	7.8 cm
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y rc - S1- 2m SV-129 PCSP y - y low open 100-200 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP large medium few rings small present - uni angular absent distinct - SV96152 - S1- 4m SV-3 PCSP large medium no small present - uni angular absent distinct - SV96146 SV-16 PCSP large medium no small present - uni angular absent distinct - SV96148 - S1- 6m SV-22 PCSP large medium few rings small present - uni angular absent distinct - SV96020 SV-61 PCSP large medium no small present - uni angular absent distinct - SV96109 - S1- 2m SV-64 PCSP small medium no small present - uni angular absent distinct - SV96020 SV-65 PCSP large medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small pre	n n	7.8 cm
- S1- 1m SV-126 PCSP y medium open 50-100 L R RB y y y y rc - S1- 2m SV-129 PCSP y y low open 100-200 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-130 PCSP y - y medium open 50-100 L R RB y y y rc - S1- 4 SV-3 PCSP large medium few rings small present - uni angular absent distinct - SV96130 SV-13 PCSP large medium no small present - uni angular absent distinct - SV96146 SV-16 PCSP large medium no small present - uni angular absent distinct - SV96148 - S1- 6m SV-22 PCSP large medium few rings small present - uni angular absent distinct - SV96020 SV-61 PCSP large low few rings small present - uni angular absent distinct - SV96109 - S1- 2m SV-64 PCSP small medium no small present - uni angular absent distinct - SV96109 - S1- 2m SV-65 PCSP large medium no small present - uni angular absent distinct - SV96154 - S1- 3m SV-68 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-76 PCSP small medium large zones small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96137 - S1- 4m SV-79 PCSP small medium no small present - uni angular absent distinct - SV96	n n	7.8 cm
- S1- 1m SV- 126 PCSP y medium open 50-100 L R RB y y y rc S1- 2m SV- 129 PCSP y - y low open 100-200 L R RB y y y rc S1- 2m SV- 130 PCSP y - y medium open 50- 100 L R RB y y y rc S1- 4 SV- 130 PCSP y - y medium open 50- 100 L R RB y y y rc S1- 4 SV- 130 PCSP y - y medium open 50- 100 L R RB y y y rc S1- 2m SV- 3 PCSP large medium few rings small present - uni angular absent distinct - SV96 130 SV- 13 PCSP large medium no small present - uni angular absent distinct - SV96 146 SV- 16 PCSP large medium no small present - uni angular absent distinct - SV96 148 - S1- 6m SV- 22 PCSP large medium few rings small present - uni angular absent distinct - SV96 109 - S1- 2m SV- 64 PCSP small medium no small present - uni angular absent distinct - SV96 109 - S1- 2m SV- 64 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 76 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 76 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 76 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 76 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 76 PCSP small medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 4m SV- 78 PCSP small, medium no small present - uni angular absent distinct - SV96 137 - S1- 3 SV- 84 PCSP small, medium no small present - uni angular absent distinct - Uni	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
- S1 - 1m	n n	7.8 cm
- S1 - 1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
S1-1m	n n	7.8 cm
- S1- 1m	n n	7.8 cm
S1-1m	n n	7.8 cm
S1- Im	n n	7.8 cm

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	macro	mic ro	CD	RBC	Ate	Sec	radius
- R/S2 - 1	SV-131	PCSP	n	5- 10	<u> </u> -	medium	-	100-200	-	0	RB	У	У	n	У	rc	n	11.5 cm
- R1 - 1m	SV- 135	PCSP	n	>10	-	medium	-	50-100	N	R	RB	У	У	n	У	rc	n	-
- S1- 4	SV- 146	PCSP	у	-	У	medium	closed	50-100	L	R	RB	У	У	n	У	rc	n	7.5 cm
- R3 - 0,5	SV-151	PCSP	n	-	-	medium	-	50-100	N	-	RB	У	У	n	У	rc	n	-
- R2 - 2m	SV- 153	PCSP	У	-	У	low	closed	100-200	N	0	RB	У	У	n	У	rc	n	7.7 cm
- S?2 - 1	SV- 168	PCSP	У	-	-	medium	open	100-200	-	0	RB	У	У	n	У	rc	n	11.5 cm
- R2 - 1	SV-171	PCSP	У	-	У	medium	closed	50-100	N	0	RB	У	У	n	У	rc	n	5.5 cm
- ?2 -	SV- 174	PCSP	У	-	У	high	open	50-100	-	0	RB	У	У	n	У	rc	n	12 cm
- ?2 - 0,5	SV- 175	PCSP	n	<5	У	high	-	<50	-	0	RB	У	У	n	У	rc	n	-
- R2 - 1m	SV- 178	PCSP	n	5- 10	-	medium	-	50-100	N	0	RB	У	У	n	У	rc	n	-
- R?2 - 3m	SV- 179	PCSP	n	5- 10	У	high	-	50-100	-	0	RB	У	У	n	У	rc	n	-
- R?2 - 0.5	SV-181	PCSP	n	>10	У	medium	-	100-200	N	0	RB	У	У	n	У	rc	n	-
- S/R2 - 3m	SV- 185	PCSP	n	5- 10	У	medium	-	50-100	-	0	RB	У	V	n	У	rc	n	9 cm
- S/R2 - 2	SV-191	PCSP	n	>10	У	medium	-	50-100	-	0	RB	У	У	n	У	rc	n	-
- R2/1- 5	SV- 195	PCSP	У	-	-	medium	open	50-100	N	-	RB	y	У	n	У	rc	n	7 cm
- S1- 3	SV- 196	PCSP	n	5- 10	У	medium		50-100	L	R	RB	y	У	n	У	rc	n	8 cm
- S?1-	SV- 199	PCSP	У	-	y	high	open	50-100	-	R	RB	y	У	n	У	rc	n	6.5 cm
- S1- 1,5	SV-204	PCSP	У	-	y	medium	open	50-100	L	R	RB	y	v	n	٧	rc	n	7 cm
- R2 - 1m	SV-207	PCSP	У	-	-	medium	open	100-200	N	0	RB	y	У	n	У	rc	n	7.2 cm
- S/R1- 2	SV-209	PCSP	У	-	У	very low	closed	100-200	-	R	RB	y	y	n	У	rc	n	6.5 cm
- S1- 2m	SV-212	PCSP	У	-	y	medium	open	50-100	L	R	RB	y	У	n	У	rc	n	7 cm
- S1- 9	SV-213	PCSP	V	-	V	high	open	50-100	L	R	RB	V	V	n	V	rc	n	10.5 cm
SV96145 - S1 - 3		PCSP	V	-	-	medium	open	50-100	L	R	RB	У	٧	n	V	rc	n	8 cm
- S?1- 2	SV-224	PCSP	y	-	-	low	closed	100-200		R	RB	У	У	n	У	rc	n	7.5 cm
Field Code	Lab Code			Е	WLW	CW	PR	TT	TT			SOBP	SPTh	S		other		
Field Code - R/S2 - 1		species PCSP			WLW ow			TT	TT	W E	3P	SOBP	SPTh					
	Lab Code	species	RD	, tr lo		CW	PR			W E	3 <b>P</b> uni			S		other		
- R/S2 - 1	Lab Code SV-131	species PCSP	RD small,	, tr lo	w	<b>CW</b> no	PR small	TT present	-	<b>W E</b>	<b>3P</b> uni uni	SOBP angular angular	SPTh absent	S'  -  -		other		
- R/S2 - 1 - R1 - 1m	SV-131 SV-135	species PCSP PCSP	RD small, small	tr lo in tr m	ow ntense	no no	PR small small	TT present present	-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	BP uni uni uni	SOBP angular angular angular	SPTh absent absent	S'  -  -	W	other		
- R/S2 - 1 - R1 - 1m - S1 - 4	SV- 131 SV- 135 SV- 146	species PCSP PCSP PCSP	RD small, small, small,	tr lo in tr m	ow ntense nedium	no no few rings	PR small small small	present present	- - -	'W E	BP uni uni uni uni	SOBP angular angular	SPTh absent absent absent	S'  -  -	W	other		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5	SV- 131 SV- 135 SV- 146 SV- 151	species PCSP PCSP PCSP PCSP	RD small, small, small, small,	tr lo in tr m tr m	ow ntense nedium nedium nedium	no no few rings few rings no	PR small small small small	present present present present present present	- - -	'W E	BP uni uni uni uni uni	SOBP angular angular angular angular angular	SPTh absent absent absent absent	S' - - dis	W	other		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m	SV-131 SV-135 SV-146 SV-151 SV-153 SV-168	species PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small,	tr lo in tr m tr m tr m	ow ntense nedium nedium nedium nedium	no no few rings few rings no few rings	PR small small small small small small	present present present present present present present	- - - -	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	JP Jni Jni Jni Jni Jni Jni	SOBP angular angular angular angular angular angular	SPTh absent absent absent absent absent absent absent	S'    -	stinct	other		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171	species PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small,	tr lo in in tr m, tr m, tr m, tr m, tr m, tr m	ow ntense nedium nedium nedium nedium nedium	no no few rings few rings no few rings few rings	PR small small small small small small small small	present present present present present present present present present	- - - - -	'W E	IP Ini	SOBP angular angular angular angular angular angular angular	SPTh absent absent absent absent absent absent absent absent	S'    -	W	other		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 -	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174	species PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCS	RD small, small, small, small, small, small	, tr lo in , tr m , tr m , tr m , tr m	ntense nedium nedium nedium nedium nedium nedium nedium	no no few rings few rings no few rings few rings few rings	PR small small small small small small small small small	present	- - - - -	\text{W} \text{E} \ \text{C} \ \t	BP  uni  uni  uni  uni  uni  uni  uni  un	SOBP angular angular angular angular angular angular angular angular	SPTh absent absent absent absent absent absent absent absent absent	S' dis dis dis	stinct	other		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171	species PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small,	tr lo in, tr m, tr m, tr m, tr m, tr m, tr m	ntense nedium nedium nedium nedium nedium nedium nedium	no no few rings few rings no few rings few rings	PR small small small small small small small small	present	- - - - - -	- W E C C C C C C C C C C C C C C C C C C	BP  Jini Jini Jini Jini Jini Jini Jini Ji	SOBP angular	SPTh absent	S' dis dis - dis - dis	stinct	others		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small, small	tr lo	ntense nedium nedium nedium nedium nedium nedium nedium nedium	no no few rings no	PR small	present	- - - - - - -	TW E	BP  Ini Ini Ini Ini Ini Ini Ini Ini Ini In	SOBP angular	SPTh absent present	S' dis dis - dis dis	stinct stinct	others		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small small, small	tr lo	ow Intense Int	no no few rings few rings no few rings few rings few rings few rings no - no	PR small	present	- - - - - - - -	- W E L L L L L L L L L L L L L L L L L L	BP uni	SOBP angular	SPTh absent	S' dis dis - dis dis	stinct	others		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small	tr lo	ow Intense Int	no no few rings few rings no few rings few rings few rings few rings -	PR small	present	- - - - - - - - -	- W E L L L L L L L L L L L L L L L L L L	BP  Juni  Ju	SOBP angular	SPTh absent	dis	stinct stinct stinct	others		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small small, small	tr lo	ow Intense Int	no no few rings few rings no few rings few rings few rings few rings no - no few rings	PR Small	present	- - - - - - - - - - - - - - - - - - -	**************************************	BP  uni  uni  uni  uni  uni  uni  uni  un	SOBP angular	SPTh absent	dis	stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185 SV- 191	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small small, small	tr lock in tr mr	ow Intense Int	no no few rings few rings no few rings few rings few rings few rings no - no few rings no no	PR small	present	- - - - - - - - - - - - -	**************************************	BP  uni  uni  uni  uni  uni  uni  uni  un	SOBP angular	SPTh absent	Single Si	stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185 SV- 191	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small	tr loc in in tr mr tr mr tr mr tr mr tr mr mr tr mr	ow Intense Int	no no few rings few rings no few rings few rings few rings few rings no - no few rings no no no no no	PR small	present		**************************************	BP  uni  uni  uni  uni  uni  uni  uni  un	SOBP angular	SPTh absent	S' dis dis - dis - dis - dis dis dis	stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 185 SV- 185 SV- 191 SV- 196	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small, small	tr loc	ow Intense Inedium Ine	no no few rings few rings no few rings few rings few rings no - no few rings no few rings no few rings	PR small	present	- - - - - - - - - - - - - - - - - - -	**************************************	SP  uni  uni  uni  uni  uni  uni  uni  un	SOBP angular	SPTh absent	S' dis dis - dis - dis - dis dis dis	stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185 SV- 191	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small	tr loc	ow Intense Inedium Ine	no no few rings few rings few rings few rings few rings no - no few rings no - no few rings no no no few rings	PR small	present	- - - - - - - - - - - - - - - - - - -	- W E	SP  Jani Jani Jani Jani Jani Jani Jani Jan	SOBP angular	SPTh absent	Single Si	stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3 - S1 - 1,5	SV-131 SV-135 SV-146 SV-151 SV-153 SV-168 SV-171 SV-174 SV-175 SV-178 SV-179 SV-181 SV-185 SV-191 SV-195 SV-196 SV-199 SV-204	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small, small, small, small, small	tr local in transfer in transf	ow Intense Int	no no few rings few rings few rings few rings few rings few rings no - no few rings no few rings no few rings no few rings	PR Small	present	- - - - - - - - - - - - - - - - - - -	**************************************	IP  Jani Jani Jani Jani Jani Jani Jani Jan	SOBP angular	SPTh absent	Single Si	stinct stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3 - S?1 - - S1 - 1,5 - R2 - 1m	SV-131 SV-135 SV-146 SV-151 SV-153 SV-168 SV-171 SV-174 SV-175 SV-178 SV-179 SV-181 SV-185 SV-191 SV-195 SV-196 SV-199 SV-204 SV-207	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD Small, Small, Small, Small, Small, Small	tr loc in in in tr m m m m m m m m m m m m m m m m m m	ow Intense Int	no no few rings few rings few rings few rings few rings few rings no - no few rings no few rings no few rings	PR Small	present	- - - - - - - - - - - - - - - - - - -	W E	and	SOBP angular	SPTh absent	Single Si	stinct stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3 - S?1 - - S1 - 1,5 - R2 - 1m - S/R1 - 2	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185 SV- 191 SV- 196 SV- 199 SV- 199 SV- 204 SV- 207 SV- 209	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD Small, Small, Small, Small, Small	tr loc in in in tr m m m m m m m m tr m m loc in m m m m m m m m m m m m m m m m m m	ow Intense Int	no no few rings few rings few rings few rings few rings few rings no - no few rings no no few rings no few rings	PR small	present	- - - - - - - - - - - - - - - - - - -	W E	SP  Jani Jani Jani Jani Jani Jani Jani Jan	SOBP angular	sprh absent	Single Si	stinct stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 0,5 - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3 - S?1 - - S1 - 1,5 - R2 - 1m - S/R1 - 2 - S1 - 2m	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 178 SV- 185 SV- 181 SV- 195 SV- 196 SV- 199 SV- 204 SV- 207 SV- 209 SV- 212	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD small, small, small	tr loc in in tr m m m m m m m m m m m m m m m m m m	ow Intense Int	no no few rings few rings few rings few rings few rings few rings no - no few rings no few rings no few rings	PR small	present		- W E	SP  Jani Jani Jani Jani Jani Jani Jani Jan	SOBP angular	spth absent	Single Si	stinct stinct stinct stinct stinct stinct	other:		
- R/S2 - 1 - R1 - 1m - S1 - 4 - R3 - 0,5 - R2 - 2m - S?2 - 1 - R2 - 1 - ?2 - - ?2 - 0,5 - R2 - 1m - R?2 - 3m - R?2 - 3m - S/R2 - 3m - S/R2 - 2 - R2/1 - 5 - S1 - 3 - S?1 - 5 - S1 - 1,5 - R2 - 1m - S/R1 - 2	SV- 131 SV- 135 SV- 146 SV- 151 SV- 153 SV- 168 SV- 171 SV- 174 SV- 175 SV- 178 SV- 179 SV- 181 SV- 185 SV- 191 SV- 196 SV- 199 SV- 199 SV- 204 SV- 207 SV- 209	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	RD Small, Small, Small, Small Small, Small	tr loc in in tr m tr m m m m m m m m tr m m m m m m	ow Intense Int	no no few rings few rings few rings few rings few rings few rings no - no few rings no no few rings no few rings	PR small	present		- W E	SP  Jani Jani Jani Jani Jani Jani Jani Jan	SOBP angular	sprh absent	Single Si	stinct stinct stinct stinct stinct stinct	other:		

**Svalbard** samples: PCSP 3

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	R/O	WI	macro	micro	CD	RBC	Atech	Se	radius
- S1- 1,5m	SV-227	PCSP	У	-	У	medium	open	50-100	L	R	RB	У	У	n	У	rc	n	7.5 cm
- S1- 1	SV-244	PCSP	n	<5	у	medium	-	50-100	L	R	RB	у	У	n	У	rc	n	9.5 cm
- R2 -	SV-245	PCSP	У	-	-	high	open	<50	N	0	RB	у	V	n	У	rc	n	7.3 cm
- R?2 - 0,5	SV-247	PCSP	n	<5	У	low	closed	100-200	-	0	RB	у	У	n	У	rc	n	7.2 cm
- S2 -	SV-248	PCSP	n	<5	У	high	open	<50	L	0	RB	У	٧	n	У	rc	n	5 cm
- R1- 1.5	SV-269	PCSP	n	<5	-	low	-	100-200	N	R	RB	У	٧	n	У	rc	n	9.8 cm
- S1- 6	SV-275	PCSP	У	-	У	medium	closed	50-100	L	R	RB	У	٧	n	У	rc	n	10.5 cm
- S1- 1	SV-291	PCSP	У	-	У	high	open	50-100	L	R	RB	У	٧	n	У	rc	n	7.5 cm
- S1- 2	SV-293	PCSP	n	5- 10	У	medium	-	50-100	L	R	RB	У	٧	n	У	rc	n	8 cm
- R/S2 - 2	SV-296	PCSP	n	<5	У	medium	-	100-200	-	0	RB	У	У	n	У	rc	n	20.5 cm
- R1- 3	SV-301	PCSP	у	-	У	medium	open	50-100	N	R	RB	У	V	n	V	rc	n	8 cm
- S1- 1m	SV-307	PCSP	V	-	- y	medium	open	50-100	L	R	RB	У	V	n	V	rc	n	9.8 cm
- S1- 8m	SV-311	PCSP	n	<5	У	medium	-	50-100	L	R	RB	У	V	n	V	rc	n	7.4 cm
- S1- 6m	SV-334	PCSP	n	-	-	medium	-	50-100	L	R	RB	У	V	n	У	rc	n	12.5 cm
- S2 - 3	SV-334	PCSP	n	5- 10	У	medium	-	50-100	L	0	RB	У	V	n	У	rc	n	14.5 cm
- S1- 0,5	SV-340	PCSP	n	5- 10	У	high	-	100-200	L	R	RB	У		n	-	rc	n	27.5 cm
- R?2 - 1m	SV-353	PCSP	n		У	medium	-	100-200	-	0	RB	-	У		У		n	3 cm
- S?1- 1m		PCSP		>10	У				-	R	RB	У	У	n	У	rc		
	SV-358	PCSP	У	-	У	medium	open	50-100				У	У	n	У	rc	n	9 cm
- S1- 1m	SV-363		У		У	high	open	50-100	L	R	RB	У	У	n	У	rc	n	8.4 cm
- S1- 1m	SV-373	PCSP PCSP	n	<5	У	medium	-	50-100	L	R	RB	У	У	n	У	rc	n	7 cm
- S/R 2 - 1m	SV-381		n	<5	У	medium	-	50-100	-	0	RB	У	у	n	У	rc	n	7 cm
- R2 - 2m	SV-386	PCSP	n	5- 10	У	medium	-	<50	N	0	RB	У	У	n	У	rc	n	4 cm
- S21- 1m	SV-391	PCSP	n	>10	у	low	-	50-100	L	-	RB	у	у	n	У	rc	n	6 cm
Field Code	Lab Code	species	RD	EW		CW	PR	TT	TTV				SPTh	SW		hers		
- S1- 1,5m	SV-227	PCSP	small, t			fewrings	small	present	-	uni		_	bsent	-	-			
- S1- 1	SV-244	PCSP	large	inte		fewrings	small	present	-	uni		0	bsent	-	-			
- R2 -	SV-245	PCSP	small, t	r med	dium	no	small		-	uni	an	gular a	absent	-	-			
- R?2 - 0,5	SV-247							present										
- S2 -		PCSP	small, t			fewrings	small	present	-	uni		0	absent	-	-			
	SV-248	PCSP	small, t	inte	nse	few rings no	small small	present present		uni	an	gular a	absent	-	-			
- R1- 1,5	SV-248 SV-269	PCSP PCSP	small, t small small	inte med	nse dium	fewrings no no	small small	present present present	-	uni uni	an an	gular a gular a	absent absent	-	-			
- S1- 6	SV-248 SV-269 SV-275	PCSP PCSP PCSP	small, t	inte	nse dium	few rings no	small small	present present	-	uni	an an	gular a gular a	absent	- - distinc	-			
- S1- 6 - S1- 1	SV-248 SV-269	PCSP PCSP	small, t small small	inte med inte	nse dium	fewrings no no	small small	present present present	- - -	uni uni	an an an	gular a gular a gular a	absent absent	-	-			
- S1- 6	SV-248 SV-269 SV-275	PCSP PCSP PCSP	small, t small small small	inte med inte med	nse dium nse	fewrings no no zones	small small small small	present present present present	- - -	uni uni uni	an an an an	gular a gular a gular a gular a	absent absent absent	-	- - t -			
- S1- 6 - S1- 1	SV-248 SV-269 SV-275 SV-291	PCSP PCSP PCSP	small, t small small small small	inte med inte med med	nse dium nse dium	fewrings no no zones fewrings	small small small small small	present present present present present	- - - -	uni uni uni uni	an an an an an an an	gular a gular a gular a gular a gular a	absent absent absent absent	distinc	- - t -			
- S1- 6 - S1- 1 - S1- 2	SV-248 SV-269 SV-275 SV-291 SV-293	PCSP PCSP PCSP PCSP PCSP	small, t small small small small small	inte med inte med med r med	nse dium nse dium dium	fewrings no no zones fewrings fewrings	small small small small small small	present present present present present present	- - - - -	uni uni uni uni uni	an a	gular a gular a gular a gular a gular a gular a	absent absent absent absent absent	distinc	- t - - -			
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296	PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small small small small, t	inte med inte med med r med r med	nse dium nse dium dium dium	few rings no no zones few rings few rings large zones	small small small small small small small	present present present present present present present	- - - - - -	uni uni uni uni uni uni	an	gular a gular a gular a gular a gular a gular a gular a gular a	absent absent absent absent absent absent	distinc	- t - - -			
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small small small, t small, t	inte med inte med med r med r med med r med	nse dium nse dium dium dium dium	few rings no no zones few rings few rings large zones no	small small small small small small small small	present present present present present present present present	- - - - - - -	uni uni uni uni uni uni	an	gular a gular a gular a gular a gular a gular a gular a gular a gular a	absent absent absent absent absent absent absent	distinc	- t - - - - t -			
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small small small, t small, t small	inte med inte med r med r med med med r med med med	nse dium nse dium dium dium dium	few rings no no zones few rings few rings large zones no	small small small small small small small small	present	- - - - - - - -	uni uni uni uni uni uni uni	an a	gular a gular	absent absent absent absent absent absent absent	- distinc distinc	t t t t			
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small small small, t small, t small large	inte med inte med r med r med med med med med med med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no	small	present present present present present present present present present present	- - - - - - - -	uni uni uni uni uni uni uni	an a	gular a	absent absent absent absent absent absent absent absent absent absent	distinc	t t t t			
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small small small, t small, t small large large	inte med inte med r med r med med med med med med med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no	small	present	- - - - - - - -	uni uni uni uni uni uni uni uni	an	gular a gular	absent absent absent absent absent absent absent absent absent absent absent	distinc	t t t t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2 - 3	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small small, 1 small, 1 small large large small	inte med inte med med r med med med med med med med med r med med r med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no no few rings	small	present	- - - - - - - -	uni	an a	gular a gular	absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - - - - - - t - t - t - t - ho	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2- 3 - S1- 0,5	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 3	inte med inte med r med med med r med med med r med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones	small	present present present present present present present present present present present present present present present		uni	an a	gular a gular	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc - distinc - distinc distinc distinc	t t t t t t t t - t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2- 3 - S1- 0,5 - R?2 - 1m - S?1- 1m	SV-248 SV-269 SV-275 SV-291 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353 SV-358	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1	inte med inte med r r med med med med med med med med r r med med med r r med r r med r r med r r r r r r r r r r r r r r r r r r r	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones no	small	present present present present present present present present present present present present present present present		uni	ani	gular a gular	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct	t t t t t t t t - t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2- 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2- 3 - S1- 0,5 - R?2- 1m - S?1- 1m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353 SV-358 SV-363	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 1	inte med inte med r med r med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones no no few rings	small	present		uni	ani	gular a gular	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distince - distince - distince - distince - distince - distince - distince distince distince	t t t t t t t t t t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2 - 3 - S1- 0,5 - R?2 - 1m - S?1- 1m - S?1- 1m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353 SV-358 SV-358 SV-363 SV-373	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small small, 1 small, 1 small, 1 small, 1 small, 1 small small small small small	inte med inte med r med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones no no few rings zones no no	small	present		uni	ani	gular a gular	absent a	distinc distinc distinc distinc distinc distinc distinc	t t t t t t t t t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R/1- 3 - S1- 1m - S1- 8m - S1- 6m - S2 - 3 - S1- 0,5 - R?2 - 1m - S?1- 1m - S1- 1m - S1- 1m - S1- 1m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353 SV-353 SV-363 SV-363 SV-373 SV-381	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small small small small small, 1 small, 1 small, 1 small, 1 small, 1 small, 1 small, 3 small small small small small small small small small	inte med inte med r med med med r med med med med med med med med low med low	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones no no few rings zones no	small	present		uni	an a	gular a gular	absent a	distinc distinc distinc distinc distinc distinc distinc	t t t t t t t t t	les		
- S1- 6 - S1- 1 - S1- 2 - R/S2 - 2 - R1- 3 - S1- 1m - S1- 8m - S1- 6m - S2 - 3 - S1- 0,5 - R?2 - 1m - S?1- 1m - S1- 1m	SV-248 SV-269 SV-275 SV-291 SV-293 SV-296 SV-301 SV-307 SV-311 SV-334 SV-338 SV-340 SV-353 SV-358 SV-358 SV-363 SV-373	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, 1 small small small small small, 1 small, 1 small, 1 small, 1 small, 1 small small small small small	inte med inte med r med med med r med r med med med med med med med med r med r med r med r med med r med	nse dium nse dium dium dium dium dium dium dium dium	few rings no no zones few rings few rings large zones no no no few rings zones no no few rings zones no no	small	present		uni	an a	gular a gular	absent a	distinc distinc distinc distinc distinc distinc distinc	t t t ho t t	les		

Field Code	Lab Code	species	pith	RMT	fungi	GL	SC	tree a	ge L/N	R/O	WI	macro	mic ro	RBC	Atec	h Sec	radius
SV96105 - S	SV-6	ABSP	У	-	-	medium	open	50-100	) L	-	RB	У	У	У	rc	n	10.5 cm
SV96105 - 1 - 2m	SV- 10	ABSP	-	-	у	medium	-	-	-	R	RB	У	У	У	rc	n	-
SV96143 - 1 - 1,5m	SV-34	ABSP	У	-	у	medium	open	50-100	) L	R	RB	У	У	У	rc	n	8.4 cm
SV96129	SV-41	ABSP	n	5- 10	у	high	-	50-100	) -	-	RB	У	У	У	rc	n	11 cm
- S1- 1	SV-81	ABSP	n	<5	у	medium	-	50-100	) L	R	RB	У	У	У	rc	n	7.7 cm
- S1- 2,5	SV-82	ABSP	n	<5	у	low	open	50-100	) L	R	RB	У	У	У	rc	n	4.4 cm
- R1- 7	SV-94	ABSP	У	-	-	high	open	50-100	) N	R	RB	У	У	У	rc	n	16 cm
- S? 1/2 - 5m	SV- 127	ABSP	n	<5	у	medium	open	50-100	) -	-	RB	У	У	У	rc	n	9.6 cm
- ?2 - 1m	SV- 138	ABSP	У	-	-	medium	open	<50	-	0	RB	У	У	У	rc	n	6 cm
- R/S2 - 1	SV- 186	ABSP	У	-	-	medium	closed	50-100	) -	0	RB	У	У	У	rc	n	5.3 cm
- S2 - 3	SV-238	ABSP	n	>10	у	medium	-	50-100	) L	0	RB	У	У	У	rc	n	8 cm
- R2 -	SV-251	ABSP	n	<5	-	high	open	<50	N	0	RB	У	У	У	rc	n	8.2 cm
- S1- 1,5m	SV-253	ABSP	У	-	-	high	open	<50	L	R	RB	У	У	У	rc	n	7.2 cm
- R2 -	SV-256	ABSP	n	<5	у	medium	-	50-100	) N	0	RB	У	У	У	rc	n	7.5 cm
- R1- 0,5	SV-260	ABSP	n	>10	У	medium	-	50-100	) N	R	RB	У	У	У	rc	n	7.5 cm
- S?1- 1m	SV-317	ABSP	n	<5	-	medium	open	50-100	) -	R	RB	У	У	У	rc	n	7.5 cm
- S - 2	SV-343	ABSP	У	-	-	medium	open	50-100	) L	-	RB	У	У	У	rc	n	9 cm
- S1- 5 - Ny	SV-354	ABSP	n	<5	У	medium	-	50-100	) L	R	RB	У	У	У	rc	n	16.5 cm
- S/R1- 1	SV-356	ABSP	n	<5	-	low	-	50-100	) -	R	RB	У	У	У	rc	n	7.5 cm
- S1- 1m	SV-365	ABSP	У	-	-	medium	closed	50-100	) L	R	RB	У	У	У	rc	n	5.8 cm
- S1- 1,5m	SV-371	ABSP	n	>10	-	medium	-	50-100	) L	R	RB	У	У	У	rc	n	6 cm
Field Code	Lab Code	species	RD		EWLW	CW	F	R .	TT	TTW	BP	SOBP	SpTh	S	w	LARred	others
SV96105 - S	SV-6	ABSP	no		medium	no	s	mall	absent	-	bi	-	absent	-		-	-
SV96105 - 1 - 2m	SV- 10	ABSP	no		low	no	s	mall a	absent	-	bi	-	absent	. d:	stinct	_	-
01/00440 4 4 5														. ai	SUITE		
SV96143 - 1 - 1,5m	SV-34	ABSP	no		medium	no	s		absent	-	uni	-	absent			-	-
SV96143 - 1 - 1,5m SV96129	SV-34 SV-41	ABSP ABSP	no no		medium medium	no few ring		mall		-	uni uni	-		di		-	-
			_				js s	mall a	absent				absent	di di	stinct	- - -	-
SV96129	SV-41	ABSP	no		medium	few ring	js s	mall a mall a mall a	absent absent	-	uni		absent absent	di di	stinct	- - -	- - -
SV96129 - S1- 1	SV-41 SV-81	ABSP ABSP	no no	l, tr	medium low	few ring	js s js s	mall amall amall amall amall a	absent absent absent	-	uni uni	-	absent absent absent	di di -	stinct	- - - -	- - - -
SV96129 - S1 - 1 - S1 - 2,5	SV-41 SV-81 SV-82	ABSP ABSP ABSP	no no smal	l, tr	medium low medium	few ring few ring few ring	js s js s	mall amall a	absent absent absent oresent	- - -	uni uni uni	-	absent absent absent absent	di di -	stinct	- - - -	- - - - -
SV96129 - S1- 1 - S1- 2,5 - R1- 7	SV-41 SV-81 SV-82 SV-94	ABSP ABSP ABSP	no no smal smal	l, tr	medium low medium low	few ring few ring few ring no	js s js s js s s	mall a ma	absent absent absent oresent absent	- - -	uni uni uni uni	- - angular -	absent absent absent absent absent	di di - - - di	stinct stinct	- - - - -	- - - - -
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m	SV-41 SV-81 SV-82 SV-94 SV-127	ABSP ABSP ABSP ABSP ABSP	no no small small no	l, tr	medium low medium low medium	few ring few ring few ring no no	js s js s js s s	mall a ma	absent absent absent oresent absent absent	- - - -	uni uni uni uni uni	- angular -	absent absent absent absent absent absent	di di : - : - : - di	stinct stinct	- - - - -	-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138	ABSP ABSP ABSP ABSP ABSP	no no small small no no	l, tr	medium low medium low medium low	few ring few ring few ring no no few ring	ys s ys s ys s ys s ys s	mall a ma	absent absent absent oresent absent absent absent	- - - -	uni uni uni uni uni uni	- angular - -	absent absent absent absent absent absent absent	di di - - - di di	stinct stinct	- - - - - -	-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186	ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no no	l, tr l, tr	medium low medium low medium low	few ring few ring few ring no no few ring few ring	JS S JS S JS S JS S S S S S S S S S S S	mall a ma	absent absent absent oresent absent absent absent absent	- - - - -	uni uni uni uni uni uni uni	- angular - -	absent absent absent absent absent absent absent absent	di di di di di di di di	stinct stinct stinct	-	
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238	ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no no no	l, tr l, tr	medium low medium low medium low low	few ring few ring no no no few ring few ring no	JS         S           JS         S           JS         S           S         S           JS         S           S         S           S         S           S         S           S         S	mall a ma	absent absent absent oresent absent absent absent absent absent	- - - - - -	uni uni uni uni uni uni uni uni bi	- angular - -	absent absent absent absent absent absent absent absent absent	di	stinct stinct stinct	-	-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 -	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238 SV-251	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no no no no	l, tr l, tr	medium low medium low medium low low low medium	few ring few ring no no few ring few ring no no no few ring no no	JS         S           JS         S           JS         S           JS         S           S         S           JS         S           JS         S           S         S           S         S	mall a ma	absent absent absent bresent absent absent absent absent absent absent absent	- - - - - - - -	uni	- angular - - - - - -	absent absent absent absent absent absent absent absent absent	di d	stinct stinct stinct		-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238 SV-251 SV-253	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no no no no no	l, tr l, tr	medium low medium low medium low low low medium medium	few ring few ring no no few ring few ring no no few ring no no		mall a mall	absent absent oresent absent absent absent absent absent absent absent	- - - - - - - - -	uni	- - angular - - - - - -	absent absent absent absent absent absent absent absent absent absent	di d	stinct stinct stinct		
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m - R2 -	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238 SV-251 SV-253 SV-256	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no no no no no no	l, tr l, tr	medium low medium low medium low low medium medium medium	few ring few ring no no few ring few ring no no few ring no no no no	S	mall a mall	absent absent absent oresent absent absent absent absent absent absent absent absent	- - - - - - - -	uni	- - angular - - - - - -	absent absent absent absent absent absent absent absent absent absent absent	di: di: di: -	stinct stinct stinct		-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m - R2 R1- 0,5	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238 SV-251 SV-253 SV-256 SV-260	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no	l, tr l, tr	medium low medium low medium low low low medium medium medium medium	few ring few ring no no few ring few ring no no few ring no no no no few ring no no few ring	S	mall a mall	absent absent absent absent absent absent absent absent absent absent absent absent	- - - - - - - - -	uni	- - angular - - - - - - -	absent absent absent absent absent absent absent absent absent absent absent absent absent	di d	stinct stinct stinct	-	-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m - R2 R1- 0,5 - S?1- 1m	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-238 SV-251 SV-253 SV-256 SV-260 SV-317	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no	l, tr l, tr	medium low medium low low low low medium medium medium medium medium medium medium medium	few ring few ring no no few ring no no few ring no no no few ring no no no no no	gs s	mall a mall	absent absent absent oresent absent absent absent absent absent absent absent absent absent	- - - - - - - - -	uni	- angular - - - - - - - - -	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	di d	stinct stinct stinct		- - - - - - - - - - - - - - - - - - -
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m - R2 R1- 0,5 - S?1- 1m - S - 2	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-186 SV-238 SV-251 SV-253 SV-256 SV-260 SV-317 SV-343	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no	l, tr l, tr	medium low medium low medium low low medium medium medium medium medium medium medium	few ring few ring no no few ring no few ring no no few ring no few ring no few ring	S	mall a ma	absent absent absent oresent absent absent absent absent absent absent absent absent absent absent		uni	- - angular - - - - - - - -	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	di d	stinct stinct stinct		-
SV96129 - S1- 1 - S1- 2,5 - R1- 7 - S? 1/2 - 5m - ?2 - 1m - R/S2 - 1 - S2 - 3 - R2 S1- 1,5m - R2 R1- 0,5 - S?1- 1m - S - 2 - S1- 5 - Ny	SV-41 SV-81 SV-82 SV-94 SV-127 SV-138 SV-238 SV-251 SV-253 SV-256 SV-260 SV-317 SV-343 SV-354	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no small small no	l, tr l, tr	medium low medium low medium low low low medium medium medium medium medium medium medium medium medium	few ring few ring no no few ring no	S	mall a ma	absent		uni	- - angular - - - - - - - -	absent	di d	stinct stinct stinct		

Svalbard samples: Deciduous wood

Field Code	Lab Code	species	pith	RMTP	funai	GL	SC	tree age	L/N	R/O	WI	macro	mic ro	RBC	Atech	Sec	radius
- S1- 5	SV-33	BESP	٧	-	٧	medium	open	50-100	L	R	RB	V	٧	٧	rc	n	9.3 cm
- S1- 5m	SV- 116	PPSP	У	-	у	medium	open	<50	L	R	RB	У	У	У	rc	n	8 cm
- R/S2 - 1	SV- 170	PPSP	У	-	у	medium	open	50-100	-	0	RB	У	У	У	rc	n	5 cm
- R?2 -	SV- 176	PPSP	n	<5	у	high	-	<50	-	0	RB	У	У	У	rc	n	10 cm
-	SV-379	SASP	У	-	у	high	open	<50	-	-	RB	У	У	У	rc	n	3 cm
Field Code	Lab Code	species	diffu	use porc	us i	ay width	ray t	уре	perf	. plate	es	SpTh	SW				
- S1- 5	SV-33	species BESP	y diffu	use porc	us i	ay width		ype geneous		. <b>plate</b> ariform		SpTh absent	SW -				
			y y y	use porc	-	ray width uniseriate	homo	•		ariform			SW - -				
- S1- 5	SV-33	BESP	y y y y	use porc	- l		homo	geneous	scal	ariform le			SW - - distinct				
- S1- 5 - S1- 5m	SV-33 SV-116	BESP PPSP	y y y y y	use porc	-    -	uniseriate	homo homo homo	geneous geneous	scal simp	ariform le le		absent -	-				

Field C.	Lab Code	specie	s pith	1 RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
1-2	-	PISY	У	1-	У	medium	open		1-	micro	У	У	n	all	V	9.2 cm
1-90	-	PISY	V	-	У	modiam	open	>200	-	micro	У	У	n	RC/CS	n	16.5 cm
54 N	-	PISY	V	_	n	very high	open	<100	-	micro	V	У	n	RC/CS	n	4.6 cm
1- 16	-	PISY	V	-	У	medium	open	>200	-	micro	У	У	n	RC/CS	n	8.8 cm
1-9	-	PISY	n	-	У	high/low	open	>200	-	RB	У	У	У	radial cut	n	25 cm
1- 10 1	-	PISY	n	-	У	high	open	100-200	-	RB	У	У	У	radial cut	n	13 cm
1-999	-	PISY	У	-	У	very low	open	100-200	-	RB	У	У	У	radial cut	n	7.4 cm
1-38	-	PISY	٧	-	У	high	open	100-200	-	RB	У	У	У	radial cut	n	11 cm
1- 12	-	PISY	У	-	У	high	open	<100	-	RB	У	У	У	radial cut	n	15.3 cm
1- 100	-	PISY	V	_	У	low	open	100-200	-	RB	V	У	У	radial cut	n	12 cm
1-41	-	PISY	У	_	У	medium	open	100-200	-	RB	У	У	У	radial cut	n	13 cm
1-84	-	PISY	V	_	У	low	open	100-00	-	RB	У	У	У	radial cut	n	6.5 cm
9-997	-	PISY	n	_	У	medium	-	100-200	-	RB	У	У	У	radial cut	n	-
1-52	-	PISY	V	_	У	medium	open	100-200	-	RB	У	У	У	radial cut	n	8.5 cm
9-998	-	PISY	V	-	У	low	open	100-200	-	RB	У	У	У	radial cut	n	6.7 cm
1-64	-	PISY	n	-	У	very high	-	<100	-	RB	У	У	У	radial cut	n	-
1-95	-	PISY	n		У	medium		100-200	-	RB	У	У	У	radial cut	n	1
1-53		PISY	V		-	medium	open	>200	-	RB	У	У		radial cut	n	19 cm
1-4		PISY	n	-	У	low	-	100-200	-	RB	У	У	У	radial cut	n	19 0111
1-34	-	PISY	n	—  <del>-</del>	У	medium	-	100-200	-	RB	-	-	У	radial cut	n	-
1-68	-	PISY		-	У	low	onon	100-200	-	RB	У	У	У	radial cut	n	9 cm
2-106		PISY	У		У	-	open		- NI		У	У	У			11.5 cm
2- 106	-		У	-	У	high	open	100-200	N	RB	У	У	У	radial cut	n	11.5 CM
		PISY	n y	-	У	medium medium	-	<100 100-200	L	RB RB	У	У	У	radial cut	n n	18.5 cm
2- 111	-	P15 Y		-	У											
Ein Id O	Lab Oada						open		L	_	у	у	у			
Field C.	Lab Code	species	CW	RD	EWLW	CW	PR	TT	TT	W I	3P 9	SOBP	SpTh	SW	LAR	
1-2	-	species PISY	<b>CW</b>	RD large	<b>EWLW</b> medium	<b>CW</b> no	PR large	TT present	too	<mark>W I</mark> th և	3 <b>P (</b> uni  -	SOBP	SpTh absent	SW distinct	LARI -	
1- 2 1- 90	-	species PISY PISY	y y	RD large small	EWLW medium low	CW no no	PR large large	TT present present	too	<b>W I</b> th เ th เ	ani -	SOBP	SpTh absent absent	S W distinct distinct	LARI - -	
1- 2 1- 90 54 N	-  -  -	species PISY PISY PISY	y y y	RD large small large	EWLW medium low low	no no no zones	PR large large large	TT present present present	too	W I th u th u th u	BP suni - uni - uni -	SOBP	SpTh absent absent absent	SW distinct distinct absent	LARI  -  -  -	
1- 2 1- 90 54 N 1- 16	- - -	species PISY PISY PISY PISY	y y y y	RD large small large large	EWLW medium low low medium	no no no zones no	PR large large large	present present present present	too too too	w I th u th u th u th u	BP Suni - uni - uni - uni - uni -	SOBP	SpTh absent absent	SW distinct distinct absent distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9	-	species PISY PISY PISY PISY PISY PISY	y y y y y	large small large large large	EWLW medium low low medium medium	no no no zones no zones	PR large large large large	present present present present present present present	tool tool tool tool	W I th th the the the the the the the the th	3P	SOBP	SpTh absent absent absent absent	SW distinct distinct absent distinct distinct	LARI  -  -  -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 10 1	- - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y	RD large small large large large large, tr	EWLW medium low low medium medium medium	no no zones no zones no	PR large large large large large	present	tool tool tool tool tool	W I th 1	3P	SOBP	SpTh absent absent absent	SW distinct distinct absent distinct distinct distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999	-	PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y	RD large small large large large large, tr large	EWLW medium low low medium medium medium medium	CW no no zones no zones no no no	PR large large large large large large	TT  present	tool tool tool tool tool	w I th   t	3P	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct distinct distinct distinct distinct distinct distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38		PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y	RD large small large large large large large, tr large large, tr	EWLW medium low low medium medium medium medium intense	CW no no zones no zones no no no	PR large large large large large large large	present	tool tool tool tool tool tool tool tool	th th the the theta the the theta the the theta the the theta the theta the theta the theta the theta the theta the the the theta the theta the theta the theta the theta the theta the the theta the theta the theta the theta the theta the theta the the theta the	BP 9  uni -	SOBP	SpTh absent absent absent absent - -	distinct distinct absent distinct distinct distinct distinct distinct distinct absent	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	RD large small large large large large, tr large, tr large, tr	EWLW medium low low medium medium medium medium medium medium medium medium	CW no no zones no zones no no no no no	PR large large large large large large large	present	tool tool tool tool tool tool tool tool	th th the the the the the the the the th	BP 9  uni -  uni -	SOBP	SpTh absent absent absent absent	sw distinct distinct absent distinct distinct distinct distinct absent distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100	-	PISY PISY PISY PISY PISY PISY PISY PISY	Y	RD large small large large large large large, tr large, tr large, tr	EWLW medium low low medium medium medium medium medium medium medium	CW no no zones no zones no no no no no no	PR large large large large large large large large	present	tool tool tool tool tool tool tool tool	th t	3P	SOBP	SpTh absent absent absent absent - - - -	sw distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41	-	PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large, tr large, tr large, tr large, tr large, tr large, tr	EWLW medium low low medium medium medium medium medium medium medium intense medium medium	CW no no zones no zones no no no no no no no	PR large	present	tool tool tool tool tool tool tool tool	th ith ith ith ith ith ith ith ith ith i	3P	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 31 1- 12 1- 100 1- 41 1- 84	-	PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	RD large small large large large large, tr large, tr large, tr large, tr large, tr large, tr	medium low low medium medium medium medium intense medium medium low	CW  no no zones no zones no	PR large	present	tool tool tool tool tool tool tool tool	th ith ith ith ith ith ith ith ith ith i	3P	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct distinct distinct distinct distinct distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr large large, tr large	medium low low medium medium medium medium intense medium medium low intense medium medium intense medium medium low intense	CW  no no zones no zones no few rings	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	3P	SOBP	SpTh absent absent absent absent	sw distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	LARI - - -	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium low intense low	CW  no no zones no zones no	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large large, tr large	medium low low medium medium medium intense medium medium low intense low medium medium medium medium medium low intense low medium medium	CW  no no zones no zones no	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 101 1- 1999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large large, tr large large, tr large, tr	medium low low medium medium medium medium medium medium medium medium low intense low medium intense	CW  no no zones no zones no	PR large	present	tool tool tool tool tool tool tool tool	th t	SP	SOBP	SpTh absent absent absent absent	distinct distinct absent distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large large, tr large large, tr large large, tr large, tr	medium low low medium low intense low medium intense intense intense	CW  no no zones no zones no	PR large	present	tool tool tool tool tool tool tool tool	th t	SP	SOBP	SpTh absent absent absent absent	distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium medium medium intense medium low intense low medium intense low intense intense intense intense intense intense	CW  no no zones no zones no	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	distinct absent	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53 1- 4		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium medium medium medium medium medium low intense low medium intense low medium intense low medium intense intense intense intense intense	CW  no no zones no zones no cones no no cones few rings few rings few rings	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	sw distinct distinct absent distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53 1- 4 1- 34		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium medium medium intense medium low intense low medium intense intense intense intense medium	CW  no no zones no zones no cewrings no	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	distinct absent distinct absent	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53 1- 4 1- 34 1- 68		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium medium medium medium medium medium low intense low medium intense intense intense medium medium medium medium medium low medium medium medium medium medium medium medium medium medium	CW  no no zones no zones no few rings no	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	sw distinct distinct absent distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53 1- 4 1- 34 1- 68 2- 106		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large large, tr	medium low low medium medium medium medium medium medium medium medium low intense low medium intense intense intense medium	CW  no no zones no zones no few rings few rings no no no few rings	PR large	TT  present	tool tool tool tool tool tool tool tool	th t	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	distinct	LARI	
1- 2 1- 90 54 N 1- 16 1- 9 1- 101 1- 999 1- 38 1- 12 1- 100 1- 41 1- 84 9- 997 1- 52 9- 998 1- 64 1- 95 1- 53 1- 4 1- 34 1- 68		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large small large large large large, tr	medium low low medium medium medium medium medium medium low intense low medium intense intense intense medium medium medium medium medium low medium medium medium medium medium medium medium medium medium	CW  no no zones no zones no few rings no	PR large	TT  present	tool tool tool tool tool tool tool tool	th	SP   SP   SP   SP   SP   SP   SP   SP	SOBP	SpTh absent absent absent absent	sw distinct distinct absent distinct	LARI	

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
2- 114	-	PISY	V	1-	У	very high	open	100-200	L	RB	у	У	у	radial cut	n	13.5 cm
2- 115	-	PISY	n	-	V	medium	-	100-200	N	RB	У	У	У	radialcut	n	15.5 cm
2-116	-	PISY	V	-	V	very low	closed	100-200	N	RB	У	У	У	radialcut	n	7.5 cm
2-121	-	PISY	V	_	V	medium	open	<100	-	RB	У	y	y	radialcut	n	8 cm
2-123	-	PISY	v	_	V	medium	open	<100	N	RB	У	٧	V	radial cut	n	11.5 cm
2-128	-	PISY	V	_	V	low	open	>200	Ĺ	RB	У	У	У	radial cut	n	22.5 cm
2-135	-	PISY	У	-	٧	low	open	<100	L	RB	У	У	у	radial cut	n	6.5 cm
2-141	-	PISY	У	-	٧	low	open	100-200	Ē	RB	У	У	У	radialcut	n	10.5 cm
2-188	-	PISY	У	-	V	medium	open	100-200	-	RB	У	У	У	radialcut	n	10.8 cm
2-207	-	PISY	У	-	٧	medium	open	100-200	L	RB	У	У	У	radialcut	n	12.3 cm
2-208	-	PISY	V	-	V	medium	open	100-200	Ē	RB	У	У	У	radialcut	n	9.5 cm
2-218	-	PISY	V	-	V	low	closed	100-200	L	RB	У	У	У	radial cut	n	6.4 cm
2-221	_	PISY	У	-	V	high	open	<100	L	RB	У	У	У	radial cut	n	6.8 cm
2-222	_	PISY	V	-	V	high	open	<100	i i	RB	У	У	У	radial cut	n	10 cm
2-225	_	PISY	У	-	V	medium	open	<100	L L	RB	У	У	У	radial cut	n	8.8 cm
2-225	-	PISY	n	-	V	medium	open	100-200	L	RB	У	У	У	radial cut	n	-
2-220	-	PISY	V		,	low	open	>200	i i	RB		-		radial cut	n	17 cm
2-227	-	PISY	V	-	y	low	open	>200	L	RB	У	У	У	radial cut	n	10 cm
2-230	-	PISY	-	-	,			100-200	L	RB	У	У	-			10 cm
2-233	-	PISY	У	-	У	medium	closed	<100	L	RB	У	У	У	radial cut	n	10 CIII
2-239	-	PISY	n		У	high	-		_	RB	У	У	У	radial cut	n	- 11 1
	-		У	-	У	medium	open	>200	-		У	У	У	radialcut	n	11.4 cm
2-242	-	PISY	У	-	n	high	open	<100	-	RB	У	У	У	radial cut	n	12 cm
2-243	-	PISY	У	-	У	very high	open	<100	-	RB	У	У	У	radial cut	n	7.2 cm
2-246	-	PISY	V	-	V	medium	open	100-200	-	micr	V	У	n	RC/CS	n	10 cm
			,			·		<u> </u>								
		species	CW	RD	EWLW	CW	PR	TT	TTV		SP SC			SW	LARred	
2- 114	-	PISY	CW y	large	intense	zones	PR large	present	toot	h u	BP SC uni -	-		distinct	]-	
2- 114 2- 115	-	PISY PISY	CW y y	large large, tr	intense intense	zones no	PR large	present present	toot toot	h u h u	BP SO uni - uni -	-		distinct distinct	-	
2- 114 2- 115 2- 116	- - -	PISY PISY PISY	CW y y	large large, tr large, tr	intense intense low	zones no few rings	PR large large large	present present present	toot toot toot	h u h u h u	BP SO Ini - Ini - Ini -	-		distinct distinct distinct	]-	
2- 114 2- 115 2- 116 2- 121	-	PISY PISY PISY PISY	y y y y	large large, tr large, tr large, tr	intense intense low medium	zones no few rings zones	PR large large large	present present present present	toot toot toot toot	h u h u h u h u	BP SO Ini - Ini - Ini - Ini -	- - - -		distinct distinct distinct distinct	-	
2- 114 2- 115 2- 116 2- 121 2- 123	- - - -	PISY PISY PISY PISY PISY	y y y y y	large large, tr large, tr large, tr large, tr	intense intense low medium medium	zones no few rings zones few rings	PR large large large large	present present present present present present present	toot toot toot toot toot	h uh uh uh uh uh uh uh uh uh	BP S( uni - uni - uni - uni - uni -	- - - -		distinct distinct distinct distinct distinct	- - - -	
2- 114 2- 115 2- 116 2- 121 2- 123 2- 128		PISY PISY PISY PISY PISY PISY	CW y y y y y y	large large, tr large, tr large, tr large, tr large, tr	intense intense low medium medium medium	zones no few rings zones few rings no no	PR large large large large large	present present present present present present present present present	toot toot toot toot toot toot	h uh uh uh uh uh uh uh	BP S( uni - uni - uni - uni - uni - uni -	- - - -		distinct distinct distinct distinct distinct absent	-   -   -   -   -	
2- 114 2- 115 2- 116 2- 121 2- 123 2- 128 2- 135	-	PISY PISY PISY PISY PISY PISY	y y y y y y y	large large, tr large, tr large, tr large, tr large, tr large, tr	intense intense low medium medium medium medium	zones no few rings zones few rings no no no	PR large large large large large large	present present present present present present present present present	toot toot toot toot toot toot toot too	h uh	BP S( uni - uni - uni - uni - uni - uni - uni -	-   -   -   -   -   -		distinct distinct distinct distinct distinct distinct distinct absent distinct	- - - -	
2- 114 2- 115 2- 116 2- 121 2- 123 2- 128 2- 135 2- 141		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y	large large, tr large, tr large, tr large, tr large, tr large, tr large, tr	intense intense low medium medium medium medium medium	zones no few rings zones few rings no no no no no	PR large large large large large large large	present	toot toot toot toot toot toot toot too	h uh	BP S( uni -	- - - - - - -		distinct distinct distinct distinct distinct distinct absent distinct distinct		
2- 114 2- 115 2- 116 2- 121 2- 123 2- 128 2- 135 2- 141 2- 188		PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y y y y	large large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr	intense intense low medium medium medium medium medium intense	zones no few rings zones few rings few rings no n no n no zones	PR large large large large large large large	present	toot toot toot toot toot toot toot too	h u h u h u h u h u h u h u h u h u h u	S	- - - - - - - -		distinct distinct distinct distinct distinct distinct absent distinct distinct distinct	-   -   -   -   -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207	- - - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y y y y y y	large large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr	intense intense low medium medium medium medium intense medium	zones no few rings zones few rings no no no zones no no no no zones no	PR large large large large large large large large	present	toot toot toot toot toot toot toot too	h u h u h u h u h u h u h u h u h u h u	S	-   -   -   -   -   -   -   -   -		distinct distinct distinct distinct distinct distinct absent distinct distinct distinct distinct		
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208		PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium intense medium intense	zones no few rings zones few rings no no no zones no no no no zones no	PR large	present	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	BP S( uni -	- - - - - - - -		distinct distinct distinct distinct distinct distinct absent distinct		
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218	- - - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium medium intense medium intense intense	zones no few rings zones few rings no no no no zones no no no no no	PR large large large large large large large large	present	toot toot toot toot toot toot toot too	h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u	S   S   C   I   I   I   I   I   I   I   I   I	-   -   -   -   -   -   -   -   -		distinct		
Field C. 2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221	- - - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW y y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium medium intense intense low	zones no few rings zones n few rings n no n no zones n no n no zones n no no no no	PR large	present	toot toot toot toot toot toot toot too	h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u	S(   S(   S(   S(   S(   S(   S(   S(	-   -   -   -   -   -   -   -   -   -		distinct distinct distinct distinct distinct absent distinct		
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222	- - - - - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large large, tr	intense intense low medium medium medium medium medium intense medium intense intense	zones no few rings zones n few rings n no n no zones n no n no zones n no no no no	PR large	present	toot toot toot toot toot toot toot too	h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u       h     u	S   S   C   I   I   I   I   I   I   I   I   I	- - - - - - - - - - - -		distinct distinct distinct distinct distinct absent distinct	- - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large large, tr	intense intense low medium medium medium medium medium intense intense low	zones no few rings zones few rings no	PR large	present	toot toot toot toot toot toot toot too	h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u         h       u	S(   S(   S(   S(   S(   S(   S(   S(			distinct	- - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222 2-225 2-226		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium intense intense low medium intense	zones no few rings n zones few rings n no n no n no n no n	PR large	present	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S(   S(   S   S   S   S   S   S   S			distinct	- - - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-225 2-225 2-226 2-227	- - - - - - - - - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	CW  y  y  y  y  y  y  y  y  y  y  y  y  y	large large, tr	intense intense low medium medium medium medium intense intense low medium medium intense intense medium medium	zones no few rings n zones few rings n no n no n no n no n	PR large	present	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S(			distinct	- - - - - - - - - - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222 2-225 2-225 2-227 2-230		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium intense intense low medium medium intense medium medium intense medium	zones no few rings zones n few rings n no no zones n no no no no no no few rings n no no no no few rings n no no few rings n no no few rings n few rings few rings few rings	PR large	present presen	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S(			distinct	- - - - - - - - - - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-225 2-225 2-226 2-227		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium intense intense low medium medium intense medium intense medium medium medium medium medium medium medium	zones no few rings zones n few rings n no no zones n no no no no no no few rings n no no no no few rings n no no few rings n no no few rings n few rings few rings few rings	PR large	present	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S			distinct	- - - - - - - - - - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222 2-225 2-225 2-226 2-227 2-230		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium intense intense low medium medium intense medium medium intense medium	zones no few rings zones n few rings n no no zones n no no no no no no few rings n no no no no few rings n no no few rings n no no few rings n few rings few rings few rings	PR large	present	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S   S   C     Ini			distinct	- - - - - - - - - - - - - - - - - - -	
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-222 2-225 2-226 2-230 2-230		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium intense intense low medium medium intense medium	zones no few rings zones n few rings n no no zones n no no no no no no no no few rings n no no no no few rings n no no no no no few rings n no n	PR large	present presen	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S   S   C     Ini			distinct		
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-218 2-221 2-225 2-226 2-227 2-230 2-230 2-230 2-231 2-239 2-241		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium intense intense low medium medium intense intense medium medium medium medium medium medium intense medium intense medium intense	zones no few rings n zones few rings n no n no n no no no no no few rings n no no no no no no no no few rings n no no no no no few rings n no no few rings n no no few rings n no no few rings few rings n no no few rings few rings	PR large	present presen	toot toot toot toot toot toot toot too	h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u           h         u	S   S   S   C     Ini			distinct distinct distinct distinct distinct absent distinct		
2-114 2-115 2-116 2-121 2-123 2-128 2-135 2-141 2-188 2-207 2-208 2-218 2-221 2-225 2-226 2-227 2-230 2-233 2-239		PISY PISY PISY PISY PISY PISY PISY PISY	CW  y y y y y y y y y y y y y y y y y y	large large, tr	intense intense low medium medium medium medium intense intense low medium medium intense intense low medium intense low	zones no few rings n zones few rings n no n no no no no few rings n no no no no no few rings n no no no few rings n no no few rings n no few rings n no few rings	PR large	present presen	toot toot toot toot toot toot toot too	h         u           h         u	S   S   S   S   S   S   S   S   S   S			distinct distinct distinct distinct distinct distinct absent distinct		

rieia C.	Lab Code	species	pith	RMTP	fungi	GL	SC	tree a	ade L	/ N	WI	macro	mic ro	RBC	Atech	Sec	radius
2-248	1-	PISY	У	1-	у	very high		<100			RB	у	у	У	radial cut	n	10 cm
2-250	_	PISY	n	-	У	vory mgr	-	100-20			micro	У	У	n	radial cut	n	10.5 cm
2-251	-	PISY	У	-	У	very low	open	>200	-		RB	У	У	У	radial cut	n	10.6 cm
2-255	-	PISY	У	-	У	medium	closed	100-20	00 -		RB	У	У	У	radial cut	n	7.5 cm
2-260	-	PISY	n	-	٧	very low	-	100-20			RB	v	V	٧	radial cut	n	-
2-261	-	PISY	n	-	У	10.7.0	open	<100	-		micro	У	У	n	RC/CS	n	8.2 cm
2-262	-	PISY	У	-	У	medium	-	<100	-		RB	У	У	У	radial cut	n	8.3 cm
2-266	-	PISY	У	-	У	medium	open	<100	-		RB	У	У	У	radial cut	n	9.2 cm
2-271	-	PISY	У	-	У	medium	open	<100	-		RB	У	У	У	radial cut	n	9.7 cm
2-273	-	PISY	У	-	у	low	open	100-20	00 -		RB	У	У	У	radial cut	n	8.8 cn
2-274	-	PISY	У	-	У	medium	open	100-20	00 -		RB	У	У	У	radial cut	n	13 cm
2-999	-	PISY	У	-	У	medium	open	100-20	00 -		RB	y	y	У	radial cut	n	13.5 cm
3-146	-	PISY	У	-	у	medium	open	100-20	00 L		RB	y	y	У	radial cut	n	13.2 cm
3-147	-	PISY	У	-	У	medium	open	100-20			RB	У	У	У	radial cut	n	12 cm
3-150	-	PISY	n	-	у	medium	closed	100-20	00 N		micro	y	У	n	RC/CS	n	6.4 cm
3-155	-	PISY	У	-	у	low	open	<100	L		RB	y	y	У	radial cut	n	7.5 cm
3-159	-	PISY	У	-	У	medium	open	<100	L		RB	y	У	У	radial cut	n	12 cm
3-160	-	PISY	n	-	У	low	open	100-20	00 L		RB	y	У	У	radial cut	n	-
3-164	-	PISY	У	-	У	low	closed	100-20	00 L		RB	y	y	У	radial cut	n	10.5 cm
3-168	-	PISY	У	-	У	very low	open	100-20	00 L		RB	y	У	У	radial cut	n	10 cm
3-169	-	PISY	У	-	У	very low	closed	>200	L		micro	y	y	n	RC/CS	n	10 cm
3-171	-	PISY	n	-	У	very low	-	100-20	00 N		micro	У	у	n	all	У	8 cm
3-173	-	PISY	У	-	y	very low	open	>200	L		micro	y	y	n	RC/CS	n	14 cm
3-174	-	PISY	У	-	٧	medium	open .	<100	L		RB	y	У	У	radial cut	n	9.5 cm
Field C.	Lab Code	species		RD	F۱	NLW	Comm W				TT\\/		0000	O T.	CM		ام ما
2-248	1-					V L VV	CompW	PR	TT		TTW	BP	SOBP	SpTh	SW	LARr	ea
	-	PISY	у	large, tr		ense	no	large	preser	ıt	tooth		SOBP	Spin -	distinct	- LAR	ea
2-250	-	PISY PISY													_		ea
2-250 2-251			у		int		no	large	preser	ıt	tooth	uni		-	distinct	-	ea
		PISY	y y	large, tr	int	ense	no few rings	large large	preser preser	ıt ıt	tooth tooth	uni bi		-	distinct distinct	-	ea
2-251	-	PISY PISY	y y y	large, tr	int me me	ense edium	no few rings few rings	large large large	preser preser preser	it it it	tooth tooth tooth	uni bi uni	-	-	distinct distinct distinct	- - -	<b>ea</b>
2-251 2-255	-	PISY PISY PISY	y y y y	large, tr large, tr large	int me me	ense edium edium edium	no few rings few rings zones	large large large large	preser preser preser preser	t t t	tooth tooth tooth tooth	uni bi uni uni	- -	-	distinct distinct distinct distinct	- - -	ea
2-251 2-255 2-260	-	PISY PISY PISY PISY	y y y y y	large, tr large, tr large large	int me me lov	ense edium edium edium	no few rings few rings zones zones	large large large large large	preser preser preser preser preser	it it it it	tooth tooth tooth tooth tooth	uni bi uni uni uni	- -	absent - - -	distinct distinct distinct distinct	- - -	
2-251 2-255 2-260 2-261		PISY PISY PISY PISY PISY	y y y y y	large, tr large, tr large large large	int me me lov	ense edium edium edium v edium	no few rings few rings zones zones no	large large large large large large	preser preser preser preser preser preser	it it it it it	tooth tooth tooth tooth tooth tooth	uni bi uni uni uni uni	- - -	absent absent	distinct distinct distinct distinct distinct	- - - - -	
2-251 2-255 2-260 2-261 2-262		PISY PISY PISY PISY PISY	y y y y y y	large, tr large, tr large large large large, tr	int me me me lov me	ense edium edium edium v edium	no few rings few rings zones zones no few rings	large large large large large large	preser preser preser preser preser preser	t t t t t	tooth tooth tooth tooth tooth tooth	uni bi uni uni uni uni uni uni uni	- - -	absent absent - absent -	distinct distinct distinct distinct distinct distinct distinct	- - - - -	
2-251 2-255 2-260 2-261 2-262 2-266	- - - - -	PISY PISY PISY PISY PISY PISY	y y y y y y	large, tr large, tr large large large large, tr large, tr	int me me me lov me	ense edium edium edium v edium	no few rings few rings zones zones no few rings no	large large large large large large large	preser preser preser preser preser preser preser preser	t t t t t	tooth tooth tooth tooth tooth tooth tooth	uni bi uni uni uni uni uni uni uni uni uni	- - - -	absent - absent - absent - absent -	distinct distinct distinct distinct distinct distinct - distinct distinct distinct	- - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271	- - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y	large, tr large, tr large large large large, tr large, tr	int me me me lov me lov me	edium edium edium edium w edium w	no few rings few rings zones zones no few rings no few rings	large large large large large large large large	preser preser preser preser preser preser preser preser preser	t it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un	- - - - -	absent - absent - absent absent -	distinct distinct distinct distinct distinct distinct - distinct distinct distinct distinct	- - - - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273	- - - - - -	PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y	large, tr large, tr large large large large, tr large, tr large, tr	int me me me lov me lov me me	edium edium edium w edium w edium w edium w edium edium	no few rings few rings zones zones no few rings no few rings few rings	large large large large large large large large large	preser preser preser preser preser preser preser preser preser preser	t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un	-	absent - absent - absent absent -	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y	large, tr large, tr large large large large, tr large, tr large, tr large, tr	int me me me lov me lov me me me	edium edium edium edium w edium w edium w edium edium edium	no few rings few rings zones zones no few rings no few rings few rings few rings	large	preser preser preser preser preser preser preser preser preser preser	t t it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un	-	absent - absent - absent absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y	large, tr large large large large, tr large, tr large, tr large, tr large, tr	int me me me lov me lov me me me	edium edium w edium w edium edium edium edium edium edium edium	no few rings few rings zones zones no few rings no few rings few rings few rings no no	large	preser preser preser preser preser preser preser preser preser preser preser	t it it it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un	- - - - - - -	absent - absent - absent absent	distinct distinct distinct distinct distinct - distinct	- - - - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y	large, tr large large large large, tr large, tr large, tr large, tr large, tr	int me me me lov me me me me me	edium edium edium w edium edium edium edium edium edium edium edium	no few rings few rings zones zones no few rings no few rings few rings few rings no no few rings	large	preser preser preser preser preser preser preser preser preser preser preser	t it it it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un	- - - - - - - - -	absent - absent - absent absent	distinct	- - - - - - - - - - - - - -	
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146 3-147		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y	large, tr large, tr large large large, tr large, tr large, tr large, tr large, tr large, tr	int me me me lov me lov me me lov me lov me	edium edium edium w edium edium edium edium edium edium edium edium	no few rings few rings zones zones no few rings no few rings few rings no no few rings no no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser	it it it it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un	-	absent - absent - absent absent	distinct distinct distinct distinct distinct - distinct		
2-251 2-255 2-260 2-261 2-262 2-271 2-273 2-274 2-999 3-146 3-147 3-150		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y	large, tr large large large large, tr	int me me me lov me lov me me lov me lov me	edium edium edium w edium w edium edium edium edium edium edium edium edium edium	no few rings few rings zones zones no few rings no few rings few rings no no few rings no no no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser	it it it it it it it it it it it	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent absent absent	distinct		
2-251 2-255 2-260 2-261 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y	large, tr large, tr large large large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr	int me me lov me lov me lov me lov me me me me me	edium edium w edium w edium edium w edium edium edium edium edium edium w w	no few rings few rings zones zones no few rings no few rings few rings few rings no no no no no no no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent absent absent	distinct		
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155 3-159		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y y	large, tr large, tr large large large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr large, tr	int me me lov me lov me lov me lov me me me me me me me me me	ense edium edium w edium w edium w w	no few rings few rings zones zones no few rings no few rings few rings no no few rings no no no no no no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent absent absent	distinct		
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155 3-159 3-160		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y y y	large, tr large, tr large large large, tr large, tr	int me me lov me lov me	edium edium w edium edium w edium	no few rings few rings zones zones no few rings no few rings few rings no no few rings no no no few rings no no no few rings	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent absent absent	distinct		
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155 3-159 3-160 3-164		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y y y y	large, tr large large large large, tr large	int me me lov me lov me	edium edium edium w edium	no few rings few rings zones zones no few rings no few rings no no few rings no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent absent absent absent	distinct		
2-251 2-255 2-260 2-261 2-262 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155 3-159 3-164 3-168		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y y y y y y y y y y	large, tr large large large large, tr large large, tr large large, tr large, tr large, tr large, tr large, tr	int me me lov me lov me me me me me me me me int me	ense edium edium w edium	no few rings few rings zones zones no few rings no few rings few rings no no few rings no no no few rings no no no no no no no no	large	preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser preser	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent	distinct		
2-251 2-255 2-260 2-261 2-266 2-271 2-273 2-274 2-999 3-146 3-147 3-150 3-155 3-160 3-164 3-168 3-169		PISY PISY PISY PISY PISY PISY PISY PISY	y y y y y y y y y y y y y y y y y y y	large, tr large large large large, tr large large, tr large large, tr large large, tr large	int me me lov me	ense edium edium w edium w w	no few rings few rings zones zones no few rings no few rings no no few rings no	large	preser pr	t t t t t t t t t t t t t t t t t t t	tooth	uni bi uni uni uni uni uni uni uni uni uni un		absent - absent - absent absent absent absent absent	distinct		

Field C.	Lab Code	species	pith	RMTP	fungi	i GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Se	radius
3- 175	-	PISY	у	-	у	medium	open	100-200	L	RB	У	У	У	radial cut	n	13 cm
3- 179	-	PISY	У	-	У	low	open	100-200	L	micro	У	У	n	RC/CS	n	7 cm
3-180	-	PISY	у	-	У	high	open	<100	L	RB	У	У	У	radial cut	n	9.2 cm
3-181	-	PISY	n	-	У	medium	-	>200	L	RB	У	У	У	radial cut	n	-
3-182	-	PISY	у	-	у	low	open	100-200	L	RB	У	У	У	radial cut	n	11 cm
3-183	-	PISY	у	-	у	high	open	<100	L	RB	У	У	У	radial cut	n	10 cm
3-185	-	PISY	n	-	У	low	-	100-200	N	RB	У	У	У	radial cut	n	-
3-189	-	PISY	у	-	У	low	open	100-200	N	RB	У	У	У	radial cut	n	6.5 cm
3-190	-	PISY	У	-	У	medium	open	100-200	L	RB	У	У	У	radial cut	n	13.5 cm
3-191	-	PISY	У	-	У	medium	open	100-200	L	RB	У	У	У	radial cut	n	12.3 cm
3-192	-	PISY	У	-	У	medium	open	>200	L	RB	У	У	У	radial cut	n	19.5 cm
3-194	-	PISY	n	-	У	medium	open	>200	L	RB	У	У	У	radial cut	n	-
3-200	-	PISY	n	-	У	medium	-	>200	L	RB	У	У	У	radial cut	n	-
Field C.	Lab Code	species	CW	RD	E	WLW	CW	PR	TT		TTW	BP	SOBP	SpTh	SW	LARred
3- 175	-	PISY	У	large, tr	'n	nedium	n	large	pres	sent	tooth	uni	-	-	distinct	]-
3-179	-	PISY	У	small	lc	w	few rings	large	pres	sent	tooth	uni	-	absent	distinct	-
3-180	-	PISY	У	large, tr	ir	itense	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-181	-	PISY	У	large	ir	itense	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-182	-	PISY	У	large, tr	lc	w	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-183	-	PISY	У	large, tr	'n	nedium	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-185	-	PISY	У	large, tr	'n	nedium	no	large	pres	sent	tooth	uni	-	-	-	-
3-189	-	PISY	У	large, tr	'n	nedium	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-190	-	PISY	У	large, tr	'n	nedium	few rings	large	pres	sent	tooth	uni	-	-	distinct	-
3-191	-	PISY	У	large, tr	'n	nedium	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-192	-	PISY	У	large, tr	'n	nedium	no	large	pres	sent	tooth	uni	-	-	distinct	-
3-194	-	PISY	-	large, tr	ir	itense	few rings	large	pres	sent	tooth	uni	-	-	distinct	-
3-200	-	PISY	V	large, tr	n	nedium	no	large	pres	sent	tooth	uni	_	-	distinct	-

Field C.	Lab Code	species	pith	RMTP	fun	gi	GL	SC		tree age	L/N	WI		macro	mic ro	RBC	Ate	c h	Sec	radius
1-45	-	PISI	у	-	У		low	open		100-200	-	mic	cro	У	у	n	rc/c	S	n	8.2 cm
2-143	-	PISI	У	-	У		very low	closed		>200	N	RB	3	У	У	у	radia	alcut	n	13.5 cm
2-263	-	PISI	n	<5	У		medium	closed		<100	-	mic	cro	У	у	n	all		У	8 cm
3-157	-	PISI	У	-	У		medium	open		<100	L	RB	3	У	У	у	radia	alcut	n	7.2 cm
3-199	-	PISI	n	-	У		low	-		100-200	L	Rb		У	у	У	radia	alcut	n	-
Field C.	Lab Code	species	RD	EW	LW	C۷	V	PR	T	T	TTW	- 22	BP	SOBP	SpTh	SW	-	LARre	d	
1-45	-	PISI	large	low		no		large	pı	resent	smooth		uni	-	absent	distin	ct	-		
2-143	-	PISI	large, t	tr low		larç	ge zones	large	рі	resent	smooth		uni	-	-	distin	ct	-		
2-263	-	PISI	large, t	tr low		no		large	рі	resent	smooth		uni	-	absent	distin	ct	-		
3-157	-	PISI	large, t	tr low		no		large	рі	resent	smooth		uni	-	-	distin	ct	-		
3- 199	-	PISI	large, t	tr low		no		large	pı	resent	smooth		uni	-	-	distin	ct	-		

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	TA	L/N	WI	ma c ro	micro	RBC	Atech		Sec	radius
1-33	1-	LASP	у	-	-	medium	closed	<100	-	micro	У	У	n	all		у	8.5 cm
1- 58	-	LASP	y	-	-	very low	open	100-200	-	RB	У	V	У	radial cu		n	3.6 cm
1-87	-	LASP	y	-	У	-	open	100-200	-	micro	У	V	n	all	-	У	7.6 cm
1-81	-	LASP	y	-	-	-	closed	100-200	-	micro	У	У	n	rc/cs		n	5.5 cm
1-31	-	LASP	У	-	У	-	open	<100	-	micro	у	У	n	rc/cs		n	7 cm
1- 102	-	LASP	y	-	y	-	closed	100-200	-	micro	у	У	n	rc/cs		n	5.5 cm
1-28	-	LASP		-	У	very low	open	100-200	-	micro	У	٧	n	rc/cs		n	4.2 cm
1-6	-	LASP	У	-	У	medium	open	100-200	-	micro	У	٧	n	rc/cs		n	6.7 cm
1-46	-	LASP	У	-	У	high	closed	100-200	-	micro	У	٧	n	rc/cs		n	7 cm
1-5	-	LASP	y	-	у	high	open	100-200	-	micro	У	У	n	rc/cs		n	8.3 cm
1-78	-	LASP	y	-	у	low	open	100-200	-	RB	У	V	у	radial cu	ıt	n	6.5 cm
1-94	-	LASP	У	-	у	very low	open	100-200	-	RB	У	У	У	radial cu	ıt	n	7.5 cm
1-83	-	LASP	y	-	У	very low	closed	100-200	-	RB	V	V	У	radial cu		n	7.5 cm
1-42	-	LASP	y	-	-	medium	open	100-200	-	RB	У	V	У	radial cu		n	7 cm
1-67	-	LASP	y	-	У	high	open	<100	-	RB	У	V	У	radial cu		n	9.7 cm
1- 16 1	-	LASP	y	-	n	high	open	100-200	-	RB	У	y	У	radial cu		n	16.4 cm
1-26	-	LASP	У	-	-	medium	open	100-200	-	RB	У	v	У	radial cu		n	7.5 cm
1-44	-	LASP	У	-	-	medium	closed	100-200	-	RB	У	v	У	radial cu		n	9.5 cm
1- 15	-	LASP	У	-	n	low	closed	100-200	-	RB	У	y	У	radial cu		n	8.7 cm
1-8	-	LASP	n	-	n	high	-	100-200	-	RB	У	y	У	radial cu		n	-
1- 59	-	LASP	n	-	-	medium	-	100-200	-	RB	У	У	У	radial cu		n	-
1-89	-	LASP	У	_	n	very low	closed	100-200	-	RB	У	V	У	radial cu		n	7.8 cm
1-99	-	LASP	У	_	n	medium	closed	100-200	-	RB	У	У	У	radial cu		n	6 cm
1-37	-	LASP	n	_	v	high	-	100-200	-	RB	V	V	V	radial cu	-	n	12.5 cm
Field C.	Lab Code		s RD	E'	WLW	CW	PR	TT	TTW		SOBP	SpTH	SW		ARre		
1-33																	
	-	LASP		e, tr in	tense		small	present	-		smooth	present	abse				
1-58	-		large small	,		few rings few rings				bi s				nt -	k red		
		LASP	large	í m	tense edium	few rings few rings	small	present present	-	bi s	smooth smooth	present	abse	nt - ct dk			
1- 58	-	LASP LASP	large small	l m I in	tense	few rings	small small small	present present present	-	bi s	smooth smooth	present -	abse distin	nt - ct dk ct -			
1- 58 1- 87	-	LASP LASP LASP	large small small	I m I in I in	tense edium tense tense	few rings few rings few rings	small small small small	present present present present	- - -	bi s bi s bi - bi -	smooth smooth	present - absent	abse distin distin	nt - ct dk ct - nt -			
1- 58 1- 87 1- 81	- - -	LASP LASP LASP LASP	large small small small	I m I in I in I in	tense edium tense	few rings few rings few rings no	small small small	present present present	- - -	bi s bi s bi - bi -	smooth smooth smooth	present - absent absent	abse distin distin abse	nt - ct dk ct - nt - ct -			
1- 58 1- 87 1- 81 1- 31		LASP LASP LASP LASP LASP	large small small small	I m I in I in I in	tense edium tense tense tense tense	few rings few rings few rings no no few rings	small small small small small small	present present present present present present	- - - -	bi s bi s bi - bi - bi - bi -	smooth smooth smooth	absent absent absent absent absent	abse distin distin abse distin distin	nt - ct dk ct - nt - ct - ct -			
1- 58 1- 87 1- 81 1- 31 1- 102 1- 28	- - - -	LASP LASP LASP LASP LASP LASP LASP	large small small small small	l m l in l in l in l in l in l in	tense edium tense tense tense tense tense	few rings few rings few rings no no few rings no	small small small small small small small	present present present present present present present	- - - -	bi s bi s bi - bi - bi s bi -	smooth smooth smooth smooth	present - absent absent absent absent absent absent	abser distin distin abser distin	nt - ct dk ct - nt - ct - ct -			
1- 58 1- 87 1- 81 1- 31 1- 102	- - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	large small small small small small small	I m I in	tense edium tense tense tense tense tense tense tense	few rings few rings few rings no no few rings no zones	small small small small small small small small	present present present present present present present present present	- - - - -	bi s bi s bi - bi - bi s bi bi s bi s	smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent	abse distin distin abse distin distin	nt - ct dk ct - nt - ct - ct - ct -			
1- 58 1- 87 1- 81 1- 31 1- 102 1- 28 1- 6 1- 46	- - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	large small small small small small small small	I m I in	tense edium tense tense tense tense tense tense tense tense tense	few rings few rings few rings no no few rings no zones no	small small small small small small small small small small	present	- - - - - -	bi s bi s bi - bi - bi - bi s bi - bi s bi -	smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent	abse distin distin abse distin distin distin	nt - ct dk ct - nt - ct - ct - ct - ct - ct -	k red		
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	LASP LASP LASP LASP LASP	y n y n	-	У	very low		100-200	N	RB	У	У	У	radial	ut	n	18.5 cm
	LASP LASP LASP LASP LASP	y n y n	-	У		closed	100-200	N	RB	y	У	У	radial		n	6.7 cm
	LASP LASP LASP	n y n			high	closed	100-200	N	RB	y	У	y	radial		n	16 cm
	LASP LASP LASP	y n	-	· V	medium	-	>200	L	RB	V	v	У	radial		n	-
	LASP LASP	n		У		open	<100	Ē	RB	У	y	У	radial		n	8.5 cm
	LASP		-	n	medium	-	100-200	N	RB	У	y	У	radial		n	-
		v	-	У	medium	closed	100-200	N	RB	У	y	у	radial		n	9.2 cm
	_,	У	-	У	high	open	100-200	N	micro	У	У	n	rc/cs		n	8 cm
	LASP	n	-	٧	medium	-	>200	N	RB	V	V	v	radial		n	-
	LASP	n	<5	У	low	-	100-200	L	RB	У	V	V	radial		n	+-
	LASP	У	-	У	medium	closed	100-200	N	RB	У	У	У	radial		n	9.5 cm
Lab Code		-		EWLW	CW	10.000	PR	TT	TTV		SOBP	SpT		SW		ARred
	LASP	sma		intense	few r	nas	small	present	-	bi	smooth	-		absent		eddish
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bi smooth - LASP small intense few rings small present - bi smooth - LASP small intense no small present - bi smooth - LASP small intense no small present - bi smooth - LASP small intense no small present - bi smooth - LASP small intense few rings small present - bi - LASP small intense few rings small present - bi smooth - LASP small intense few rings small present - bi smooth - LASP small intense few rings small present - bi smooth prese LASP large low zones small present - bi smooth abse LASP small intense few rings small present - bi smooth abse LASP small intense few rings small present - bi smooth abse	LASP small intense no small present - bi smooth - a large zones small present - bi smooth present - bi smooth absent bi smooth absent bi smooth absent bi smooth absent - bi smooth absent bi smooth absent bi smooth - bi smooth absent bi smooth absent bi smooth - bi smooth absent bi smooth - bi smooth absent bi smooth absent bi smooth - bi smooth absent bi smooth - bi smooth absent bi smooth absent bi smooth absent bi smooth - bi smooth absent bi smooth absent bi smooth - bi smooth - bi smooth - bi smooth - bi smooth absent bi smooth - bi smooth absent bi smooth - bi smoo	LASP small intense few rings small present - bi smooth - absent LASP small intense few rings small present - bi smooth - distinct LASP small medium zones small present - bi smooth - LASP - intense large zones small present - bi smooth - distinct LASP small intense few rings small present - bi smooth - distinct LASP small intense no small present - bi smooth - distinct LASP small intense no small present - bi smooth - absent LASP small intense no small present - bi smooth - absent LASP small intense few rings small present - bi smooth - absent LASP small intense few rings small present - bi smooth - absent LASP small intense few rings small present - bi smooth present distinct LASP large low zones small present - bi smooth absent distinct LASP small intense few rings small present - bi smooth absent distinct LASP small intense few rings small present - bi smooth absent absent LASP small intense few rings small present - bi smooth - absent	LASP small intense no small present - bi smooth - absent record listinct - bi smooth - bi smooth - distinct - bi smooth - bi smooth - comparison - c

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	TA	L/N	WI	macro	micro	RBC	Atech	Sec	radius
2-223	-	LASP	V	-	У	low	open	100-200	L	RB	У	У	у	radial cut	n	6.8 cm
2-224	-	LASP	V	-	У	very high	open	100-200	L	micro	У	V	n	rc/cs	n	14 cm
2-229	-	LASP	n	-	V	low	-	100-200	N	RB	У	V	٧	radial cut	n	-
2-234	-	LASP	٧	-		high	open	>200	L	micro	У	V	n	all	У	9 cm
2-235	-	LASP	V	-	-	low	closed	100-200	L	RB	У	v	٧	radial cut	n	6.7 cm
2-237	-	LASP	V	-	-	medium	open	>200	L	RB	У	v	٧	radial cut	n	10 cm
2-237	-	LASP	n	-	٧	medium	-	100-200	-	RB	У	У	У	radial cut	n	-
2-238	-	LASP	٧	-	n	medium	open	100-200	L	RB	У	V	٧	radial cut	n	9.5 cm
2-240	-	LASP	٧	-	У	medium	open	100-200	-	RB	У	У	У	radial cut	n	6.5 cm
2-264	-	LASP	У	-	n	high	open	<100	-	RB	У	٧	У	radial cut	n	9.8 cm
2-274	-	LASP	n	-	n	low	open	<100	-	micro	У	V	n	rc/cs	n	5.3 cm
3-117	-	LASP	٧	-	n	medium	open	100-200	-	RB	У	V	У	radial cut	n	10 cm
3-144	-	LASP	n	<5	-	medium	open	100-200	L	RB	У	У	у	radial cut	n	8 cm
3-149	-	LASP	٧	-	n	low	open	100-200	L	RB	V	V	٧	radial cut	n	7.7 cm
3-151	-	LASP	n	<5	V	high	- '	100-200	N	RB	У	V	У	radial cut	n	17.8 cm
3-152	-	LASP	٧	-	У	medium	open	100-200	N	RB	У	У	У	radial cut	n	7.7 cm
3-154	-	LASP	٧	-	-	low	closed	100-200	L	RB	У	V	٧	radial cut	n	5 cm
3-156	-	LASP	У	-			closed	100-200	L	micro	У	У	n	radial cut	n	9.3 cm
3-170	-	LASP	У	-	-	high	open	100-200	L	RB	У	У	У	radial cut	n	12 cm
3-176	-	LASP	٧	-	V	medium	open	100-200	L	RB	У	У	У	radial cut	n	8.5 cm
3-185	-	LASP	٧	-	У	medium	closed	100-200	-	RB	У	У	У	radial cut	n	9 cm
3- 189	-	LASP	n	>10	-	low	-	>200	-	RB	У	У	У	radial cut	n	-
3-195	-	LASP	٧	-	٧	very high	open	100-200	L	micro	У	v	n	radial cut	n	18.5 cm
3-196	-	LASP	V	-	У	-, 3	open	>200	N	micro	У	У	n	radial cut	n	9 cm
Field C.	Lab Code	species	RD	E	WLW	CW	PR	TT	TTW	BP	SOBP	SpTH	SW		LARred	i i
2-223	-	LASP	small	ir	itense	few rings	small	present	1-	bi	smooth	-	-		reddish	
2-224	-	LASP	small.	tr n	nedium	few rings	small	present	-	uni	smooth	absent	distin	ict (blue	-	
2-229	-	LASP	small	n	nedium	few rings	small	present	-	bi	smooth	-	abse	nt	-	
2-234	-	LASP	large.	tr ir	itense	zones	small			bi		-1	abse	nt		
2-235	-							present	-	DI	-	absent	abse		17	
2-237		LASP	small	n	nedium	few rings	small	present	-	uni	- smooth	absent -	abse		brred	
0.007	-	LASP	small		nedium ntense	few rings no	small small			-				nt	br red	
2-237	-		_	ir				present	-	uni	smooth	-	abse distin	nt	br red - reddish	
2-237		LASP	small	ir ir	itense	no	small	present present	-	uni bi	smooth smooth	-	abse distin	nt ict ict (blue	-	
	-	LASP LASP	small small	ir ir ir	itense itense	no no	small small	present present present	- - -	uni bi bi	smooth smooth smooth	-	abse distin distin	nt ict ict (blue nt	- reddish	
2-238	-	LASP LASP LASP	small small	ir ir ir ir	itense itense itense	no no few rings	small small small	present present present present	- - -	uni bi bi bi	smooth smooth smooth smooth	- - - absent	abse distin distin abse	nt act act (blue nt nt	reddish	
2-238 2-240	-	LASP LASP LASP	small small small small	ir ir ir ir ir	itense itense itense itense	no no few rings no	small small small small	present present present present present	- - - -	uni bi bi bi bi	smooth smooth smooth smooth smooth	- - absent	abse distin distin abse abse	nt ict ict (blue nt nt	reddish - reddish	
2-238 2-240 2-264	- - -	LASP LASP LASP LASP LASP	small small small small small	ir ir ir ir ir	itense itense itense itense itense	no no few rings no few rings	small small small small small	present present present present present present	- - - - -	uni bi bi bi bi bi	smooth smooth smooth smooth smooth smooth	- - absent -	abse distin distin abse abse abse	nt ict ict (blue nt nt	reddish reddish reddish	
2-238 2-240 2-264 2-274	- - - -	LASP LASP LASP LASP LASP LASP	small small small small small small	ir ir ir ir ir ir	atense atense atense atense atense	no no few rings no few rings no	small small small small small small	present present present present present present present	- - - - -	uni bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth	- - - absent - - absent	abse distin distin abse abse abse	nt act act (blue nt nt nt	reddish reddish reddish br red	
2-238 2-240 2-264 2-274 3-117	-	LASP LASP LASP LASP LASP LASP LASP	small small small small small small small	ir ir ir ir ir ir Ic	atense atense atense atense atense atense	no no few rings no few rings no no	small small small small small small small	present present present present present present present present	- - - - - -	uni bi bi bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth	absent - absent - absent	abse distin distin abse abse abse abse	nt act act (blue nt nt nt	reddish reddish reddish br red reddish	
2-238 2-240 2-264 2-274 3-117 3-144	- - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large	ir ir ir ir ir ic ir ir	atense	no no few rings no few rings no no no	small small small small small small small small	present present present present present present present present present	- - - - - - -	uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth	- - - absent - - absent	abse distin distin abse abse abse abse - abse -	nt nct nct (blue nt nt nt nt	reddish reddish br red reddish reddish reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-149		LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small	ir ir ir ir ir ir ir n ir	ntense	no no few rings no few rings no no few rings no no few rings no no few rings	small	present present present present present present present present present present	- - - - - - - - -	uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	- - - absent - - absent	abse distin distin abse abse abse abse	nt nct nct (blue nt nt nt nt	reddish reddish br red reddish reddish reddish reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-149 3-151		LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small small	ir ir ir ir ir ir ir n ir	atense	no no few rings no few rings no no - few rings	small	present present present present present present present present present present	- - - - - - - - - -	uni bi uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	- - - absent - - absent	abse distin distin abse abse abse abse - abse - abse	nt nct (blue nt nt nt nt nt	reddish reddish br red reddish reddish reddish reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-149 3-151 3-152	- - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small small small	ir i	atense	no no few rings no few rings no no no few rings no no few rings no few rings no	small small small small small small small small small small small small	present present present present present present present present present present present present present	- - - - - - - - - -	uni bi bi bi bi bi bi bi bi bi uni uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	- - - absent - - absent	abse distin distin abse abse abse abse - abse - abse distin	nt nct (blue nt nt nt nt nt	reddish reddish br red reddish reddish reddish reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-149 3-151 3-152 3-154	- - - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small small small small	ir ir ir ir ir ir ic ir	atense	no no few rings no few rings no no - few rings no few rings	small small small small small small small small small small small small small small	present		uni bi bi bi bi bi bi bi bi bi uni uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent - absent absent	abse distin distin abse abse abse abse - abse - abse distin	nt nct (blue nt nt nt nt nt nt	reddish reddish br red reddish reddish reddish reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-151 3-152 3-154 3-156	- - - - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small	ir i	atense	no no few rings no no no - few rings no no - few rings no few rings no few rings	small	present present present present present present present present present present present present present present	- - - - - - - - - - - - - - - - - - -	uni bi uni uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent - absent - absent - absent	abse distin abse abse abse - abse distin abse abse - abse distin abse abse abse - abse distin abse abse abse abse abse distin abse abse abse	nt nct (blue nt nt nt nt nt nt	reddish reddish br red reddish reddish reddish reddish - br red reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-151 3-152 3-154 3-156 3-170	- - - - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small	ir i	atense	no no few rings no few rings no no - few rings no	small small small small small small small small small small small small small small small small	present		uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent - absent - absent - absent	abse distin abse abse abse - abse distin abse distin abse distin abse distin abse distin	nt nct (blue nt nt nt nt nt nt nt nt	reddish reddish br red reddish reddish reddish reddish - br red reddish - dk red	
2-238 2-240 2-264 2-274 3-117 3-144 3-151 3-152 3-154 3-156 3-170 3-176	- - - - - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small large small	ir i	atense	no no few rings no few rings no no - few rings no few rings no few rings no few rings no no no no no	small small small small small small small small small small small small small small small small small	present		uni bi bi bi bi bi bi bi bi uni uni bi bi uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent - absent - absent - absent	abse distin abse abse abse - abse distin abse distin abse distin abse distin distin distin distin	nt nt nct (blue nt	reddish reddish br red reddish reddish reddish reddish - br red reddish - dk red reddish	
2-238 2-240 2-264 2-274 3-117 3-144 3-151 3-152 3-154 3-156 3-170 3-176 3-185	- - - - - - - - - - -	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small small small small small small small small small	ir i	atense	no no few rings no few rings no no - few rings no few rings	small	present		uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent - absent - absent - absent	abse distin abse abse abse - abse distin abse distin abse distin abse distin distin distin distin distin	nt nct (blue nt nt nt nt nt nt nt nt cct (blue cct (blue cct (blue cct (blue cct (blue	reddish reddish reddish reddish reddish reddish reddish reddish - br red reddish - dk red reddish dk red	

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	TA	L/N	WI	macro	micro	RBC	Atech	Sec	radius
3- 197	-	LASP	n	-	n	medium	-	100-200	L	RB	у	у	у	radial cut	n	-
3- 198	-	LASP	У	-	-	low	open	100-200	N	RB	У	У	У	radial cut	n	8.5 cm
3-201	-	LASP	n	-	-	medium	-	100-200	N	RB	У	У	У	radial cut	n	-
3-204	-	LASP	У	-	-	medium	closed	100-200	N	RB	у	У	У	radial cut	n	9 cm
3-188	-	LASP	У	-	n	medium	closed	100-200	N	RB	У	У	У	radial cut	n	14.2 cr
3-203	-	LASP	у	-	-	low	closed	>200	L	RB	У	У	У	radial cut	n	12.2 cn
2-123	-	LA/PCSP	У	-	n	low	closed	100-200	-	RB	У	У	У	radial cut	n	7.4 cm
Field C.	Lab Code	species	RD	F\	VLW	CW	PR	TT	TTW	BP	SOBP	CMTH	SW	LAR	· o d	
		00000			V - VV	CVV	FR	- 1 1	1 1 77	DF	SUBP	SpTH	3 W	LANI	eu	
3- 197	-	LASP	small		ense	few rings	small	present	-	bi	smooth	-	abser			
3- 197 3- 198	-			int		~			-  -			- - -		nt reddis	sh	
	-	LASP	small	int int	ense	few rings	small	present	-	bi	smooth	- - -	abser	nt reddis nt dk red	sh I	
3- 198	-  -  -  -	LASP LASP	small small	int int tr int	ense ense	few rings no	small small	present present	- - -	bi bi	smooth smooth	- - - -	abser abser	nt reddis nt dk red nt reddis	sh d sh	
3- 198 3- 201	- - -	LASP LASP LASP	small small small,	int int tr int me	ense ense ense	few rings no few rings	small small small	present present present	- - - -	bi bi bi	smooth smooth smooth	- - - - -	abser abser abser	nt reddis nt dk red nt reddis ct br red	sh I sh	
3- 198 3- 201 3- 204	-	LASP LASP LASP LASP	small small small, small	int int tr int me int	ense ense ense edium	few rings no few rings few rings	small small small small	present present present present	- - - - -	bi bi bi uni	smooth smooth smooth smooth	- - - - - -	abser abser abser distin	nt reddis nt dk red nt reddis ct br red ct reddis	sh I sh	

Traill samples: PCSP 1

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radiu
- 39	-	PCSP	у	-		low	closed	100-200	-	micro	у	У	n	all	У	13 cm
1-93	-	PCSP	У	-	У	high	open	>200	-	micro	У	У	n	rc/cs	n	13.6 c
1-55	-	PCSP	n	-	У	high	open	100-200	-	micro	У	У	n	rc/cs	n	8 cm
1-88	-	PCSP	У	-	n	high	open	<100	-	RB	У	У	У	radial cu	t n	7.4 cm
1-75	-	PCSP	У	-	У	medium	closed	100-200	-	RB	У	У	У	radial cu	t n	7.2 cm
1- 11	-	PCSP	У	-	У	high	closed	100-200	-	RB	У	У	У	radial cu	t n	9.5 cm
1-86	-	PCSP	У	-	У	low	closed	100-200	-	RB	У	У	У	rc/cs	n	8 cm
1-25	-	PCSP	У	-	У	high	closed	>200	-	RB	У	У	У	radial cu	t n	15.5 c
1-56	-	PCSP	У	-	У	medium	closed	<100	-	RB	У	У	У	radial cu	t n	7 cm
1-79	-	PCSP	У	-	У	low	open	<100	-	RB	У	У	У	radial cu	t n	3.8 cm
1-80	-	PCSP	У	-	У	low	open	100-200	-	RB	У	У	У	radial cu	t n	6.3 cm
1-29	-	PCSP	У	-	-	medium	open	<100	-	RB	У	У	У	radial cu	t n	9 cm
1-23	-	PCSP	V	-	٧	medium	open	<100	-	RB	V	У	У	radial cu	t n	7.4 cm
?	-	PCSP	n	-	У	low		100-200	-	RB	У	У	у	radial cu		1-
1-69	-	PCSP	У	-	У	high	closed	100-200	-	RB	У	У	У	radial cu		-
1-21	-	PCSP	У	-	-	high	open	<100	-	RB	У	У	У	radialcu		8.5 cm
2- 107	-	PCSP	У	-	У	low	open	100-200	N	RB	У	У	У	radial cu	t n	6.8 cm
2- 109	-	PCSP	n	-	У	high	-	<100	L	RB	У	У	У	radialcu		13 cm
2- 113	-	PCSP	n	-	-	low	-	100-200	N	RB	V	У	У	radialcu		-
2- 120	-	PCSP	V	-	٧	medium	closed	100-200	N	RB	V	٧	У	radial cu		11 c m
2- 122	-	PCSP	٧	-	٧	high	open	<100	-	micro	y	У	n	rc/cs	n	6.3 cm
2- 127	-	PCSP	n	-	-	very low	-	>200	L	RB	y	У	У	radial cu		12 cm
2- 129	-	PCSP	V	-			open	>200	N	RB	У	У	V	radialcu		9 cm
Field C.	Lab Code	species		ΕV	<b>NLW</b>	CW	PR	TT	TTV	/ BP	SOBP	SpTH		W	LARred	
1-39	-	PCSP	small		edium	few rings	small	present	-	uni		absent	_	bsent	-	
1-93	-	PCSP	small		edium	no	small	present	-	uni	angular	absent		bsent	reddish	1
1-55	-	PCSP	small	lo		zones	small	present	-	uni	angular	absent		istinct	-	1
1-88	-	PCSP	small	lo		fewrings	small	present	-	bi	angular	-		istinct	_	1
1- 75	-	PCSP	small	lo		no	small	present	-	uni	angular	-		istinct	-	1
1- 11	-	PCSP	small.			large zone		present	-	bi	angular	-		istinct	-	1
1-86	-	PCSP	-	lo		no	small	present	-	uni	angular	-		istinct	-	1
1- 25	-	PCSP	small,		edium	zones	small	present	-	uni	angular	-		bsent	_	-
1-56	-	PCSP	small		edium	large zone		-	-	uni	-	-	-	_ 50	-	1
1-79	-	PCSP	small		edium	few rings	small	present	-	uni	angular	-	Н	istinct	-	+
1-80	-	PCSP	small		edium	no	small	present	-	uni	angular	-		istinct	_	+
1-29	-	PCSP	small		edium	no	small	present	-	uni	angular	-		bsent	bright	+
1-23	-	PCSP	small		edium	no	small	present		bi	angular	-		bsent	bright	+
	-	PCSP	small	lo		fewrings	small	present	-	uni	angular	-		istinct	bright	+
?			small,		edium	fewrings	small	present	-	uni	angular	-	_			1
?	-	PCSP	Jinali,			fewrings	small	present	-	uni	angular	-	2	bsent	br red	-
? 1- 69		PCSP	small	lo	۸/		Jiliali			uni	angular	-		istinct	-	-
? 1- 69 1- 21	-	PCSP	small	tr in			lema	nresent		uni	angulai	17	u			
? 1- 69 1- 21 2- 107	-	PCSP PCSP	small,	tr int	ense	few rings	small	present	_	uni	angular	_			_	-
? 1- 69 1- 21 2- 107 2- 109	-	PCSP PCSP	small,	tr int	ense edium	few rings no	small	present	-	uni	angular	-	a	bsent	-	
? 1- 69 1- 21 2- 107 2- 109 2- 113	- - -	PCSP PCSP PCSP	small, small small	tr int	ense edium edium	few rings no no	small small	present present	-	uni	angular	-	al al	bsent bsent	-	
? 1-69 1-21 2-107 2-109 2-113 2-120	- - - -	PCSP PCSP PCSP PCSP	small, small small small	tr int	ense edium edium edium	fewrings no no zones	small small small	present present present	-	uni uni	angular angular	-	al al di	bsent bsent istinct	-	
? 1- 69 1- 21 2- 107 2- 109 2- 113 2- 120 2- 122	- - - -	PCSP PCSP PCSP PCSP PCSP	small, small small small small	tr int	ense edium edium edium edium	fewrings no no zones zones	small small small small	present present present present	- - -	uni uni uni	angular angular angular	- - absent	al al di di	bsent bsent istinct istinct	- br red	
? 1-69 1-21 2-107 2-109 2-113 2-120 2-122 2-127	- - - - -	PCSP PCSP PCSP PCSP PCSP PCSP	small, small small small small small	tr int	ense edium edium edium edium edium	fewrings no no zones zones zones	small small small small small	present present present present present	-	uni uni uni uni	angular angular angular angular	- absent presen	al al di di t al	bsent bsent istinct istinct bsent	- - br red reddish	-
? 1- 69 1- 21 2- 107 2- 109 2- 113 2- 120 2- 122	- - - -	PCSP PCSP PCSP PCSP PCSP	small, small small small small	tr int	ense edium edium edium edium edium	fewrings no no zones zones	small small small small	present present present present	- - -	uni uni uni	angular angular angular	- - absent	al al di di t al	bsent bsent istinct istinct	- br red	-

Traill samples: PCSP 2

Field C.	Lab Code	species	e nith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
2- 136	-	PCSP		-	y	1	closed	100-200	N N	micro	у	у	n	rc/cs	n	9.5 cm
2-138	-	PCSP	У	_	y -	low	open	100-200	N	RB	У	У	У	radial cu		8.7 cm
2-142		PCSP	У	_	V	low	closed	100-200	N	RB	У	V	У	radialcu		-
2-212	-	PCSP	n	_	V	medium	-	<100	L	RB	У	V	У	radialcu		7 cm
2-215	_	PCSP	У	_	V	very low	closed	>200	N	micro	y	V	n	all	У	8 cm
2-216	_	PCSP		-	У	vory low	closed	100-200	N	micro	y	V	n	rc/cs	n	10 cm
2-217	_	PCSP			У		closed	>200	L	RB	у	У	У	radial cu		9 cm
2-236	-	PCSP		_	-	medium	closed	>200	L	RB	У	V	У	radialcu		19 cm
2-244	-	PCSP	У		У	medium	open	100-200	-	RB	V	V	У	radialcu		8.5 cm
2-245	-	PCSP	У		У	low	open	<100	-	RB	У	У	У	radialcu		8 cm
2-247	-	PCSP	У		У	low	closed	100-200	-	RB	У	У	y	radialcu		7.3 cm
2-249	-	PCSP		_	n	medium	open	100-200	-	RB	У	-	-	radialcu		11.4 cm
2-249	-	PCSP	У	-	V	high		100-200	-	RB	У	y	y y	radialcu		8.4 cm
2-257	-	PCSP	y n			medium	open -	<100	-	RB	-	V	•	radialcu		9 cm
2-257	-	PCSP			У	very low		100-200	-	RB	У	,	У	radialcu		5.5 cm
2-256	-	PCSP	J	-	У	medium	open	<100	-	RB	У	У	У	radialcu		8.5 cm
2-265			J		У						У	У	У			
2-267	-	PCSP	J		У	low medium	closed	>200 100-200	-	RB RB	У	У	У	radial cu radial cu		5.6 cm 11.4 cm
			J		У					RB	У	У	У			
2-269	-	PCSP	У		У	medium	open	100-200	-		У	У	У	radialcu		9.9 cm
2-272	-	PCSP	n		У	very high	-	<100	-	RB	У	У	У	radialcu		-
2-275	-	PCSP	n		У	medium	open	100-200	-	RB	У	У	У	radialcu		10 cm
3-145	-	PCSP	n		У	very low	-	100-200	N	RB	У	У	У	radialcu		-
3-148	-	PCSP	n		У	very high	-	<100	N	RB	У	У	У	radialcu		-
3- 158	-	PCSP	n		n	very high	-	<100	L	RB	У	у	У	radialcu		-
Field C.	Lab Code	species	RD	EV	<b>VLW</b>	CW	PF	TT T	TT	W BP	SOBP	SpTH	SV	N/	LARred	
2-136	-				- 11											
		PCSP	small		edium	large zone	s sm	all present	-	bi	angular	absent	dis	tinct	-	
2-138	-	PCSP	small	lov	V	zones	s sm	all present all present	-	bi bi	angular angular	absent -		tinct		
2-142	-	PCSP PCSP	small small, ti	lov r me	v edium	zones zones	s sm sm sm	all present all present all present	- - -	bi bi uni	angular angular angular	absent - -	dis - -	tinct	- br red -	
2-142 2-212	-	PCSP PCSP PCSP	small small, ti small	lov r me me	v edium edium	zones zones no	s sm sm sm sm	all present all present all present all present	- - - -	bi bi uni uni	angular angular angular angular	absent - - -	dis - - ab	sent	- br red - bright	
2-142 2-212 2-215	-	PCSP PCSP PCSP	small small, to small large, to	lov r me me r int	v edium edium ense	zones zones no zones	s sm sm sm sm sm	all present all present all present all present all present all present	- - -	bi bi uni uni uni	angular angular angular	absent absent	dis - - ab dis	sent stinct	- br red - bright -	
2-142 2-212 2-215 2-216	-	PCSP PCSP PCSP PCSP	small small, ti small large, ti small	lov r me me r int	v edium edium ense edium	zones zones no zones zones	s sm sm sm sm sm sm	all present	- - - -	bi bi uni uni uni uni	angular angular angular angular	absent absent absent	dis - - ab dis dis	sent stinct	- br red - bright	
2- 142 2- 212 2- 215 2- 216 2- 217	- - - - -	PCSP PCSP PCSP PCSP PCSP PCSP	small small, to small large, to small small	lov r me me r int me lov	w edium edium ense edium	zones zones no zones zones zones zones	s sm sm sm sm sm sm sm	all present	- - - - - -	bi bi uni uni uni uni	angular angular angular angular angular -	absent absent absent -	dis - - ab dis dis	sent stinct stinct	- br red - bright - -	
2- 142 2- 212 2- 215 2- 216 2- 217 2- 236	- - - - -	PCSP PCSP PCSP PCSP PCSP PCSP	small small, to small large, to small small small, to	lov r me me r int me lov r me	edium edium ense edium v edium	zones zones no zones zones zones large zone	es sm sm sm sm sm sm sm sm sm	all present	- - - - - - -	bi bi uni uni uni uni uni	angular angular angular angular angular - - angular	absent absent absent	dis ab dis dis dis ab	sent stinct stinct stinct stinct	- br red - bright - -	
2- 142 2- 212 2- 215 2- 216 2- 217 2- 236 2- 244	- - - - -	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, to small large, to small small small, to	lov me me int me lov me int me int	edium edium ense edium w edium ense	zones zones no zones zones zones large zone no	s sm sm sm sm sm sm sm sm sm sm	all present	- - - - - -	bi bi uni uni uni uni uni uni	angular angular angular angular angular - - angular angular	absent absent absent	dis ab dis dis dis ab ab	sent sent stinct stinct stinct sent	- br red - bright - - - br red	
2- 142 2- 212 2- 215 2- 216 2- 217 2- 236 2- 244 2- 245	- - - - - -	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, to small large, to small small, to small, to small	lov r me r int me lov r me r int lov	v edium edium ense edium v edium ense	zones zones no zones zones zones large zone no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm	all present	- - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular angular angular angular angular angular angular angular	absent absent absent	dis ab dis dis dis ab ab ab	sent sent stinct stinct stinct stinct stinct sent sent	- br red - bright - -	
2- 142 2- 212 2- 215 2- 216 2- 217 2- 236 2- 244 2- 245 2- 247		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small small, to small, to small, to small small small	lov r me me r int me lov r me r int lov me	v edium edium ense edium v edium ense edium v edium ense v edium	zones zones no zones zones zones large zone no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm	all present	- - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular angular angular angular angular - angular angular angular angular angular	absent absent absent	dis ab dis dis dis ab ab ab dis	sent itinct itinct itinct itinct itinct sent sent sent itinct	- br red - bright - - - br red - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249	- - - - - -	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, to small large, to small small, to small, to small	lov r me me r int me lov r me r int lov me me me	edium edium ense edium v edium ense edium v edium ense v edium edium	zones zones no zones zones zones large zone no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm	all present	- - - - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular angular angular angular angular angular angular angular	absent absent absent	dis ab dis dis dis ab ab ab dis	sent itinct itinct itinct itinct itinct sent sent sent itinct	- br red - bright - - - br red	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small small, to small, to small, to small small small	lov r me me r int me lov r me r lov me r me r me r me me me	edium edium ense edium v edium ense edium v edium ense v edium edium edium	zones zones no zones zones zones large zone no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present	- - - - - - - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular angular angular angular angular - angular angular angular angular angular	absent absent absent	dis ab dis dis dis ab ab ab dis	sent itinct sent itinct itinct itinct sent sent sent sent sent sent	- br red - bright - - - br red - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small small, to small, to small small small small small small	lov r me me r int me lov r me r lov me r me r me r me me me	edium edium ense edium v edium ense edium v edium ense v edium edium	zones zones no zones zones zones large zone no no zones	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present	- - - - - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent absent	dis ab dis dis dis dis ab ab ab ab	sent itinct sent itinct itinct itinct sent sent sent sent sent sent	- br red - bright - - - br red - bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257 2-258		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small small, to small small, to small, to small, to small, to small small small small small small	lov r me me r int me lov r me r lov me r me r me r me me me	edium edium ense edium v edium ense edium edium ense v edium edium edium edium	zones zones no zones zones zones large zone no no no zones	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present ge present all present all present all present all present all present all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent absent	dis ab dis dis dis dis ab ab ab ab ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent	- br red - bright - - - br red - bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-254 2-254 2-258 2-265		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small, to small, to small, small small small small small small small small	lov r me me r int me lov r me me r int lov me me me me lov me	wedium edium ense edium w edium ense edium ense w edium ense w edium edium edium edium edium	zones zones no zones zones zones large zone no no no zones no few rings	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present	- - - - - - - - - - - - - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent absent	dis ab dis dis dis ab ab ab ab ab ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent	- br red - bright - - - br red - bright - bright -	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257 2-258		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small, to small, to small, small	lov r me me r int me lov r me me r int lov me me me me lov me	wedium ense edium wedium ense edium wedium ense edium edium ense w edium edium edium edium edium	zones zones no zones zones zones large zone no no no few rings no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present	- - - - - - - - - - - - - - - - - - -	bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent - absent	dis ab dis dis dis ab ab ab ab ab ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent	- br red - bright br red - bright - bright - bright - bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-254 2-254 2-258 2-265		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small, to small, to small small, small small, to small small small, to small small small, to small small small small, to small s	lov r me me r int me lov r me me r int lov me me me me lov me	wedium edium ense edium w edium ense edium ense w edium edium edium edium edium edium edium edium edium	zones zones no zones zones zones large zone no no no no few rings no large zone	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent - absent	dis ab dis dis dis dis ab ab dis ab ab ab - ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent	- br red - bright br red - bright - bright - bright - bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257 2-258 2-265 2-267		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small, to small, to small smal	lov r me me r int me lov r me not me r int me lov r me me me me me lov r me	wedium edium ense edium w edium ense edium ense w edium edium edium edium edium edium edium edium edium	zones zones no zones zones zones large zone no no no few rings no large zone large zone	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent - absent	dis ab dis dis dis dis ab ab dis ab ab ab - ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent sen	- br red - bright br red - bright - bright - bright - bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-257 2-257 2-258 2-265 2-267 2-268		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small large, to small small, to small, to small	lov r me me r int me lov r me me r int lov me me me me lov r me	wedium ense edium ense edium wedium ense wedium ense wedium edium edium edium edium w	zones zones no zones zones zones large zone no no no zones no few rings no large zone few rings	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent - absent	dis ab dis dis dis ab ab ab ab ab - ab dis ab - ab - ab - an -	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent sen	- brred - bright bright bright - bright - bright bright bright bright bright bright bright - bright bright - bright bright - bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-257 2-258 2-265 2-265 2-267 2-268 2-269		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, the small, the small small, the small small, the small small, the small small small small, the small small small small small small, the small small small small small, the small sm	lov r me me int lov r me lov me me me me me me me lov r me m	wedium edium ense edium ense edium ense edium ense wedium edium edium edium edium wedium edium wedium	zones zones no zones zones zones large zone no no no zones no few rings few rings few rings	es sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent	dis ab dis dis dis ab ab ab ab - ab dis ab - ab dis ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent sen	- brred - bright bright bright - bright - bright bright bright bright bright bright bright bright - bright bright - bright bright	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257 2-258 2-265 2-265 2-268 2-269 2-272		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small small, to small small, to small small, to small small, to small, t	lov r me me int lov r me lov me	wedium edium edium ense edium w edium ense w edium ense w edium edium edium edium w edium edium edium w	zones zones no zones zones zones large zone no no sones no few rings no large zone few rings few rings no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent absent	dis ab dis dis dis dis ab ab dis ab - ab dis - ab dis ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent sen	- bright - bright - bright - bright - bright - bright bright - bri	
2-142 2-212 2-215 2-216 2-217 2-236 2-244 2-245 2-247 2-249 2-254 2-257 2-258 2-265 2-267 2-268 2-269 2-272		PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, to small, to small small, to small small, to small small, to small small, to small small, to small, to small small, to small, to small small, to small smal	lov r me me int lov r me lov me	wedium edium ense edium w edium ense w edium ense w edium	zones zones no zones zones zones large zone no no zones no few rings no large zone large zone few rings few rings no no	ss sm sm sm sm sm sm sm sm sm sm sm sm sm s	all present		bi bi uni uni uni uni uni uni uni uni uni un	angular	absent absent - absent	dis ab dis dis dis ab dis ab dis ab - ab dis ab - ab dis ab dis ab dis ab	sent sent stinct stinct stinct stinct sent sent sent sent sent sent sent sen	- bright - bright - bright - bright - bright - bright bright - bri	

Traill samples: PCSP 3

Field C.	Lab Code	species	pith	RMTI	fungi	GL	SC		tree age	L/N	WI	m	acro m	nicro	RBC	Atech	Sec	radius
3-162	-	PCSP	у	-	У		open		>100	L	mic ro	у	у		n	all	У	7.5 cm
3-166	-	PCSP	У	-	У		close	d	>200	L	mic ro	У	У		n	all	У	17.5 cm
3-167	-	PCSP	У	-	n	medium	close	ed	100-200	N	RB	У	У		У	radial cut	n	10 cm
3- 178	-	PCSP	n	-	У	high	close	ed	100-200	N	mic ro	У	У		n	all	У	-
3-187	-	PCSP	n	-	У	low	-		100-200	N	RB	У	У		У	radial cut	n	-
3-202	-	PCSP	n	<5	-	very low	-		100-200	N	RB	У	у		У	radial cut	n	11.5 cm
3-205	-	PCSP	n	-	У	high	-		<100	L	RB	У	у		У	radial cut	n	10 cm
3-206	-	PCSP	У	-	У		open		<100	N	mic ro	У	у		n	radial cut	n	8.7 cm
1-73	-	PC/LASP	У	-	-	medium	open		100-200	-	RB	У	У		У	radial cut	n	-
2-252	-	PC/LASP	У	-	n	low	open		>200	-	RB	У	У		У	radial cut	n	7.8 cm
2-270	-	PC/LASP	У	-	У	very lw	open		>200	-	RB	У	У		У	radial cut	n	5.5 cm
1- 72	-	PC/LASP	у	-	У	medium	close	d	<100	-	RB	У	у		У	radial cut	n	11.5 cm
Field C.	Lab Code	species	RD		EWLW	CW		PR	TT	7	TW	BP	SOBP	Sp	тн	SW	LARre	
3-162	-	PCSP	small	l	low	no		small	preser	nt -		uni		ab	sent	distinct	-	
3-166	-	PCSP	medi	ium	medium	no		small	preser	ıt -		uni	angular	ab	sent	absent	-	
3-167	-	PCSP	small	l	medium	no		small	preser	ıt -		uni	angular	-		absent	bright	
3- 178	-	PCSP	small	l, tr	medium	few rings		small	preser	ıt -		uni	angular	ab	sent	distinct	-	
3-187	-	PCSP	small	l	medium	few rings		small	preser	ıt -		uni	angular	-		distinct	br red	
3-202	-	PCSP	small	l	low	few rings		small	preser	ıt -		uni	angular	-		absent	bright	
3-205	-	PCSP	small	l	intense	no		small	preser	ıt -		uni	angular	-		absent	-	
3-206	-	PCSP	-		-	no		small	preser	ıt -		uni	-	ab	sent	-	-	
1-73	-	PC/LASP	small	l	low	large zon	es	small	preser	nt -		uni	-	-		-	-	
2-252	-	PC/LASP	small	l, tr	medium	large zon	es	small	preser	ıt -		uni	angular	-		distinct	br red	
2-270	-	PC/LASP	small	l, tr	low	zones		small	preser	ıt -		uni	-	-		distinct	-	1
					medium					ıt -		bi				absent	reddish	

Field C.	Lab Code	species	pith	RMT	P fungi	GL	SC	tree age	e L/N	WI	macro	micro	RBC	Atech		Sec	radius
1-3	-	ABSP	у	-	у	medium	open	<100	-	RB	У	У	у	radial c	ut	n	6.4 cm
1-30	-	ABSP	у		У	high	open	<100	-	RB	У	У	У	radial c	ut	n	9.3 cm
1-76	-	ABSP	У		n	high	open	<100	-	RB	у	У	у	radialc	ut	n	6 cm
1- 13	-	ABSP	У		n	medium	open	<100	-	RB	у	У	у	radial c	ut	n	8.6 cm
2- 139	-	ABSP	у		n	high	open	<100	L	RB	У	У	у	radialc	ut	n	7.5 cm
2-213	-	ABSP	n	<5	У	high	-	<100	L	RB	у	У	у	radialc	ut	n	9 cm
2-220	-	ABSP	у		у	medium	open	<100	L	RB	У	У	у	radialc	ut	n	7.5 cm
Field C.	Lab Code	species	CW	RD	EWLW	CW	PF	} T	Т	TT	TW E	SP S	OBP	SpTh	SW	L	ARred
1-3	-	ABSP	у	no	medium	no	sm	all al	osent	-	U	ıni -		-	-	-	
1-30	-	ABSP	у	no	low	no	sm	all al	osent	-	b	i -		-	-	-	
1-76	-	ABSP	у	no	low	no	sm	all al	osent	-	U	ıni -		-	absent	-	
1- 13	-	ABSP	У	no	low	no	sm	all al	osent	-	U	ıni -		-	absent	-	
2-139	-	ABSP	У	no	medium	no	sm	all al	osent	-	U	ıni -		-	absent	-	
2-213	-	ABSP	у	no	medium	no	sm	all al	osent	-	U	ıni -		-	distinc	t -	
2-220	-	ABSP	y	no	medium	zones	sm	all al	osent	-	U	ıni -		-	distinc	t -	

Traill samples: Deciduous wood

Field C.	Lab Code	species	pith	RMTP	fungi	GL	SC	tree a	ge L/N	WI	macro	micro	RBC	Atech	Sec	radius
1-85	-	BESP	У				open	<100	-	micro	У	У	n	all	у	8 cm
1-36	-	BESP	У	-	У	medium	closed	<100	-	RB	У	У	У	tc/rc	n	7 cm
1-74	-	PPSP	У		У		closed	<100	-	micro	У	У	n	all	n	8 cm
1- 10	-	PPSP	n	<5	-	medium	open	<100	-	RB	У	У	У	tc/rd/cs	n	13 cm
1-20	-	PPSP	У	-	У	very high	open	<100	-	RB	У	У	У	tc/rd/cs	n	6.5 cm
1-66	-	PPSP	У	-	У	medium	open	<100	-	RB	У	У	У	tc/rd/cs	n	6.5 cm
2-104	-	PPSP	n	<5	У	high	-	<100	N	RB	У	У	У	tc/rd/cs	n	-
2-209	-	PPSP	n	<5	-	high	open	50-100	L	RB	У	У	У	tc/rd/cs	n	11 cm
2-232	-	PPSP	У	-	-	high	open	50-100	L	RB	У	У	У	tc/rd/cs	n	8.5 cm
3-153	-	PPSP	у	-	-	medium	open	100-20	0 N	RB	У	У	У	tc/rd/cs/all	n	12.5 cm
3-163	-	PPSP	n	5- 10	У	low	-	100-20	0 N	RB	У	У	У	tc/rd/cs/all	n	-
3-193	-	PPSP	n	>10	-	low	-	>200	-	RB	У	У	У	tc/rd/cs/all	n	-
1-40	-	SASP	У		n	very high	open	<100	-	micro	У	У	n	all	У	7.5 cm
1-70	-	SASP	У	-	У	very high	open	<100	-	RB	У	У	У	tc/rd/cs	n	6.5 cm
1-65	-	SASP	n	<5	У	very high	-	<100	-	RB	У	У	У	tc/rd/cs	n	9.5 cm
1-63	-	SASP	n	<5	У	medium	-	<100	-	RB	У	У	У	tc/rd/cs	n	-
2-256	-	SASP	У	-	У	medium	open	<50	-	RB	У	у	У	tc/rd/cs	n	7.5 cm
Field C.	Lab Code	species	diffus	e porous	rayı	width	ray type	p	erf.plat	es S	pTh	tension	wood	SW		
1-85	-	BESP	у		unise	riate	homogeneo	us s	calariforn	n a	bsent	few rings		absen		
1-36	-	BESP	у		2-3		homogeneo	us s	calariforn	n a	bsent	few rings		distinc	t	
1-74	-	PPSP	У		unise	riate	homogeneo	us s	imple	а	bsent	zones		distinc	t	
1- 10	-	PPSP	У		2-3		homogeneo	us s	imple	а	bsent	no		-		
1-20	-	PPSP	у		2-3		homogeneo	us s	imple	а	bsent	no		distinc	t	
1-66	-	PPSP	У		2-3		homogeneo	us s	imple	а	bsent	no		-		
2-104	-	PPSP	у		2-3		homogeneo	us s	imple	а	bsent	no		distinc	t	
2-209	-	PPSP	У		2-3		homogeneo		imple	а	bsent	no		-		
2-232	_	PPSP	У		2-3		homogeneo		imple	а	bsent	no		-		
							a lanca la		bsent			-		-		
3-153	-	PPSP	У		2-3		simple									
3-163		PPSP	y y		2-3		simple	а	bsent	-		-		distinc	-	
3- 163 3- 193	-	PPSP PPSP	J		2-3 2-3		simple simple	a	bsent bsent	- -		-		absen	i	
3- 163 3- 193 1- 40	-	PPSP PPSP SASP	У		2-3 2-3 unise	eriate	simple simple heterogene	a ous s	bsent bsent imple			- - few rings		absen distinc	t t	
3- 163 3- 193 1- 40 1- 70	-	PPSP PPSP SASP SASP	y y		2-3 2-3 unise 2-3	riate	simple simple heterogenee heterogenee	a a ous s	bsent bsent imple imple	а	bsent	- - few rings no		absen	t t	
3- 163 3- 193 1- 40 1- 70 1- 65		PPSP PPSP SASP SASP SASP	y y y		2-3 2-3 unise 2-3 2-3	eriate	simple simple heterogened heterogened heterogened	a a a sous sous sous sous s	bsent bsent imple imple imple	a	bsent bsent			absen distinc distinc	t t	
3- 163 3- 193 1- 40 1- 70	-	PPSP PPSP SASP SASP	y y y y		2-3 2-3 unise 2-3	eriate	simple simple heterogenee heterogenee	a a a sous sous sous sous s	bsent bsent imple imple	a	bsent bsent	no		absen distinc	t t t	

															_	
Field Code	Lab Code			RMTP	fungi	GL	SC	tree age	L/N	WI	macro		RBC		Sec	radius
1- S1L	1- 1	PISY	n	-	У	medium	-	100-200	L	RB	у	У	У	rc	n	13 cm
3 - S1L	1-3	PISY	n	<5	У	high	open	50-100	L	RB	У	У	У	rc	n	8.5 cm
4 - S1L 7 - S1L	1- 4	PISY	n	<5	У	high	open	50-100	L	RB	У	У	У	rc	n	11.7 cm
	1- 7 1- 10		n	<5	У	medium	-	100-200	L	RB	У	У	У	rc	n	8.5 cm
10 - S1N		PISY	У		У	medium	closed	100-200	N	RB	У	У	У	rc	n	12 cm
12 - S1L	1- 12	PISY	n	<5	У	medium	-	100-200	L	RB	У	У	У	rc	n	14 cm
26 - S1L	1- 26	PISY	У	-	У	very low	open	50-100	L	RB	У	У	У	rc	n	6 cm
28 - S1L	1- 28	PISY	n	>10	У	medium	-	50-100	L	RB	У	У	У	rc	n	-
29 - S1L	1- 29	PISY	У	-	у	high	open	50-100	L	RB	У	У	У	rc	n	11 cm
30 - S1L	1-30	PISY	У	-	у	medium	open	100-200	L	RB	У	У	У	rc	n	14.4 cm
31- S1L	1-31	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	9.5 cm
32 - S1L	1-32	PISY	n	>10	У	medium	-	100-200	L	RB	У	У	У	rc	n	-
42 - S1N	1- 42	PISY	У	-	-	high	open	50-100	N	RB	У	У	У	rc	n	7 cm
43 - S1L	1- 43	PISY	У	-	у	medium	open	50-100	L	RB	У	У	у	rc	n	8.2 cm
45 - S1N	1- 45	PISY	n	>10	у	medium	-	50-100	N	RB	У	У	у	rc	n	-
52 - S1L	1- 52	PISY	n	<5	у	medium	-	100-200	L	RB	У	у	У	rc	n	9 cm
55 - S1L	1- 55	PISY	n	5- 10	у	medium	-	100-200	L	RB	У	у	У	rc	n	16 cm
56 - S1N	1- 56	PISY	У	-	у	low	open	>200	N	RB	У	У	У	rc	n	15 cm
58 - S1L	1- 58	PISY	У	-	у	medium	open	100-200	L	RB	У	у	У	rc	n	9.7 cm
59 - S1L	1- 59	PISY	n	<5	у	low	-	100-200	L	RB	У	у	у	rc	n	16.5 cm
63 - S1L	1- 63	PISY	n	<5	у	medium	open	100-200	L	RB	У	у	у	rc	n	14 cm
64 - S1N	1-64	PISY	У	-	У	high	closed	100-200	N	RB	У	У	У	rc	n	15.6 cm
67 - S1L	1-67	PISY	У	-	у	medium	open	50-100	L	RB	У	У	у	rc	n	9.3 cm
68 - S1L	1- 68	PISY	У	-	у	medium	open	50-100	L	RB	У	У	у	rc	n	8.2 cm
Field Code	Lab Cada															
	Lab Code	species	RD	EWL	N CV	/ PR	TT	TTW BP	SO	BP S	pTh	SW	LARre	ed othe	rs	
1- S1L	1- 1	PISY	large	mediu		/ PR large	present	tooth uni				<b>SW</b> distinct	LARre	d othe	rs	
1 - S1L 3 - S1L	1- 1 1- 3	PISY PISY			m no				-	a				ed othe	rs	
1 - S1L 3 - S1L 4 - S1L	1- 1	PISY PISY PISY	large	mediu	m no se no	large	present	tooth uni	-	al al	bsent	distinct	-	ed othe	rs	
1 - S1L 3 - S1L 4 - S1L 7 - S1L	1- 1 1- 3	PISY PISY PISY PISY	large large	mediu intens	m no se no se no	large large	present present	tooth uni	- - -	a a a	bsent bsent bsent	distinct	-	ed othe  -  -  -  -	ers	
1 - S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N	1- 1 1- 3 1- 4	PISY PISY PISY	large large large	mediu intens intens	m no se no se no se no	large large large	present present present	tooth uni tooth uni tooth uni	- - -	al al al	bsent bsent bsent bsent	distinct - -	- -	- - - - reddi		
1 - S1L 3 - S1L 4 - S1L 7 - S1L	1- 1 1- 3 1- 4 1- 7	PISY PISY PISY PISY	large large large large	mediu intens intens intens	m no se no se no se no m no	large large large large	present present present present	tooth uni tooth uni tooth uni tooth uni	- - - -	al al al al	bsent bsent bsent bsent bsent	distinct - - distinct	- - -	- - -		
1 - S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N	1- 1 1- 3 1- 4 1- 7 1- 10	PISY PISY PISY PISY PISY	large large large large small	mediu intens intens intens mediu	m no se no se no se no m no	large large large large large large	present present present present absent	tooth uni tooth uni tooth uni tooth uni tooth uni	- - - - -	al al al al al	bsent bsent bsent bsent bsent bsent	distinct - - distinct distinct	- - - -	- - -		
1 - S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12	PISY PISY PISY PISY PISY	large large large large small large	mediu intens intens intens mediu mediu	im no se no se no se no im no im no zoi	large large large large large large	present present present present absent present	tooth uni tooth uni tooth uni tooth uni tooth uni tooth uni	- - - - -	al al al al al al	bsent bsent bsent bsent bsent bsent bsent	distinct distinct distinct distinct	- - - - -	- - -		
1- S1L 3- S1L 4- S1L 7- S1L 10- S1N 12- S1L 26- S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26	PISY PISY PISY PISY PISY PISY	large large large large small large large	mediu intens intens intens mediu mediu low	m no se no se no se no se no m no m no zon m no	large large large large large large large large	present present present present absent present present	tooth uni	- - - - -	al al al al al al al	bsent	distinct - distinct distinct distinct distinct distinct	- - - - -	- - -		
1- S1L 3- S1L 4- S1L 7- S1L 10- S1N 12- S1L 26- S1L 28- S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large small large large large	mediu intens intens intens mediu mediu low mediu	m no se no se no se no m no m no zoi m no m no	large	present present present present absent present present present	tooth unitooth	- - - - - -	al al al al al al al	bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent	distinct - distinct distinct distinct distinct distinct distinct	- - - - - -	- - -		
1 - S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large small large large large large	mediu intens intens intens mediu mediu low mediu mediu mediu	m no se no se no se no se no se no m no m no zon m no im no im no im fev	large	present present present present absent present present present present	tooth unitooth unitoo	- - - - - - -	al al al al al al al al	bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent	distinct - distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - -	- - - reddi - - -		
1 - S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large	mediu intens intens intens intens mediu mediu low mediu mediu mediu mediu mediu	m no se no se no se no se no se no m no m no zon m no sm no sm no sm no sm fev sm fev	large	present present present present absent present present present present present	tooth unitooth	- - - - - - - -	a a a a a a a a a a a a	bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent bsent	distinct	- - - - - - - - -	- - - reddi - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large large	mediu intens intens intens intens mediu mediu low mediu mediu mediu mediu mediu mediu	m no se no se no se no m no m no zoi m no m no m fev m fev m no	large	present present present absent present present present present present present present	tooth unitooth	- - - - - - - - -	al al al al al al al al al al	bsent	distinct	- - - - - - - - - -	- - - reddi - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large large large	mediu intens intens intens mediu mediu low mediu mediu mediu mediu mediu mediu mediu	m no se no se no se no se no m no m no zoi m no m se no m fev m no m no m fev m no m no m no m no	large	present present present absent present present present present present present present present	tooth unitooth unitoo	- - - - - - - - - -	al al al al al al al al al al al	bsent	distinct	- - - - - - - - -	- - - reddi - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large large large	mediu intens intens intens mediu mediu low mediu mediu mediu mediu mediu mediu mediu mediu mediu	m no ee no ee no ee no m no m no m no m no m no m fev m no m no m fev m no m no m fev m no m fev m no m fev m fev m no m no m fev m fev m fev m no m no m fev	large	present present present present absent present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - reddi - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 31 1- 32 1- 42 1- 43	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large large large	mediu intens intens intens mediu mediu low mediu	m no se no se no se no se no m no m no m no m no m fev m no	large	present present present present absent present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct	- - - - - - - - - - -	- - - reddi - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large large large large large large large large large	mediu intens intens intens mediu low mediu mediu mediu mediu mediu mediu mediu intens	m no se no se no se no se no m	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - reddi - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 42 - S1N 43 - S1L 45 - S1N 52 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45 1- 52	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu low mediu mediu mediu mediu mediu mediu intens mediu intens	m no se no se no se no se no m no m no zoi m no m no m no m no m fev se no	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - - - - - - - - - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N 52 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 42 1- 45 1- 52 1- 55	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu mediu mediu mediu mediu mediu mediu mediu mediu intens mediu intens mediu	m no se no se no se no se no m no m no zoi m no m no m fev	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - - - - - - - - - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N 52 - S1L 55 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 42 1- 43 1- 45 1- 55 1- 56	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu mediu mediu mediu mediu mediu mediu intens mediu intens	m no ee no ee no ee no m no zoi m no m no m fev m no m fev ee no	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - - - - - - - - - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 30 - S1L 31 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N 55 - S1L 56 - S1N 58 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45 1- 52 1- 56 1- 56 1- 58	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu intens mediu intens mediu mediu	m no ee no ee no ee no m no m no m no m no m no m fev m no m no m fev m no m no m fev m no	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - - - - - - - - - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N 55 - S1L 56 - S1N 58 - S1L 59 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45 1- 52 1- 55 1- 56 1- 58 1- 59	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu mediu mediu mediu mediu mediu mediu intens mediu intens mediu intens mediu intens mediu	m no ee no ee no ee no m no m no m no m no m fev	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - reddi - - - - - - - - - - - - - - - - - -		
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 32 - S1L 42 - S1N 43 - S1L 45 - S1N 55 - S1L 55 - S1L 56 - S1N 58 - S1L 63 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45 1- 52 1- 55 1- 56 1- 58 1- 59 1- 63	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens intens mediu low mediu mediu mediu mediu mediu intens	m no se no se no se no se no se no se no m no zoi m no m no m fev m fev m no m fev se no m fev se no m fev se no m fev se fev se fev	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct	- - - - - - - - - - - - - - - - - - -			
1- S1L 3 - S1L 4 - S1L 7 - S1L 10 - S1N 12 - S1L 26 - S1L 28 - S1L 29 - S1L 30 - S1L 31 - S1L 42 - S1N 43 - S1L 45 - S1N 52 - S1L 55 - S1L 56 - S1N 58 - S1L 59 - S1L 63 - S1L	1- 1 1- 3 1- 4 1- 7 1- 10 1- 12 1- 26 1- 28 1- 29 1- 30 1- 31 1- 32 1- 42 1- 43 1- 45 1- 55 1- 56 1- 58 1- 59 1- 63 1- 64	PISY PISY PISY PISY PISY PISY PISY PISY	large large large small large	mediu intens intens intens mediu low mediu mediu mediu mediu mediu intens mediu intens mediu intens mediu intens mediu intens mediu intens intens intens intens intens	m no se no se no se no se no se no m no m no m no m no m no m fev m fev m no m fev se no m fev se no m fev se no m fev se no m fev m no m fev m fev se no m fev m no m no m no m fev m no	large	present	tooth unitooth unitoo	- - - - - - - - - - - - - - - - - - -	al a	bsent	distinct		- - - - - - - - - - - - - - - - - - -		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Se	radius
70 - S1L	1-70	PISY	n	>10	У	low	1-	100-200	1L	RB	У	У	У	rc	n	1-
71- S1L	1-71	PISY	n	<5	y	medium	open	50-100	Ī	RB	У	у	У	rc	n	7.1cm
75 - S1L	1- 75	PISY	n	<5	У	high	open	50-100	L	RB	У	٧	У	rc	n	8.3 cm
76 - S1L	1- 76	PISY	n	<5	У	medium	open	100-200	L	RB	У	٧	у	rc	n	14.5 cm
77 - S1L	1-77	PISY	У	-	٧	medium	open	100-200	Ē	RB	У	У	У	rc	n	12.6 cm
33 - S1L	1-83	PISY	У	-	У	medium	open	50- 100	Ē	RB	У	У	У	rc	n	8.4 cm
35 - S1L	1-85	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	10.3 cm
39 - S1N	1-89	PISY	n	<5	У	high	-	50-100	N	RB	У	У	У	rc	n	8.5 cm
90 - S1L	1-90	PISY	-	>10	У	high	-	50-100	L	RB	У	У	У	rc	n	-
92 - S1L	1-92	PISY	У	-	y	medium	open	50-100	i i	RB	У	У	У	rc	n	9.8 cm
99 - S1L	1-99	PISY	n	<5	У	medium	open	50-100	Ĺ	RB	У	У	У	rc	n	9.3 cm
03 - S1L	1- 103	PISY	n	<5	У	medium	-	100-200	Ĺ	RB	У	У	У	rc	n	12 cm
04 - S1L	1- 104	PISY	У	<b>\</b>		high	open	50-100	È	RB	У	У	У	rc	n	10.1 cm
09 - S1L	1- 104	PISY	-	-	У -	medium	open	50-100	L	RB			-	rc	n	5.6 cm
11 - S1N	1- 111	PISY	y n	<5		medium		100-200	N	RB	У	У	У	rc	n	9.8 cm
117 - S1N	1- 117	PISY		-	У		open		-	RB	У	У	У			
117 - ST 119 - S1L	1- 117	PISY	у	- <5	У	high high	open	50- 100 100- 200	L	RB	У	У	У	rc	n n	10.5 cm 16.5 cm
19 - STL 124 - S1N	1- 124	PISY	n	<0	У		open	100-200	N	RB	У	У	У	rc	n	4.7 cm
24 - S IN 25 - S1L	1- 124	PISY	У	- <5	У	very low	open	<50	I	RB	У	У	У	rc	n	4.7 cm
	-	_	n		У	very high	open				У	У	У	-		11.5 CIII
129 - S1L	1- 129	PISY	n	>10	-	medium	-	50-100	L	RB	У	У	У	rc	n	10 5 2 22
32 - S1L	1- 132	PISY	n	<5	У	medium	open	100-200	L	RB	У	У	у	rc	n	12.5 cm
33 - S1L	1- 133	PISY	У	-	У	medium	open	50- 100	L	RB	У	У	У	rc	n	7 cm
I- S2L	2-1	PISY	У	-	У	high	open	<50	L	RB	у	У	У	rc	n	7 cm
2 - S2N	2-2	PISY	у	-	У	very high	open	<50	N	RB	у	У	У	rc	n	7 cm
ield Code	I ob Codo															
	Lab Code	species			LW	CW	PR	TT	TTW	В					LAR	
70 - S1L	1- 70	PISY	larg	e med	dium	no	large	present	tooth	un	i -	abser	nt di	stinct	LARI	-
70 - S1L 71 - S1L	1- 70 1- 71	PISY PISY	larg larg	e med	dium dium	no no	large large	present present	tooth tooth	un un	i - i -	abser abser	nt di nt di	stinct stinct	- -	-
70 - S1L 71 - S1L 75 - S1L	1- 70 1- 71 1- 75	PISY PISY PISY	larg larg larg	e med e med	dium dium dium	no no no	large large large	present present present	tooth tooth tooth	un un un	i - i - i -	abser abser abser	nt di nt di nt di	stinct stinct stinct	- - -	-  -  -
70 - S1L 71 - S1L 75 - S1L 76 - S1L	1- 70 1- 71 1- 75 1- 76	PISY PISY PISY PISY	large large large large	e med e med e med e med	dium dium dium dium	no no no few rings	large large large large	present present present present	tooth tooth tooth tooth	un un un un	i - i - i - i -	abser abser abser abser	nt di nt di nt di nt di nt di	stinct stinct stinct stinct	- - -	- - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77	PISY PISY PISY PISY PISY	larg larg larg larg larg	e mede mede mede mede mede mede	dium dium dium dium dium	no no no few rings no	large large large large large	present present present present present	tooth tooth tooth tooth tooth	un un un un un	i - i - i - i -	abser abser abser abser abser	nt di nt di nt di nt di nt di	stinct stinct stinct stinct stinct	- - -	- - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L	1-70 1-71 1-75 1-76 1-77 1-83	PISY PISY PISY PISY PISY	larg larg larg larg larg	e med e med e med e med e med e med	dium dium dium dium dium dium dium	no no no few rings no no	large large large large large large	present present present present present present	tooth tooth tooth tooth tooth tooth	un un un un un	i - i - i - i - i -	abser abser abser abser abser abser	nt di nt di nt di nt di nt di nt di	stinct stinct stinct stinct stinct stinct	- - -	- - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 85 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium	no no no few rings no no	large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	un un un un un un	i - i - i - i - i - i - i -	abser abser abser abser abser abser abser	nt di nt di nt di nt di nt di nt di nt di	stinct stinct stinct stinct stinct stinct stinct stinct	- - -	- - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 83 - S1L 85 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no no	large large large large large large large	present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	un un un un un un	i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser	nt di	stinct stinct stinct stinct stinct stinct stinct stinct stinct	- - -	- - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 35 - S1L 39 - S1N	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no	large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth	un un un un un un	i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser	nt di	stinct stinct stinct stinct stinct stinct stinct stinct	- - -	- - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 39 - S1L 39 - S1N 90 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no no	large large large large large large large	present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser	nt di	stinct	- - -	- - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 39 - S1L 39 - S1N 90 - S1L 99 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no no no no	large large large large large large large large	present present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth tooth	un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser	nt di	stinct	- - -	- - - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 83 - S1L 89 - S1L 90 - S1L 90 - S1L 90 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103	PISY PISY PISY PISY PISY PISY PISY PISY	largi largi largi largi largi largi largi largi	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no no no no no no	large	present present present present present present present present present present	tooth	un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser	nt di	stinct	- - -	- - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 77 - S1L 77 - S1L 83 - S1L 89 - S1L 89 - S1N 90 - S1L 99 - S1L 90 - S1L 03 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104	PISY PISY PISY PISY PISY PISY PISY PISY	largi largi largi largi largi largi largi largi largi	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no no no no no no no no	large	present present present present present present present present present present present	tooth	un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser	nt di	stinct	- - - - - - - - -	- - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 77 - S1L 77 - S1L 83 - S1L 89 - S1L 89 - S1N 90 - S1L 99 - S1L 90 - S1L 03 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103	PISY PISY PISY PISY PISY PISY PISY PISY	larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no	large	present	tooth	un un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct	- - - - - - - - -	
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 13 - S1L 15 - S1L 19 - S1L 10 - S1L 10 - S1L 10 - S1L 10 - S1L 10 - S1L 10 - S1L 11 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104	PISY PISY PISY PISY PISY PISY PISY PISY	larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg- larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no	large	present present present present present present present present present present present present present present	tooth	un un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct	- - - - - - - - - - -	- - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 73 - S1L 75 - S1L 79 - S1L 70 - S1L 70 - S1L 70 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109	PISY PISY PISY PISY PISY PISY PISY PISY	larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no	large	present	tooth	un un un un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct	- - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 73 - S1L 75 - S1L 79 - S1L 70 - S1L 70 - S1L 70 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111	PISY PISY PISY PISY PISY PISY PISY PISY	larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no no few rings no	large	present	tooth	un un un un un un un un un un un	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		- - - - - - - - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 35 - S1L 39 - S1L 90 - S1L 90 - S1L 90 - S1L 91 - S1L 91 - S1L 91 - S1L 91 - S1L 91 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no no few rings no	large	present	tooth	un u	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		- - - - - - - - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 77 - S1L 33 - S1L 33 - S1L 39 - S1N 30 - S1L 30 - S1L 30 - S1L 30 - S1L 31 - S1L 32 - S1L 33 - S1L 34 - S1L 35 - S1L 36 - S1L 37 - S1L 38 - S1L 39 - S1L 39 - S1L 30 - S1L 30 - S1L 31 - S1N 31 - S1N 31 - S1N 31 - S1L 32 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111 1- 117	PISY PISY PISY PISY PISY PISY PISY PISY	larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no	large	present	tooth	un u	i - i - i - i - i - i - i - i - i - i -	abser abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		- - - - - - - - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 77 - S1L 33 - S1L 33 - S1L 39 - S1N 90 - S1L 90 - S1L 90 - S1L 100 - S1L 101 - S1N 117 - S1 119 - S1L 124 - S1N 125 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111 1- 117 1- 119 1- 124	PISY PISY PISY PISY PISY PISY PISY PISY	larg-	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no n	large	present	tooth	un u		abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		- - - - - - - - - - - - - - - - - - -
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 35 - S1L 39 - S1L 30 - S1L 30 - S1L 30 - S1L 30 - S1L 30 - S1L 30 - S1L 31 - S1L 32 - S1L 33 - S1L 34 - S1L 35 - S1L 36 - S1L 37 - S1 38 - S1L 39 - S1L 30 - S1L 30 - S1L 30 - S1L 30 - S1L 31 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 103 1- 104 1- 109 1- 111 1- 117 1- 117 1- 119 1- 124 1- 125	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no few rings no	large	present	tooth	un u		abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 35 - S1L 39 - S1L 31 - S1L 31 - S1N 31 - S1L 31 - S1L 31 - S1L 31 - S1L 31 - S1L 31 - S1L 31 - S1L 32 - S1L 33 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111 1- 117 1- 119 1- 124 1- 125 1- 129	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no no no no few rings no	large	present	tooth	un u		abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		
70 - S1L 71 - S1L 75 - S1L 76 - S1L 77 - S1L 33 - S1L 33 - S1L 39 - S1L 99 - S1L 103 - S1L 104 - S1L 111 - S1L 1124 - S1N 1125 - S1L 1132 - S1L	1- 70 1- 71 1- 75 1- 76 1- 77 1- 83 1- 85 1- 89 1- 90 1- 92 1- 99 1- 103 1- 104 1- 109 1- 111 1- 117 1- 119 1- 124 1- 125 1- 129 1- 132	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e mede mede mede mede mede mede mede me	dium dium dium dium dium dium dium dium	no n	large	present	tooth	un u		abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser abser	nt dint dint dint dint dint dint dint di	stinct		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	)	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
5 - S2L	2-5	PISY	У	-	У	high	ор	en	100-200	L	RB	У	У	У	rc	n	14 cm
6 - S2L	2-6	PISY	У	-	У	low	op	en	100-200	L	RB	У	У	У	rc	n	6.3 cm
7 - S2L	2-7	PISY	n	>10	У	low	-		>200	L	RB	У	У	У	rc	n	-
8 - S2L	2-8	PISY	n	5- 10	У	high	-		100-200	L	RB	У	У	У	rc	n	24 cm
9 - S2N	2-9	PISY	٧	-	У	low	clo		100-200	N	RB	V	У	У	rc	n	9.2 cm
12 - S2L	2-12	PISY	٧	-	٧	medium	qo		50-100	L	RB	y	У	У	rc	n	8.5 cm
14 - S2L	2- 14	PISY	У	-	У	high	qo		<50	L	RB	У	У	У	rc	n	8 cm
16 - S2L	2- 16	PISY	У	-	٧	low	qo		>200	L	RB	٧	٧	У	rc	n	11.4 cm
18 - S2L	2- 18	PISY	У	-	У	very low	ор		>200	L	RB	У	У	У	rc	n	9 cm
23 - S2L	2-23	PISY	n	5- 10	У	medium	-		50-100	L	RB	У	У	у	rc	n	-
25 - S2L	2-25	PISY	n	5- 10	У	medium	-		50-100	L	RB	У	У	У	rc	n	-
26 - S2N	2-26	PISY	У	-	У	low	qo		100-200	N	RB	У	У	у	rc	n	10 cm
27 - S2L	2-27	PISY	У	-	У	medium	ор		50-100	L	RB	У	У	У	rc	n	7.7 cm
31- S2L	2-31	PISY	У	-	У	medium	qo		100-200	L	RB	V	V	У	rc	n	10.5 cm
33 - S2L	2-33	PISY	У	-	У	medium	ор		100-200	L	RB	У	У	У	rc	n	13.5 cm
34 - S2L	2-34	PISY	n	<5	У	medium	- -		50-100	L	RB	У	У	У	rc	n	15.5 cm
35 - S2L	2-35	PISY	V	-	У	medium	op		100-200	L	RB	У	-	У	rc	n	13.5 cm
38 - S2L	2-33	PISY	У	-	-	high	op	-	<50	L	RB	V	У	-	rc	n	6.5 cm
39 - S2L 39 - S2L	2-36	PISY	n	- <5	У	very high			50- 100	L	RB	У	У	У	rc	n	13.5 cm
42 - S2L	2-39	PISY		-	У	, ,			50-100	L	RB	-	У	У	rc		15.5 cm
42 - S2L 44 - S2N		PISY	У	-	У	high	op	-		N	RB	У	У	У		n	12.6 cm
	2-44		У		У	high	ор		50-100			У	У	У	rc	n	
46 - S2L	2-46	PISY	n	5- 10	У	very low	-		>200	L	RB	У	У	У	rc	n	12 cm
47 - S2L	2-47	PISY	n	<5	У	high	ор	-	50-100	L	RB	У	У	У	rc	n	10 cm
49 - S2L	2-49	PISY	у	-	У	medium	ор		50- 100	L	RB	у	У	У	rc	n	9.7 cm
Field Code	Lab Code	species	DD														
F COL				EWLW			PR	TT	TTW	BP	so				LARred		ers
	2-5	PISY	large	mediur	n no		large	prese	nt tooth	uni	-	abse	nt dist	inct	-	otn -	ers
6 - S2L	2-5 2-6	PISY PISY	large large	mediur mediur	n no n no		large large	prese prese	nt tooth nt tooth	uni uni	-	abse abse	nt dist nt dist	inct inct	- -		ers
6 - S2L 7 - S2L	2-5 2-6 2-7	PISY PISY PISY	large large large	mediur mediur intense	n no n no e no		large large large	prese prese prese	nt tooth nt tooth nt tooth	uni uni uni	- - -	abse abse abse	nt dist nt dist nt dist	inct inct inct	- - -		ers
5 - S2L 6 - S2L 7 - S2L 8 - S2L	2-5 2-6 2-7 2-8	PISY PISY PISY PISY	large large large large	mediur mediur intense intense	n no n no e no e no		large large large large	prese prese prese prese	nt tooth nt tooth nt tooth nt tooth	uni uni uni uni	- - -	abse abse abse abse	nt dist nt dist nt dist nt dist	inct inct inct inct	- - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N	2-5 2-6 2-7 2-8 2-9	PISY PISY PISY PISY PISY	large large large large large	mediur mediur intense intense intense	n no n no e no e no fev		large large large large large	prese prese prese prese prese	nt tooth nt tooth nt tooth nt tooth nt tooth nt tooth	uni uni uni uni uni	- - - -	abse abse abse abse abse	nt dist nt dist nt dist nt dist nt dist	inct inct inct inct inct	- - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L	2-5 2-6 2-7 2-8 2-9 2-12	PISY PISY PISY PISY PISY PISY	large large large large large large	mediur mediur intense intense intense mediur	n no n no e no e no e fev n no	v rings	large large large large large	prese prese prese prese prese	nt tooth	uni uni uni uni uni uni	- - - -	abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct	- - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14	PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	mediur mediur intense intense intense mediur mediur	n no n fev n no n fev		large large large large large large	prese prese prese prese prese prese prese	nt tooth	uni uni uni uni uni uni uni	- - - - -	abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct	- - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	mediur mediur intense intense intense mediur mediur mediur	m no m no e no e no fev m no n	v rings	large large large large large large large large	prese prese prese prese prese prese prese	nt tooth	uni uni uni uni uni uni uni	- - - - - -	abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - -		ers
5 - S2L 7 - S2L 3 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large	mediur mediur intense intense intense mediur mediur mediur low	n no	v rings	large large large large large large large large large	prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur	m no m no e no e no e fev m no m no m no m no m no no m no	v rings	large	prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - - -		ers
3 - S2L 7 - S2L 3 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur mediur	m no m no e no e no e no e fev m no m fev m no no no m no m no	v rings	large	prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur mediur mediur mediur	m no m no e no e no e no e fev m no m fev m no no m no m no m no m no m no	v rings	large	prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur mediur	m no m no e no e no e no e fev m no m fev m no no m no m no m no m no m no	v rings	large	prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur mediur mediur mediur	m no m no e no e no e no e fev m no m fev m no no m no m no m no m no m no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct	- - - - - - - - - -		ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur mediur low mediur mediur mediur mediur	n non no n	v rings	large	prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct			ers
3 - S2L 7 - S2L 3 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense intense mediur	n non no n	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct			ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L 34 - S2L 35 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34 2-35	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense intense mediur	n non no n	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct			ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L 34 - S2L 35 - S2L 36 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense intense mediur	n non no n	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct			ers
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L 33 - S2L 34 - S2L 35 - S2L 36 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34 2-35	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur	m nom nom nom nom nom nom nom nom nom no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct		- - - - - - - - - - - - - - - - - - -	y reddish for
6 - S2L 7 - S2L 8 - S2L 9 - S2N 112 - S2L 114 - S2L 116 - S2L 118 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 31 - S2L 33 - S2L 33 - S2L 33 - S2L 33 - S2L 34 - S2L 35 - S2L 39 - S2L 39 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34 2-35 2-38	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur low mediur	m nom nom nom nom nom nom nom nom nom no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct		- - - - - - - - - - - - - - - - - - -	
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L 33 - S2L 33 - S2L 34 - S2L 35 - S2L 36 - S2L 37 - S2L 38 - S2L 39 - S2L 39 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-33 2-34 2-35 2-38 2-39	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense mediur mediur low mediur intense	m nom nom nom nom nom nom nom nom nom no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inct inct inct inct inct inct inct inct		- - - - - - - - - - - - - - - - - - -	
6 - S2L 7 - S2L 8 - S2L 9 - S2N 12 - S2L 14 - S2L 16 - S2L 18 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 33 - S2L 34 - S2L 35 - S2L 38 - S2L 38 - S2L 39 - S2L 39 - S2L 44 - S2N	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34 2-35 2-34 2-35 2-38 2-39 2-42	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense intense mediur	m nom nom nom nom nom nom nom nom nom no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inet inet inet inet inet inet inet inet		- - - - - - - - - - - - - - - - - - -	
6 - S2L 7 - S2L 8 - S2L 9 - S2N 112 - S2L 114 - S2L 116 - S2L 118 - S2L 23 - S2L 25 - S2L 26 - S2N 27 - S2L 31 - S2L 31 - S2L 33 - S2L 33 - S2L 33 - S2L 33 - S2L 34 - S2L 35 - S2L 39 - S2L 39 - S2L	2-5 2-6 2-7 2-8 2-9 2-12 2-14 2-16 2-18 2-23 2-25 2-26 2-27 2-31 2-33 2-34 2-35 2-38 2-39 2-42 2-44	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediur mediur intense intense intense intense intense mediur	m nom nom nom nom nom nom nom nom nom no	v rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	nt tooth	uni		abse abse abse abse abse abse abse abse	nt dist	inet inet inet inet inet inet inet inet		- - - - - - - - - - - - - - - - - - -	

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Se	radius
54 - S2N	2-54	PISY	У	-	٧	medium	open	100-200	N	RB	у	У	У	rc	n	12.3 cm
55 - S2L	2-55	PISY	У	-	У	medium	open	100-200	L	RB	У	у	У	rc	n	8.5 cm
56 - S2L	2-56	PISY	٧	-	٧	low	closed	100-200	L	RB	У	V	V	rc	n	12 cm
57 - S2L	2-57	PISY	n	<5	٧	medium	open	100-200	L	RB	У	V	V	rc	n	15 cm
60 - S2L	2-60	PISY	n	<5	٧	medium	open	50-100	L	RB	У	V	V	rc	n	10.5 cm
61- S2L	2-61	PISY	V	-	٧	high	open	50-100	L	RB	У	У	V	rc	n	11.5 cm
67 - S2L	2-67	PISY	n	<5	У	medium	open	50-100	L	RB	У	У	У	rc	n	10.3 cm
69 - S2L	2-69	PISY	n	<5	V	medium	open	100-200	L	RB	У	٧	V	rc	n	13 cm
72 - S2L	2-72	PISY	V	-	V	medium	open	100-200	L	RB	У	٧	V	rc	n	7.7 cm
73 - S2L	2-73	PISY	V	-	V	high	open	100-200	L	RB	У	٧	V	rc	n	18.5 cm
74 - S2L	2-74	PISY	У	-	У	medium	open	100-200	L	RB	У	У	V	rc	n	10 cm
78 - S2L	2-78	PISY	n	<5	У	medium	-	100-200	L	RB	У	У	٧	rc	n	11.5 cm
30 - S2L	2-80	PISY	У	-	У	medium	open	100-200	L	RB	У	У	٧	rc	n	9.5 cm
31- S2N	2-81	PISY	n	<5	У	medium	open	100-200	N	RB	У	٧	V	rc	n	7.5 cm
32 - S2L	2-82	PISY	У	-	У	medium	open	100-200	L	RB	У	٧	V	rc	n	12 cm
34 - S2L	2-84	PISY	n	<5	У	medium	open	100-200	L	RB	У	У	V	rc	n	16.5 cm
35 - S2L	2-85	PISY	n	<5	V	medium	open	100-200	L	RB	У	V	y V	rc	n	9.5 cm
38 - S2L	2-88	PISY	V	-	V	high	open	50-100	L	RB	У	У	V	rc	n	9.6 cm
39 - S2L	2-89	PISY	V	-	٧	high	open	50-100	ī	RB	У	У	V	rc	n	10.5 cm
91- S2L	2-91	PISY	У	-	У	medium	open	100-200	L	RB	У	У	٧	rc	n	13 cm
92 - S2L	2-92	PISY	У	-	У	medium	open	100-200	L	RB	У	V	٧	rc	n	13.8 cm
94 - S2L	2-94	PISY	n	<5	V	medium	open	100-200	L	RB	У	V	V	rc	n	14.2 cm
95 - S2L	2-95	PISY	v	_	V	high	open	50-100	L	RB	У	У	V	rc	n	7.3 cm
96 - S2L	2-96	PISY	V	-	У	high	open	50-100	L	RB	У	У	У	rc	n	9.2 cm
Field Code	Lab Code	species	-		WLW	CW	PR	TT	TTW	BP	SOBP	SpTh	SW		ARre	
54 - S2N	2-54	PISY	large		nedium	no	large	present	tooth	uni	- 30BF	absent	disti		Anie	u Others
55 - S2L	2-55	PISY	large		nedium	no	large	present	tooth	uni	-	absent	disti			-
6 - S2L	2-56	PISY	large		nedium	fewrings	large	present	tooth	uni	-	absent	disti			_
57 - S2L	2-57	PISY	large		nedium	no	large	present	tooth	uni	-	absent	disti			-
60 - S2L	2-60	PISY	large		nedium	no	large	present	tooth	uni	-	absent	disti			_
61- S2L	2-61	PISY	small.		nedium	fewrings	large	present	tooth	uni	-	absent	disti			-
67 - S2L	2-67	PISY	large		nedium	no	large	present	tooth	uni		absent	disti			_
69 - S2L	2-69	PISY	large		nedium	fewrings	large	present	tooth	uni	-	absent	disti			
72 - S2L	2-72	PISY	large		ow	no	large	present	tooth	uni	-	absent	disti			
73 - S2L	2-72	PISY	large		nedium	no	large	present	tooth	uni	-	absent	disti			
74 - S2L	2-74	PISY	small		)W	no	large	present	tooth	uni	-	absent	disti			
78 - S2L	2-74	PISY	large		ntense	no	large	present	tooth	uni	-	absent	disti			
	2-76	PISY	large		nedium	no	large	present	tooth	uni	-	absent	disti			-
			laide	[11	i GuiuIII				tooth	uni	-	absent	disti			-
				le le	<b>7W</b>	no				uiii	17	- anseill	lloiu			
31- S2N	2-81	PISY	large		)W	no	large	present		uni	_					
81- S2N 82 - S2L	2-81 2-82	PISY PISY	large large	ir	ntense	no	large	present	tooth	uni	-	absent	disti	nct -		-
31- S2N 32 - S2L 34 - S2L	2-81 2-82 2-84	PISY PISY PISY	large large large	ir ir	ntense ntense	no no	large large	present present	tooth tooth	uni	-	absent absent	disti disti	nct - nct -		-
31- S2N 32- S2L 34- S2L 35- S2L	2-81 2-82 2-84 2-85	PISY PISY PISY PISY	large large large large	ir ir ir	ntense ntense ntense	no no no	large large large	present present present	tooth tooth tooth	uni uni	-	absent absent absent	disti disti disti	nct - nct - nct -		-
31- S2N 32 - S2L 34 - S2L 35 - S2L 38 - S2L	2-81 2-82 2-84 2-85 2-88	PISY PISY PISY PISY PISY	large large large large large	ir ir ir ir	ntense ntense ntense ntense	no no no no	large large large large	present present present present	tooth tooth tooth tooth	uni uni uni	- - -	absent absent absent absent	disti disti disti disti	nct - nct - nct - nct -		- - -
31- S2N 32 - S2L 34 - S2L 35 - S2L 38 - S2L 39 - S2L	2-81 2-82 2-84 2-85 2-88 2-89	PISY PISY PISY PISY PISY	large large large large large large	ir ir ir ir ir	ntense ntense ntense ntense nedium	no no no no no	large large large large large	present present present present present	tooth tooth tooth tooth tooth	uni uni uni uni	-	absent absent absent absent absent	disti disti disti disti disti	nct - nct - nct - nct - nct - nct -		-
31- S2N 32 - S2L 34 - S2L 35 - S2L 38 - S2L 39 - S2L 91- S2L	2-81 2-82 2-84 2-85 2-88 2-89 2-91	PISY PISY PISY PISY PISY PISY	large large large large large large	ir ir ir ir ir n	ntense ntense ntense ntense nedium	no no no no no	large large large large large	present present present present present present	tooth tooth tooth tooth tooth tooth	uni uni uni uni uni	- - - -	absent absent absent absent absent absent	disti disti disti disti disti disti	nct -		- - - -
81 - S2N 82 - S2L 84 - S2L 85 - S2L 88 - S2L 89 - S2L 91 - S2L	2-81 2-82 2-84 2-85 2-88 2-89 2-91 2-92	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small	ir ir ir ir ir n lo	ntense ntense ntense ntense nedium ow nedium	no no no no no no	large large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni	- - - -	absent absent absent absent absent absent absent	disti disti disti disti disti disti disti	nct -		- - - - -
35 - S2L 38 - S2L 39 - S2L 91 - S2L 92 - S2L 94 - S2L	2-81 2-82 2-84 2-85 2-88 2-89 2-91 2-92 2-94	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large small large	ir ir ir ir n k n	ntense ntense ntense ntense nedium ow nedium nedium	no no no no no no no no	large large large large large large large large	present	tooth tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni	- - - -	absent absent absent absent absent absent absent absent	disti disti disti disti disti disti disti disti	nct -		- - - - - - -
31 - S2N 32 - S2L 34 - S2L 35 - S2L 38 - S2L 39 - S2L 91 - S2L	2-81 2-82 2-84 2-85 2-88 2-89 2-91 2-92	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small	ir ir ir ir n k n n	ntense ntense ntense ntense nedium ow nedium	no no no no no no	large large large large large large large	present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni	- - - -	absent absent absent absent absent absent absent	disti disti disti disti disti disti disti	nct -		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
99 - S2L	2-99	PISY	n	>10	у	medium	-	100-200	L	RB	У	у	У	rc	n	-
00 - S2N	2-100	PISY	n	5- 10	У	medium	-	50-100	N	RB	У	٧	У	rc	n	7.5 cm
03 - S2L	2- 103	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	7.5 cm
06 - S2L	2-106	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	10.2 cm
08 - S2L	2-108	PISY	n	<5	٧	low		50-100	L	RB	У	٧	У	rc	n	7 cm
10 - S2L	2- 110	PISY	У	-	У	high	open	50-100	L	RB	У	٧	У	rc	n	12.5 cm
12 - S2N	2- 112	PISY	У	-	у	high	open	50-100	N	RB	У	٧	У	rc	n	10.7 cm
14 - S2L	2- 114	PISY	n	<5	У	medium	open	50-100	L	RB	У	٧	V	rc	n	11.3 cm
15 - S2N	2- 115	PISY	n	>10	У	medium	-	50-100	N	RB	У	٧	У	rc	n	-
17 - S2N	2- 117	PISY	n	<5	У	high	open	100-200	N	RB	У	У	У	rc	n	18 cm
19 - S2L	2- 119	PISY	У	-	У	high	open	50- 100	L	RB	У	٧	У	rc	n	12 cm
20 - S2L	2- 120	PISY	n	<5	У	medium	open	100-200	L	RB	У	У	У	rc	n	13 cm
26 - S2N	2- 126	PISY	у	-	У	medium	open	100-200	N	RB	У	У	У	rc	n	12 cm
27 - S2N	2- 127	PISY	у	-	У	low	open	100-200	N	RB	٧	V	У	rc	n	13.1 cm
28 - S2L	2- 128	PISY	У	-	У	medium	open	50-100	L	RB	У	V	У	rc	n	8.9 cm
30 - S2N	2- 130	PISY	У	<5	У	medium	open	100-200	N	RB	У	V	y	rc	n	12.4 cm
32 - S2L	2- 132	PISY	У	-	У	high	open	50-100	L	RB	У	V	У	rc	n	11 cm
34 - S2L	2- 134	PISY	У	-	У	medium	open	50-100	L	RB	У	V	У	rc	n	6 cm
39 - S2L	2- 139	PISY	n	<5	У	medium	open	100-200	L	RB	У	V	У	rc	n	17.5 cm
11- S2L	2- 141	PISY	n	<5	-	medium	open	100-200	L	RB	У	V	У	rc	n	12.5 cm
12 - S2N	2- 141	PISY	n	<5	У	medium	open	50-100	N	RB	У	V	У	rc	n	8.5 cm
13 - S2L		PISY		-	У						•	,	•			8.5 cm
4 - S2L	2- 143		У		У	high medium	open	50- 100 50- 100	L	RB RB	У	У	У	rc	n	
_	2- 144	PISY	n	>10	V					nn n	У	V	У	rc	n	15 cm
	0 115	DICY			,						-	,	-			0.0
	2- 145	PISY	у	-	y	high	open	<50	L	RB	у	У	y	rc	n	6.2 cm
ield Code	Lab Code	species	RD	- EW	y /LW	high CW	PR	<50 <b>TT</b>	L	RB BP	y SOBI	y SpTI	y 1 S	rc S W	n LAR	red others
ield Code 9 - S2L	Lab Code 2-99	species PISY	RD large	- EW me	y /LW dium	high CW few rings	PR large	<50 TT present	TTW tooth	RB BP uni	y SOBI	y SpTI abse	y nt c	rc S W distinct	n	red others
<b>ield Code</b> 9 - S2L 00 - S2N	<b>Lab Code</b> 2-99 2-100	species PISY PISY	RD large large	- EW	y /LW dium dium	high  CW few rings few rings	PR large large	<50 TT present present	TTW tooth tooth	RB uni uni	y SOBI	SpTI abse abse	y nt c	rc S W distinct distinct	n LAR -	red others
ield Code 9 - S2L 00 - S2N 03 - S2L	<b>Lab Code</b> 2-99 2-100 2-103	species PISY PISY PISY	RD large large large	me me me	y /LW dium dium dium	high  CW few rings few rings few rings	PR large large large	<50 TT present present present	tooth tooth	RB uni uni uni	SOBI	y SpTI abse abse abse	y nt c nt c nt c	rc S W distinct	n	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L	<b>Lab Code</b> 2-99 2-100 2-103 2-106	species PISY PISY PISY PISY	RD large large large large,	me me me tr me	y /LW dium dium dium dium	high  CW few rings few rings few rings no	PR large large large large	<50 TT present present present present	tooth tooth tooth	RB uni uni uni uni	y SOBI	y SpTI abse abse abse abse	y nt cont cont cont cont cont cont cont co	rc SW distinct distinct	n LAR - - -	red others
ield Code 9 - S2L 90 - S2N 93 - S2L 96 - S2L 98 - S2L	2-99 2-100 2-103 2-106 2-108	species PISY PISY PISY PISY PISY	large large large large, large,	me me me tr me me	y /LW dium dium dium dium dium	high  CW few rings few rings few rings no no	PR large large large large large	<50 TT present present present present present present	tooth tooth tooth tooth tooth	RB uni uni uni uni uni	y SOBI	y SpTI abse abse abse abse abse	y nt cont cont cont cont cont cont cont co	rc SW distinct distinct distinct	n LAR - - - -	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 0 - S2L	2-99 2-100 2-103 2-106 2-108 2-110	species PISY PISY PISY PISY PISY PISY PISY	RD large large large, large, large	me me tr me inte	y /LW dium dium dium dium dium ense	high  CW few rings few rings few rings no no	PR large large large large large large	rt present present present present present present	tooth tooth tooth tooth tooth tooth	RB uni uni uni uni uni uni uni	y SOBI	y SpTI abse abse abse abse abse abse abse	y nt cont cont cont cont cont cont cont co	rc  SW  distinct distinct distinct distinct	n LAR - - - - -	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 10 - S2L 12 - S2N	2-99 2-100 2-103 2-106 2-108 2-110 2-112	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large, large large	me me me me inte	y /LW dium dium dium dium dium dium dium dium	high  CW few rings few rings few rings no no no	PR large large large large large large large	rt present present present present present present present	tooth tooth tooth tooth tooth tooth	RB uni uni uni uni uni uni	SOBI	y SpTI abse abse abse abse abse abse abse abse	y nt cont cont cont cont cont cont cont co	rc SW distinct distinct distinct distinct distinct distinct distinct	n - - - - - -	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 0 - S2L 2 - S2N 4 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large large, large large large large	me me me inte	y  /LW  dium	high  CW few rings few rings few rings no no no no	PR large large large large large large large large large	rr present	tooth tooth tooth tooth tooth tooth tooth	RB uni uni uni uni uni uni uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y nt cont cont cont cont cont cont cont co	rc SW distinct distinct distinct distinct distinct distinct distinct distinct distinct	n LAR - - - - - - - -	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 10 - S2L 12 - S2N 14 - S2L 15 - S2N	2-99 2-100 2-103 2-106 2-108 2-108 2-110 2-112 2-114 2-115	PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large large large large large large	me me me inte	y  //LW  dium	high  CW few rings few rings few rings no no no no no zones	PR large	rr present	tooth	RB uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt cont cont cont cont cont cont cont co	rc SW distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N	2-99 2-100 2-103 2-106 2-108 2-108 2-110 2-112 2-114 2-115 2-117	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large large large large large large large large	me me me inte	y //LW dium dium dium dium dium dium dium dium	high  CW few rings few rings few rings no no no no no no no	PR large	rr present	tooth	RB uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  y  not cont cont cont cont cont cont cont c	rc SW  distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N 9 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large large large large large large large large large	me me me intermeter me low me me	y /LW dium dium dium dium dium dium dium dium	high  CW few rings few rings no no no no no zones no	large	rr present	tooth	RB uni	SOBI	y SpTI abse abse abse abse abse abse abse abse	y  y  not continue to the cont	rc SW distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N 9 - S2L 20 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me me inte	y  //LW  dium	high  CW few rings few rings few rings no no no no so no	PR large	resent present	tooth	RB Uni u	SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt cont cont cont cont cont cont cont co	rc  SW  distinct	n LAR	red others
eld Code 9 - S2L 100 - S2N 103 - S2L 106 - S2L 108 - S2L 109 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me inte me inte me inte me inte me	y  //LW  dium	high  CW few rings few rings no no no no zones no no	PR large	rr present	tooth	RB Uni u	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt cont cont cont cont cont cont cont co	rc SW  distinct	n LAR	red others
eld Code 0 - S2L 0 - S2N 3 - S2L 6 - S2L 8 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N 9 - S2L 0 - S2L 6 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me me inte	y  //LW  dium	high  CW few rings few rings few rings no	large	rr present	tooth	RB Uni u	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt cont cont cont cont cont cont cont	rc SW  distinct	n LAR	red others
eld Code 0 - S2L 0 - S2N 3 - S2L 6 - S2L 8 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N 9 - S2L 6 - S2L 6 - S2N 7 - S2N 9 - S2L 6 - S2N 7 - S2N 8 - S2N	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me inte	y  //LW  dium  dium  dium  dium  dium  ense  dium	high  CW few rings few rings no	large	rr present	tooth	RB  Uni  uni  uni  uni  uni  uni  uni  uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt  nt  nt  nt  nt  nt  nt  nt  nt  n	rc SW  distinct	n LAR	red others
eld Code 0 - S2L 0 - S2N 3 - S2L 6 - S2L 0 - S2L 2 - S2N 4 - S2L 5 - S2N 7 - S2N 9 - S2L 0 - S2N 0 - S2L 0 - S2N 7 - S2N	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large	me me me inte me inte me	y  //LW  dium	high  CW few rings few rings no few rings no	large	rrsent present	tooth	RB Uni u	y SOBI	y spTI abse abse abse abse abse abse abse abse	y  nt  nt  nt  nt  nt  nt  nt  nt  nt  n	rc SW  distinct	n LAR	red others
eld Code 9 - S2L 100 - S2N 103 - S2L 106 - S2L 108 - S2L 107 - S2L 108 - S2L 109 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130 2-132	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me inte me	y //LW dium dium dium dium dium dium dium dium	high  CW few rings few rings no	large	rr present	tooth	RB Uni u	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  y  nt  cont  co	rc  SW  distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 09 - S2N 09 - S2L	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large	me me inte me	y  //LW  dium	high  CW few rings few rings no few rings no	large	rrsent present	tooth	RB Uni u	y SOBI	y spTI abse abse abse abse abse abse abse abse	y  y  nt  cont  co	rc SW  distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 08 - S2L 09 - S2N 09 - S2N 09 - S2N 09 - S2L 00 - S2N	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130 2-132	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me me inte me inte me	y //LW dium dium dium dium dium dium dium dium	high  CW few rings few rings few rings no few rings no	large	rr present pre	tooth	RB Uni u	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt  nt  nt  nt  nt  nt  nt  nt  nt  n	rc  SW  distinct	n LAR	red others
ield Code 9 - S2L 00 - S2N 03 - S2L 06 - S2L 06 - S2L 08 - S2L 09 - S2N	2- 99 2- 100 2- 103 2- 106 2- 108 2- 110 2- 112 2- 114 2- 115 2- 117 2- 119 2- 120 2- 126 2- 127 2- 128 2- 130 2- 132 2- 134	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large	me me inte me	y  //LW  dium	high  CW few rings few rings few rings no	large	resent present	tooth	RB  Uni  uni  uni  uni  uni  uni  uni  uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  y  nt  cont  co	rc  SW  distinct	n LAR	red others
Selection   Selection	2- 99 2- 100 2- 103 2- 106 2- 108 2- 110 2- 112 2- 114 2- 115 2- 117 2- 119 2- 120 2- 126 2- 127 2- 128 2- 130 2- 132 2- 134 2- 139	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me inte me	y  //LW  dium	high  CW few rings few rings few rings no few rings no no no few rings no no few rings	large	resent present	tooth	RB  Uni  uni  uni  uni  uni  uni  uni  uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  y  not continue to the cont	rc  SW  distinct	n LAR	red others
Seld Code   9 - S2L   100 - S2N   103 - S2L   106 - S2L   106 - S2L   107 - S2L   107 - S2N   107 -	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130 2-132 2-134 2-139 2-141	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large large large, large	me me inte me	y  //LW  dium	high  CW few rings few rings few rings no	large	resent present	tooth	RB  Uni  uni  uni  uni  uni  uni  uni  uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt  nt  nt  nt  nt  nt  nt  nt  nt  n	rc  SW  distinct	n LAR	red others
	2-99 2-100 2-103 2-106 2-108 2-110 2-112 2-114 2-115 2-117 2-119 2-120 2-126 2-127 2-128 2-130 2-132 2-134 2-139 2-141 2-142	species PISY PISY PISY PISY PISY PISY PISY PISY	RD large	me me inte me	y  //LW  dium  diu	high  CW few rings few rings few rings no	large	rry present	tooth	RB  Uni  uni  uni  uni  uni  uni  uni  uni	y SOBI	y SpTI abse abse abse abse abse abse abse abse	y  nt  nt  nt  nt  nt  nt  nt  nt  nt  n	rc SW  distinct	n LAR	red others

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	ma c	ro mic ro	RBC	Atech	Sec	radius
147 - S2N	2- 147	PISY	У	-	٧	medium	open	100-200	N	RB	у	У	٧	rc	n	9.6 cm
148 - S2L	2- 148	PISY	n	5-10	y	high		100-200	L	RB	y	V	У	rc	n	-
149 - S2L	2-149	PISY	n	5-10	У	medium	-	>200	L	RB	У	У	У	rc	n	13.5 cm
154 - S2L	2-154	PISY	n	5-10	У	medium	-	100-200	L	RB	У	У	У	rc	n	9 cm
156 - S2L	2-156	PISY	n	<5	У	medium	open	100-200	L	RB	У	У	У	rc	n	10 cm
163 - S2L	2-163	PISY	n	<5	У	low	-	100-200	L	RB	У	У	У	rc	n	15 cm
165 - S2L	2-165	PISY	n	>10	У	medium	-	100-200	L	RB	У	У	У	rc	n	-
31- S3L	3-31	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	5 cm
33 - S3L	3-33	PISY	У	-	У	medium	open	100-200	L	RB	У	У	У	rc	n	11.3 cm
35 - S3L	3-35	PISY	У	-	у	low	open	100-200	L	RB	У	У	У	rc	n	13 cm
37 - S3L	3-37	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	8 cm
40 - S3L	3-40	PISY	У	-	у	low	open	100-200	L	RB	y	У	У	rc	n	12.5 cm
41- S3L	3-41	PISY	n	5-10	y	medium	- '	>200	L	RB	у	У	У	rc	n	-
52 - S3L	3-52	PISY	n	<5	У	medium	-	100-200	L	RB	У	V	У	rc	n	11 cm
53 - S3L	3-53	PISY	n	<5	У	low	-	>200	L	RB	У	V	У	rc	n	13.5 cm
54 - S3N	3-54	PISY	У	-	У	medium	open	50-100	N	RB	у	V	У	rc	n	6.5 cm
55 - S3N	3-55	PISY	У	-	У	medium	open	50-100	N	RB	У	V	У	rc	n	9 cm
56 - S3L	3-56	PISY	n	<5	У	low	-	100-200	Ĺ	RB	у	У	У	rc	n	15 cm
57 - S3L	3-57	PISY	У	-	У	high	open	50-100	L	RB	У	V	У	rc	n	12 cm
60 - S3L	3-60	PISY	У	-	У	high	open	100-200	L	RB	У	V	У	rc	n	11.8 cm
61- S3L	3-61	PISY	n	<5	У	high	open	100-200	L	RB	У	V	У	rc	n	13 cm
63 - S3L	3-63	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	9 cm
75 - S3L	3-75	PISY	У	_	У	low	open	100-200	L	RB	У	V	У	rc	n	9.5 cm
79 - S3L	3-79	PISY	n	5-10	У	medium	-	>200	L	RB	У	У	У	rc	n	16.5 cm
Field Code																
		enaciae	RD		CW		D TI	TTV	V R	D 9	ORD	SnTh	SW.	IARr	ad ot	hore
	<b>Lab Code</b> 2- 147	species PISY	large	medium	CW		R TI				OBP	SpTh absent	distinct	LARr	ed of	thers
147 - S2N	2- 147	PISY	large	medium	n no	la	arge pro	esent toot	h u	ni -	ОВР	absent	distinct	LARro		thers
147 - S2N 148 - S2L	2- 147 2- 148	PISY PISY	large large	medium medium	n no n few	rings la	arge pro	esent toot esent toot	h u h u	ni - ni -	ОВР	absent absent	distinct distinct	-		thers
147 - S2N 148 - S2L 149 - S2L	2- 147 2- 148 2- 149	PISY PISY PISY	large large large	medium medium medium	no n few n no	rings la	arge pro arge pro arge pro	esent toot esent toot esent toot	h u h u h u	ni - ni - ni -	ОВР	absent absent absent	distinct distinct distinct			thers
147 - S2N 148 - S2L 149 - S2L 154 - S2L	2- 147 2- 148 2- 149 2- 154	PISY PISY PISY PISY	large large large large	medium medium medium medium	n no n few n no n no	rings la la la	arge pro arge pro arge pro arge pro	esent toot esent toot esent toot esent toot	h u h u h u h u	ni - ni - ni - ni -	ОВР	absent absent absent absent	distinct distinct distinct distinct	- - -	- -	thers
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L	2- 147 2- 148 2- 149 2- 154 2- 156	PISY PISY PISY PISY PISY	large large large large large	medium medium medium medium medium	n no n few n no n no n no	rings la la la la	arge pro arge pro arge pro arge pro arge pro	esent toot esent toot esent toot esent toot esent toot	h u h u h u h u h u	ni - ni - ni - ni - ni -	ОВР	absent absent absent absent absent	distinct distinct distinct distinct distinct	- - -	- - - -	
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163	PISY PISY PISY PISY PISY	large large large large large large	medium medium medium medium medium intense	no few no no no no few	rings la rings la la la rings la	arge pro	esent toot	h ui h ui h ui h ui h ui	ni - ni - ni - ni - ni - ni -	ОВР	absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct	- - - -	- - - -	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165	PISY PISY PISY PISY PISY PISY PISY	large large large large large large	medium medium medium medium medium intense low	n no n few n no n no n no few no	rings la rings la la la rings la la	arge pro	esent toot	h uih uih uih uih uih uih	ni - ni - ni - ni - ni - ni -	OBP	absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct	- - - - -	- - - -	
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr	medium medium medium medium medium intense low medium	n no n few n no n no n no n no n no few no n no	rings la rings la la la rings la la	arge pro	esent toot	h uih uih uih uih uih uih	ni -		absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - -	- - - - re	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large, tr	medium medium medium medium intense low medium	n no	rings la la la la la rings la la rings la la la	arge pro	esent toot	h uih uih uih uih uih uih uih	ni -	ngular	absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - -	- - - - re	
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large, tr large	medium medium medium medium intense low medium low low	n no few no no few no no no no no no		arge pri arge pri arge pri arge pri arge pri arge pri arge pri arge pri arge pri arge pri	esent toot	h uih uih uih uih uih uih uih uih uih ui	ni -		absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct		- - - - re	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 37 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large, tr large small	medium medium medium medium medium intense low medium low low	n no few no no few no no no no no no no no	rings la rings la la rings la rings la	arge pro	esent toot	h uih uih uih uih uih uih uih uih uih ui	ni -		absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct		- - - - re - - - fe	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 37 - S3L 40 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large, tr large, tr large, tr large, tr	medium medium medium medium intense low low low low	non few no	rings la li li li li li rings la	arge pro	esent toot	h uh	ni -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - -	re fe	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 37 - S3L 40 - S3L 41 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large, tr large, tr large, tr large, tr	medium medium medium medium intense low medium low low low low medium	non few non non no n	la rings la la la rings la la la la la la	arge pro	esent toot	h uh	ni -		absent a absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - - - - - - -	re	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 41 - S3L 52 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 35 3- 37 3- 40 3- 41 3- 52	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large, tr large, tr large, tr large, tr	medium medium medium medium medium intense low medium low low low low medium medium	non few no	la rings la la rings la rings la la la la la la	arge pro	esent toot	h uh	ni -		absent a	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - -	re fe	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 40 - S3L 52 - S3L 53 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41 3- 52 3- 53	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large, tr large, tr large, tr large, tr	medium medium medium medium medium intense low low low low medium medium medium	non few no	la   la   la   la   la   la   la   la	arge pro	esent toot	h uh	ni -		absent a	distinct d distinct distinct distinct distinct distinct distinct distinct d	- - - - - - - - - - - - - - - - - - -	re	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N	2- 147 2- 148 2- 149 2- 156 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41 3- 52 3- 53 3- 54	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large, tr large, tr large, tr large, tr large, tr	medium medium medium medium medium intense low low low low medium medium medium	no no few no	rings la rings la rings la rings la la la la la la la la la rings la la la la la la la rings la	arge pro	esent toot	h uh	ni		absent a	distinct distinct	- - - - - - - - - - - - - - - - - - -		ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41 3- 52 3- 53 3- 54 3- 55	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large, tr large, tr large, tr large, tr large, tr large	medium medium medium medium medium intense low low low low medium medium medium medium medium	non few no	rings la rings la la rings la rings la la la la la la rings la l	arge pro	esent toot	h uh	ni		absent a	distinct d distinct distinct distinct distinct distinct distinct distinct d	- - - - - - - - - - - - - - - - - - -	re	ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 37 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N 56 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41 3- 52 3- 53 3- 54 3- 55 3- 56	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large large	medium medium medium medium medium intense low low low low medium	non few non no	rings la li li li li rings la rings la la la la la la la li li li la li	arge pro	esent toot	h uhh uhh uhh uhh uhh uhh uhh uhh uhh u	ni -		absent a	distinct	- - - - - - - - - - - - - - - - - - -		ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 165 - S2L 31 - S3L 33 - S3L 37 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 55 - S3L 57 - S3L 57 - S3L 57 - S3L	2- 147 2- 148 2- 149 2- 154 2- 156 2- 163 2- 165 3- 31 3- 33 3- 35 3- 37 3- 40 3- 41 3- 52 3- 53 3- 54 3- 55 3- 56 3- 57	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large, tr large	medium medium medium medium medium intense low low low low medium medium medium medium medium medium medium medium medium	non few no	rings la rings la rings la rings la rings la la rings la rings la	arge pro	esent toot	h uh	ni -		absent a	distinct	- - - - - - - - - - - - - - - - - - -		ddish w rings
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 37 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N 56 - S3L 57 - S3L 60 - S3L	2-147 2-148 2-149 2-154 2-156 2-163 2-165 3-31 3-33 3-35 3-37 3-40 3-41 3-52 3-53 3-54 3-55 3-56 3-57 3-60	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr	medium medium medium medium medium intense low low low low medium low	non few no	rings la rings la rings la rings la rings la rings la rings la rings la rings la rings la	arge pro	esent toot	h uh	ni -		absent a	distinct	- - - - - - - - - - - - - - - - - - -		ddish
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 37 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N 56 - S3L 57 - S3L 60 - S3L	2-147 2-148 2-149 2-154 2-156 2-163 2-165 3-31 3-33 3-35 3-37 3-40 3-41 3-52 3-53 3-54 3-55 3-57 3-60 3-61	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large large large large large large large large	medium medium medium medium medium intense low low low low medium	no no few no	rings la rings la rings la rings la rings la rings la rings la rings la rings la	arge pro	esent toot	h uh	ni -		absent a	distinct	- - - - - - - - - - - - - - - - - - -		ddish w rings
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N 56 - S3L 57 - S3L 60 - S3L 61 - S3L 63 - S3L	2-147 2-148 2-149 2-154 2-156 2-163 2-165 3-31 3-33 3-35 3-37 3-40 3-41 3-52 3-53 3-54 3-55 3-56 3-57 3-60 3-61 3-63	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large, tr large, tr large, tr large, tr large, tr large	medium medium medium medium medium intense low low low low medium	no no few no	rings la rings la rings la rings la la la la la la la la la rings la rings la rings la rings la rings la	arge pro	esent toot	h uh	ni -		absent a	distinct			ddish w rings w scars
147 - S2N 148 - S2L 149 - S2L 154 - S2L 156 - S2L 163 - S2L 165 - S2L 31 - S3L 33 - S3L 35 - S3L 40 - S3L 40 - S3L 41 - S3L 52 - S3L 53 - S3L 54 - S3N 55 - S3N 56 - S3L 57 - S3L 60 - S3L	2-147 2-148 2-149 2-154 2-156 2-163 2-165 3-31 3-33 3-35 3-37 3-40 3-41 3-52 3-53 3-54 3-55 3-57 3-60 3-61	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large, tr large large large large large large large large	medium medium medium medium medium intense low low low low medium	no no few no	rings la rings la rings la rings la la la la la la la la rings la l	arge pro	esent toot	h uhh uhh uhh uhh uhh uhh uhh uhh uhh u	ni -		absent a	distinct	- - - - - - - - - - - - - - - - - - -		ddish w rings

Field Code	Lab Code	species	pith	RMTP	fungi	GL	S	C	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
30 - S3N	3-80	PISY	у	-	у	high	0	pen	50- 100	N	RB	У	у	У	rc	n	10.8 cm
32 - S3L	3-82	PISY	n	5- 10	У	high	-		50- 100	L	RB	У	у	У	rc	n	-
33 - S3L	3-83	PISY	У	-	У	medium	0	pen	50- 100	L	RB	У	у	У	rc	n	10 cm
37 - S3L	3-87	PISY	У	-	У	high	0	pen	50- 100	L	RB	У	у	У	rc	n	15.5 cm
90 - S3N	3-90	PISY	У	-	У	high	0	pen	<50	N	RB	У	у	У	rc	n	5.5 cm
95 - S3L	3-95	PISY	У	-	У	low	0	pen .	100-200	L	RB	У	У	У	rc	n	14.8 cm
97 - S3L	3-97	PISY	У	-	У	high		pen .	50- 100	L	RB	У	У	У	rc	n	7.5 cm
99 - S3N	3-99	PISY	n	<5	У	low	-		>200	N	RB	у	У	У	rc	n	14 cm
1- S3L	3-1	PISY	n	<5	У	very hig	h o	pen	50-100	L	RB	у	У	У	rc	n	19 cm
3 - S3L	3-3	PISY	У	-	y	medium		pen .	100-200	L	RB	y	у	У	rc	n	13.8 cm
10 - S3N	3- 10	PISY	V	-	٧	high		pen	50- 100	N	RB	у	У	У	rc	n	8.5 cm
1- S3N	3- 11	PISY	n	5- 10	٧	medium			50- 100	N	RB	у	У	У	rc	n	-
2 - S3L	3- 12	PISY	n	<5	٧	medium		pen	50- 100	L	RB	у	У	У	rc	n	10 cm
3 - S3L	3- 13	PISY	У	-	٧	medium		pen	50- 100	L	RB	У	У	У	rc	n	7.7 cm
17- S3L	3- 17	PISY	n	<5	V	medium		pen	50-100	L	RB	У	У	У	rc	n	11.5 cm
21- S3L	3-21	PISY	У	-	У	low		pen	>200	L	RB	У	У	У	rc	n	12 cm
23 - S3L	3-23	PISY	У	-	V	medium		losed	100-200	L	RB	У	У	У	rc	n	7.5 cm
24 - S3L	3-24	PISY	У	-	V	medium		pen	100-200	L	RB	У	У	У	rc	n	11.6 cm
26 - S3L	3-26	PISY	У	-	У	medium		pen	100-200	L	RB	У	У	У	rc	n	10.5 cm
28 - S3L	3-28	PISY	У	-	У	medium		pen	100-200	L	RB	У	У	У	rc	n	7.5 cm
29 - S3L	3-29	PISY	У	-	У	high		pen	50- 100	L	RB	У	У	У	rc	n	9.9 cm
100 - S3L	3- 100	PISY	У	-	У	very hig		pen	<50	L	RB	У	У	У	rc	n	11 cm
104 - S3L	3- 104	PISY	n	<5	У	medium		pen	50- 100	L	RB	у	У	У	rc	n	9.5 cm
104 - 33L 106 - S3L	3- 104	PISY	У	< 3	У	high		pen	50- 100	L	RB	У	У	V	rc	n	7 cm
					WLW		PR						-	SW			
Field Code 30 - S3N	Lab Code	e specie PISY	s RD larg		nedium	no	large	prese	TTW ent tooth	BF un		SOBP	SpTh absent	distin		ARred	other
32 - S3L	3-82	PISY	larg		ntense	no	large	prese		un			absent	distin			-
33 - S3L	3-83						laige	hiese		uii			absent	uistiii	ici -		-
	3-03					no	largo	nroce		un	i		ahcont	dictin	ot		
	2 07	PISY	larg		nedium	no	large	prese	ent tooth	un			absent	distin			-
	3-87	PISY	larg	e r	nedium	no	large	prese	ent tooth ent tooth	un	i -		absent	distin	ict -		-
90 - S3N	3-90	PISY PISY	larg	e r e ii	nedium ntense	no no	large large	prese	ent tooth ent tooth ent tooth	un un	i - i -		absent absent		ict -		-
90 - S3N 95 - S3L	3-90 3-95	PISY PISY PISY	larg larg larg	e r e ii e r	nedium ntense nedium	no no no	large large large	prese prese	ent tooth ent tooth ent tooth ent tooth	un un un	i - i -		absent absent absent	distin distin	ict - ict -		- - - -
90 - S3N 95 - S3L 97 - S3L	3-90 3-95 3-97	PISY PISY PISY	larg larg larg larg	e r e ii e r e ii	nedium ntense nedium ntense	no no no	large large large large	prese prese prese	ent tooth ent tooth ent tooth ent tooth ent tooth	un un un un	i - i - i -		absent absent absent absent	distin distin	ict - ict - ict -		- - - -
90 - S3N 95 - S3L 97 - S3L 99 - S3N	3-90 3-95 3-97 3-99	PISY PISY PISY PISY PISY	larg larg larg larg larg	e r e ii e r e ii e r	nedium ntense nedium ntense nedium	no no no no	large large large large large	prese prese prese prese	ent tooth	un un un un	i - i - i - i -		absent absent absent absent absent	distin distin distin distin	ct		- - - -
90 - S3N 95 - S3L 97 - S3L 99 - S3N I- S3L	3-90 3-95 3-97 3-99 3-1	PISY PISY PISY PISY PISY	larg larg larg larg larg	e r e ii e r e ii e r e, tr ii	nedium ntense nedium ntense nedium ntense	no no no no no no few	large large large large large	prese prese prese prese prese	ent tooth	un un un un un	i - i - i - i - i - i -	ıngular	absent absent absent absent absent absent	distin distin distin distin distin	ct		- - - - -
90 - S3N 95 - S3L 97 - S3L 99 - S3N I- S3L 3 - S3L	3-90 3-95 3-97 3-99 3-1 3-3	PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg	e r e ii e r e ii e r e, tr ii e, tr r	nedium ntense nedium ntense nedium ntense nedium	no no no no no few no	large large large large large large	prese prese prese prese prese prese	ent tooth	un un un un un un	i - i - i - i - i - i - i -	ıngular	absent absent absent absent absent absent absent	distin distin distin distin distin distin	ct		- - - - - -
90 - S3N 95 - S3L 97 - S3L 99 - S3N I- S3L 3 - S3L 10 - S3N	3-90 3-95 3-97 3-99 3-1 3-3 3-10	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e r e ii e r e ii e r e, tr ii e, tr r e, tr r	nedium ntense nedium ntense nedium ntense nedium nedium	no no no no no few no no	large large large large large large large	prese prese prese prese prese prese prese	ent tooth	un un un un un un un	i - i - i - i - i - i - i - i - i -	ıngular	absent absent absent absent absent absent absent absent	distin distin distin distin distin distin	Ct		
90 - S3N 95 - S3L 97 - S3L 99 - S3N 1- S3L 3 - S3L 10 - S3N	3-90 3-95 3-97 3-99 3-1 3-3 3-10 3-11	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e r e ii e r e ii e r e, tr ii e, tr r e, tr r e, tr r r e, tr r	nedium ntense nedium ntense nedium ntense nedium nedium nedium	no no no no no few no no	large large large large large large large large	prese prese prese prese prese prese prese prese	ent tooth	un un un un un un un	i - i - i - i - i - i - i - i - i - i -	ıngular	absent absent absent absent absent absent absent absent absent	distin distin distin distin distin distin distin distin distin	Ct		- - - - - - - - - - -
90 - S3N 95 - S3L 97 - S3L 99 - S3N 1- S3L 3 - S3L 10 - S3N 11 - S3N 12 - S3L	3-90 3-95 3-97 3-99 3-1 3-3 3-10 3-11 3-12	PISY PISY PISY PISY PISY PISY PISY PISY	larg larg larg larg larg larg larg larg	e r e ii e r e ii e r e, tr ii e, tr r e, tr r e, tr r e r	nedium ntense nedium ntense nedium ntense nedium nedium nedium nedium	no no no no no few no no no	large large large large large large large large large large	prese prese prese prese prese prese prese prese prese	ent tooth	un un un un un un un	i - i - i - i - i - i - i - i - i - i -	ıngular	absent absent absent absent absent absent absent absent absent absent	distin distin distin distin distin distin distin distin distin	CC		- - - - - - - - - - - -
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Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
09 - S3L	3- 109	PISY	У	-	У	high	open	<50	L	RB	У	У	У	rc	n	5.6 cm
11- S3L	3- 111	PISY	У	-	y	high	open	50- 100	L	RB	У	У	У	rc	n	7 cm
116 - S3L	3- 116	PISY	n	<5	У	low		100-200	L	RB	У	У	У	rc	n	11 cm
117 - S3N	3- 117	PISY	n	<5	y	high	-	50- 100	N	RB	У	У	У	rc	n	7.7 cm
119 - S3N	3- 119	PISY	n	>10	У	low	-	100-200	L	RB	У	У	У	rc	n	11 cm
122 - S3L	3-122	PISY	n	<5	У	medium	-	100-200	L	RB	У	У	У	rc	n	12.7 cm
123 - S3N	3- 123	PISY	У	-	У	high	open	50-100	N	RB	У	У	У	rc	n	6.9 cm
128 - S3L	3- 128	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	7.3 cm
131 - S3N	3- 131	PISY	n	<5	У	very low	open	100-200	N	RB	У	У	У	rc	n	6.4 cm
134 - S3N	3- 134	PISY	У	-	У	medium	closed	50-100	N	RB	у	У	У	rc	n	12 cm
37 - S3L	3- 137	PISY	n	<5	У	low	closed	50-100	L	RB	У	У	У	rc	n	6.3 cm
38 - S3N	3- 138	PISY	У	-	У	very low	closed	>200	N	RB	у	У	У	rc	n	8.6 cm
46 - S3L	3- 146	PISY	n	-	У	medium	-	50-100	L	RB	у	У	٧	rc	n	8 cm
47 - S3N	3- 147	PISY	У	-	У	low	open	>200	N	RB	у	У	У	rc	n	9.2 cm
48 - S3N	3- 148	PISY	У	-	у	low	open	>200	N	RB	у	y	У	rc	n	14 cm
149 - S3L	3- 149	PISY	У	-	у	high	open	50- 100	L	RB	У	У	У	rc	n	10.2 cm
162 - S3L	3-162	PISY	У	-	У	high	open	<50	L	RB	У	y	У	rc	n	8.2 cm
63 - S3N	3- 163	PISY	У	-	У	medium	open	50- 100	N	RB	У	y	У	rc	n	6 cm
165 - S3L	3- 165	PISY	n	<5	У	high		50-100	L	RB	у	У	У	rc	n	8.5 cm
66 - S3L	3- 166	PISY	У	-	у	low	open	50-100	L	RB	у	У	У	rc	n	10.2 cm
167 - S3L	3- 167	PISY	n	5- 10	у	low		100-200	L	RB	У	У	У	rc	n	12.5 cm
71- S3L	3- 171	PISY	n	-	У	medium	-	100-200	L	RB	V	y	У	rc	n	-
72 - S3L	3- 172	PISY	n	>10	У	medium	-	100-200	Ē	RB	٧	У	V	rc	n	-
176 - S3L	3- 176	PISY	У	-	У	medium	open	50- 100	Ē	RB	У	у	У	rc	n	6.2 cm
ield Code	Lab Code	species	RD	EWLV	-		PR TT		_				SW	LAR		
09 - S3L																
	3- 109	PISY														others -
	3- 109 3- 111	PISY	large	mediu	m no	) I	arge pre	esent too	th u	ni -	a	bsent	distinct	-  -  -		
11- S3L	3- 111	PISY	large large	mediu mediu	m no	)   )	arge pre	esent too esent too	th u	ni - ni -	a	ibsent ibsent	distinct distinct	-		
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11 - S3L 16 - S3L 17 - S3N 19 - S3N 22 - S3L 23 - S3N 28 - S3L 31 - S3N 34 - S3N 37 - S3L 38 - S3N 46 - S3L 47 - S3N 48 - S3N	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediui mediui low low mediui mediui mediui mediui low mediui low mediui low mediui intensi mediui	m		arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent a	distinct dis	- - - - - - - - - - - - - - - - - - -		
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11 - S3L 16 - S3L 17 - S3N 19 - S3N 22 - S3L 23 - S3N 28 - S3L 31 - S3N 34 - S3N 34 - S3N 36 - S3N 46 - S3L 47 - S3N 48 - S3N 49 - S3L 63 - S3N	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149 3- 162 3- 163	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediui mediui low low mediui mediui mediui mediui low mediui low mediui low mediui	m		arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent	distinct dis	- - - - - - - - - - - - - - - - - - -		
11 - S3L 16 - S3L 17 - S3N 19 - S3N 22 - S3L 23 - S3L 23 - S3L 31 - S3N 34 - S3N 34 - S3N 36 - S3L 47 - S3L 47 - S3N 48 - S3N 49 - S3L 62 - S3L 63 - S3L	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149 3- 162 3- 163 3- 165	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediui mediui low mediui mediui mediui mediui low mediui low mediui low mediui intensi mediui mediui intensi	m nom nom nom nom nom nom nom nom nom no		arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent	distinct	- - - - - - - - - - - - - - - - - - -		
11- S3L 16 - S3L 17 - S3N 19 - S3N 22 - S3L 23 - S3L 31 - S3N 34 - S3N 34 - S3N 36 - S3L 47 - S3L 48 - S3N 49 - S3L 62 - S3L 63 - S3L 66 - S3L 66 - S3L	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149 3- 162 3- 163 3- 165 3- 166	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediumediumediumediumediumediumediumediu	m		arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent	distinct dis	- - - - - - - - - - - - - - - - - - -		
111 - S3L 116 - S3L 117 - S3N 119 - S3N 122 - S3L 223 - S3L 231 - S3N 34 - S3N 34 - S3N 36 - S3L 38 - S3N 46 - S3L 47 - S3N 48 - S3N 49 - S3L 665 - S3L 666 - S3L 666 - S3L	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149 3- 162 3- 163 3- 165 3- 166 3- 167	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediumediumediumediumediumediumediumediu			arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent	distinct			
111 - S3L 116 - S3L 117 - S3N 119 - S3N 122 - S3L	3- 111 3- 116 3- 117 3- 119 3- 122 3- 123 3- 128 3- 131 3- 134 3- 137 3- 138 3- 146 3- 147 3- 148 3- 149 3- 162 3- 163 3- 165 3- 166	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediumediumediumediumediumediumediumediu			arge pre	esent too	th uith uith uith uith uith uith uith ui	ni -	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	absent	distinct dis	- - - - - - - - - - - - - - - - - - -		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	o micro	RBC	Atech	Sec	radius
180 - S3L	3- 180	PISY	n	5- 10	У	high	-	50-100	L	RB	У	У	У	rc	n	9 cm
182 - S3L	3- 182	PISY	n	<5	y	high	open	50-100	L	RB	y	٧	У	rc	n	11cm
185 - S3N	3- 185	PISY	n	>10	٧	high	-	50-100	N	RB	У	٧	٧	rc	n	-
186 - S3L	3- 186	PISY	n	>10	У	medium	-	100-200	L	RB	y	٧	٧	rc	n	-
187 - S3N	3- 187	PISY	У	-	٧	low	closed	100-200	N	RB	У	٧	У	rc	n	8 cm
189 - S3L	3- 189	PISY	n	<5	У	medium	open	50-100	L	RB	У	٧	У	rc	n	6.5 cm
192 - S3L	3- 192	PISY	n	5- 10	У	medium	-	50-100	L	RB	У	У	У	rc	n	10 cm
200 - S3L	3-200	PISY	٧	-	-	high	open	<50	L	RB	У	٧	У	rc	n	-
201- S3N	3-201	PISY	У	-	У	very high	open	<50	N	RB	У	У	У	rc	n	5.6 cm
205 - S3L	3-205	PISY	у	-	٧	medium	open	100-200	L	RB	у	V	У	rc	n	10.8 cm
209 - S3L	3-209	PISY	У	-	У	low	open	100-200	L	RB	у	y	У	rc	n	13.6 cm
210 - S3L	3-210	PISY	у	-	У	low	open	100-200	L	RB	у	y	У	rc	n	9.8 cm
211 - S3L	3-211	PISY	У	-	У	medium	open	100-200	L	RB	У	y	У	rc	n	12.5 cm
213 - S3L	3-213	PISY	n	<5	У	high	-	<50	L	RB	у	y	У	rc	n	7.5 cm
214 - S3L	3-214	PISY	У	-	у	medium	open	100-200	L	RB	у	y	У	rc	n	13.6 cm
216 - S3L	3-216	PISY	У	-	У	medium	open	50-100	L	RB	у	y	У	rc	n	10.5 cm
218 - S3L	3-218	PISY	n	<5	٧	medium	closed	100-200	L	RB	У	V	V	rc	n	11cm
221- S3L	3-221	PISY	n	<5	У	high	-	50-100	L	RB	У	V	У	rc	n	13 cm
222 - S3L	3-222	PISY	n	<5	У	low	open	100-200	L	RB	У	V	V	rc	n	10.5 cm
224 - S3L	3-224	PISY	У	-	У	medium	closed	100-200	L	RB	у	y	У	rc	n	8.1cm
225 - S3L	3-225	PISY	n	<5	У	high	-	100-200	L	RB	у	V	У	rc	n	19 cm
229 - S3L	3-229	PISY	n	>10	V	low	_	100-200	L	RB	У	V	V	rc	n	-
235 - S3L	3-235	PISY	n	<5	У	medium	_	100-200	Ĺ	RB	У	V	У	rc	n	15.5 cm
236 - S3L	3-236	PISY	n	<5	У	medium	_	50-100	L	RB	У	У	У	rc	n	9 cm
Field Code	Lab Code	species		EWL		W						SpTh	SW		re d	others
180 - S3L					**	, vv				<b>о</b> ,	J O D I	SPIII	3 11		ii e u	Others
.00	.3- 180	PISY	smal	l medii	ım r	0	large r	resent t	ooth	uni -		absent	distinc	t -		-
182 - S3I	3- 180 3- 182	PISY	smal			ones				uni -		absent	distinc			-
	3-182	PISY	large	mediu	ım z	ones	large p	resent t	ooth	uni -		absent	distinc	t -		
185 - S3N	3- 182 3- 185	PISY PISY	large large	mediu low	ım z	ones ew rings	large p	oresent t	ooth ooth	uni - uni -		absent absent	distinc distinc	t -		-
185 - S3N 186 - S3L	3- 182 3- 185 3- 186	PISY PISY PISY	large large large	mediu low intens	ım z fe r	ones ew rings o	large plarge	present to the presen	ooth ooth ooth	uni - uni - uni -		absent absent absent	distinc distinc	t - t - -		-
185 - S3N 186 - S3L 187 - S3N	3- 182 3- 185 3- 186 3- 187	PISY PISY PISY	large large large large	mediu low intens	ım z f se r	ones ew rings o	large plarge plarge plarge	present to resent to resen	ooth ooth ooth ooth	uni - uni - uni - uni -		absent absent absent absent	distinc distinc - distinc	t - t - - t -		-
185 - S3N 186 - S3L 187 - S3N 189 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189	PISY PISY PISY PISY PISY	large large large large large	mediu low intens low mediu	im z fi se r r im r	ones ew rings o o	large plarge pla	oresent toresent tore	ooth ooth ooth ooth ooth ooth	uni - uni - uni - uni - uni -		absent absent absent absent absent	distinc distinc - distinc distinc	t - t - - t - t -		-
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192	PISY PISY PISY PISY PISY	large large large large large	medic low intense low medic medic	z f se r r im r	ones ew rings o o	large plarge pla	oresent toresent tore	ooth ooth ooth ooth ooth ooth ooth ooth	uni - uni - uni - uni - uni - uni -		absent absent absent absent absent absent	distinc distinc distinc distinc distinc	t - t - t - t - t -		-
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200	PISY PISY PISY PISY PISY PISY	large large large large large large	medic low intense low medic medic medic medic	im z fi se r im r im r im r	ones ew rings 0 0 0	large properties to the control of t	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent absent absent absent absent absent absent	distinc distinc distinc distinc distinc	t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	mediu low intens low mediu mediu mediu mediu mediu mediu mediu mediu	im z f se r r im r im r im r im r	ones ew rings o o o o o o	large properties to the control of t	present to	ooth	uni -		absent absent absent absent absent absent absent absent	distinc - distinc distinc distinc distinc - distinc - distinc	t - t - t - t - t - t - t - t - t -		-
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	mediu low low low low mediu	im z f se r r im r im r im r im r im r	ones ew rings o o o o o o o	large plarge pla	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent	distinc distinc distinc distinc distinc distinc distinc distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large	mediu intens int	im z f f ge r r im r im r im r im r im r im r	ones ew rings o o o o o o o o o	large plarge pla	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent	distinc distinc distinc distinc distinc distinc distinc distinc distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large	mediu intens int	Im	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0	large plarge pla	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3L 205 - S3L 209 - S3L 210 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 205 3- 209 3- 210 3- 211	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu intens int	im z f f f f f r r im r	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large plarge pla	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu intens int	Im	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large programmer progr	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu		ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Family   Fami	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 216 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu intens int		ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Farage   Fara	present to	ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 216 - S3L 216 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216 3- 218	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu		ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large page page page page page page page pa	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 216 - S3L 218 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216 3- 218 3- 221	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu intens int	Im	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Family   Fami	present to	ooth	uni -		absent a	distinc	t - t - t - t - t - t - t t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 216 - S3L 216 - S3L 217 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216 3- 218 3- 221 3- 222	PISY PISY PISY PISY PISY PISY PISY PISY	large	medici me	Im	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Farage   Fara	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent a	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 214 - S3L 214 - S3L 216 - S3L 2216 - S3L 2218 - S3L 221 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216 3- 218 3- 221 3- 222 3- 224	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu intens int	im z f f f f f f f f f f f f f f f f f f	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Filarge   Filarge	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent a	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 210 - S3L 211 - S3L 211 - S3L 214 - S3L 218 - S3L 218 - S3L 222 - S3L 222 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 218 3- 221 3- 222 3- 224 3- 225	PISY PISY PISY PISY PISY PISY PISY PISY	large	medici intensi	im z fin	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Filarge   Filarge	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent a	distinc	t - t - t - t - t - t - t - t - t - t -		
185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 216 - S3L 221 - S3L 222 - S3L 224 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 216 3- 218 3- 221 3- 222 3- 222 3- 224 3- 225 3- 229	PISY PISY PISY PISY PISY PISY PISY PISY	large	mediu	im z f f f f f f f f f f f f f f f f f f	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Filarge   Filarge	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent a	distinc	t - t - t - t - t - t - t - t - t - t -	lioh	
182 - S3L 185 - S3N 186 - S3L 187 - S3N 189 - S3L 192 - S3L 200 - S3L 201 - S3N 205 - S3L 209 - S3L 210 - S3L 211 - S3L 213 - S3L 214 - S3L 218 - S3L 221 - S3L 222 - S3L 222 - S3L 224 - S3L 225 - S3L 235 - S3L	3- 182 3- 185 3- 186 3- 187 3- 189 3- 192 3- 200 3- 201 3- 205 3- 209 3- 210 3- 211 3- 213 3- 214 3- 218 3- 221 3- 222 3- 224 3- 225	PISY PISY PISY PISY PISY PISY PISY PISY	large	medicione intensi	Im	ones ew rings 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	large   Farge   Farge	present to	ooth ooth ooth ooth ooth ooth ooth ooth	uni -		absent a	distinc	t - t - t - t - t - t - t - t - t - t -	lish	

Field Code	Lab Code	species	pith	RMTP	fungi	GL	sc		tree age	L/N	WI	ma c ro	micro	RBC	Atech	Sec	radius
1- S4L	4-1	PISY	У	- T. IVI I F	y	high	qo		50- 100	L	RB	У	У	У	rc	n	11 cm
5 - S4L	4-5	PISY	У	-	у	high	ор	-	50-100	L	RB	У	У	y	rc	n	8 cm
8 - S4L	4-8	PISY	n	<5	У	high	- OP	_	50-100	Ĺ	RB	У	V	У	rc	n	11.5 cm
21- S4L	4-21	PISY	У	-	у	medium	ор		100-200	Ĺ	RB	У	У	У	rc	n	9.3 cm
26 - S4N	4-26	PISY	V	-	У	high	ор	_	50-100	N	RB	У	V	У	rc	n	8.5 cm
27 - S4L	4-27	PISY	n	<5	У	very high			50-100	L	RB	У	У	У	rc	n	14.5 cm
28 - L4	4-28	PISY	У	-	У	high	ор		50-100	L	RB	У	У	У	rc	n	12.5 cm
30 - S4L	4-30	PISY	V	-	V	high	ор		50-100	L	RB	У	V	V	rc	n	12.5 cm
36 - S4N	4-36	PISY	n	<5	У	medium	- -	-	100-200	N	RB	У	V	У	rc	n	13 cm
38 - S4L	4-38	PISY	n	<5	У	high	-		100-200	L	RB	У	У	У	rc	n	19 cm
40 - S4L	4-40	PISY	n	<5	У	high	-		50-100	L	RB	У	У	У	rc	n	13 cm
44 - S4L	4-44	PISY	У	-	У	medium	ор	_	50-100	L	RB	У	У	У	rc	n	5.7 cm
47 - S4L	4-47	PISY	У	-	У	high	ор		100-200	L	RB	У	У	У	rc	n	9.5 cm
58 - S4L	4-58	PISY	У	-	У	medium	ор	-	100-200	L	RB	У	У	У	rc	n	8 cm
62 - S4L	4-62	PISY	n	5- 10	У	high	-	-	50-100	L	RB	У	У	У	rc	n	17 cm
64 - S4L	4-64	PISY	У	-	У	low	ор		>200	L	RB	У	У	У	rc	n	15 cm
75 - S4L	4-75	PISY	n	<5	У	high	op		50-100	L	RB	У	V	У	rc	n	11.5 cm
77 - S4L	4-77	PISY	n	5- 10	У	low	-		100-200	L	RB	У	V	У	rc	n	13 cm
83 - S4L	4-83	PISY	V	-	У	medium	clo		100-200	L	RB	У	V	У	rc	n	9.5 cm
87 - S4L	4-87	PISY	У	-	У	medium	ор		50-100	L	RB	у	У	У	rc	n	8 cm
89 - S4L	4-89	PISY	n	5- 10	У	very low	-		100-200	L	RB	у	У	У	rc	n	6 cm
100 - S4L	4- 100	PISY	n	<5	٧	medium	clo		50-100	ī	RB	У	V	٧	rc	n	7.3 cm
101 - S4L	4- 101	PISY	n	<5	У	high	-		50-100	Ĺ	RB	У	٧	V	rc	n	10 cm
106 - S4L	4- 106	PISY	n	<5	У	high	qo		50-100	L	RB	У	У	У	rc	n	10.3 cm
Field Code	Lab Code	species	RD	EWLW	CW	1	PR	TT	TTW	BP	SO	BP S	pTh S	SW	LARre	ed of	thers
1- S4L	4 4																
	4-1	PISY	large	intense	no		large	prese		uni	ang			distinct	-	-	
5 - S4L	4-1	PISY	large large	intense low	no no		large large	prese prese	nt tooth			ular a	bsent (			-	
5 - S4L 8 - S4L					no				ent tooth ent tooth	uni		ular a a	bsent o	distinct		- - -	
8 - S4L 21- S4L	4-5	PISY	large	low	no		large	prese	ent tooth ent tooth ent tooth	uni uni	ang -	ular a a a	bsent of bse	distinct distinct	-	- - -	
8 - S4L 21 - S4L 26 - S4N	4-5 4-8 4-21 4-26	PISY PISY PISY PISY	large large	low medium	no n no no		large large	prese prese	ent tooth ent tooth ent tooth ent tooth	uni uni uni	ang - -	ular a a a a	bsent of the bsent	distinct distinct distinct	- - -	- - - -	
8 - S4L 21- S4L	4-5 4-8 4-21	PISY PISY PISY	large large large	low medium low	no n no no n no	rings	large large large	prese prese prese	ent tooth ent tooth ent tooth ent tooth ent tooth	uni uni uni uni	ang - - -	ular a a a a a	bsent of bse	distinct distinct distinct distinct	- - -	- - - - -	
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4	4-5 4-8 4-21 4-26 4-27 4-28	PISY PISY PISY PISY PISY	large large large large	low medium low medium	no no no no no no no no	rings	large large large large	prese prese prese prese	ent tooth ent tooth ent tooth ent tooth ent tooth ent tooth	uni uni uni uni uni	ang - - - -	ular a a a a a a	bsent of bse	distinct distinct distinct distinct distinct	- - - -	- - - - -	
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L	4-5 4-8 4-21 4-26 4-27	PISY PISY PISY PISY PISY PISY	large large large large	low medium low medium medium	no no no no no no no no no no no no no n	rings rings	large large large large large	prese prese prese prese prese	ent tooth	uni uni uni uni uni uni	ang - - - - -	ular a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct	- - - - -	- - - - - -	
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36	PISY PISY PISY PISY PISY PISY PISY	large large large large large	low medium low medium medium medium	no no no no no no no no no no no no no n	J	large large large large large large	prese prese prese prese prese	ent tooth	uni uni uni uni uni uni uni	ang - - - - - -	ular a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - -	- - -	
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large	low medium low medium medium medium medium medium	no no no no no no no few no	J	large large large large large large large	prese prese prese prese prese prese	ent tooth	uni uni uni uni uni uni uni	ang - - - - - - -	ular a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - -	- - - - -	wrings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small	low medium low medium medium medium medium medium medium	no n	rings	large	prese prese prese prese prese prese prese	ent tooth	uni	ang - - - - - - - -	ular a a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - -	- - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large small large	low medium low medium medium medium medium ilow intense	no n	rings	large	prese prese prese prese prese prese prese prese	ent tooth	uni	ang - - - - - - - -	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - -	- - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-36 4-38 4-40 4-44	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small large large	low medium low medium medium medium medium low intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent obsent obs	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct		- - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small large large large	low medium low medium medium medium medium intense medium medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct		- - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large small large large large	low medium low medium medium medium medium ilow intense medium medium medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - -	- - - - - fe - -	wrings
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64	PISY PISY PISY PISY PISY PISY PISY PISY	large	low medium low medium medium medium low intense medium medium intense medium	no no no no no no few no no few no	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - -	wrings
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large large large large large large	low medium low medium medium medium low intense medium medium medium intense medium medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent obsent obs	distinct d distinct distinct distinct distinct distinct distinct distinct d	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -	w rings
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 77 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77	PISY PISY PISY PISY PISY PISY PISY PISY	large	low medium medium medium medium medium intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent obsent obs	distinct dis	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 77 - S4L 83 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77 4-83	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large large small large large large large large large large	low medium low medium medium medium low intense medium medium medium intense medium medium	no n	rings rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct dis	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -	w rings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 75 - S4L 83 - S4L 83 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77 4-83 4-87	PISY PISY PISY PISY PISY PISY PISY PISY	large	low medium low medium medium medium low intense medium medium intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct dis			wrings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 77 - S4L 83 - S4L 89 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77 4-83 4-87 4-89	PISY PISY PISY PISY PISY PISY PISY PISY	large	low medium low medium medium medium low intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct dis	- - - - - - - - - - - - - - - - - - -		w rings
8 - S4L 21 - S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 83 - S4L 84 - S4L 85 - S4L 86 - S4L 87 - S4L 88 - S4L 89 - S4L 80 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77 4-83 4-87 4-89 4-100	PISY PISY PISY PISY PISY PISY PISY PISY	large large large large large large small large	low medium low medium medium medium medium intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct dis			wrings
8 - S4L 21- S4L 26 - S4N 27 - S4L 28 - L4 30 - S4L 36 - S4N 38 - S4L 40 - S4L 44 - S4L 47 - S4L 58 - S4L 62 - S4L 64 - S4L 75 - S4L 77 - S4L 83 - S4L 89 - S4L	4-5 4-8 4-21 4-26 4-27 4-28 4-30 4-36 4-38 4-40 4-44 4-47 4-58 4-62 4-64 4-75 4-77 4-83 4-87 4-89	PISY PISY PISY PISY PISY PISY PISY PISY	large	low medium low medium medium medium low intense medium	no n	rings	large	prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese prese	ent tooth	uni	ang	ular a a a a a a a a a a a a a a a a a a a	bsent of bse	distinct dis			wrings

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree ag	e L/N	WI	macro	micro	RBC	Atech	Sec	radius
109 - S4L	4- 109	PISY	n	<5	у	low	-	100-200	L	RB	У	У	У	rc	n	9.8 cm
114 - L4N	4- 114	PISY	У	-	-	medium	open	50-100	-	RB	У	У	У	rc	n	6 cm
116 - S4L	4- 116	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	6.3 cm
120 - S4L	4- 120	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	12 cm
125 - S4N	4- 125	PISY	У	-	У	low	open	50-100	N	RB	У	У	У	rc	n	6 cm
126 - S4L	4- 126	PISY	n	5- 10	У	medium	-	50-100	L	RB	У	У	У	rc	n	11 cm
134 - S4L	4- 134	PISY	n	5- 10	у	high	-	50-100	L	RB	У	У	У	rc	n	16.5 cm
135 - S4L	4- 135	PISY	У	-	у	medium	open	50-100	L	RB	У	У	У	rc	n	7 cm
139 - S4L	4- 139	PISY	-	<5	У	low	open	100-200	L	RB	У	У	У	rc	n	14 cm
143 - S4L	4- 143	PISY	n	<5	у	high	open	50-100	L	RB	У	У	У	rc	n	9.5 cm
145 - S4N	4- 145	PISY	n	<5	У	very low	close	d 50-100	N	RB	У	У	У	rc	n	4.3 cm
146 - S4N	4- 146	PISY	У	-	У	low	open	100-200	N	RB	У	У	У	rc	n	6.9 cm
147 - S4L	4- 147	PISY	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	7.5 cm
149 - S4L	4- 149	PISY	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	9.3 cm
158 - S4	4- 158	PISY	У	-	У	medium	open	100-200	-	RB	У	У	У	rc	n	6.8 cm
159 - S4L	4- 159	PISY	n	5- 10	У	medium	-	100-200	L	RB	У	У	У	rc	n	8 cm
163 - S4L	4- 163	PISY	У	-	У	medium	close	d 50-100	L	RB	У	У	У	rc	n	10.8 cm
168 - S4N	4- 168	PISY	У	-	У	medium	open	50-100	N	RB	У	у	У	rc	n	6 cm
Field Code	Lab Code	species	RD	EWLW	CV	1	PR T	TŤ	TTW	BP	SOBP	SpTh	SW	LA	Rred	others
109 - S4L	4- 109	PISY	large	medium	n no		large p	present	tooth	uni	-	absent	distin	ct -		-
114 - L4N	4- 114	PISY	large	medium	n no		large p	present	tooth	uni	-	absent	-	-		-
116 - S4L	4- 116	PISY	large	intense	no		large p	present	tooth	uni	-	absent	distin	ct -		-
120 - S4L	4- 120	PISY	large	low	no		large p	present	tooth	uni	-	absent	distin	ct -		-
125 - S4N	4- 125	PISY	large	medium	n no		large p	present	tooth	uni	-	absent	distin	ct -		-
126 - S4L	4- 126	PISY	large	intense	no		large p	present	tooth	uni	-	absent	-	-		-
134 - S4L	4- 134	PISY	large	intense	fev	/ rings	large p	oresent	tooth	uni	-	absent	distin	ct -		-
135 - S4L													distin	ct -		-
100 - O-L	4- 135	PISY	large	medium	n no		large p	present	tooth	uni	-	absent	aistin	C L		
139 - S4L	4- 135 4- 139	PISY PISY	large large	medium intense	n no	-			tooth tooth	uni uni		absent	distin			-
139 - S4L 143 - S4L		PISY PISY				_	large p	present			-			ct -		-
139 - S4L	4- 139	PISY	large	intense	no no	nes	large p	present present	tooth	uni	-	absent	distin	ct - ct -		-
139 - S4L 143 - S4L 145 - S4N 146 - S4N	4- 139 4- 143	PISY PISY PISY PISY	large large	intense intense	no no no	nes	large plarge	present present present	tooth tooth	uni uni	-	absent absent	distin distin distin distin	ct - ct - ct -		-
139 - S4L 143 - S4L 145 - S4N	4- 139 4- 143 4- 145	PISY PISY PISY PISY	large large small	intense intense medium	no no zor n no	nes	large plarge plarge plarge	present present present present	tooth tooth tooth	uni uni uni	-	absent absent absent	distin distin distin	ct - ct - ct -		- - - -
139 - S4L 143 - S4L 145 - S4N 146 - S4N 147 - S4L 149 - S4L	4- 139 4- 143 4- 145 4- 146	PISY PISY PISY PISY PISY	large large small large	intense intense medium medium	no no zor n no	nes	large plarge pla	present present present present present	tooth tooth tooth tooth	uni uni uni uni	- - - -	absent absent absent absent	distin distin distin distin	ct - ct - ct - ct -		- - - - -
139 - S4L 143 - S4L 145 - S4N 146 - S4N 147 - S4L 149 - S4L 158 - S4	4- 139 4- 143 4- 145 4- 146 4- 147 4- 149 4- 158	PISY PISY PISY PISY PISY PISY	large large small large small	intense intense medium medium medium	no no no no no no no	nes	large plarge pla	present present present present present present	tooth tooth tooth tooth tooth	uni uni uni uni uni	-	absent absent absent absent absent	distin distin distin distin distin distin distin	ct -		- - - - -
139 - S4L 143 - S4L 145 - S4N 146 - S4N 147 - S4L 149 - S4L 158 - S4 159 - S4L	4- 139 4- 143 4- 145 4- 146 4- 147 4- 149	PISY PISY PISY PISY PISY PISY PISY PISY	large large small large small large	intense intense medium medium medium intense	no no no no no no no no no no	nes	large plarge pla	present present present present present present present present	tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni	- - - - -	absent absent absent absent absent absent	distin distin distin distin distin distin	ct -		-
139 - S4L 143 - S4L 145 - S4N 146 - S4N 147 - S4L 149 - S4L 158 - S4	4- 139 4- 143 4- 145 4- 146 4- 147 4- 149 4- 158	PISY PISY PISY PISY PISY PISY	large large small large small large large	intense intense medium medium medium intense medium	no n	nes vrings	large   large	present present present present present present present present present	tooth tooth tooth tooth tooth tooth tooth	uni uni uni uni uni uni uni	- - - - -	absent absent absent absent absent absent absent	distin distin distin distin distin distin distin	ct -		-

Field Code	Lab Code	species	pith	RMTP	fungi	GL	sc	tree age	L/N	WI	macro	mic ro	RBC	Atech	Se	radius
6 - S1N	1-6	PISI	n	5- 10	У	high	-	100-200	N	RB	У	У	У	rc	n	19 c m
25 - S1L	1-25	PISI	n	<5	У	high	open	50-100	L	RB	У	У	У	rc	n	12.5 cm
44 - S1L	1-44	PISI	n	>10	У	low	-	100-200	L	RB	У	У	У	rc	n	-
80 - S1L	1-80	PISI	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	10.2 cm
21- S2N	2-21	PISI	n	<5	У	medium	-	100-200	N	RB	У	У	У	rc	n	16.5 cm
71- S2L	2-71	PISI	У	-	У	very low	open	>200	L	RB	У	У	У	rc	n	10 cm
90 - S2N	2-90	PISI	У	-	У	medium	open	100-200	N	RB	У	У	У	rc	n	9.5 cm
102 - S2N	2-102	PISI	-	<5	У	low	-	100-200	N	RB	У	У	У	rc	n	12 cm
6 - S3N	3-6	PISI	n	>10	У	medium	-	>200	N	RB	У	У	У	rc	n	-
139 - S3 root	3- 139	PISI	n	>10	У	very low	-	>200	root	RB	У	У	У	rc	n	-
19 - S4L	4- 19	PISI	У	-	У	high	open	100-200	L	RB	У	У	У	rc	n	10.2 cm
23 - S4L	4-23	PISI	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	7 cm
45 - S4L	4-45	PISI	У	-	У	very high	open	<50	L	RB	У	У	У	rc	n	9.7 cm
79 - S4N	4-79	PISI	У	-	У	high	open	50-100	N	RB	У	У	У	rc	n	10 cm
150 - S4L	4- 150	PISI	n	<5	У	low	open	100-200	L	RB	У	У	У	rc	n	9.5 cm
Field Code	Lab Code	specie	s RE	)	EWLW	CW	PR	TT	TT	W	BP	SOBP	SpTh	SW		others
6 - S1N	1-6	PISI	lar	ge, tr	medium	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
25 - S1L	1-25	PISI	lar	ge	low	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
44 - S1L	1-44	PISI	lar	ge	medium	fewrings	large	present	sm	ooth	uni	-	absent	-		rose colour
80 - S1L	1-80	PISI	lar	ge, tr	low	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
21- S2N	2-21	PISI	lar	ge	low	no	large	present	sm	ooth	uni	-	present	distin	ct	-
71- S2L	2-71	PISI	lar	ge	low	fewrings	large	present	sm	ooth	uni	-	absent	distin	ct	-
90 - S2N	2-90	PISI	lar	ge	medium	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
102 - S2N	2-102	PISI	lar	ge	low	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
6 - S3N	3-6	PISI	lar	ge, tr	low	fewrings	large	present	sm	ooth	uni	-	absent	distin	ct	-
139 - S3 root	3-139	PISI	lar	ge	medium	fewrings	large	present	sm	ooth	uni	-	absent	-		-
19 - S4L	4- 19	PISI	lar	ge, tr	low	no	large	present	sm	ooth	bi	-	absent	distin	ct	-
23 - S4L	4-23	PISI	lar	ge, tr	medium	no	large	present	sm	ooth	uni	-	absent	distin	ct	-
45 - S4L	4-45	PISI	lar	ge	low	fewrings	large	present	sm	ooth	uni	-	absent	-		-
79 - S4N	4-79	PISI	lar	ge	low	fewrings	large	present	sm	ooth	uni	-	absent	distin	ct	purple colou
150 - S4L	4- 150	PISI	lar	-	low	no	large	present		ooth	uni		absent	_		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macr	o mic ro	RBC	Atech	Sec	radius	S
2 - S1N	1-2	LASP	У	-	У	medium	open	100-200	N	RB	У	٧	У	rc	n	16 cm	
15 - S1N	1- 15	LASP	У	-	-	medium	open	50-100	N	RB	У	V	У	rc	n	11.5 cm	n
6 - S1N	1- 16	LASP	V	-	٧	medium	closed	50-100	N	RB	У	V	v	rc	n	10 cm	
24 - S1N	1- 24	LASP	n	>10	٧	low	-	50-100	N	RB	У	V	y	rc	n	-	
7 - S1L	1-27	LASP	У	-	У	medium	open	50-100	L	RB	У	V	v	rc	n	6.4 cm	1
5 - S1N	1- 35	LASP	n	5-10	٧	high	-	50-100	N	RB	У	v	У	rc	n	15.5 cr	
0 - S1L	1- 40	LASP	У	-	У	medium	open	50-100	L	RB	У	v	У	rc	n	8.5 cm	
6 - S1L	1- 46	LASP	n	>10	-	medium	-	50-100	L	RB	У	v	У	rc	n	-	
9 - S1N (root)	1- 49	LASP	٧	-	У	medium	closed	50-100	N	RB	У	V	У	rc	n	13.4 cr	m
0 - S1N	1-60	LASP	n	>10	У	medium	-	50-100	N	RB	У	У	У	rc	n	-	
1 - S1N	1- 61	LASP	٧	-	У	medium	open	100-200	N	RB	У	У	У	rc	n	13 cm	
2 - S1L	1-62	LASP	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	7 cm	
9 - S1L	1-69	LASP	V	-	V	medium	open	50-100	L	RB	У	V	У	rc	n	8 cm	
2 - S1L	1- 72	LASP	У	-	У	medium	open	50-100	-	RB	У	V	У	rc	n	6.3 cm	1
8 - S1N	1- 78	LASP	У	-	У	very high	open	<50	N	RB	У	V	У	rc	n	8.6 cm	
6 - S1N	1- 86	LASP	У	-	у	medium	closed	50- 100	N	RB	у	У	У	rc	n	9.2 cm	
7 - S1L	1-87	LASP	_	-	- -	high	open	50- 100	L	RB	У	V	-	rc	n	8.1cm	
7 - SIL 5 - SIN	1- 95	LASP	y n	5-10	У	high	open -	50- 100	N	RB	-	V	У	rc	n	6. I CIII	
6 - S1L	1- 96	LASP	n	<5	У	medium	open	100-200	L	RB	У	У	y y	rc	n	11.3 cm	0
00 - S1N	1- 100	LASP	n	>10	-	medium	open	50-100	N	RB	-			rc	n	11.3 CII	
01 - S1N	1- 100	LASP	n	<5	y -		-	50- 100	N	RB	У	У	У			12.5 cr	m
10 - S1L	1- 110	LASP	_	-		high		100-200	L		У	У	У	rc	n		
	-		У	-	У	medium	open			RB	У	У	У	rc	n	9.5 cm	
18 - S1N	1- 118	LASP	У		У	low	closed	100-200	N	RB	У	У	У	rc	n	6.5 cm	
20 - S1N	1- 120	LASP	n	<5	У	high	open	100-200	N	RB	У	у	У	rc	n	20 cm	
ield Code	Lab Code	e specie	s RD														
C4N					EWLW	CW		R TT		TTW			SpTh	SW		ARred	othe
	1-2	LASP	sm	all	intense	no	sr	nall prese	ent	-	bi s	smooth	absent	- S W	dł	red	-
5 - S1N	1- 2 1- 15	LASP LASP	sm sm	all all	intense intense	no few rings	sr s sr	nall prese	ent ent	-	bi s	smooth smooth	absent absent	-	dł dł	red red	-
5 - S1N 6 - S1N	1- 2 1- 15 1- 16	LASP LASP LASP	sm sm sm	all all all, tr	intense intense medium	no few rings large zoi	sr s sr nes sr	nall prese nall prese nall prese	ent ent ent	- -	bi s bi s	smooth smooth smooth	absent absent absent	- - distinct	dł dł re	red	-
5 - S1N 6 - S1N 4 - S1N	1- 2 1- 15 1- 16 1- 24	LASP LASP LASP LASP	sm sm sm sm	all all all, tr all	intense intense medium medium	no few rings large zoi few rings	sr s sr nes sr s sr	nall prese nall prese nall prese nall prese	ent ent ent ent	- - -	bi s bi s uni s	smooth smooth smooth smooth	absent absent absent absent	- distinct	dł dł re -	red red ddish	- - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L	1- 2 1- 15 1- 16 1- 24 1- 27	LASP LASP LASP LASP LASP	sm sm sm sm	all all all, tr all all	intense intense medium medium medium	no fewrings large zor fewrings fewrings	sr s sr nes sr s sr	nall prese nall prese nall prese nall prese nall prese	ent ent ent ent ent	- - - -	bi s bi s bi s uni s bi s	smooth smooth smooth smooth smooth	absent absent absent absent absent	- - distinct	dł dł re - br	cred cred ddish ight	- - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N	1- 2 1- 15 1- 16 1- 24 1- 27 1- 35	LASP LASP LASP LASP LASP LASP	sm sm sm sm sm	all all all, tr all all all, tr	intense intense medium medium medium intense	no few rings large zor few rings few rings few rings	sr s sr nes sr s sr s sr	nall presenall prese	ent ent ent ent ent ent	- - - - -	bi s bi s bi s uni s bi s	smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent	- distinct distinct distinct	dł dł re - br dł	cred cred ddish ight cred	- - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L	1- 2 1- 15 1- 16 1- 24 1- 27 1- 35 1- 40	LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm	all all, tr all, tr all all, tr all, tr	intense intense medium medium medium intense intense	no few rings large zor few rings few rings few rings no	Sr   S	nall prese	ent ent ent ent ent ent ent	- - - - -	bi s bi s uni s bi s bi s	smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent	- distinct	dł dł re - br dł br	cred cred ddish ight cred red	- - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm	all all, all, tr all all, tr all, tr all, tr	intense intense medium medium medium intense intense intense	no few rings large zor few rings few rings few rings no few rings	Sr   S	nall prese	ent	- - - - - -	bi s bi s uni s bi s bi s bi s bi s	smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent	distinct distinct - distinct -	dł dł re - br dł br	cred cred ddish ight cred red ddish	- - - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root)	1- 2 1- 15 1- 16 1- 24 1- 27 1- 35 1- 40 1- 46 1- 49	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm	all all, tr all, tr all all, tr all all, tr all all, tr all, tr	intense intense medium medium intense intense intense medium	no few rings large zor few rings few rings few rings no few rings	Sr   Sr   Sr   Sr   Sr   Sr   Sr   Sr	nall prese	ent	- - - - - -	bi sibi sibi sibi sibi sibi sibi sibi s	smooth	absent absent absent absent absent absent absent absent absent	- distinct distinct distinct	dł dł re - br dł br re	cred cred ddish ight cred red ddish ddish	- - - - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm	all all, tr all, tr all all, tr all all, tr all all, tr all, tr	intense intense medium medium intense intense intense medium medium	no few rings large zor few rings few rings no few rings and large zor zones	ST   ST   ST   ST   ST   ST   ST   ST	nall prese	ent	- - - - - - -	bi sibi sibi sibi sibi sibi sibi sibi s	smooth	absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct	dl dl re - br dl br re re	red ddish ight red red ddish ddish	- - - - - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm	all all, tr all, tr all all, tr all, tr all, tr all, tr all, tr all, tr	intense intense medium medium intense intense intense medium medium intense	no few rings large zor few rings few rings no few rings no large zor zones zones	ST   ST   ST   ST   ST   ST   ST   ST	nall prese	ent	- - - - - - - - -	bi s bi s uni s bi s b	smooth	absent absent absent absent absent absent absent absent absent absent absent	distinct	dh dh re - br dh br re re re	cred cred ddish ight cred red ddish ddish ddish	- - - - - - -
2 - S1N 5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 11 - S1N 12 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all all, tr all, tr all, tr all, tr all, tr all	intense intense medium medium intense intense medium medium intense intense intense intense	no few rings large zor few rings few rings no few rings zones zones few rings	ST   ST   ST   ST   ST   ST   ST   ST	nall prese	ent		bi s bi s uni s bi s b	smooth	absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct - distinct - distinct - distinct - distinct distinct distinct distinct distinct	dh dh re - br dh br re re dh	cred cred ddish ight cred red ddish ddish ddish cred ddish	- - - - - - - - - - - - - - - - - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm	all all, tr all, tr all all, tr all, tr all, tr all, tr all, tr all all, all	intense intense medium medium intense intense intense medium medium intense intense intense intense	no few rings large zoo few rings few rings few rings no few rings large zoo zones few rings	ST   ST	nall prese	ent	- - - - - - - - - - -	bi s bi s uni s bi s b	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct - distinct - distinct distinct distinct distinct distinct distinct distinct	dh dh re - br dh br re re dh re	red ddish ight cred ddish ddish ddish ddish ddish ddish ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm	all all, tr all, tr all all, tr all, tr all, tr all, tr all all, all all all	intense intense medium medium intense intense intense medium medium intense intense intense intense intense	no few rings large zor few rings few rings few rings no few rings large zor zones zones few rings	ST   ST	nall prese	ent		bi s	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct - distinct - distinct distinct distinct distinct distinct distinct distinct	dh dh dh dh re	red ddish ight red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 2 - S1L 2 - S1L 8 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all all, tr all all, tr all, tr all, tr all all all all all	intense intense medium medium intense intense intense medium intense intense intense intense intense intense intense	no few rings large zor few rings few rings no few rings no few rings large zor zones zones few rings no no no	ST   ST	nall prese	ent		bi	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct - distinct distinct -	dli dli re - br dli br re re re re dli re	red ddish ight red ddish ddish ddish ddish ddish ddish ddish ddish ddish	- - - - - - - - - - - - - - - - - - -
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 2 - S1L 9 - S1L 6 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all all, tr all all, tr all, tr all, tr all all all all all all all	intense intense medium medium medium intense intense medium intense intense intense intense intense intense intense	no few rings large zor few rings few rings no few rings large zor zones zones few rings no no no	ST   ST	nall prese	ent		bi s	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct - distinct	dli dli re - br dli br re re re dli re	red ddish ight red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 2 - S1L 8 - S1L 8 - S1N 6 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all all, tr all, tr all, tr all, tr all, all	intense intense medium medium intense intense intense intense intense intense intense intense intense intense intense intense	no few rings large zor few rings few rings few rings no few rings large zor zones zones few rings no no no no	ST   ST	nall prese	ent		bi	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct	dk dk re - br dk br re re re dk dk dk dk dk	red ddish ght red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 2 - S1L 8 - S1N 6 - S1N 7 - S1L	1-2 1- 15 1- 16 1- 24 1- 27 1- 35 1- 40 1- 46 1- 49 1- 60 1- 61 1- 62 1- 69 1- 72 1- 78 1- 86 1- 87 1- 95	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all all, tr all, tr all, tr all, tr all all all all all all all all all al	intense intense medium medium intense	no few rings large zor few rings few rings no few rings large zor zones zones few rings no no no few rings	ST   ST	nall prese	ent		bi	smooth	absent a	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct - distinct - distinct - distinct - distinct - distinct distinct distinct	dk dk re - br dk br re re re dk dc dd dk dk	red ddish ight red ddish dred ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 8 - S1L 8 - S1N 6 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86 1-87 1-95	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all, tr all, tr all, tr all, tr all all, tr all all all all, tr all all, tr	intense intense medium medium intense	no few rings large zor few rings few rings few rings no few rings large zor zones zones few rings no no no no	ST   ST	nall prese	ent		bi s	smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct - distinct	dk dk re - br dk br re re re dk dk dk dk	red ddish ight red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 9 - S1L 5 - S1L 6 - S1N 6 - S1N 6 - S1N 6 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86 1-87 1-95 1-96	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all, tr all, tr all, tr all, tr all all, tr all all all all all, tr all all all, tr	intense intense medium medium intense medium	no few rings large zor few rings few rings no few rings large zor zones zones few rings no no no no no no no few rings	ST   ST	nall prese	ent		bi	smooth	absent a	distinct distinct - distinct - distinct distinct distinct distinct distinct distinct - distinct - distinct - distinct - distinct - distinct distinct distinct	dk dk re - br dk br re re dk re dk dk dk dk	red ddish ight red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 2 - S1L 8 - S1N 6 - S1N 6 - S1N 6 - S1N 6 - S1N 6 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86 1-87 1-95 1-96 1-100	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all, tr all, tr all, tr all, tr all all, tr all all all all, tr all all all, tr all all all all all all all all all al	intense intense medium medium intense	no few rings large zoo few rings few rings no few rings no few rings large zoo zones zones few rings no no no no few rings	ST   ST	nall prese	ent		bi	smooth	absent a	distinct dis	dk dk re - br dk br re re dk re dk dk dk dk	red ddish ight red ddish	
5 - S1N 6 - S1N 14 - S1N 17 - S1L 5 - S1N 0 - S1L 6 - S1L 9 - S1N (root) 10 - S1N	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86 1-87 1-95 1-96	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all, tr all, tr all, tr all, tr all, tr all all, tr all all all all all, tr all all all, tr	intense intense medium medium intense medium	no few rings large zor few rings few rings no few rings large zor zones zones few rings no no no no no no no few rings	ST   ST	nall prese	ent		bi	smooth	absent a	distinct dis	dk dk re - br dk br re re dk re re dk dk dk dk dk dk dk	red ddish ight red ddish	
5 - S1N 6 - S1N 4 - S1N 7 - S1L 5 - S1L 0 - S1L 6 - S1L 9 - S1N (root) 0 - S1N 1 - S1N 2 - S1L 9 - S1L 2 - S1L 8 - S1N 6 - S1N 7 - S1L 5 - S1N 6 - S1N 6 - S1N 7 - S1L	1-2 1-15 1-16 1-24 1-27 1-35 1-40 1-46 1-49 1-60 1-61 1-62 1-69 1-72 1-78 1-86 1-87 1-95 1-96 1-100	LASP LASP LASP LASP LASP LASP LASP LASP	sm sm sm sm sm sm sm sm sm sm sm sm sm s	all all, tr all all, tr all all, tr all, tr all, tr all all all all all all, tr all all all all all all all all all al	intense intense medium medium intense medium intense	no few rings large zol few rings few rings no few rings large zol zones zones zones few rings no	ST   ST	nall prese	ent		bi	smooth	absent a	distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct - distinct - distinct - distinct - distinct distinct	dk dk re - br dk br re re dk re re dk re re dk dk dk dk dk dk dk dk	red ddish ight red ddish	

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius	
21- S1L	1- 12 1	LASP	٧	1-	٧	medium	closed	50-100	î L	RB	٧	У	٧	rc	n	5.4 cm	
28 - S1L	1- 128	LASP	٧	-	V	low	closed	100-200	L	RB	٧	v	٧	rc	n	9.8 cm	
31 - S1N	1- 13 1	LASP	n	<5	V	medium	-	50-100	N	RB	v	v	٧	rc	n	8 cm	
34 - S1L	1- 134	LASP	У	-	-	high	open	50-100	L	RB	٧	v	У	rc	n	14.5 cm	
36 - S1N	1- 136	LASP	٧	-	-	low	closed	100-200	N	RB	v	v	٧	rc	n	4.6 cm	
37 - S1N	1- 137	LASP	n	<5	٧	low	-	>200	N	RB	V	٧	٧	rc	n	13 cm	
38 - S1L	1- 138	LASP	У	-	У	high	open	50-100	L	RB	٧	У	У	rc	n	8.3 cm	
40 - S1N	1- 140	LASP	٧	-	٧	low	closed	50-100	N	RB	٧	٧	٧	rc	n	2.2 cm	
42 - S1N	1- 142	LASP	У	-	-	very high	open	<50	N	RB	٧	У	У	rc	n	3.2 cm	
- S2N	2-4	LASP	n	<5	У	high	-	50-100	N	RB	У	٧	У	rc	n	15 cm	
0 - S2N	2- 10	LASP	У	-	-	low	closed	100-200	N	RB	У	У	У	rc	n	4 cm	
5 - S2L	2- 15	LASP	У	-	У	medium	open	100-200	L	RB	V	У	У	rc	n	13 cm	
0 - S2L	2-20	LASP	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	7.5 cm	
4 - S2N	2-24	LASP	V	-	y _	medium	open	50-100	N	RB	V	V	V	rc	n	12.5 cm	_
0 - S2L	2-30	LASP	n	>10	-	medium	-	50-100	L	RB	V	V	V	rc	n	-	
3 - S2L	2-43	LASP	n	<5	У	medium	open	50-100	L	RB	V	У	У	rc	n	11.2 cm	
5 - S2L 5 - S2L	2-45	LASP	n	<5	-	high		50-100	L	RB	V	V	-	rc	n	17 cm	-
0 - S2N	2-45	LASP	У	-	У	medium	open	100-200	N	RB	V		У	rc	n	13.6 cm	
9 - S2L	2-50	LASP	-	<5	У	medium		50-100	L	RB	,	У	У	rc	n	14.5 cm	_
2 - S2N	2-62	LASP	n	-	У		open -	100-200	N	RB	У	У	У			14.5 0111	_
2 - S2N 6 - S2L	2-62	LASP	n	- <5	У -	medium		100-200	L	RB	У	У	У	rc	n	- 14 F am	_
			n			medium	open				У	У	У	rc	n	14.5 cm	_
8 - S2L	2-68	LASP	У	-	У	medium	closed	50-100	L	RB	У	У	У	rc	n	8 cm	_
0 - S2L	2-70 2-79	LASP	У	-	У	high	open	50-100	L	RB	У	У	У	rc	n	6.6 cm	
9 - S2L	19_7G					111		E0 400									
		LASP	У	-	у	medium	open	50- 100	L	RB	у	у	у	rc	n	10.5 cm	
ield Code	Lab Code	species	RD	EWI	-W	CW	PR	TT	Т	TW	BP S	ОВР	SpTh	SW	n	LARred	
ield Code 21 - S1L	Lab Code 1- 121	species LASP	RD large	<b>EWI</b> med	<b>.W</b> ium	<b>CW</b> no	PR small	<b>TT</b> present		TW	BP S bi sr	OBP nooth	SpTh absent	SW -		<b>LARred</b> br red	-
ield Code 21 - S1L 28 - S1L	<b>Lab Code</b> 1- 121 1- 128	species LASP LASP	RD large large	med med	ium ium	no no	PR small small	TT present present	- - -	TW	BP S bi sr uni sr	OBP nooth nooth	SpTh absent absent	SW - distin		LARred br red reddish	-
ield Code 21 - S1L 28 - S1L 31 - S1N	Lab Code 1- 121 1- 128 1- 131	species LASP LASP LASP	RD large large small	med med med	ium ium ium ium	no no few rings	PR small small small	present present	- - -	TW	BP S bi sr uni sr bi sr	OBP nooth nooth nooth	SpTh absent absent absent	SW - distin		br red reddish reddish	-
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L	Lab Code 1- 121 1- 128 1- 131 1- 134	species LASP LASP LASP LASP	large large small small	med med med inter	ium ium ium ium	no no few rings	PR small small small small	present present present present	- - - -	TW	BP S bi sr uni sr bi sr bi sr	OBP nooth nooth nooth nooth	SpTh absent absent absent absent	SW - distin - -		br red reddish reddish dk red	- - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136	species LASP LASP LASP LASP LASP	large large small small small	med med med inter med	ium ium ium ium ise ium	CW no no few rings no few rings	PR small small small small small	present present present present present present	- - - -	TW	BP S bi sr uni sr bi sr bi sr uni sr	OBP nooth nooth nooth	SpTh absent absent absent absent absent	SW - distin - -	ct	LARred br red reddish reddish dk red reddish	- - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137	species LASP LASP LASP LASP LASP LASP LASP	large large small small small large	med med med inter med inter	ium ium ium ium ise ium	no no few rings	PR small small small small small small	present present present present	- - - - - to	<b>TW</b>	BP S bi sr uni sr bi sr bi sr uni sr uni -	OBP nooth nooth nooth nooth	SpTh absent absent absent absent absent absent	SW - distin distin	ct	br red reddish reddish dk red reddish reddish	- - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138	species LASP LASP LASP LASP LASP LASP LASP LASP	large large small small small	med med med inter med inter	ium ium ium ium ise ium	CW no no few rings no few rings	PR small small small small small	present present present present present present	- - - -	oth	BP S bi sr uni sr bi sr uni sr uni sr bi sr uni sr uni sr	OBP nooth nooth nooth nooth	SpTh absent absent absent absent absent absent absent	S W - distin distin distin distin	ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red	- - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140	species LASP LASP LASP LASP LASP LASP LASP LASP	large large small small small large	EWI med med med inter med inter r inter	ium ium ium ise ium ise	no no few rings no few rings few rings	PR small small small small small small	present present present present present present present	- - - - - to	oth	BP S bi sr uni sr bi sr bi sr uni sr uni sr uni sr	OBP nooth nooth nooth nooth	SpTh absent absent absent absent absent absent	SW - distin distin	ct ct ct	br red reddish reddish dk red reddish reddish	- - - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138	SPECIES LASP LASP LASP LASP LASP LASP LASP LAS	RD large large small small large small, t	med med inter med inter r inter low	ium ium ium ise ium ise	no no few rings no few rings few rings no no	PR small small small small small small small large small	present present present present present present present present present	- - - - - to	oth	BP S bi sr uni sr bi sr bi sr uni sr bi sr uni sr uni sr uni sr	OBP nooth nooth nooth nooth nooth	SpTh absent absent absent absent absent absent absent	S W - distin distin distin distin	ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red	- - - - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4	LASP LASP LASP LASP LASP LASP LASP LASP	large large small small large small, t small	med med inter med inter r inter low	ium ium ium ise ium ise	no no few rings no few rings few rings few rings ano large zones	PR small small small small small large small small	present	to	oth	BP S bi sr uni sr bi sr uni sr bi sr uni sr bi sr uni sr uni sr uni - bi sr bi sr uni sr	OBP nooth nooth nooth nooth nooth nooth	SpTh absent absent absent absent absent absent absent absent absent	SW - distin distin distin distin	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red reddish	- - - - - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142	SPECIES LASP LASP LASP LASP LASP LASP LASP LAS	RD large large small small large small, t small small, t	EWI med med med inter med inter r inter low r med	ium ium ium ise ium ise ium	no no few rings no few rings few rings few rings ano large zones zones	PR small small small small small small small small large small small small	present	- - - - to -	oth	BP S bi sr uni sr bi sr uni sr uni sr bi sr uni sr uni sr uni sr uni - bi sr bi sr bi sr	OBP mooth	SpTh absent absent absent absent absent absent absent absent absent absent	SW - distin distin distin distin	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red reddish	- - - - - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N - S2N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4	LASP LASP LASP LASP LASP LASP LASP LASP	RD large large small small small large small, t small small, t small	EWI med med med inter med inter r inter low r med low	ium ium ium ise ium ise ium ise ium	no no few rings no few rings few rings few rings ano large zones zones large zones	PR small small small small small small small large small small small	present	to	oth	BP S bi sr uni sr bi sr uni sr uni sr bi sr uni sr uni sr uni - bi sr bi sr bi sr bi sr bi sr bi sr	OBP mooth	SpTh absent absent absent absent absent absent absent absent absent absent	SW - distin distin distin distin distin distin	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red reddish - bright	- - - - - - - - - fun
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N - S2N 5 - S2N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10	LASP LASP LASP LASP LASP LASP LASP LASP	RD large large small small small large small, t small small small, t small small	EWI med med med inter med inter r inter low r med low inter	ium ium ium ise iuse ise ise ium	no no few rings no few rings few rings few rings no large zones large zones large zones	PR small	present	to	oth	BP S bi sr uni sr bi sr uni sr bi sr bi sr bi sr bi sr	OBP mooth	SpTh absent	SW - distin distin distin distin distin distin - distin -	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red reddish - bright br red	- - - - - - - - - fun
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N - S2N 0 - S2N 0 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15	LASP LASP LASP LASP LASP LASP LASP LASP	RD large large small small small large small, t small small small small small	med med med inter med inter r inter low r med low inter med	ium ium ium ise iuse ise ise ium	no no few rings no few rings few rings no large zones large zones large zones few rings	PR small small small small small large small small small small small small small	present	to	oth	BP S bi sr uni sr bi sr bi sr uni sr uni sr uni sr uni sr uni sr bi sr	OBP mooth	SpTh absent	SW - distin distin distin distin - distin - distin - distin - distin	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish reddish - bright br red reddish	- - - - - - - - fun
eld Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N - S2N - S2N 0 - S2N 0 - S2L 0 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20	LASP LASP LASP LASP LASP LASP LASP LASP	RD large large small small large small, t small small small small small small small	med med med inter med inter r inter low r med low inter med	ium ium ium ise ium ise ium ise	no no few rings no few rings few rings no large zones zones large zones large zones few rings no	PR small small small small large small small small small small small small small small	present	T	oth	BP S bi sr uni sr bi sr uni sr bi sr uni sr uni - bi sr bi sr bi sr bi sr bi sr uni sr bi sr uni sr uni sr bi sr uni sr bi sr bi sr bi sr bi sr	OBP mooth	SpTh absent abse	SW - distin distin distin distin - distin - distin - distin distin distin distin	ct ct ct ct	LARred br red reddish reddish dk red reddish reddish - bright br red reddish	- - - - - - - - fun - -
eld Code 11 - S1L 8 - S1L 11 - S1N 4 - S1N 7 - S1N 8 - S1L 0 - S1N 2 - S1N - S2N - S2N - S2L 1 - S2L 1 - S2N - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24	LASP LASP LASP LASP LASP LASP LASP LASP	large large small large, t	med med med inter med inter r inter low r med low inter inter inter inter inter inter r low	ium ium ise ise ium ise ise	no no few rings no few rings few rings no large zones zones large zones large zones few rings no large zones	PR small small small small small large small small small small small small small small small	present	T	oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni sr uni sr uni sr bi sr bi sr bi sr bi sr bi sr bi sr	OBP mooth	SpTh absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	SW - distin distin distin distin - distin - distin - distin distin distin distin	ct ct ct ct ct	LARred br red reddish reddish dk red reddish reddish dk red reddish br red reddish - bright br red reddish br red reddish	- - - - - - - - fun - -
eld Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N - S2N 0 - S2N 0 - S2L 0 - S2L 0 - S2L 0 - S2L 0 - S2L 0 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30	LASP LASP LASP LASP LASP LASP LASP LASP	large large small small small large small, t small	med med med inter med inter r inter low r med low inter inter inter inter inter r inter inter r low inter inter r low med	ium ium ium ise ise ise ium	no no few rings no few rings few rings no large zones zones large zones large zones few rings no large zones no large zones	PR small small small small small large small	present	T	oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni sr uni sr bi sr bi sr bi sr uni sr bi sr uni sr bi sr	OBP mooth	SpTh absent abse	SW - distin distin distin distin - distin distin - distin	ct ct ct ct ct ct	LARred br red reddish reddish dk red reddish reddish reddish br reddish - bright br red reddish	fun sma
eld Code 11 - S1L 18 - S1L 11 - S1N 14 - S1L 16 - S1N 17 - S1N 18 - S1L 10 - S1N 10 - S2N 10 - S2N 10 - S2L 11 - S2N 10 - S2L 11 - S2L 11 - S2L 12 - S2L 13 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43	LASP LASP LASP LASP LASP LASP LASP LASP	large large small small large small, t small	EWI med med med inter med inter r inter low r med low inter inter r low inter	ium ium iium ise iium ise ise ise ise	no no few rings no few rings few rings no large zones large zones large zones large zones few rings no no no no	PR small small small small large small	present	T	oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni sr uni sr bi sr bi sr uni sr bi sr uni sr bi sr	OBP mooth	SpTh absent abse	SW - distin distin distin distin - distin	ct ct ct ct ct ct ct ct	LARred br red reddish reddish dk red reddish reddish reddish bright br red reddish	- - - - - - - - fun - - - sma
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N 5 - S2N 5 - S2L 0 - S2L 4 - S2N 0 - S2L 3 - S2L 5 - S2L 5 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43 2- 45 2- 50	LASP LASP LASP LASP LASP LASP LASP LASP	large large small	EWI med med med inter med inter r inter low inter inter inter r low inter inter inter r inter r med	ium ium ium ise	no no few rings no few rings few rings few rings no large zones large zones large zones large zones few rings no large zones few rings no large zones no no no	PR small small small small large small	present	to	oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni sr uni sr uni sr bi sr bi sr uni sr bi sr	OBP mooth	SpTh absent abse	SW - distin distin distin distin - distin - distin - distin - distin distin distin distin distin distin	ct ct ct ct ct ct ct ct ct	LARred br red reddish reddish dk red reddish dk red reddish oreddish - bright br red reddish br red reddish dk red reddish	- - - - - - - - - - - - - - - - - - -
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N - S2N 0 - S2L 0 - S2L 4 - S2N 0 - S2L 3 - S2L 5 - S2L 0 - S2L 0 - S2L 9 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43 2- 45 2- 50 2- 59	LASP LASP LASP LASP LASP LASP LASP LASP	large large small	med med med inter med inter r inter inter inter inter r low inter inter r low inter inter r med inter r med inter r inter inter inter inter inter inter inter inter r med inter r med inter r med inter r med	ium ium ium ise	no no few rings no few rings few rings no large zones zones large zones large zones few rings no large zones large zones few rings no large zones no no no large zones no	PR small small small small large small	present	to	oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni sr uni sr bi sr	OBP mooth	SpTh absent	SW - distin distin distin - distin - distin - distin distin - distin distin distin distin distin distin	ct ct ct ct ct ct ct ct ct	LARred br red reddish reddish reddish reddish reddish reddish reddish - bright br red reddish br red reddish dk red reddish dk red reddish br red reddish dk red reddish dk red reddish dk red reddish dk red	
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N - S2N 0 - S2N 0 - S2L 4 - S2N 0 - S2L 3 - S2L 0 - S2L 0 - S2L 0 - S2L 2 - S2N 9 - S2N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43 2- 43 2- 45 2- 50 2- 59 2- 62	LASP LASP LASP LASP LASP LASP LASP LASP	large large small	med med med inter med inter r inter inter inter inter inter r inter r med inter r med inter r med inter med inter med inter med inter med	ium ium ium ise iium ise	no no few rings no few rings few rings no large zones large zones large zones few rings no large zones large zones few rings no large zones no no large zones no	PR small small small small large small	present		oth	BP S bi sr uni sr bi sr uni sr uni sr uni sr uni - bi sr bi sr bi sr bi sr uni sr bi sr	OBP mooth	SpTh absent	SW - distin distin distin distin - distin - distin - distin - distin distin distin distin - distin distin distin distin	ct ct ct ct ct ct ct ct ct	br red reddish reddish reddish reddish reddish reddish reddish reddish - bright br red reddish br red reddish dk red	sma
ield Code 21 - S1L 28 - S1L 31 - S1N 34 - S1L 36 - S1N 37 - S1N 38 - S1L 40 - S1N 42 - S1N - S2N 5 - S2L 0 - S2L 4 - S2N 0 - S2L 5 - S2L 0 - S2L 5 - S2L 0 - S2L 5 - S2L 0 - S2L 6 - S2N 6 - S2N 6 - S2N	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43 2- 45 2- 50 2- 59 2- 62 2- 66	LASP LASP LASP LASP LASP LASP LASP LASP	large large small	med med med inter med inter low red inter med inter med inter med inter med inter med inter med	ium ium ium ise	no no few rings no few rings few rings no large zones zones large zones large zones few rings no large zones large zones few rings no large zones no large zones no no fo large zones few rings	PR small small small small small large small	present		oth	BP S bi sr uni sr bi sr uni sr uni - bi sr	OBP mooth	SpTh absent	sw - distin - distin distin distin distin distin distin distin - distin distin distin distin distin	ct	LARred br red reddish reddish dk red reddish reddish reddish reddish - bright br red reddish br red reddish dk red reddish br red reddish dk red	
Field Code 21 - S1L 28 - S1L 31 - S1N 33 - S1N 33 - S1N 33 - S1N 33 - S1N 38 - S1L 40 - S1N 42 - S1N 42 - S1N 42 - S1N 42 - S1N 44 - S2N 45 - S2L 46 - S2L 46 - S2L 47 - S2N 48 - S2L 48 - S2N 49 - S2L 48 - S2N 49 - S2L 49 - S2L 40 - S2L 40 - S2L 40 - S2L 41 - S2N 41 - S2N 42 - S2N 43 - S2L 44 - S2N 45 - S2L 46 - S2L 47 - S2N 48 - S2L 49 - S2L 49 - S2L 40 - S2L 40 - S2L 41 - S2N 41 - S2L	Lab Code 1- 121 1- 128 1- 131 1- 134 1- 136 1- 137 1- 138 1- 140 1- 142 2- 4 2- 10 2- 15 2- 20 2- 24 2- 30 2- 43 2- 43 2- 45 2- 50 2- 59 2- 62	LASP LASP LASP LASP LASP LASP LASP LASP	large large small	med med med inter med inter r inter inter inter inter inter r inter r med inter r med inter r med inter med inter med inter med inter med	ium ium ise ise ium ise ise ium ise ise ium ise ise iium	no no few rings no few rings few rings no large zones large zones large zones few rings no large zones large zones few rings no large zones no no large zones no	PR small small small small large small	present		oth	BP S bi sr uni sr bi sr	OBP mooth	SpTh absent	SW - distin - distin distin	ct	br red reddish reddish reddish reddish reddish reddish reddish reddish - bright br red reddish br red reddish dk red	sma

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
3 - S2N	2-83	LASP	n	<5	У	medium	closed	100-200	N	RB	у	у	٧	rc	n	10.5 cm
6 - S2L	2-86	LASP	n	<5	у	medium	open	100-200	L	RB	у	y	У	rc	n	8.8 cm
7 - S2L	2-87	LASP	n	>10	У	low		100-200	L	RB	У	V	У	rc	n	-
3 - S2L	2-93	LASP	У	-	-	medium	open	100-200	L	RB	У	V	У	rc	n	11.5 cm
7 - S2N	2-97	LASP	n	<5	-	medium	open	50-100	N	RB	У	V	У	rc	n	8 cm
09 - S2N	2-109	LASP	У	-	У	low	closed	50-100	N	RB	у	y	У	rc	n	6.5 cm
11- S2N	2- 111	LASP	n	>10	-	medium	-	50-100	N	RB	у	У	У	rc	n	-
21- S2N	2-121	LASP	У	-	٧	medium	closed	50-100	N	RB	У	У	У	rc	n	8.2 cm
22 - S2L	2-122	LASP	-	<5	У	medium	open	100-200	L	RB	У	٧	У	rc	n	12 cm
33 - S2L	2-133	LASP	у	-	-	medium	open	50-100	L	RB	у	y	У	rc	n	9.4 cm
37 - S2N	2-137	LASP	У	-	у	low	closed	100-200	N	RB	У	У	У	rc	n	5.4 cm
50 - S2L	2-150	LASP	У	-	-	medium	open	50-100	L	RB	У	У	У	rc	n	5.5 cm
51- S2L	2-151	LASP	У	-	V	high	open	50-100	L	RB	У	У	У	rc	n	9.8 cm
52 - S2L	2-152	LASP	У	-	У	medium	closed	100-200	L	RB	У	٧	У	rc	n	11.5 cm
53 - S2L	2-153	LASP	У	-	У	low	open	50-100	L	RB	У	У	У	rc	n	5.1cm
55 - S2N	2-155	LASP	n	<5	У	low	closed	50-100	N	RB	У	У	У	rc	n	4.3 cm
58 - S2N	2-158	LASP	У	-	У	low	open	100-200	N	RB	У	У	У	rc	n	7.3 cm
61- S2N	2-161	LASP	n	<5	- y	medium	open	50-100	N	RB	У	V	У	rc	n	10.7 cm
62 - S2L	2-162	LASP	У	-	У	high	closed	50-100	L	RB	У	У	У	rc	n	7.1cm
64 - S2N	2-164	LASP	n	5- 10	У	medium	-	50-100	N	RB	У	У	У	rc	n	6.5 cm
66 - S2N	2-166	LASP	У	-	- y	low	open	100-200	N	RB	У	У	У	rc	n	6.5 cm
67 - S2L	2-167	LASP	n	>10	У	medium	-	100-200	L	RB	У	V	У	rc	n	-
68 - S2	2-168	LASP	У	-		medium	open	50-100	-	RB	-	•	-	rc	n	7.3 cm
169 - S2L	2-169	LASP	У	-	У	medium	open	100-200	L	RB	y v	y	y	rc	n	16 cm
						W		TT	TTW	BP	SOBP	-		SW		
Field Code 83 - S2N	Lab Code 2-83	Species LASP	RD small	low		ones	PR small	present	- I I VV	bi	smooth	SpT abse		distinct	reddi	
36 - S2L	2-86			IOW												311
		ILASP	emall	intor	neo n				_							ich -
17 - S2I		LASP	small	inter		10	small	present	-	uni	smooth	abse	ent	distinct	reddi	
	2-87	LASP	small	med	ium n	10	small small	present present	-	uni bi	smooth smooth	abse abse	ent ent	distinct distinct	reddi reddi	ish -
3 - S2L	2-87 2-93	LASP LASP	small small	med inter	ium n	10 10	small small small	present present present	-	uni bi uni	smooth smooth smooth	abse abse	ent ent ent	distinct distinct	reddi reddi reddi	sh -
3 - S2L 7 - S2N	2-87 2-93 2-97	LASP LASP LASP	small small	med inter med	ium n nse n ium n	10 10 10	small small small small	present present present present	-	uni bi uni bi	smooth smooth smooth smooth	abse abse abse	ent ent ent ent	distinct distinct - -	reddi reddi reddi reddi	sh - sh -
93 - S2L 97 - S2N 09 - S2N	2-87 2-93 2-97 2-109	LASP LASP LASP LASP	small small small small	med inter med inter	ium n nse n ium n nse f	io io io ew rings	small small small small small	present present present present present	-	uni bi uni bi bi	smooth smooth smooth smooth smooth	abse abse abse abse	ent ent ent ent ent	distinct distinct - -	reddi reddi reddi reddi dk re	sh - sh - sh - d -
93 - S2L 97 - S2N 109 - S2N 111 - S2N	2-87 2-93 2-97 2-109 2-111	LASP LASP LASP LASP LASP	small small small small small	med inter med inter low	ium nise nium nise fo	io io io ew rings	small small small small small small	present present present present present present	- - -	uni bi uni bi bi	smooth smooth smooth smooth smooth smooth	abse abse abse abse abse	ent ent ent ent ent ent	distinct distinct - - -	reddi reddi reddi reddi dk re reddi	sh - sh - d - sh -
93 - S2L 97 - S2N 109 - S2N 11- S2N 21- S2N	2-87 2-93 2-97 2-109 2-111 2-121	LASP LASP LASP LASP LASP	small small small small small small	med inter med inter low med	ium nase nase nase for nase for nase nase nase nase nase nase nase nase	oo oo ew rings oo arge zones	small small small small small small small	present present present present present present present	- - - -	uni bi uni bi bi bi	smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse	ent ent ent ent ent ent ent	distinct distinct - - - distinct	reddi reddi reddi reddi dk re reddi reddi	sh - sh - sh - d - sh -
93 - S2L 97 - S2N 99 - S2N 111 - S2N 121 - S2N 122 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122	LASP LASP LASP LASP LASP LASP LASP	small small small small small small small	med inter med inter low med inter	ium nase nase nase for nase nase nase nase nase nase	oo oo oo ew rings oo arge zones	small small small small small small small	present	- - -	uni bi uni bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse	ent	distinct distinct - - -	reddi reddi reddi reddi dk re reddi reddi dk re	sh - sh - sh - d - sh - sh - dh - sh - dh -
93 - S2L 97 - S2N 99 - S2N 11- S2N 21- S2N 22 - S2L 33 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small	med inter med inter low med inter inter inter	ium nuse nuse nuse for nuse nuse nuse nuse nuse nuse nuse nuse	to to to to ew rings to to to	small small small small small small small small small	present present present present present present present present present	- - - -	uni bi uni bi bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct - - - distinct distinct	reddi reddi reddi reddi dk re reddi dk re reddi	sh - sh - sh - d - sh - sh - dh - sh - sh - dh -
93 - S2L 97 - S2N 109 - S2N 111 - S2N 121 - S2N 122 - S2L 133 - S2L 137 - S2N	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small	med inter med inter low med inter inter inter inter	ium n nse n ium n nse fi n ium l ium l ium l ise n nse f	no no no no no no no narge zones no no no no no no no no no no no no no	small small small small small small small small small small	present present present present present present present present present present	- - - - - - -	uni bi uni bi bi bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct distinct distinct distinct	reddi reddi reddi dk re reddi reddi dk re reddi dk re	sh - sh - d - ssh - dsh - dsh - ssh - d - ssh - d -
37 - S2L 93 - S2L 97 - S2N 109 - S2N 111 - S2N 121 - S2N 122 - S2L 133 - S2L 137 - S2N 150 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small	med inter med inter low med inter in	ium nase nase nase nase nase nase nase nase	no n	small small small small small small small small small small small small	present present present present present present present present present present present present	- - - - - - - - -	uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct - - - distinct distinct	reddi reddi reddi dk re reddi dk re reddi dk re reddi br red	sh - sh - sh - d - ssh - ssh - d - ssh - d - ssh - d - ssh -
03 - S2L 07 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small small	med inter med inter low med inter in	ium nase nase nase nase nase nase nase nase	no n	small	present	- - - - - - - - - - - - -	uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct - distinct	reddi reddi reddi reddi dk re reddi dk re reddi br red reddi reddi	sh - ish - ish - d - ish - ish - d - ish - d - ish - ish - ish -
93 - S2L 97 - S2N 99 - S2N 11- S2N 21- S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51- S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter in	ium nase nase nase nase nase nase nase nase	oo	small	present	- - - - - - - - - - - - - - - - - - -	uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct distinct distinct distinct distinct	reddi reddi reddi reddi dk re reddi dk re reddi br red reddi reddi	sh -
33 - S2L 17 - S2N 109 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 33 - S2L 50 - S2L 51 - S2L 52 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter inter inter inter inter tr med	ium nase nase nase nase nase nase nase nase	oo	small	present	- - - - - - - - - - - - - - - - - - -	uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct distinct distinct distinct distinct distinct	reddi reddi reddi dk re reddi reddi dk re reddi br rec reddi reddi reddi reddi reddi	Sh
33 - S2L 17 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 55 - S2L 55 - S2L 55 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-155 2-153 2-155	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter inter inter inter inter inter tr med med	ium n nse n ium n nse f ium n ium k ium k nse n nse n nse f nse z nse n n nse n	ew rings oo ew rings oo ew rings oo ew rings oo ew rings	small	present		uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct - distinct - distinct - distinct distinct distinct distinct distinct	reddi reddi reddi dk re reddi dk re reddi br rec reddi reddi reddi brigh	Sh
3 - S2L 17 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51 - S2L 52 - S2L 53 - S2L 53 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-158	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter inter inter inter inter inter tr med inter tr med inter inter med inter	ium nium nium nium nium la	ew rings oo	small	present		uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct - distinct - distinct - distinct - distinct - distinct - distinct	reddi reddi reddi reddi dk re reddi dk re reddi br red reddi reddi reddi reddi reddi reddi reddi	ssh - ssh - d - ssh - d - ssh - d - ssh - d - ssh - t - t - t - ssh -
33 - S2L 17 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51 - S2L 52 - S2L 55 - S2L 55 - S2N 58 - S2N 61 - S2N	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-155 2-158 2-158 2-161	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small small small small small small small	med inter med inter low med inter inter inter inter tr med inter	ium nase nase nase nase nase nase nase nase	no n	small	present		uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct - distinct - distinct distinct distinct distinct	reddi reddi reddi reddi dk re reddi dk re reddi br red reddi reddi reddi brigh reddi reddi	sh - sh - sh - d - ssh - d - ssh - d - ssh - ssh - t - ssh - t - t - ssh -
3 - S2L 17 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51 - S2L 52 - S2L 53 - S2L 53 - S2L 56 - S2L 67 - S2N 68 - S2N 68 - S2N 69 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-158 2-161 2-162	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter inter inter inter tr med inter	ium	no n	small	present		uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	abse abse abse abse abse abse abse abse	ent	distinct distinct distinct distinct - distinct distinct distinct - distinct distinct distinct distinct distinct	reddi reddi reddi dk re reddi dk re reddi br red reddi reddi brigh reddi reddi	sh -
93 - S2L 97 - S2N 99 - S2N 11- S2N 21- S2N 22 - S2L 33 - S2L 37 - S2N 50 - S2L 51- S2L 52 - S2L 53 - S2L 55 - S2N 58 - S2N 61- S2N 62 - S2L 64 - S2N	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-155 2-158 2-161 2-162 2-164	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter	ium	and to	small	present	- - - - - - - - - - - - - - - - - - -	uni bi uni bi	smooth	abse	ent	distinct distinct distinct distinct - distinct - distinct distinct distinct distinct	reddi reddi reddi reddi dk re reddi br reddi reddi reddi reddi reddi brigh reddi brigh reddi	ssh -
33 - S2L 17 - S2N 09 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 33 - S2L 55 - S2L 55 - S2L 55 - S2L 55 - S2N 61 - S2N 62 - S2L 64 - S2N 66 - S2N	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-158 2-161 2-162 2-164 2-166	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter	ium	so s	small	present		uni bi uni bi	smooth	abse	ent	distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct	reddi reddi reddi reddi dk re reddi dk re reddi br reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi	Sh
33 - S2L 37 - S2N 39 - S2N 11 - S2N 21 - S2N 22 - S2L 33 - S2L 33 - S2L 55 - S2L 55 - S2L 55 - S2L 55 - S2N 58 - S2N 61 - S2N 62 - S2L 64 - S2N 66 - S2N 67 - S2L	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-158 2-161 2-162 2-164 2-166 2-166	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter med inter med inter med inter med inter inter med inter inter med inter inter med inter inte	ium nase nase nase nase nase nase nase nase	so o o o o o o o o o o o o o o o o o o	small	present	- - - - - - - - - - - - - - - - - - -	uni bi uni bi	smooth	abse     abse	ent	distinct distinct distinct distinct - distinct - distinct distinct - distinct distinct distinct - distinct distinct - distinct - distinct - distinct distinct - distinct	reddi reddi reddi reddi dk re reddi dk re reddi reddi reddi brigh reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi	sh - sh - sh - d - sish - d - sish - d - sish - t - ssh - t - t - ssh - ssh - t - ssh - ssh - ssh - ssh - t - ssh -
93 - S2L 97 - S2N 109 - S2N 111 - S2N 121 - S2N 122 - S2L 133 - S2L 137 - S2N	2-87 2-93 2-97 2-109 2-111 2-121 2-122 2-133 2-137 2-150 2-151 2-152 2-153 2-155 2-158 2-161 2-162 2-164 2-166	LASP LASP LASP LASP LASP LASP LASP LASP	small	med inter med inter low med inter	ium nase nase nase nase nase nase nase nase	so s	small	present		uni bi uni bi	smooth	abse	ent	distinct distinct distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct	reddi reddi reddi reddi dk re reddi dk re reddi br reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi reddi	Sh

Field Code	Lab Code	species	pith	RMTP	fung	i GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
170 - S2L	2- 170	LASP	У	-	У	medium	open	100-200		RB	у	у	У	rc	n	12 cm
32 - S3N	3-32	LASP	n	<5	n	high	-	50-100	N	RB	y	У	У	rc	n	8 cm
38 - S3N	3-38	LASP	У	-	٧	very high	open	<50	N	RB	y	v	V	rc	n	5.4 cm
42 - S3L	3-42	LASP	У	-	٧	medium	open	50-100	L	RB	y	v	У	rc	n	7 cm
44 - S3N	3-44	LASP	У	-	٧	low	closed	50-100	N	RB	y	v	У	rc	n	4.5 cm
51- S3L	3-51	LASP	У	-	У	medium	open	100-200	L	RB	У	У	У	rc	n	13.5 cm
58 - S3L	3-58	LASP	У	-	У	medium	open	100-200	L	RB	У	у	y	rc	n	9 cm
62 - S3L	3-62	LASP	V	-	V	high	open	50 - 100	L	RB	У	У	V	rc	n	7 cm
66 - S3L	3-66	LASP	n	5- 10	V	medium	-	100-200	L	RB	У	У	У	rc	n	-
68 - S3L	3-68	LASP	У	-	У	medium	closed	50-100	L	RB	У	У	У	rc	n	4 cm
69 - S3L	3-69	LASP	n	<5		medium	open	50-100	L	RB		У		rc	n	8.5 cm
70 - S3L	3-70	LASP	n	>10	y -	medium	-	>200	L	RB	У		У		n	16 cm
70 - 33L 71- S3L	3-70	LASP		<i>&gt;</i> 10		medium	open	100-200	L	RB	У	У	У	rc	n	6.5 cm
76 - S3N			У		У				N	RB	У	У	У			
76 - S3N 77 - S3L	3-76	LASP	У	-	У	high	open	50-100			У	У	У	rc	n	7.3 cm
	3-77	LASP	У	- 10	У	high	closed	50-100	L	RB	У	У	У	rc	n	4.5 cm
81- S3N	3-81	LASP	n	>10	У	medium	-	>200	N	RB	У	У	У	rc	n	-
85 - S3L	3-85	LASP	n	<5	У	medium	-	>200	L	RB	У	У	У	rc	n	13 cm
36 - S3L	3-86	LASP	у	-	У	high	closed	50-100	L	RB	у	У	У	rc	n	7 cm
39 - S3N	3-89	LASP	n	-	У	high	-	50-100	N	RB	у	У	У	rc	n	12 cm
93 - S3N	3-93	LASP	у	-	У	low	closed	50-100	N	RB	у	У	У	rc	n	6.3 cm
94 - S3L	3-94	LASP	n	5- 10	У	medium	-	50-100	L	RB	У	У	У	rc	n	6 cm
22 - S3L	3-22	LASP	n	<5	У	very high	open	100-200	L	RB	У	У	у	rc	n	18 cm
103 - S3N	3- 103	LASP	у	-	У	medium	closed	50-100	N	RB	У	У	у	rc	n	6 cm
110 - S3N	3- 110	LASP	у	-	У	medium	closed	<50	N	RB	У	У	у	rc	n	2.5 cm
Field Code	Lab Code	species	RD	EWL	W	CW	PR T	т т	TW B	SP SC	DBP	SpTh	SW	LAR	re d	others
170 - S2L	2- 170	LASP	small	inten	se	no	small p	resent -	b	i sm	ooth	absent	distinct	redd	ish	-
32 - S3N	3-32	LASP	small	inten	se	few rings	small p	resent -	b	i sm	ooth	absent	-	br re	d	-
38 - S3N	3-38	LASP	small	inten	se	no	small p	resent -	b	i sm	ooth	absent	-	brigh	it	-
42 - S3L	3-42	LASP	large	inten	se	no	small p	resent -	la la	i em	ooth	- I I		ام ام ما ما	:_ L_	
44 - S3N	3-44	LASP	small	medi	ım				b	. 3111	100111	absent	distinct	redd	ISN	-
51- S3L		LASI	Jiliali	IIICUI	J111	no	small p		b			present	distinct -	brre		-
	3-51	LASP	small	medi		no				i sm	ooth				d	
	3-51				um		small p	oresent -	b	i sm	ooth ooth	present	-	br re	d ish	-
58 - S3L		LASP	small	medi	um se	no	small p	oresent - oresent - oresent -	b	i sm i sm i sm	ooth ooth ooth	present absent	- distinct	br red redd	d ish ish	-
58 - S3L 62 - S3L	3-58 3-62	LASP LASP LASP	small small small	medi inten inten	um se se	no no no	small p	oresent - oresent - oresent - oresent -	b b b	i sm i sm i sm i sm	ooth ooth ooth ooth	present absent absent absent	- distinct distinct distinct	br red redd redd br red	d ish ish d	-
58 - S3L 52 - S3L 56 - S3L	3-58 3-62 3-66	LASP LASP LASP	small small small small	medi inten inten inten	um se se se	no no no no	small p small p small p small p	oresent - oresent - oresent - oresent - oresent -	b b b b	i sm i sm i sm i sm i sm	ooth ooth ooth ooth ooth	present absent absent absent absent	distinct distinct distinct distinct	br red redd redd br red br red	d ish ish d	- - - -
58 - S3L 52 - S3L 56 - S3L 58 - S3L	3-58 3-62 3-66 3-68	LASP LASP LASP LASP LASP	small small small small small	medi inten inten inten medi	um se se se um	no no no no	small p small p small p small p	oresent - oresent - oresent - oresent - oresent - oresent -	b b b b	i sm	ooth ooth ooth ooth ooth	present absent absent absent absent absent	- distinct distinct distinct	br red redd redd br red br red	d ish ish d d	-
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L	3-58 3-62 3-66 3-68 3-69	LASP LASP LASP LASP LASP LASP	small small small small small small	medi inten inten inten medi inten	um se se se um se	no no no no no	small p small p small p small p small p small p	oresent -	b b b b b	i sm	ooth looth looth looth looth looth looth	present absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct	br red redd redd br red br red brigh	d ish ish d d it	- - - - - many little hole
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L	3-58 3-62 3-66 3-68 3-69 3-70	LASP LASP LASP LASP LASP LASP LASP	small small small small small small large	medi inten inten inten medi inten inten	um se se se um se se	no no no no no no few rings	small p small p small p small p small p small p small p	oresent -	b b b b b	i sm	ooth looth looth looth looth looth looth	present absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct	br red redd redd br red br red brigh redd	d ish ish d d it ish	- - - -
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L	3-58 3-62 3-66 3-68 3-69 3-70 3-71	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small	medi inten inten inten medi inten inten inten	um se se um se se se se se se se se se	no no no no no few rings	small p	oresent -	b b b b b u u b b	i sm	ooth ooth ooth ooth ooth ooth ooth ooth	present absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd redd brigh	d ish ish d d it ish ish	- - - - many little hole - big scar
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L 76 - S3N	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small	medi inten inten medi inten inten inten inten medi	um se se um se se se um se se se	no no no no no no few rings no few rings	small p	oresent -	b b b b b b	i sm	sooth sooth sooth sooth sooth sooth sooth sooth sooth	present absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd redd brigh br red	d ish ish d d it ish ish it ish ish	- - - - many little hole - big scar -
88 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76 3-77	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small small	medi inten inten inten medi inten inten inten inten inten inten medi , tr inten	um se se um se se se um se se se	no no no no no no few rings no few rings	small p	oresent -	b b b b b b b	i sm	sooth	present absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd brigh brigh	d ish ish d d it ish ish it ish id	- - - - many little hole - big scar - -
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 81 - S3N	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76 3-77 3-81	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small, large,	medi inten inten inten medi inten inten inten inten inten inten medi , tr inten , tr inten	um se se se um se se um se se se um se se se	no no no no no no few rings no few rings few rings	small p	oresent -	b b b b b b b	i sm	sooth	present absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd brigh redd brigh redd brigh	d ish ish d d it ish ish it d it d d d it d d d d d d d d d d d	- - - - many little hole - big scar - -
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 51 - S3N 55 - S3L	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76 3-77 3-81	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small small, large, small	medi inten inten medi inten inten inten inten inten inten medi , tr inten inten inten	um se se se um se se um se se se se um se se se se se se se	no no no no no few rings few rings few rings few rings few rings few rings	small p	oresent -	b b b b b b b b	i smii smii smii smii smii smii smii sm	sooth	present absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd brigh redd brigh br red br red br red dk redd dk re	d ish ish d d it ish ish it ish d d d it ish ish d d	many little hole - big scar
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L 77 - S3L 77 - S3L 85 - S3L 86 - S3L	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76 3-77 3-81 3-85 3-86	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small large small	medi inten inten medi inten inten inten inten inten inten inten medi , tr inten inten inten inten	um se se um se se um se se se um se se se um se se se se se se	no no no no no no no few rings few rings few rings few rings few rings gones zones few rings	small p	oresent -	b b b b b b b b b b b b b b b b b b b	i smi smi smi smi smi smi smi smi smi sm	sooth	present absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct	br red redd br red br red brigh redd brigh redd brigh br red dredd brigh br red dredd brigh	d ish ish d d t ish ish ish ish ish d d d	- - - many little hole - big scar - - -
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 35 - S3L 36 - S3L 39 - S3N	3-58 3-62 3-66 3-68 3-70 3-71 3-76 3-77 3-81 3-85 3-86 3-89	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small, large, small small small small	medi inten inten medi inten inten inten inten inten inten inten medi , tr inten inten inten inten inten inten inten inten	um se se se um se se um se	no no no no no no no few rings no few rings few rings zones few rings zones few rings	small programmer small	oresent -	b   b   b   b   b   b   b   b   b   b	i smi smi smi smi smi smi smi smi smi sm	sooth	present absent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct	br red redd br red brigh redd brigh redd brigh redd brigh br red dk re dk re	d ish ish d d t t ish ish ish d d d d d d d d d d d d d d d d d	big scar
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 31 - S3N 35 - S3L 36 - S3L 39 - S3N	3-58 3-62 3-66 3-68 3-70 3-71 3-76 3-77 3-81 3-85 3-86 3-89 3-93	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small, large, small small small small small small small	medi inten inten medi inten inten inten inten inten inten medi , tr inten	um se se se um se se se um se	no no no no no no few rings no few rings rew rings zones few rings sones few rings	small programmer small	oresent -	b   b   b   b   b   b   b   b   b   b	i smi smi smi smi smi smi smi smi smi sm	sooth	present absent	distinct distinct distinct distinct distinct - distinct	br red redd br red brigh redd brigh redd brigh br red d kree dk re dk re	d ish ish d d d tt ish ish ish d d d d d d d d d d d d d d d d d d d	big scar
58 - S3L 52 - S3L 56 - S3L 58 - S3L 59 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 81 - S3N 85 - S3L 89 - S3L 89 - S3N 94 - S3L	3-58 3-62 3-68 3-68 3-70 3-71 3-76 3-77 3-81 3-85 3-85 3-89 3-93	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small, small small small small small small	medi inten inten medi inten inten inten inten inten inten , tr inten	um se se se um se se se um se	no no no no no no no few rings no few rings few rings zones zones tew rings	small p	oresent -	b   b   b   b   b   b   b   b   b   b	i smi smi smi smi smi smi smi smi smi sm	sooth	present absent	distinct	br red redd br red br red brigh redd brigh br red dk re dk re dk re dk re dk re	d ish ish d d d t t ish ish d d d d d d d d d d d d d d d d d d d	big scar
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 81 - S3N 85 - S3L 86 - S3L 88 - S3L 89 - S3N 94 - S3L 22 - S3L	3-58 3-62 3-66 3-68 3-69 3-70 3-71 3-76 3-77 3-81 3-85 3-86 3-89 3-93 3-94 3-22	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small large small	medi inten inten medi inten inten inten inten inten inten inten trinten inten	um se se se um se se se um se	no no no no no no no few rings few rings few rings zones zones few rings few rings	small programmer small	oresent -	b   b   b   b   b   b   b   b   b   b	i smi smi smi smi smi smi smi smi smi sm	sooth	present absent	distinct	br red redd br red br redd redd brigh redd brigh br red dk re dk re redd dk re redd dk re	d ish ish d d it ish ish ish d d d d d d d d d d d d d d d d d d d	big scar
58 - S3L 62 - S3L 66 - S3L 68 - S3L 69 - S3L 70 - S3L 71 - S3L 76 - S3N 77 - S3L 81 - S3N 85 - S3L 88 - S3L 88 - S3L 89 - S3N 94 - S3L	3-58 3-62 3-68 3-68 3-70 3-71 3-76 3-77 3-81 3-85 3-85 3-89 3-93	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small large small small, small small small small small small	medi inten inten medi inten inten inten inten inten inten , tr inten	um se se se um se se se se um se	no no no no no no no few rings no few rings few rings zones zones tew rings	small programmer small	oresent -	b   b   b   b   b   b   b   b   b   b	i sm	sooth	present absent	distinct	br red redd br red br red brigh redd brigh br red dk re dk re dk re dk re dk re	d ish ish d d it ish ish ish d d d d d d d d d d d ish ish d d d d ish ish	big scar

Field Code	Lab Code	species	pith	RMTP	fungi	GL		sc	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
115 - S3N	3- 115	LASP	У	-	У	medium			50-100	N	RB	У	У	У	rc	n	2.8 cm
120 - S3L	3- 120	LASP	n	<5	У	medium	_		50-100	L	RB	У	У	У	rc	n	6.5 cm
124 - S3L	3-124	LASP	n	5- 10	V	medium			100-200	L	RB	У	V	У	rc	n	7.5 cm
126 - S3N	3-126	LASP	n	<5	٧	medium			50-100	N	RB	У	У	V	rc	n	10 cm
127 - S3L	3-127	LASP	n	>10	V	medium		- 1	50-100	Ĺ	RB	٧	٧	У	rc	n	-
132 - S3N	3-132	LASP	n	<5	У	high			50-100	N	RB	У	٧	У	rc	n	9 cm
135 - S3N	3-135	LASP	У	-	У	very low			50-100	N	RB	У	У	У	rc	n	5 cm
136 - S3L	3-136	LASP	У	-	У	medium			50-100	L	RB	У	V	У	rc	n	9 cm
141 - S3L	3-141	LASP	У	-	-	high		-	50-100	L	RB	У	V	У	rc	n	7 cm
144 - S3N	3-144	LASP	n	<5	У	low			50-100	N	RB	У	V	У	rc	n	5.5 cm
145 - S3N	3-145	LASP	У	-	-	low			100-200	N	RB	У	У	У	rc	n	7.4 cm
151 - S3N	3-151	LASP	n	<5	٧	high			50-100	N	RB	У	У	У	rc	n	7.4 cm
152 - S3L	3-152	LASP	У	-	V	very low			>200	L	RB	У	У	У	rc	n	6 cm
154 - S3L	3-154	LASP	n	<5	V	high		- 1	50-100	i i	RB	У	У	У	rc	n	7 cm
155 - S3L	3- 155	LASP	У	-	,	low			100-200	L	RB				rc	n	7.6 cm
169 - S3L	3- 169	LASP	У	-	У	low			100-200	L	RB	У	У	У	rc	n	5.8 cm
175 - S3N	3- 109	LASP		-	У	very low			50-100	N	RB	-	У	У	rc	n	3.7 cm
178 - S3N	3- 178	LASP	У	-	У	low			50-100	N	RB	У	У	У	rc	n	5.7 CIII
176 - S3N 179 - S3L	3- 179	LASP	y n	- <5	У	high			50-100	IN I	RB	У	У	У	rc	n	9.2 cm
181 - S3N	3-1/9	LASP		-	У	medium		- 1	50-100	N	RB	У	У	У			
			У		У							У	У	У	rc	n	9 cm
194 - S3L	3-194	LASP	n	<5	У	medium			50-100	L	RB	У	У	У	rc	n	9 cm
196 - S3N	3-196	LASP	У	-	У	low	_		100-200	N	RB	У	У	У	rc	n	5.7 cm
197 - S3L	3-197	LASP	n	<5	у	medium			50-100	L	RB	У	У	У	rc	n	10.4 cm
198 - S3N	3- 198	LASP	n	>10	-	medium			50-100	L	RB	У	У	у	rc	n	<u> -</u>
Field Code 115 - S3N	<b>Lab Code</b> 3- 115	<b>species</b> LASP	RD	mediun			PR	TT	TTW	<b>BP</b>	SOI		pTh	<b>SW</b> distinct	LAR		others
120 - S3L	3- 120	LASP	small			•	small	presen			smo			distinct	bright dk red		
		_	small	intense		U	small small	presen		uni	smo	otn at	sent			]  -	
124 - S3L	3- 124 3- 126	LASP		intense					1			برمن مالدم					
126 - S3N	.3- IZh	LACD				9 -		presen		uni	smo		esent	distinct	reddi	sh -	
		LASP	small	mediun	n no		small	presen	t tooth	bi	smo	oth pr	esent		reddi: br red	sh -	
127 - S3L	3- 127	LASP	small small	mediun intense	n no		small small	presen	t tooth t -	bi bi	smo smo	oth pr	esent osent	distinct distinct	reddi: br red reddi:	sh - sh -	
132 - S3N	3- 127 3- 132	LASP LASP	small small small	mediun intense intense	n no no no		small small small	present present present	t tooth t - t -	bi bi bi	smo smo smo	oth proth at oth at	esent osent osent	distinct distinct - distinct	reddis br red reddis br red	sh - sh -	
132 - S3N 135 - S3N	3- 127 3- 132 3- 135	LASP LASP LASP	small small small small	mediun intense intense intense	n no no no no		small small small small	present present present	t tooth t - t - t tooth	bi bi bi uni	smo smo smo smo	oth proth at oth at oth at	esent osent osent osent	distinct distinct - distinct distinct	reddis br red reddis br red br red	sh - sh - l -	
132 - S3N 135 - S3N 136 - S3L	3-127 3-132 3-135 3-136	LASP LASP LASP	small small small small small	mediun intense intense intense intense	n no no no no no		small small small small small	presen presen presen presen presen	t tooth t - t - t tooth t - t - t tooth t -	bi bi bi uni uni	smo smo smo smo smo	oth proth at oth at oth at oth at oth at	esent osent osent osent osent	distinct distinct - distinct distinct distinct	reddis br red reddis br red br red reddis	sh - sh - l - sh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L	3- 127 3- 132 3- 135 3- 136 3- 141	LASP LASP LASP LASP LASP	small small small small small small	mediun intense intense intense intense intense	n no no no no no no no no		small small small small small small	presen presen presen presen presen presen	t tooth t - t - t tooth t - t tooth t - t -	bi bi bi uni uni uni	smo smo smo smo smo smo	oth protection of the algorith algorithms algorithms algorithms algorithms algorithms also also algorithms also also also algorithms also also also also also also also als	esent osent osent osent osent osent	distinct distinct - distinct distinct distinct	reddis br red reddis br red br red	sh - sh - l - sh - l - sh - l -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N	3- 127 3- 132 3- 135 3- 136 3- 141 3- 144	LASP LASP LASP LASP LASP LASP	small small small small small small, to	medium intense intense intense intense intense intense	n no no no no no no no zono	es	small small small small small small small	present present present present present present present	t tooth t - t - t tooth t - t tooth t - t - t - t -	bi bi bi uni uni uni bi	smo smo smo smo smo smo smo	oth protection of the content of the	esent osent osent osent osent osent esent	distinct distinct - distinct distinct distinct	reddis br reddis br red br reddis br reddis	sh - sh - l - sh - l - sh - l -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N	3- 127 3- 132 3- 135 3- 136 3- 141 3- 144 3- 145	LASP LASP LASP LASP LASP LASP LASP	small small small small small small, to	medium intense intense intense intense intense intense intense intense	n no no no no no no no zono	es es	small small small small small small small small	presen presen presen presen presen presen presen presen	t tooth t - t - t tooth t - t tooth t - t - t - t - t - t -	bi bi bi uni uni uni bi	smo smo smo smo smo smo smo smo	oth proth at oth oth oth at oth oth oth oth oth oth oth oth oth ot	esent osent osent osent osent osent osent osent osent	distinct distinct distinct distinct distinct - distinct	reddis br red reddis br red br red reddis br red	sh - sh - sh - sh - sh - sh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, to small small small	mediun intense	n no no no no no zono no	9S 9S	small small small small small small small small small	presen presen presen presen presen presen presen presen presen	t tooth t - t - t tooth t - t tooth t - t - t - t - t - t - t -	bi bi uni uni uni bi bi	smo smo smo smo smo smo smo smo	oth proth all oth all oth all oth all oth all oth all oth proth all oth all ot	esent osent	distinct	reddis br red reddis br red br red reddis br red reddis br red creddis dk red	sh - sh - sh - sh - sh - ssh - ssh - ssh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, to small small small small	mediun intense	n no no no no no zono no	9S 9S	small small small small small small small small small small	presen presen presen presen presen presen presen presen presen	t tooth t - t - t tooth t - t tooth t - t - t - t - t - t - t -	bi bi uni uni uni bi bi bi	smo smo smo smo smo smo smo smo	oth proth about ab	esent psent	distinct distinct distinct distinct distinct distinct distinct	reddis br red reddis br red br reddis br reddis br reddis creddis dk rec reddis	sh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, tr small small small small small small	mediun intense	n no no no no no zono no	es es rings	small small small small small small small small small small small small	presen presen presen presen presen presen presen presen presen presen	t tooth t - t - t tooth t - t tooth t - t t - t - t t - t - t - t - t - t -	bi bi uni uni uni bi bi bi uni bi	smo smo smo smo smo smo smo smo smo	oth proth about ab	esent psent	distinct distinct distinct distinct distinct distinct distinct distinct distinct - distinct	reddis br red reddis br red br reddis br red reddis br red reddis creddis dk red reddis reddis	sh -   -   -   -   -   -   -   -   -   -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, to small small small small small small small	mediun intense	n no no no no no no zono no	es es rings	small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t tooth t - t - t t - t t - t - t t - t t - t t - t t -	bi bi bi uni uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth all oth all	esent osent osent osent osent osent osent osent osent esent osent osent osent	distinct	reddis br red reddis br red br reddis br reddis br reddis creddis reddis reddis reddis reddis reddis	sh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small small small small small small small small small small	mediun intense	n no no no no no no zono no no few no	es es rings	small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t tooth t - t - t - t - t - t - t - t - t - t -	bi bi bi uni uni uni bi bi bi uni uni uni uni bi uni uni	smo smo smo smo smo smo smo smo smo smo	oth proth about ab	esent osent	distinct	reddis br red reddis br red br reddis br reddis creddis dk red reddis reddis reddis reddis	sh -	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, tr small small small small small small small small small	mediun intense	n no no no no no no zono few no no zono zono zono zono zono zono zo	es es rings	small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t tooth t - t - t - t - t - t - t - t - t - t -	bi bi bi uni uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth all oth all	esent psent	distinct	reddis br red reddis br red reddis br red reddis reddis reddis reddis reddis reddis		
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175 3-178	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, tr small small small small small small small small small small	mediun intense	n no no no no no no zono few no no zono zono zono zono zono zono zo	es es rings	small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t t - t - t - t - t - t - t - t - t	bi bi bi uni uni uni bi bi bi uni uni uni uni bi uni uni	smo smo smo smo smo smo smo smo smo smo	oth proth all oth all	esent osent	distinct	reddis br red reddis br red reddis br red reddis	Sh	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N 179 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, tr small small small small small small small small small	mediun intense	n no no no no no no zono no few no zono no zono no	es es rings	small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t - t - t - t - t - t - t - t - t -	bi bi bi uni uni uni bi bi bi uni bi uni bi uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth all oth all	esent psent	distinct	reddis br red reddis br red reddis br red reddis reddis reddis reddis reddis reddis	Sh	
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N 179 - S3L 181 - S3N	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175 3-178 3-179 3-181	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, ti small small small small small, ti small small small, ti	mediun intense	n no	es es rings	small small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t t - t - t - t - t - t t -	bi bi bi uni uni bi bi bi bi uni bi uni bi bi uni bi bi uni bi uni bi bi uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth about ab	esent psent	distinct	reddis br red br reddis br red creddis br red reddis creddis reddis br red br red creddis reddis reddis reddis reddis reddis reddis		
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N 179 - S3L 181 - S3N 194 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175 3-178 3-179	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small, tr small small small small small small, tr small small small small small small small small small	mediun intense	n no	es es rings es	small small small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t tooth t - t - t -	bi bi bi uni uni bi bi bi uni bi uni bi uni bi bi uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth about ab	esent psent	distinct	reddis br red br reddis br reddis br reddis creddis reddis reddis reddis reddis br red		
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 145 - S3N 151 - S3N 152 - S3L 154 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N 179 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175 3-178 3-179 3-181	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, ti small small small small small, ti small small small, ti	mediun intense	n no	es es rings es	small small small small small small small small small small small small small small small small small small	presen	t tooth t - t - t tooth t - t tooth t - t - t - t - t - t - t - t - t - t -	bi bi bi uni uni bi bi bi bi uni bi uni bi bi uni bi bi uni bi uni bi bi uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth about ab	esent psent	distinct	reddis br red br reddis br red creddis br red reddis creddis reddis br red br red creddis reddis reddis reddis reddis reddis reddis		
132 - S3N 135 - S3N 136 - S3L 141 - S3L 144 - S3N 151 - S3N 151 - S3N 152 - S3L 155 - S3L 169 - S3L 175 - S3N 178 - S3N 179 - S3L 181 - S3N 194 - S3L	3-127 3-132 3-135 3-136 3-141 3-144 3-145 3-151 3-152 3-154 3-155 3-169 3-175 3-178 3-178 3-179 3-181 3-194	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small small small, to small small small small small small small small small small small small small, to small smal	mediun intense	n no	es es rings es	small small	presen	t tooth t - t - t tooth t - t - t - t - t - t - t - t - t - t -	bi bi bi uni uni bi bi bi bi uni bi uni bi bi uni bi bi uni bi bi uni bi	smo smo smo smo smo smo smo smo smo smo	oth proth all oth all	esent psent	distinct	reddis br red br reddis br reddis br reddis br reddis creddis		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
212 - S3L	3-212	LASP	n	5- 10	У	very low	-	>200	ÎL.	RB	У	У	У	rc	n	10.5 cm
215 - S3N	3-215	LASP	n	5- 10	У	medium	-	50-100	N	RB	у	У	У	rc	n	6.5 cm
220 - S3L	3-220	LASP	V	-	-	medium	open	100-200	L	RB	y	V	٧	rc	n	10.3 cm
223 - S3N	3-223	LASP	n	<5	У	low		50-100	N	RB	y	У	v	rc	n	5.2 cm
226 - S3N	3-226	LASP	n	>10	V	medium	-	>200	N	RB	V	V	v	rc	n	18 cm
227 - S3L	3-227	LASP	n	5- 10	У	medium	-	100-200	L	RB	У	٧	٧	rc	n	12 cm
230 - S3N	3-230	LASP	n	>10	-	medium	-	100-200	N	RB	У	٧	У	rc	n	-
231- S3L	3-231	LASP	n	<5	٧	medium	open	100-200	L	RB	У	٧	٧	rc	n	10.2 cm
232 - S3L	3-232	LASP	n	<5	٧	low	-	100-200	L	RB	У	٧	٧	rc	n	9 cm
239 - S3L	3-239	LASP	n	5- 10	У	medium	-	50-100	L	RB	У	٧	٧	rc	n	-
2 - S4N	4-2	LASP	n	<5	У	very high	-	<50	N	RB	У	У	У	rc	n	8.5 cm
7 - S4L	4-7	LASP	У	-	У	high	open	<50	L	RB	У	У	٧	rc	n	6 cm
13 - S4N	4- 13	LASP	У	-	-	low	open	50-100	N	RB	У	У	V	rc	n	7.2 cm
15 - N4N	4- 15	LASP	n	>10	-	low	-	100-200	N	RB	У	У	V	rc	n	-
17 - S4L	4- 17	LASP	У	-	n	very high	open	50-100	L	RB	У	V	V	rc	n	11.3 cm
22 - S4L	4-22	LASP	У	-		medium	open	50-100	L	RB	У	V	V	rc	n	7 cm
24 - S4N	4-24	LASP	V	-	-	low	open	100-200	N	RB	У	V	V	rc	n	5.5 cm
25 - S4L	4-25	LASP	У	-	n	low	closed	100-200	L	RB	У	V	У	rc	n	6.5 cm
37 - S4L	4-37	LASP	У	-	V	high	open	50-100	1	RB	У	V	V	rc	n	10.5 cm
39 - S4N	4-39	LASP	n	<5	-	medium	-	50-100	N	RB	У	У	,	rc	n	7 cm
49 - S4N	4-49	LASP	n	5- 10	У	medium		100-200	N	RB	-	-	y V	rc	n	7 0111
50 - S4L	4-49	LASP			У			>200	L	RB	У	У	,	_		10 F am
50 - S4L 52 - S4N	4-50		n	<5	У	medium	open	50-100	N		У	У	У	rc	n	10.5 cm
54 - S4N		LASP	n	<5	У	medium	-			RB	У	У	У	rc	n	5.5 cm
	4-54	LASP	У	-	-	high	closed	<50	N	RB	у	У	У	rc	n	3.2 cm
Field Code	<b>Lab Code</b> 3-212	species	RD	EW		cw	PR	TT	TTW		SOBP	SpTh	SW		ARred	others
212 - S3L							amall	nrocont					diation		ddiab	
O4E CON		LASP	small			no	small	p			smooth	absent	distind		ddish	-
215 - S3N	3-215	LASP	small	low	1	fewrings	small	present	- I	oi	smooth	absent	-	re	ddish	root?
220 - S3L	3-215 3-220	LASP LASP	small small	low inte	nse	few rings no	small small	present present	- i	oi oi	smooth smooth	absent absent	distind	re dl	ddish cred	root?
220 - S3L 223 - S3N	3-215 3-220 3-223	LASP LASP LASP	small small large	low inte inte	nse i	few rings no few rings	small small small	present present present	- I	oi oi oi	smooth smooth smooth	absent absent absent		re dl re	ddish cred ddish	root? - -
220 - S3L 223 - S3N 226 - S3N	3-215 3-220 3-223 3-226	LASP LASP LASP LASP	small small large small	low inte inte inte	nse i	fewrings no fewrings zones	small small small small	present present present present	-     -     -	oi oi oi	smooth smooth smooth smooth	absent absent absent absent	- - disting	re dl re	ddish cred ddish red	root? - - -
220 - S3L 223 - S3N 226 - S3N 227 - S3L	3-215 3-220 3-223 3-226 3-227	LASP LASP LASP LASP LASP	small small large small small	low inte inte inte inte	nse inse inse inse	fewrings no fewrings zones no	small small small small small	present present present present present	-   -   -   -	oi oi oi oi	smooth smooth smooth smooth smooth	absent absent absent absent absent	- - disting	re dl re re ct br	ddish red ddish red ddish	root? - - - -
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N	3-215 3-220 3-223 3-226 3-227 3-230	LASP LASP LASP LASP LASP LASP	small small large small small small, t	low inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones	small small small small small small	present present present present present present	- I - I - I - I	oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent	- disting	re dl re tt bi	ddish cred ddish red	root? - - - -
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L	3-215 3-220 3-223 3-226 3-227 3-230 3-231	LASP LASP LASP LASP LASP LASP LASP	small small large small small small, t	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones	small small small small small small small	present present present present present present present present present	-	oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent	- disting disting - disting	re dl re t bi	ddish cred ddish red ddish ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232	LASP LASP LASP LASP LASP LASP LASP LASP	small large small small small, t small small	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no no	small small small small small small small small	present	- I - I - I - I - I	oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent	- distinct d	re di re	ddish cred ddish red ddish ddish	root? - - - -
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239	LASP LASP LASP LASP LASP LASP LASP LASP	small large small small small, t small small large	low inte inte inte inte inte inte inte med med	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings	small small small small small small small small small	present	- 1 - 1 - 1 - 1 - 1 - 1 - 1	oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct	red did red to the control of the co	ddish cred ddish red ddish ddish cred	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small small small small small large small	low inte inte inte inte inte inte inte inte	nse	few rings no few rings zones no zones no no few rings	small small small small small small small small small small	present	- I - I - I - I - I - I - I - I - I - I	oi oi oi oi oi oi oi oi oi	smooth	absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct	red dl red	ddish cred ddish red ddish ddish cred cred	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small small small large small small small small small small small	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	few rings no few rings zones no zones no no few rings few rings few rings	small small small small small small small small small small small	present	- I	oi oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent	distinct distinct distinct distinct distinct distinct distinct distinct distinct	red did red to the control of the co	ddish c red ddish c red ddish ddish c red c red c red c red ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-232 3-239 4-2 4-7	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, t small small large small small small	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	few rings no few rings zones no zones no no few rings few rings few rings no no	small small small small small small small small small small small small	present	-   1   -   1	oi oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct	red did red red red red red red red red red re	ddish cred ddish ddish ddish cred cred cred ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, 1 small, 1 small large small small small	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings fewrings fewrings no no zones	small small small small small small small small small small small	present	- I	oi oi oi oi oi oi oi oi oi oi oi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct	red did red red red red red red red red red re	ddish cred ddish ddish ddish cred cred cred ddish cred ddish cred ddish ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, small small large small small large small	low inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	few rings no few rings zones no zones no no few rings few rings few rings no no	small small small small small small small small small small small small	present	- I		smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct	red did red di	ddish cred ddish ddish ddish cred cred cred ddish cred ddish ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 17 - S4L 17 - S4L 22 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, small small, small small large small small small small small small large small small small small small small small	low inte inte inte r inte med inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings fewrings fewrings no no zones	small small small small small small small small small small small small small small small small	present	- I		smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct dist	red dl red	ddish cred ddish ddish ddish cred cred cred ddish cred ddish cred ddish ddish red	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L 22 - S4L 24 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small large small small small small small small small small	low interinterinterinterinterinterinterinter	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings fewrings fewrings no zones fewrings	small small small small small small small small small small small small small small small small	present	- I		smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct absen absen absen	red dl red	ddish cred ddish ddish ddish cred cred cred ddish cred ddish cred ddish red ddish red	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L 22 - S4L 24 - S4L 25 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22 4-24	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, small small, small small large small small small small small small large small small small small small small small	low interinterinterinterinterinterinterinter	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings fewrings fewrings no no zones	small small small small small small small small small small small small small small small small	present	- I		smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct dist	red dl red	ddish cred ddish ddish ddish cred cred cred ddish cred ddish cred ddish ddish red	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L 22 - S4L 24 - S4L 25 - S4L 27 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small large small small small small small small small small	low inte inte inte inte med inte inte med inte inte med inte med inte med inte inte med inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	fewrings no fewrings zones no zones no fewrings fewrings fewrings no zones fewrings	small small small small small small small small small small small small small small small small	present	- I		smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinct absen absen absen	red dl red	ddish cred ddish ddish ddish cred cred cred ddish cred ddish cred ddish red ddish red	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L 22 - S4L 24 - S4N 25 - S4L 37 - S4L 39 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22 4-24	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small, 1 small large small small small small small small small small	low inte inte inte med inte inte inte med inte inte inte inte inte inte inte inte	nse inse inse inse inse inse inse inse i	few rings no few rings zones no zones no no few rings few rings no no sew rings few rings no no few rings few rings no no zones few rings few rings	small small small small small small small small small small small small small small small small small	present	- I		smooth	absent a	distinct absen absen absen absen absen	red dl red	ddish cred ddish ddish cred cred ddish ddish cred ddish cred ddish cred ddish red ddish cred ddish cred ddish cred ddish cred ddish cred ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 15 - N4N 15 - N4N 17 - S4L 22 - S4L 24 - S4N 25 - S4L 37 - S4L 39 - S4N 49 - S4N	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22 4-24 4-25 4-37	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small, 1 small large small small large small small small small small small small	low inte inte inte inte med inte inte inte inte inte inte inte inte	nse   nse	few rings no few rings zones no zones no few rings few rings no zones few rings no no zones few rings few rings	small small small small small small small small small small small small small small small small small small small	present	-       -	oi o	smooth	absent a	distinct absen absen absen distinct dis	red did red di	ddish cred ddish ddish cred cred ddish cred cred ddish cred	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 13 - S4N 15 - N4N 17 - S4L 22 - S4L 24 - S4N 25 - S4L 37 - S4L 39 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22 4-24 4-24 4-25 4-37 4-39	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small small large small small large small	low inte inte inte inte med inte inte inte inte inte inte inte inte	nse	few rings no few rings zones no zones no few rings few rings few rings no no zones few rings no accepted few rings few rings no no zones few rings no accepted few rings no few rings no few rings no few rings accepted few rings no no no	small	present	-       -	oi o	smooth	absent a	distinct absen absen absen distinct dis	red did red di	ddish cred ddish cred cred ddish red ddish	root?
220 - S3L 223 - S3N 226 - S3N 227 - S3L 230 - S3N 231 - S3L 232 - S3L 239 - S3L 2 - S4N 7 - S4L 15 - N4N 17 - S4L 22 - S4L 24 - S4N 25 - S4L 37 - S4L 39 - S4L	3-215 3-220 3-223 3-226 3-227 3-230 3-231 3-232 3-239 4-2 4-7 4-13 4-15 4-17 4-22 4-24 4-25 4-37 4-39 4-49	LASP LASP LASP LASP LASP LASP LASP LASP	small small large small small small small small large small	low interinter interinterinterinterinterinterinterinter	nse inse inse inse inse inse inse inse i	few rings no few rings zones no zones no no few rings few rings few rings few rings few rings few rings no zones few rings no zones few rings no few rings no zones few rings no zones few rings no zones few rings no zones	small small	present	- I	oi o	smooth	absent a	distinct absen absen absen distinct dis	red did red di	ddish cred ddish ddish cred cred ddish cred ddish	root?

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	1 Sec	radius
57 - L4N	4-57	LASP	У	-	У	medium	closed	100-200	N	RB	У	У	У	rc	n	7 cm
67 - S4L	4-67	LASP	У	-	-	medium	open	100-200	L	RB	y	у	У	rc	n	9.8 cm
69 - S4L	4-69	LASP	У	-	v	high	open	50-100	L	RB	y	У	V	rc	n	6.9 cm
72 - S4L	4-72	LASP	У	-	-	medium	open	100-200	L	RB	y	У	У	rc	n	8.2 cm
36 - S4L	4-86	LASP	У	-	V	medium	open	100-200	L	RB	V	٧	٧	rc	n	10 cm
91- S4N	4-91	LASP	У	-	V	low	closed	50- 100	N	RB	V	У	V	rc	n	3.6 cm
97 - S4N	4-97	LASP	У	-	V	high	open	<50	N	RB	У	У	У	rc	n	6.6 cm
98 - S4L	4-98	LASP	У	-	V	high	open	50-100	L	RB	V	V	V	rc	n	7.2 cm
103 - S4L	4-103	LASP	n	<5	V	medium	-	100-200	L	RB	V	У	V	rc	n	11 cm
107 - S4L	4-107	LASP	У	-	- -	medium	closed	50-100	L	RB	У	V	V	rc	n	6 cm
107 - 54L 108 - S4L	4-108	LASP	У	-	-	low	open	50-100	L	RB	У	У	У	rc	n	6 cm
110 - S4N	4- 110	LASP	-	-	У	medium	open	50-100	N	RB	У	У	У	rc	n	3.9 cm
112 - S4N	4- 112	LASP	y	-		very low	closed	100-200	N	RB	У			rc	n	4.4 cm
15 - S4N	4- 115	LASP	-	-	y -	very low		100-200	N	RB	-	У	У	rc	n	6.2 cm
18 - S4L	4- 118	LASP	У	-		,	open	50-100	L	RB	У	У	У			
16 - S4L 27 - S4N		LASP	У	-	y -	high	open	<50	N	RB	У	У	У	rc	n	10 cm
127 - S4N 130 - S4N	4-127		У			medium	closed		N		У	У	У	rc	n	3.1cm
130 - S4N 133 - S4N	4- 130 4- 133	LASP	n	<5 -	У	medium	open	100-200 50-100	N	RB RB	У	У	У	rc	n	9 cm
		_	У		У	very low	closed				У	у	У	rc	n	2.6 cm
136 - S4N	4-136	LASP	n	<5	n	low	closed	<50	N	RB	У	у	У	rc	n	4.8 cm
137 - S4N	4-137	LASP	У	-	У	low	open	50-100	N	RB	У	у	У	rc	n	3.5 cm
38 - S4N	4-138	LASP	у		-	very low	closed	100-200	N	RB	У	у	У	rc	n	4 cm
40 - S4L	4- 140	LASP	n	<5	-	medium	open	50-100	L	RB	У	У	У	rc	n	7 cm
148 - S4L	4- 148	LASP	у	-	у	medium	open	50- 100	L	RB	У	У	У	rc	n	6.6 cm
153 - S4L	4- 153	LASP	у	-	у	medium	open	50- 100	L	RB	У	У	У	rc	n	9 cm
ield Code																
	Lab Code	species			EWLW	CW	PR		TTW	BP	SOBP	SpTh	SW		LARred	
	4-57	LASP	small	į	ntense	no	small	present	-	bi	smooth	absent		inct	reddish	haselwuc
7 - S4L	4-57 4-67	LASP LASP	small small	i	ntense ntense	no few rings	small small	present present	- -	bi uni	smooth smooth	absent absent	dist -	inct	reddish br red	haselwuci -
67 - S4L 69 - S4L	4-57 4-67 4-69	LASP LASP LASP	small small small,	i tr i	ntense ntense ntense	no	small	present present	-	bi uni bi	smooth smooth smooth	absent absent absent	dist -	inct inct	reddish br red reddish	
87 - S4L 89 - S4L 72 - S4L	4-57 4-67 4-69 4-72	LASP LASP LASP LASP	small small, small,	i tr i	ntense ntense	no few rings	small small	present present present	- -	bi uni bi bi	smooth smooth smooth smooth	absent absent absent absent	dist - dist -	inct	reddish br red reddish bright	haselwuci -
57 - L4N 57 - S4L 59 - S4L 72 - S4L 86 - S4L	4-57 4-67 4-69 4-72 4-86	LASP LASP LASP LASP LASP	small small small,	i tr i tr i	ntense ntense ntense	no few rings no	small small small	present present present present	- - -	bi uni bi	smooth smooth smooth	absent absent absent	dist - dist -	inct	reddish br red reddish	haselwucl - -
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N	4-57 4-67 4-69 4-72 4-86 4-91	LASP LASP LASP LASP LASP LASP	small small, small,	i tr i tr i	ntense ntense ntense ntense	no few rings no no	small small small small	present present present present present	- - -	bi uni bi bi	smooth smooth smooth smooth	absent absent absent absent	dist - dist - dist	inct	reddish br red reddish bright	haselwucl - - -
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N	4-57 4-67 4-69 4-72 4-86	LASP LASP LASP LASP LASP	small small, small, small,	tr i tr i tr i tr i	ntense ntense ntense ntense ntense	no few rings no no few rings	small small small small small	present present present present present present	- - - -	bi uni bi bi bi	smooth smooth smooth smooth smooth	absent absent absent absent absent	dist - dist - dist	inct inct inct sent	reddish br red reddish bright dk red	haselwuci - - - - -
87 - S4L 89 - S4L 72 - S4L	4-57 4-67 4-69 4-72 4-86 4-91	LASP LASP LASP LASP LASP LASP	small small, small, small, small	tr i tr i tr i tr i tr i	ntense ntense ntense ntense ntense ntense	no few rings no no few rings few rings	small small small small small small	present present present present present present present	- - - - -	bi uni bi bi bi bi	smooth smooth smooth smooth smooth	absent absent absent absent absent absent	dist - dist - dist abs	inct inct inct sent	reddish br red reddish bright dk red reddish	haselwucl
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N 97 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97	LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small,	i tr	ntense ntense ntense ntense ntense ntense ntense	no few rings no no few rings few rings few rings	small small small small small small small	present present present present present present present present present	- - - - -	bi uni bi bi bi bi uni	smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent	dist - dist - dist abs	inct inct inct sent	reddish br red reddish bright dk red reddish br red	haselwuch - - - - - -
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N 97 - S4N 98 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small, small,	i tr i i i i	ntense ntense ntense ntense ntense ntense ntense ntense	no few rings no no few rings few rings few rings few rings	small small small small small small small small	present present present present present present present present present	- - - - - -	bi uni bi bi bi bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent	dist - dist - dist abs	inct inct inct sent	reddish br red reddish bright dk red reddish br red	haselwucl
67 - S4L 69 - S4L 72 - S4L 66 - S4L 61 - S4N 97 - S4N 98 - S4L 03 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small, small small	i tr	ntense ntense ntense ntense ntense ntense ntense ntense ntense	no few rings no no few rings few rings few rings few rings no	small small small small small small small small small	present	- - - - - -	bi uni bi bi bi uni bi uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent	dist - dist - dist abs	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br reddish br red reddish reddish	haselwucl
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N 97 - S4N 98 - S4L 003 - S4L 007 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small, small small	i i i tr i i i i	ntense	no few rings no no few rings few rings few rings few rings no no	small small small small small small small small small small	present	- - - - - - -	bi uni bi bi bi uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist - dist dist	inct inct inct sent	reddish br red reddish bright dk red reddish bright reddish br red reddish reddish reddish	haselwucl
67 - S4L 69 - S4L 72 - S4L 86 - S4L 91 - S4N 97 - S4N 98 - S4L 903 - S4L 907 - S4L 908 - S4L 908 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small, small small small	i	ntense	no few rings no no few rings few rings few rings few rings no no no	small small small small small small small small small small small	present	- - - - - - - - -	bi uni bi bi bi uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist - dist dist	inct inct inct sent inct	reddish br red reddish bright dk red reddish br reddish br red reddish reddish reddish reddish reddish	haselwucl
67 - S4L 69 - S4L 72 - S4L 166 - S4L 11 - S4N 107 - S4N 108 - S4L 107 - S4L 108 - S4L 10 - S4N 112 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small, small small small small	i	ntense	no few rings no no few rings few rings few rings few rings no no no no	small small small small small small small small small small small small small	present	- - - - - - - - - -	bi uni bi bi bi uni bi uni bi uni uni uni	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist - dist dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish	haselwucl
67 - S4L 69 - S4L 62 - S4L 66 - S4L 611 - S4N 67 - S4N 68 - S4L 603 - S4L 605 - S4L 606 - S4L 607 - S4L 607 - S4L 608 - S4L 608 - S4L 609 - S4N 610 - S4N 610 - S4N 611 - S4N 612 - S4N 613 - S4N 615 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110	LASP LASP LASP LASP LASP LASP LASP LASP	small small small small, small, small, small	i   i   i   tr	ntense	no few rings no no few rings few rings few rings few rings no no no no few rings	small small small small small small small small small small small small small small small	present	- - - - - - - - -	bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist - dist dist - dist -	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish reddish	haselwucl
7 - S4L 9 - S4L 2 - S4L 6 - S4L 1 - S4N 7 - S4N 8 - S4L 03 - S4L 07 - S4L 08 - S4L 10 - S4N 12 - S4N 15 - S4N 18 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115	LASP LASP LASP LASP LASP LASP LASP LASP	small small small, small, small, small, small small small small small small, small,	i   i   i   tr	ntense	no few rings no no few rings few rings few rings few rings no no no few rings few rings	small small small small small small small small small small small small small small small small	present	- - - - - - - - - -	bi uni bi bi bi uni bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist - dist dist - dist -	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish br red reddish br red reddish br red reddish br red	haselwucl
7 - S4L 9 - S4L 2 - S4L 6 - S4L 1 - S4N 7 - S4N 8 - S4L 03 - S4L 07 - S4L 08 - S4L 10 - S4N 12 - S4N 15 - S4N 18 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115 4-118 4-127	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small small small small small, small, small, small, small,	i   i   i   i   tr	ntense	no few rings no no few rings few rings few rings few rings no no no few rings few rings no no no no few rings few rings few rings few rings few rings fow rings fow rings fow rings fow rings fow rings	small small small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - -	bi uni bi bi bi uni bi uni bi uni bi uni bi bi bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist -	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish br red reddish br reddish br reddish br red reddish br red reddish br red reddish br red	haselwucl
77 - S4L 99 - S4L 22 - S4L 66 - S4L 11 - S4N 17 - S4N 18 - S4L 007 - S4L 008 - S4L 100 - S4N 112 - S4N 115 - S4N 118 - S4L 217 - S4N 218 - S4N 219 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115 4-118	LASP LASP LASP LASP LASP LASP LASP LASP	small small small, small, small, small small small small small, small, small, small	i   i   i   tr	ntense	no few rings no no few rings few rings few rings no no no few rings few rings few rings few rings no no no no few rings few rings few rings few rings fow rings no no	small small small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - -	bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi uni bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	dist - dist - dist abs dist -	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish reddish reddish reddish br red reddish br red	haselwucl
77 - S4L 99 - S4L 22 - S4L 66 - S4L 11 - S4N 177 - S4N 188 - S4L 107 - S4L 108 - S4L 109 - S4N 119 - S4N 119 - S4N 110 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-115 4-115 4-118 4-127 4-130 4-133	LASP LASP LASP LASP LASP LASP LASP LASP	small small small, small, small, small small small small small, small, small small small small	i   i   i   tr	ntense medium ntense medium	no few rings no no few rings few rings few rings few rings no no no few rings few rings no no no few rings	small small small small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	bi uni bi bi bi uni bi bi bi bi	smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth smooth	absent a	dist - dist - dist abs dist - dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish reddish reddish br red	haselwucl
77 - S4L 69 - S4L 69 - S4L 61 - S4L 61 - S4N 77 - S4N 78 - S4L 03 - S4L 007 - S4L 008 - S4L 10 - S4N 112 - S4N 115 - S4N 115 - S4N 115 - S4N 115 - S4N 116 - S4N 117 - S4N 118 - S4N 119 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115 4-118 4-127 4-130 4-133 4-136	LASP LASP LASP LASP LASP LASP LASP LASP	small small, small, small, small, small small small, small, small, small small small small small small	tr i	ntense mtense ntense mtense mtense mtense mtense mtense mtense medium ntense medium ntense	no few rings no no few rings few rings few rings few rings no no no no few rings few rings no no few rings few rings few rings few rings few rings few rings no no few rings no no sew rings no no few rings zones	small small	present		bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi uni bi bi bi bi bi bi bi bi	smooth	absent a	dist - dist - dist abs - dist dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish br red reddish bright br red br red	haselwuc
67 - S4L 69 - S4L 62 - S4L 66 - S4L 101 - S4N 107 - S4N 108 - S4L 1008 - S4L 1008 - S4L 1009 - S4N 1109 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115 4-118 4-127 4-130 4-133 4-136 4-137	LASP LASP LASP LASP LASP LASP LASP LASP	small	i   i   i   tr	ntense medium ntense ntense	no few rings no no few rings few rings few rings few rings no no no few rings no no few rings no no no no	small small	present	- - - - - - - - - - - - - -	bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi	smooth	absent a	dist - dist - dist abs - dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish br red reddish bright br red br red br red br red br red	haselwucl
67 - S4L 69 - S4L 69 - S4L 66 - S4L 611 - S4N 67 - S4L 603 - S4L 607 - S4L 608 - S4L 608 - S4L 609 - S4N 619 - S4N	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-115 4-115 4-118 4-127 4-130 4-133 4-136 4-137 4-138	LASP LASP LASP LASP LASP LASP LASP LASP	small	i   i   i   tr	ntense	no few rings no no few rings few rings few rings few rings no no no few rings no no no large zones	small small	present		bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi	smooth	absent a	dist - dist - dist abs dist - dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish reddish br red reddish bright br red reddish bright br red reddish bright br red reddish	haselwucl
57 - S4L 59 - S4L 72 - S4L 86 - S4L 91 - S4N 97 - S4N 98 - S4L	4-57 4-67 4-69 4-72 4-86 4-91 4-97 4-98 4-103 4-107 4-108 4-110 4-112 4-115 4-118 4-127 4-130 4-133 4-136 4-137	LASP LASP LASP LASP LASP LASP LASP LASP	small	tr i	ntense medium ntense ntense	no few rings no no few rings few rings few rings few rings no no no few rings no no few rings no no no no	small small	present		bi uni bi bi bi uni bi uni bi uni bi uni bi uni bi	smooth	absent a	dist - dist - dist abs - dist	inct inct inct inct inct inct inct inct	reddish br red reddish bright dk red reddish br red reddish reddish reddish br red reddish bright br red br red br red br red br red	haselwucl

Field Code	Lab Co			pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
l60 - S4N	4- 160	LASF	,	n	<5	У	very high	-	<50	N	RB	У	У	У	rc	n	10 cm
61- S4L	4- 161	LASF	,	n	<5	У	medium	-	100-200	L	RB	У	У	У	rc	n	15.5 cm
62 - S4L	4- 162	LASF	,	У	-	-	medium	open	50-100	L	RB	У	У	У	rc	n	7.7 cm
65 - S4N	4- 165	LASF	,	n	5- 10	-	medium	-	100-200	N	RB	У	У	У	rc	n	15 cm
67 - S4L	4- 167	LASF	,	n	5- 10	-	medium	-	50-100	L	RB	У	У	У	rc	n	11 cm
3 - S1N	1-8	LASF	(PCSP)	n	<5	У	high	-	50-100	N	RB	У	У	У	rc	n	10.3 cm
33 - S1N (root)	1- 33	LASF	PCSP	) у	-	У	medium	open	50-100	N	RB	У	У	У	rc	n	9.5 cm
37 - S1N	1-37	LASF	PCSP	n	>10	٧	medium	-	50-100	N	RB	У	У	٧	rc	n	-
79 - S1L	1- 79	LASF	PCSP	у у	-	٧	low	open	50-100	L	RB	У	У	٧	rc	n	5.5 cm
143 - S1N (root)	1- 143	LASF	PCSP	) y	-	У	medium	open	50-100	N	RB	y	y	٧	rc	n	6.5 cm
3 - S2L	2-3		P(PCSP)	) y	-	-	high	open	100-200	L	RB	y	y	У	rc	n	12 cm
18 - S2N	2-48		PCSP	) y	-	٧	low	closed	100-200	N	RB	У	У	У	rc	n	7.5 cm
59 - S3N	3-59		(PCSP	у у	-	У	low	open	100-200	N	RB	٧	У	٧	rc	n	5 cm
64 - S3N	3-64		(PCSP	y y	-	-	high	closed	50-100	N	RB	У	У	٧	rc	n	9.1cm
98 - S3L	3-98		(PCSP)	y ) y	-	V	low	closed		L	RB	У	У	V	rc	n	7.2 cm
3 - S3N	3-8		(PCSP)	y ) y	-	V	high	closed		N	RB	У	У	V	rc	n	18 cm
6 - S3L	3-16		(PCSP)	n	<5	- Y	medium	open	<50	L	RB	У	У	V	rc	n	8 cm
27 - S3N	3-10		P (PCSP)	) y	-	V	medium	closed		N	RB	У	У	V	rc	n	6.5 cm
158 - S3L	3-158		(PCSP)		-	У	medium	closed		L	RB	У	У	V	rc	n	8 cm
202 - S3N	3-100		P (PCSP)		-	У	medium	closed		N	RB	У	У	V	rc	n	4.5 cm
32 - S4L	4-32		(PCSP)		-	-	medium	open	50-100	L	RB	-	-	-	rc	n	4.5 cm
3 - S4N	4-53		(PCSP)	y n	<5	y	high	- open	<50	N	RB	У	У	y	rc	n	6 cm
70 - S4L	4-33		P (PCSP)		5- 10	-	low	-	100-200	L	RB	У	У	-	rc	n	12 cm
71- S4N	4-70		P (PCSP)		3- 10	У	low	closed		N	RB	У	У	У	rc	n	4.5 cm
			_ `		-	у						у	у	у			
Field Code 60 - S4N	Lab Code s 4-160 L	ASP	RD		medium	zones		R T mall pr	esent -	TW E			<b>SpTh</b> absent	S W distinc		Rre d	others
161 - S4L		ASP	sma		intense	no			esent -	b			absent	distinc			_
162 - S4L		ASP								b				-			_
165 - S4N		ASP	sma		intense	few rin	_		CSCIII	b			absent	-	dk re		-
167 - S4L		ASP ASP	sma		intense	zones			esent -				oresent		dk re		-
167 - 54L 3 - S1N		ASP (PCSF	sma	411	intense				0000+	h							-
_	I-0 L			VII					esent -	b			absent	- diation	dk re		
	1 00 1	•	,		low	few rin	gs sı	mall pr	esent -	b	oi -		absent	distinc	t redo	dish	-
		ASP (PCSF	r) sma	all	low medium	few rin large z	gs si cones si	mall pr	esent -	b	oi -	;	absent absent	distinc distinc	t redo	dish	-
33 - S1N (root) 37 - S1N	1-37 L	ASP (PCSF ASP (PCSF	P) sma	all all	low medium medium	few rin large z large z	gs si zones si zones si	mall pr mall pr mall pr	esent - esent - esent -	b b b	oi - oi -	; ;	absent absent absent	distinc distinc	t redo t redo	dish dish	- - dark rose
37 - S1N 79 - S1L	1-37 L 1-79 L	ASP (PCSF ASP (PCSF ASP (PCSF	9) sma 9) sma 9) sma	all all all	low medium medium medium	few rin large z large z few rin	gs si zones si zones si gs si	mall pr mall pr mall pr mall pr	esent - esent - esent -	b b b	oi - oi - oi - uni sr	; ;	absent absent	distinc distinc -	t redo t redo - br re	dish dish ed	-
37 - S1N 79 - S1L 143 - S1N	1- 37 L 1- 79 L 1- 143 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	9) sma 9) sma 9) sma 9) sma	all all all all, tr	low medium medium medium medium	few rin large z large z few rin large z	gs si cones si cones si gs si cones si	mall pr mall pr mall pr mall pr mall pr mall pr	esent - esent - esent - esent - esent -	b b b u b	oi - oi - oi - uni sn	mooth	absent absent absent absent	distinc distinc - - distinc	t redo t redo - br re t redo	dish dish ed dish	-
37 - S1N 79 - S1L 143 - S1N 3 - S2L	1- 37 L 1- 79 L 1- 143 L 2- 3 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	2) sma 2) sma 2) sma 2) sma 2) sma 2) sma	all all all all, tr all, tr	low medium medium medium medium medium	few rin large z large z few rin large z no	gs si cones si cones si gs si cones si	mall pr	esent - esent - esent - esent - esent - esent -	b b u b	oi - oi - oi - ini sn oi - ini sn	nooth a	absent absent absent absent - absent	distinc distinc - - distinc	t redo t redo br re t redo redo	dish dish ed dish dish	- dark rose - -
37 - S1N 79 - S1L 143 - S1N 3 - S2L 48 - S2N	1- 37 L 1- 79 L 1- 143 L 2- 3 L 2- 48 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	P)         sma           P)         sma           P)         sma           P)         sma           P)         sma           P)         sma           P)         larg	all all all all, tr all, tr	low medium medium medium medium medium medium	few rin large z large z few rin large z no large z	gs si cones si cones si gs si cones si sones si	mall pr	esent -	b b b u b	oi -	mooth a	absent absent absent absent - absent absent	distinc distinc - - distinc -	t redo t redo br redo t redo brigl	dish dish ed dish dish ht	- dark rose - - - - black-gree
87 - S1N 79 - S1L 143 - S1N 8 - S2L 48 - S2N 59 - S3N	1- 37 L 1- 79 L 1- 143 L 2- 3 L 2- 48 L 3- 59 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	o) sma	all all all all, tr all, tr le all	low medium medium medium medium medium medium medium medium medium	few rin large z large z few rin large z no large z no	gs si cones si cones si gs si cones si sones si	mall pr	esent -	b b b u b u	oi -	mooth mooth mooth mooth	absent absent absent absent absent absent oresent	distinc distinc - - distinc - -	t redo t redo - br re t redo redo brigl br re	dish dish ed dish dish ht	- dark rose  - black- gree
87 - S1N 79 - S1L 143 - S1N 8 - S2L 18 - S2N 59 - S3N 64 - S3N	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	P) sma	all all all all, tr all, tr ge all, tr	low medium	few rin large z large z few rin large z no large z no zones	gs si cones si cones si gs si cones si si cones si si	mall pr	esent -	b b u u b u b	oi - oi - oi - uni sr oi - uni sr oi - uni sr oi sr uni sr oi sr	mooth mooth mooth mooth mooth	absent absent absent absent absent absent absent oresent absent	distinc distinc distinc distinc distinc distinc	t redo t redo br re t redo redo brigl br re t redo	dish dish ed dish dish ht ed	- dark rose   - black- gree 
37 - S1N 79 - S1L 43 - S1N 3 - S2L 48 - S2N 59 - S3N 54 - S3N 58 - S3L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	P) sma	all all all, tr all, tr je all all, tr	low medium	few rin large z large z few rin large z no large z no zones	gs si cones si gs si cones si gs si cones si cones si si	mall pr	esent -	b b u b u b	oi - oi - oi - oi - uni sr oi - uni sr oi sr uni sr oi sr uni sr	mooth mooth mooth mooth mooth mooth	absent	distinc - distinc - distinc - distinc - distinc distinc	t redo t redo br re t redo redo brigl br re t redo t redo t redo t redo	dish dish ed dish dish ht ed dish	- dark rose  - black- gree 
87 - S1N 79 - S1L 43 - S1N 3 - S2L 48 - S2N 59 - S3N 54 - S3N 58 - S3L 3 - S3N	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-8 L	ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF ASP (PCSF	P) sma	all all all all, tr all, tr le all, tr le all, tr all, tr all, tr	low medium medium medium medium medium medium medium medium medium intense low	few rin large z large z few rin large z no large z no zones no few rin	gs si cones si gs si cones si cones si cones si si si gs si	mall pr	esent -	b b u u b u b	oi - oi - oi - ini sr oi - ini sr oi - ini sr oi sr oi sr ini sr oi sr oi sr oi sr	nooth nooth nooth nooth nooth nooth	absent	distinc distinc distinc distinc distinc distinc distinc	t redo t redo - br re t redo redo brigl br re t redo t redo t redo t redo	dish dish dish dish dish dish dish dish	- dark rose black- gree 
37 - S1N 79 - S1L 43 - S1N 3 - S2L 48 - S2N 59 - S3N 64 - S3N 98 - S3L 3 - S3L 6 - S3L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-8 L 3-16 L	ASP (PCSF ASP (PCSF	P) sma	all all all, tr all, tr all, tr le all, tr all, tr all, tr all, tr all, tr	low medium medium medium medium medium medium medium medium medium intense low intense	few rin large z large z few rin large z no large z no zones no few rin few rin	gs si cones si gs si cones si gs si cones si si gs si gs si	mall pr	esent -	b b u u b u b u b	oi - oi - oi - oii - oii - oii - oii - oii sr	mooth	absent	distinc distinc distinc distinc distinc distinc distinc distinc distinc	t redo t redo - br redo redo brigl br re t redo	dish dish dish dish dish dish dish dish	- dark rose black- gree 
37 - S1N 79 - S1L 43 - S1N 3 - S2L 48 - S2N 59 - S3N 64 - S3N 98 - S3L 3 - S3N 66 - S3L 27 - S3N	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-8 L 3-16 L 3-27 L	ASP (PCSF ASP (PCSF	P) sma	all all all all, tr all, tr e all, tr all, tr all, tr all, tr all, tr	low medium medium medium medium medium medium medium medium medium intense low intense medium	few rin large z large z few rin large z no large z no zones no few rin	gs si cones si cones si gs si cones si cones si si si gs si gs si gs si	mall pr	esent -	b b b u u b b b u u u b b	oi -	mooth	absent absent absent absent absent absent oresent absent absent absent absent absent	distinc	t redo t redo brre t redo redo brigi br re t redo	dish dish dish dish dish dish dish dish	- dark rose black- gree 
37 - S1N 79 - S1L 43 - S1N 3 - S2L 48 - S2N 59 - S3N 64 - S3N 68 - S3L 6 - S3L 27 - S3N 58 - S3L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-16 L 3-27 L 3-158 L	ASP (PCSF ASP (PCSF	P) Sma	all all all all, tr all, tr e all, tr all, tr all, tr all, tr all, tr	low medium medium medium medium medium medium medium medium medium intense low intense	few rin large z large z few rin large z no large z no zones no few rin few rin	gs si cones si cones si gs si cones si cones si si si gs si gs si gs si	mall pr	esent -	b b b u u b b b u u u b b	oi -	mooth	absent	distinc distinc distinc distinc distinc distinc distinc distinc distinc	t redo t redo - br redo redo brigl br re t redo	dish dish dish dish dish dish dish dish	- dark rose black- gree 
87 - S1N 79 - S1L 43 - S1N 8 - S2L 18 - S2N 19 - S3N 64 - S3N 18 - S3L 18 - S3N 19 - S3N 10 - S3L 10 - S3N 10 - S3L 10 - S3N 10 - S3N	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-16 L 3-17 L 3-27 L 3-158 L 3-202 L	ASP (PCSF ASP (PCSF	(i) sma (ii) sma (iii) sma	all all all all, tr all, tr je all, tr all, tr all, tr all all, tr all, tr all, tr all, tr all, tr	low medium medium medium medium medium medium medium medium intense low intense medium medium	few rin large z large z few rin large z no large z no zones no few rin few rin	gs si cones si cones si gs si cones si cones si si si gs si gs si gs si gs si	mall pr	esent -	b b b u u b b b u u u b b u u u	oi -	mooth	absent absent absent absent absent absent oresent absent absent absent absent absent	distinc	t redct t redc - br redc brigg br redc brigg br redct t redct t redct t redct t brigg br redct t redct t redct t redct t redct t redct t brigg t brigg	dish dish dish dish dish dish dish dish	- dark rose black- gree 
87 - S1N 79 - S1L 43 - S1N 8 - S2L 18 - S2N 59 - S3N 54 - S3N 58 - S3L 3 - S3N 6 - S3L 27 - S3N 58 - S3L 58 - S3L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-16 L 3-27 L 3-158 L 3-202 L 4-32 L	ASP (PCSF ASP (PCSF	(i) small sm	all all all all, tr all, tr le all, tr all, tr all, tr all, tr all all, tr all, tr all all, tr all all, tr	low medium medium medium medium medium medium medium medium medium intense low intense medium medium	few rin large z large z few rin large z no large z no zones no few rin few rin no	gs si cones si cones si gs si cones si cones si sones si si sones si si si si si si si si si si si si si s	mall pr	esent -	b b b b b b b b u u u u u u u u	oi -	mooth	absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t redct t redc - br redc brigg br redc brigg br redct t redct t redct t redct t brigg br redct t redct t redct t redct t redct t redct t brigg t brigg	dish dish dish dish dish dish dish dish	- dark rose black- gree 
37 - S1N 79 - S1L 143 - S1N 3 - S2L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-16 L 3-27 L 3-158 L 3-202 L 4-32 L	ASP (PCSF ASP (PCSF	(i) small sm	all all all all, tr all, tr le all, tr all, tr all, tr all, tr all all, tr all, tr all all, tr all all, tr	low medium medium medium medium medium medium medium medium intense low intense medium medium	few rin large z large z few rin large z no large z no zones no few rin few rin no no	gs si cones si gs si cones si gs si cones si cones si si gs si gs si gs si gs si gs si	mall pr	esent -	b b b b b b b b u u u u u u u u	oi -	mooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t redct t redc - br re t redc brig br re t redc t brig t br re brig t br re	dish dish dish dish dish dish dish dish	- dark rose black- gree 
87 - S1N 79 - S1L 43 - S1N 8 - S2L 18 - S2N 59 - S3N 54 - S3N 58 - S3L 3 - S3N 6 - S3L 27 - S3N 58 - S3L 58 - S3L	1-37 L 1-79 L 1-143 L 2-3 L 2-48 L 3-59 L 3-64 L 3-98 L 3-16 L 3-158 L 3-158 L 3-202 L 4-32 L 4-53 L	ASP (PCSF ASP (PCSF	(i) small (iii) sm	all all all all, tr all, tr all, tr all, tr all, tr all, tr all all, tr all all, tr all all, tr	low medium medium medium medium medium medium medium medium intense low intense medium medium medium intense	few rin large z large z few rin large z no large z no zones no few rin few rin no no no	gs si cones si gs si cones si gs si cones si cones si si gs si gs si gs si gs si si	mall pr	esent -	b b b u u b b b b u u u u u u u b b	oi - oi - oi - oi - nni sr oi - nni sr oi - nni sr oi - nni sr oi sr oi - nni sr oi sr oi - nni sr oi sr	mooth	absent absent absent absent absent absent absent absent absent absent absent absent absent absent absent	distinc	t redct t redc - br re t redc brigl br re t redc t brigl t br re t brigl t br re brigl	dish dish dish dish dish dish dish dish	- dark rose black- gree 

Field Code	Lab Code	species	pith	RMT	P fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Se	radiu	S
80 - S4N	4-80	LASP (PCSP)	У	-	У	very low	closed	100-200	N	RB	у	у	У	rc	n	4 cm	
82 - S4N	4-82	LASP (PCSP)	У	-	У	very low	closed	100-200	N	RB	У	у	У	rc	n	4 cm	
84 - S4N	4-84	LASP (PCSP)	У	-	У	medium	closed	50-100	N	RB	У	у	У	rc	n	5 cm	
93 - S4N	4-93	LASP (PCSP)	n	<5	-	medium	-	50-100	N	RB	У	у	У	rc	n	5.5 cn	า
102 - S4N	4-102	LASP (PCSP)	У	-	У	low	closed	50-100	N	RB	У	у	У	rc	n	4 cm	
105 - S4L	4- 105	LASP (PCSP)	У	-	У	low	open	100-200	L	RB	У	у	У	rc	n	9 cm	
128 - S4N	4- 128	LASP (PCSP)	n	<5	У	low	closed	50-100	N	RB	у	у	У	rc	n	3.8 cn	า
Field Code																	
Field Code	Lab Code	species	RD		EWLW	CW	PR	TT	TTW	BP	SOBP	Sp	Th	SW	LAF	₹re d	others
Field Code 80 - S4N	Lab Code 4-80	species LASP (PCSP)	small			zones	PR small	present	TTW -	<b>BP</b> uni	smooth		<b>Th</b> sent	SW -	redd		others
					intense	7			TTW - -			abs		- distinct		lish	others -
80 - S4N	4-80	LASP (PCSP)	small		intense medium	zones	small	present	<b>TTW</b>	uni	smooth	abs	sent	-	redd	lish d	others - -
80 - S4N 82 - S4N	4-80 4-82	LASP (PCSP) LASP (PCSP)	small small		intense medium medium	zones few rings	small small	present present	TTW - - -	uni uni	smooth	abs abs	sent sent	- distinct	redd br re	lish d lish	others - - -
80 - S4N 82 - S4N 84 - S4N	4-80 4-82 4-84	LASP (PCSP) LASP (PCSP) LASP (PCSP)	small small large	tr	intense medium medium intense	zones few rings large zones	small small small	present present present	TTW	uni uni bi	smooth	abs abs abs	sent sent sent	- distinct	redd br re redd	lish d lish d	others - - - -
80 - S4N 82 - S4N 84 - S4N 93 - S4N	4-80 4-82 4-84 4-93	LASP (PCSP) LASP (PCSP) LASP (PCSP) LASP (PCSP)	small small large small,	tr	intense medium medium intense medium	zones few rings large zones no	small small small small	present present present present		uni uni bi uni	smooth smooth -	abs abs abs abs	sent sent sent sent	- distinct distinct -	redd br re redd br re	lish d lish d	others

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
5 - S1N	1- 5	PCSP	n	<5	У	medium	open	50-100	N	RB	У	У	У	rc	n	9.5 cm
11 - S1N	1- 11	PCSP	у	-	٧	medium	closed	100-200	N	RB	y	У	У	rc	n	17.2 cm
18 - S1L	1- 18	PCSP	n	<5	٧	medium	closed	50-100	L	RB	У	V	У	rc	n	9.5 cm
19 - S1N	1- 19	PCSP	n	<5	٧	medium	closed	50-100	N	RB	У	V	У	rc	n	11 cm
22 - S1L	1-22	PCSP	n	>10	v	high	-	<50	L	RB	v	V	У	rc	n	-
23 - S1N	1-23	PCSP	У	-	-	low	closed	50-100	N	RB	У	V	У	rc	n	4.7 cm
36 - S1N	1-36	PCSP	У	-	У	low	open	50-100	N	RB	У	У	У	rc	n	5.7 cm
38 - S1N	1-38	PCSP	У	-	٧	medium	open	50-100	N	RB	У	٧	٧	rc	n	5 cm
39 - S1L	1-39	PCSP	n	<5	٧	medium	open	50-100	L	RB	У	У	٧	rc	n	9.5 cm
47 - S1L	1-47	PCSP	٧	-	٧	high	open	50-100	L	RB	У	٧	У	rc	n	7.5 cm
50 - S1L	1-50	PCSP	n	<5	-	medium	-	50-100	L	RB	У	У	У	rc	n	6 cm
51 - S1L	1-51	PCSP	У	-	У	low	open	100-200	L	RB	У	У	У	rc	n	6.5 cm
53 - S1L	1-53	PCSP	У	-	-	medium	closed	50-100	L	RB	У	У	У	rc	n	4.7 cm
54 - S1L	1-54	PCSP	n	-	У	high	open	50-100	L	RB	У	У	У	rc	n	8.8 cm
57 - S1L	1-57	PCSP	У	-	У	medium	closed	50-100	L	RB	У	У	У	rc	n	5.7 cm
65 - S1N	1-65	PCSP	У	-	-	very high	open	<50	N	RB	У	У	У	rc	n	3.7 cm
66 - S1N	1-66	PCSP	У	-	-	medium	closed	50- 100	N	RB	У	V	V	rc	n	11.5 cm
74 - S1N	1-74	PCSP	У	_	v	medium	open	50-100	N	RB	У	У	У	rc	n	7.8 cm
82 - S1N	1- 82	PCSP	У	-	V	medium	closed	50- 100	N	RB	У	V	У	rc	n	5.9 cm
91- S1L	1-91	PCSP	-	-	,	high		50-100	L	RB	-	,	•	rc	n	9.8 cm
97 - S1L	1-97	PCSP	У	-	У	-	open			RB	У	У	У			
			У		-	medium	open	50- 100	L		У	У	У	rc	n	4 cm
106 - S1N	1- 106	PCSP	У	-	У	high	open	<50	N	RB	У	У	У	rc	n	4.4 cm
107 - S1N	1- 107	PCSP	У	-	У	low	closed	<50	N	RB	У	У	У	rc	n	2.1cm
112 - S1N	1- 112	PCSP	у	-	у	low	open	>200	N	RB	у	у	У	rc	n	9 cm
Field Code																
	Lab Code	species	RD	EWI		CW	PR	TT	TTW	BP	SOBP	SpTh	S١		LARre	ed others
5 - S1N	1-5	PCSP	small	med	ium	no	small	present	-	uni	angular	absen	t dis	stinct	LARre	-
5 - S1N 11 - S1N	1- 5 1- 11	PCSP PCSP	small small	med low	ium	no zones	small small	present present	-	uni uni	angular angular	absen absen	t dis		LARre	ed others - Haselwuch
5 - S1N 11 - S1N 18 - S1L	1- 5 1- 11 1- 18	PCSP PCSP PCSP	small small small	med low med	ium	no zones few rings	small small small	present present present	- -	uni uni uni	angular angular angular	absen absen absen	t dis t - t -	stinct	LARre	-
5 - S1N 11 - S1N 18 - S1L 19 - S1N	1- 5 1- 11 1- 18 1- 19	PCSP PCSP PCSP PCSP	small small small small	low med low	ium	no zones few rings few rings	small small small small	present present present present	- - -	uni uni uni uni	angular angular angular angular	absen absen absen absen	t dis t - t - t dis		LARre - - -	-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L	1- 5 1- 11 1- 18 1- 19 1- 22	PCSP PCSP PCSP PCSP PCSP	small small small small small, t	med low med low r low	ium	no zones few rings few rings few rings	small small small small small	present present present present present	- - - -	uni uni uni uni uni	angular angular angular angular angular	absen absen absen absen absen	t dis t - t - t dis	stinct	LARre - - - -	-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N	1- 5 1- 11 1- 18 1- 19 1- 22 1- 23	PCSP PCSP PCSP PCSP PCSP	small small small small small, t	med low med low r low med	ium ium ium	no zones few rings few rings few rings zones	small small small small small small	present present present present present present	- - - - -	uni uni uni uni uni uni	angular angular angular angular angular angular	absen absen absen absen absen absen	t dis t - t - t dis t -	stinct		-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36	PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small	med low low r low med med med	ium ium ium ium	no zones few rings few rings few rings	small small small small small	present present present present present present present	- - - -	uni uni uni uni uni	angular angular angular angular angular angular angular	absen absen absen absen absen absen absen	t dis t - t - t dis t - t - t dis t - t - t dis	stinct		-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small	med low med low med med med	ium ium ium ium ium	no zones few rings few rings few rings zones few rings no	small small small small small small small small	present	- - - - -	uni uni uni uni uni uni uni	angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen	t dis t - t - t dis t - t dis t - t dis t - t - t dis	stinct		-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small	med low med low low med med med med	ium ium ium ium ium ium ium	no zones few rings few rings few rings zones few rings few rings	small small small small small small small small small	present present present present present present present present present	- - - - -	uni	angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen	t dis t - t - t dis t - t dis t - t - t dis t - t dis t - t dis	stinct		-
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small	med low med low med med med med	ium ium ium ium ium ium ium ium ium	no zones few rings few rings few rings zones few rings no	small small small small small small small small	present	- - - - - -	uni uni uni uni uni uni uni	angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen	t dis t - t - t dis t - t - t dis t - t - t dis t - t dis t - t dis	stinct		- Haselwuch - - - - - -
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-38 1-47 1-50	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small	med low med low med med med med med med med	ium ium ium ium ium ium ium ium ium	no zones few rings few rings few rings zones few rings few rings	small small small small small small small small small	present present present present present present present present present	- - - - - - -	uni	angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen	t dis	stinct		- Haselwuch - - - - - -
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small	med low med low med	ium	no zones few rings few rings few rings zones few rings no few rings	small small small small small small small small small small	present	- - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen	t dis t - t - t dis t dis t - t dis t dis t -	stinct stinct stinct		- Haselwuch - - - - - -
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1N 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small	med low med low med med med med med med med	ium	no zones few rings few rings few rings zones few rings no few rings few rings	small small small small small small small small small small small	present	- - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen	t dist	stinct stinct stinct		- Haselwuch - - - - - -
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small	med low med low med	ium	no zones few rings few rings few rings zones few rings no few rings few rings few rings few rings	small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen	t dist	stinct stinct stinct		- Haselwuch - - - - - -
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 53 - S1L 54 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small, t	med low med low med	ium	roo zones few rings few rings few rings zones few rings no few rings	small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen	distribution	stinct stinct stinct stinct stinct		- Haselwuch 
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 55 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-53 1-54	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small, small, small, small, small small small small small small small, small small, small	med low med low med	ium	roo zones few rings few rings few rings zones few rings no few rings	small small small small small small small small small small small small small	present	- - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen absen	t dist	stinct stinct stinct stinct stinct		- Haselwuch 
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 55 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-53 1-54 1-57	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small small small small	med low med low relow med	ium	no zones few rings few rings few rings zones few rings no few rings	small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen absen absen	t dist	stinct stinct stinct stinct stinct		- Haselwuch 
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 55 - S1N 66 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-51 1-53 1-54 1-57 1-65	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small small small small small	med low med low med med med med med med med med low med	ium	no zones few rings few rings few rings zones few rings no few rings fow rings	small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen absen absen absen	dist	stinct stinct stinct stinct stinct		- Haselwuch 
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1N 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 55 - S1L 56 - S1N 66 - S1N 66 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-53 1-51 1-65	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small, t no small, t no small small small small small small small small small small small	med low med low med	ium	no zones few rings few rings few rings zones few rings no few rings no no no large zones	small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absen absen absen absen absen absen absen absen absen absen absen absen absen absen absen	distance	stinct stinct stinct stinct stinct stinct stinct		- Haselwuch 
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1N 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 57 - S1L 66 - S1N 74 - S1N 32 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-51 1-53 1-54 1-57 1-65 1-66 1-74	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small, t small, t no small, t small small small small small small small small small small small small small small small, t	med low med low med	ium	no zones few rings few rings few rings zones few rings no few rings no no no large zones few rings	small small small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absen	distance	stinct stinct stinct stinct stinct stinct stinct		- Haselwuch
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L 51 - S1L 54 - S1L 55 - S1N 65 - S1N 66 - S1N 67 - S1N 69 - S1N	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-53 1-54 1-57 1-65 1-66 1-74 1-82	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small small small small, t small, t small, t small, t	med low med	ium	no zones few rings few rings few rings zones few rings no few rings	small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absen	t dist	stinct stinct stinct stinct stinct stinct stinct		- Haselwuch
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 51 - S1L 55 - S1L 55 - S1L 56 - S1N 66 - S1N 74 - S1L 57 - S1L 67 - S1L 67 - S1L 67 - S1L 67 - S1L 67 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-51 1-53 1-54 1-57 1-65 1-66 1-74 1-82 1-91 1-97	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small, t no small, t no small	med low med	ium	roo zones few rings few rings few rings zones few rings no few rings	small	present		uni	angular	absen	distance	stinct stinct stinct stinct stinct stinct stinct		- Haselwuch
5 - S1N 11 - S1N 18 - S1L 19 - S1N 22 - S1L 23 - S1N 36 - S1N 38 - S1N 39 - S1L 47 - S1L 50 - S1L	1-5 1-11 1-18 1-19 1-22 1-23 1-36 1-38 1-39 1-47 1-50 1-51 1-53 1-54 1-57 1-65 1-66 1-74 1-82	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small small small, t no small small small small small small small small small small, t small, t small, t small, t	med low med low med	ium	no zones few rings few rings few rings zones few rings no few rings tones few rings zones few rings few rings	small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absen	distance	stinct stinct stinct stinct stinct stinct stinct		- Haselwuch

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
15 - S1N	1- 115	PCSP	У	-	У	low	closed	100-200	N	RB	У	у	У	rc	n	6.2 cm
16 - S1N	1- 116	PCSP	у	-	У	low	open	50-100	N	RB	У	У	У	rc	n	3 cm
22 - S1N	1- 122	PCSP	У	-	v	very high	open	<50	N	RB	V	٧	У	rc	n	9.5 cm
26 - S1N	1- 126	PCSP	n	<5	V	low	-	50-100	N	RB	V	٧	٧	rc	n	7 cm
27 - S1N	1- 127	PCSP	У	-	v	low	open	50-100	N	RB	V	٧	У	rc	n	5.7 cm
130 - S1N	1- 130	PCSP	n	<5	У	medium	closed	50-100	N	RB	V	У	У	rc	n	8 cm
135 - S1L	1- 135	PCSP	n	>10	٧	medium	-	100-200	L	RB	V	У	У	rc	n	-
11- S2N	2- 11	PCSP	٧	-	٧	low	closed	100-200	N	RB	٧	٧	У	rc	n	9 cm
3 - S2L	2- 13	PCSP	У	-	٧	high	open	50-100	L	RB	٧	У	У	rc	n	9.5 cm
29 - S2L	2-29	PCSP	У	-	٧	high	open	50-100	L	RB	У	У	У	rc	n	15.5 cm
36 - S2L	2-36	PCSP	У	-	У	low	open	100-200	L	RB	У	У	У	rc	n	7.5 cm
37 - S2L	2-37	PCSP	-	<5	V	very high	-	<50	L	RB	У	V	У	rc	n	12 cm
0 - S2N	2-40	PCSP	n	>10	У	high	_	50-100	N	RB	У	V	У	rc	n	-
2 - S2N	2-52	PCSP	У	-	V	medium	closed	50-100	N	RB	V	V		rc	n	7.7 cm
8 - S2N	2-58	PCSP	-	-		high	closed	50-100	N	RB		,	У	rc	n	8.5 cm
63 - S2L	2-63	PCSP	У	-	У	high		50-100	L	RB	y	У	У	rc	n	8.2 cm
65 - S2N	2-65	PCSP	у	- <5	У	medium	open	100-200	N	RB	,	У	У	rc		11 cm
75 - S2N	2-65	PCSP	n	<5	У			100-200	L	RB	У	У	У		n	
77 - S2L	-		У	-	У	low	open		_		У	У	У	rc	n	9 cm
_	2-77	PCSP	n	<5	У	low	open	100-200	L	RB	У	У	У	rc	n	7.2 cm
01- S2L	2- 101	PCSP	У	-	-	very high	open	<50	L	RB	У	У	У	rc	n	6.7 cm
13 - S2L	2- 113	PCSP	у	-	У	medium	closed	50-100	L	RB	у	У	У	rc	n	7.6 cm
16 - S2L	2- 116	PCSP	n	5- 10	-	medium	-	50- 100	L	RB	У	У	У	rc	n	-
123 - S2L	2- 123	PCSP	у	-	У	medium	open	50- 100	L	RB	У	У	У	rc	n	6 cm
25 - S2L	2- 125	PCSP	n	5-10	-	high	-	50- 100	L	RB	У	У	у	rc	n	14.5 cm
ield Code	Lab Code	species	RD	EW	VLW	CW	PR	TT	TTW	BP	SOBP	SpT	h S	SW	LARr	ed othe
15 - S1N																eu om
	1- 115	PCSP	large	me	dium	zones	small	present	-	uni	angular	abse	nt c	listinct	-	-
16 - S1N	1- 116	PCSP	large small	me me	dium dium	zones few rings	small small	present present	-	uni uni	angular angular	abse abse	nt c	listinct	-	-
16 - S1N 22 - S1N	1- 116 1- 122	PCSP PCSP	large small small, t	me me r low	edium edium v	zones few rings no	small small small	present present present	- - -	uni uni uni	angular angular angular	abse abse abse	nt c nt - nt -	listinct	-	- - -
16 - S1N 22 - S1N 26 - S1N	1- 116 1- 122 1- 126	PCSP PCSP PCSP	large small small, t small, t	me me r low r low	edium edium v	zones few rings no few rings	small small small small	present present present present	- - -	uni uni uni uni	angular angular angular angular	abse abse abse abse	nt c nt - nt - nt -	listinct	- - -	-
16 - S1N 22 - S1N 26 - S1N 27 - S1N	1- 116 1- 122 1- 126 1- 127	PCSP PCSP PCSP	large small small, t small, t small	me me r low r low	edium edium v	zones few rings no	small small small	present present present	- - -	uni uni uni	angular angular angular	abse abse abse abse	nt c nt - nt - nt -	listinct	-	-
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N	1- 116 1- 122 1- 126 1- 127 1- 130	PCSP PCSP PCSP PCSP PCSP	large small small, t small, t	me me r low r low	edium edium v v edium	zones few rings no few rings	small small small small	present present present present	- - -	uni uni uni uni	angular angular angular angular	abse abse abse abse abse	nt c nt - nt - nt - nt -	listinct	- - -	- - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N	1- 116 1- 122 1- 126 1- 127	PCSP PCSP PCSP	large small small, t small, t small	me r low re r low re r low	edium edium v v edium	zones few rings no few rings no	small small small small small	present present present present present	- - - -	uni uni uni uni uni	angular angular angular angular angular	abse abse abse abse abse abse	nt cont - nt - nt - nt - nt - nt - nt -	listinct	- - - -	- - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L	1- 116 1- 122 1- 126 1- 127 1- 130	PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small, t	me r low r low me r low me r low me	edium edium v v edium v	zones few rings no few rings no zones	small small small small small small	present present present present present present	- - - - -	uni uni uni uni uni uni	angular angular angular angular angular angular	abse abse abse abse abse abse abse abse	nt cont - nt -	listinct	- - - -	- - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135	PCSP PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small, t small	me me r low me r low me me	edium edium v v edium v edium	zones few rings no few rings no zones few rings	small small small small small small small	present present present present present present present	- - - - -	uni uni uni uni uni uni uni	angular angular angular angular angular angular angular	abse abse abse abse abse abse abse abse	nt cont - nt -	distinct	- - - - -	- - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11	PCSP PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small, t small small	me m	edium edium v v edium v edium edium	zones few rings no few rings no zones few rings few rings	small small small small small small small small	present	- - - - - -	uni uni uni uni uni uni uni	angular angular angular angular angular angular angular angular	abse abse abse abse abse abse abse abse	nt c nt -	distinct	- - - - - -	- - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small small, t small small, t	me m	edium edium v v edium v edium edium edium edium edium edium ense	zones few rings no few rings no zones few rings few rings few rings	small small small small small small small small small	present present present present present present present present present	- - - - - - -	uni	angular angular angular angular angular angular angular angular angular	abse abse abse abse abse abse abse abse	nt c nt - nt c nt - nt c nt - nt c nt -	distinct distinct	- - - - - - -	- - - - - - -
18 - 8 IN 122 - 8 IN 122 - 8 IN 126 - 8 IN 127 - 8 IN 130 - 8 IN 135 - 8 IL 11 - 8 2N 13 - 8 2L 129 - 8 2L 136 - 8 2L 137 - 8 2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small small, t small small, t small	me m	edium edium v v edium v edium edium edium edium edium edium ense	zones few rings no few rings no zones few rings few rings no no no	small small small small small small small small small small	present present present present present present present present present present	- - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct distinct distinct	- - - - - - - -	- - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1- S2N 3 - S2L 29 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, t small, t small, t small small small small, t small small small	me m	edium edium v v edium v edium	zones few rings no few rings no zones few rings few rings no no no	small small small small small small small small small small	present present present present present present present present present present present	- - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct distinct distinct distinct distinct	- - - - - - - - -	- - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 38 - S2L 29 - S2L 37 - S2L 37 - S2L 30 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, small, small small, small small, small small, small small small small small	me m	edium edium v v edium v edium edium edium edium edium edium eense v edium edium	zones few rings no few rings no zones few rings few rings no no no	small small small small small small small small small small small	present	- - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt cont - nt -	distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 29 - S2L 66 - S2L 57 - S2L 60 - S2N 52 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, small, small, small small, small, small small, small small, small small, small small, small, small, small	me intermeter low me intermeter low me low low low low low me	edium edium v v edium v edium edium edium edium edium edium eense v edium edium	zones few rings no few rings no zones few rings few rings no no no no few rings	small small small small small small small small small small small small	present		uni	angular	abse abse abse abse abse abse abse abse	nt	distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - -	-
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 6 - S2L 7 - S2L 0 - S2N 22 - S2N 88 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, 1 small, 1 small, 1 small, 1 small small small small small small small, 1 small small small, 3	me m	edium  v v v edium ev edium ev edium edium edium edium edium edium ense v v	zones few rings no few rings no zones few rings few rings no no no few rings large zones	small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - -	- - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 6 - S2L 7 - S2L 0 - S2N 2 - S2N 8 - S2N 8 - S2N 8 - S2N 8 - S2N 8 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, small, small, small small, small small, small small, small small small small, small, small small, small	me inte low me low me	edium  v v v edium	zones few rings no few rings no zones few rings few rings no no no few rings large zones few rings	small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - -	- - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 33 - S1L 1 - S2N 3 - S2L 29 - S2L 16 - S2L 17 - S2L 10 - S2N 18 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, 1 small, 1 small, 1 small small small, 1 small small small small small, 1 small small, 1 small small, 1	me m	edium  v v v edium	zones few rings no few rings no zones few rings few rings no no no few rings few rings no no no no few rings large zones few rings no no	small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 16 - S2L 17 - S2L 10 - S2N 12 - S2N 13 - S2L 15 - S2N 16 - S2N 17 - S2L 18 - S2N 18 - S2N	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65 2- 75	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, 1 small, 1 small, 1 small small small, 1 small small small small, 1 small, 1 small, 1 small, 1 small, 1 small, 1	me inter low me inter low me	edium edium v v edium v edium	zones few rings no few rings no zones few rings few rings no no no no few rings large zones few rings no no few rings	small small small small small small small small small small small small small small small small small	present	- - - - - - - - - - - - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt cont - nt -	distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 66 - S2L 67 - S2N 62 - S2N 63 - S2N 65 - S2N 65 - S2N 65 - S2N 65 - S2N 67 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65 2- 75 2- 77	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, small, small, small small, small, small, small small, small small small, small small, small, s	me inter low me low me inter low me me inter low me me in me	edium edium v v edium v v v edium edium	zones few rings no few rings no zones few rings few rings no no no no few rings large zones few rings no no few rings large zones few rings no no few rings few rings few rings	small	present	- - - - - - - - - - - - - - - - - - -	uni	angular	abse abse abse abse abse abse abse abse	nt	distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 6 - S2L 7 - S2N 8 - S2N 8 - S2N 3 - S2N 5 - S2N 5 - S2N 5 - S2N 7 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65 2- 75 2- 77 2- 101	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, 1 small, 1 small, 1 small small, 1	me m	edium edium ev edium ev edium edium edium edium edium edium edium ev edium ev edium ev edium ev edium edium edium edium edium edium edium edium edium	zones few rings no few rings no zones few rings few rings no no no few rings large zones few rings no no few rings large zones few rings no no no few rings no	small small small small small small small small small small small small small small small small small small	present		uni	angular	abse abse abse abse abse abse abse abse	nt	distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1 - S2N 3 - S2L 9 - S2L 6 - S2L 7 - S2L 0 - S2N 2 - S2N 2 - S2N 3 - S2N 5 - S2N 5 - S2N 5 - S2L 5 - S2L 5 - S2L 5 - S2L 5 - S2L 6 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65 2- 75 2- 77 2- 101 2- 113	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, 1 small, 1 small, 1 small, 1 small small, 1 small	me m	edium edium ev edium ev edium edium edium edium edium edium edium ev edium ev edium ev edium ev edium	zones few rings no few rings no zones few rings few rings no no no few rings large zones few rings no no few rings no no few rings no no few rings few rings no few rings few rings	small small small small small small small small small small small small small small small small small small small	present		uni	angular	abse abse abse abse abse abse abse abse	nt	distinct		- - - - - - - - - - - - - - - - - - -
16 - S1N 22 - S1N 26 - S1N 27 - S1N 30 - S1N 35 - S1L 1- S2N 3 - S2L 29 - S2L 37 - S2L	1- 116 1- 122 1- 126 1- 127 1- 130 1- 135 2- 11 2- 13 2- 29 2- 36 2- 37 2- 40 2- 52 2- 58 2- 63 2- 65 2- 75 2- 77 2- 101	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	large small, small, 1 small, 1 small, 1 small small, 1	me m	edium edium ev edium ev edium edium edium edium edium edium edium ev edium ev edium ev edium ev edium edium edium edium edium edium edium edium edium	zones few rings no few rings no zones few rings few rings no no no few rings large zones few rings no no few rings large zones few rings no no no few rings no	small small small small small small small small small small small small small small small small small small	present		uni	angular	abse abse abse abse abse abse abse abse	nt	distinct		- - - - - - - - - - - - - - - - - - -

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
131 - S2N	2-131	PCSP	٧	-	У	very low	closed	100-200	N	RB	У	У	У	rc	n	5.5 cm
135 - S2L	2- 135	PCSP	n	5- 10	у	medium	-	50-100	L	RB	У	У	У	rc	n	6.8 cm
136 - S2N	2-136	PCSP	V	-	٧	high	open	<50	N	RB	v	V	У	rc	n	7.5 cm
138 - S2N	2- 138	PCSP	٧	-	٧	low	open	100-200	N	RB	v	V	V	rc	n	7.5 cm
140 - S2N (root)	2-140	PCSP	n	-	V	high	-	<50	N	RB	٧	V	У	rc	n	17 cm
146 - S2L	2-146	PCSP	n	<5	У	low	-	100-200	L	RB	У	٧	У	rc	n	10 cm
160 - S2L	2-160	PCSP	n	<5	У	medium	open	50-100	L	RB	٧	٧	У	rc	n	13 cm
30 - S3N	3-30	PCSP	n	<5	٧	medium	-	<50	N	RB	٧	٧	У	rc	n	9 cm
36 - S3N	3-36	PCSP	V	-	У	medium	open	100-200	N	RB	٧	٧	У	rc	n	12.3 cm
39 - S3L	3-39	PCSP	٧	-	У	high	open	50-100	L	RB	У	٧	У	rc	n	10 cm
43- S3N	3-43	PCSP	У	-	У	medium	open	50-100	N	RB	У	٧	У	rc	n	6.7 cm
45 - S3L	3-45	PCSP	n	<5	V	very low	-	100-200	L	RB	У	У	У	rc	n	8 cm
46 - S3N	3-46	PCSP	n	>10	У	very high	-	<50	N	RB	٧	У	У	rc	n	-
47 - S3L	3-47	PCSP	V	-	V	medium	open	50-100	L	RB	V	У	У	rc	n	4.5 cm
67 - S3N	3-67	PCSP	У	-	У	medium	closed	50-100	N	RB	У	V	У	rc	n	6 cm
78 - S3L	3-78	PCSP	n	5- 10	У	medium	-	50-100	L	RB	У	V	У	rc	n	-
88 - S3N	3-78	PCSP	n	<5	V	medium	open	<50	N	RB	V	V	У	rc	n	4.5 cm
91- S3N	3-91	PCSP	n	-	V	very high	-	<50	N	RB	V	V	У	rc	n	7 cm
92 - S3N	3-92	PCSP	V	-	У	medium	open	50-100	N	RB	У	У	У	rc	n	12.5 cm
2 - S3N	3-92	PCSP	n	<5	-	very low	-	>200	N	RB	У	-	-	rc	n	10 cm
4 - S3L	3-4	PCSP		-	У	medium		50- 100	L	RB		У	У			9.4 cm
- S3L 5 - S3L	3-4	PCSP	У	<5	У -	medium	open -		L	RB	У	У	У	rc	n	
14 - S3N	3-14	PCSP	n	-				100-200	N		У	У	У	rc	n	15 cm
15 - S3L	3- 14	PCSP	У	-	У	high	open	<50 <50		RB	У	У	У	rc	n	6 cm
			У		-	very high	open		L		у	у	у	rc	n	6.2 cm
Field Code I31- S2N	<b>Lab Code</b> 2-131	species PCSP		EWI		CW rings	PR				SOBP	SpTh absent	SW disting		Rred	others
135 - S2L	2- 13 1	PCSP	small	med med		ew rings		present -			angular		distin			-
136 - S2N	2-136	PCSP	small		-	10	small	present -	u	ni a	angular	absent	distini	JL  -		
138 - S2N	2-130						amall	nraaant		mi d		abaant	diatio	a +		
	0.400		small	med	-	10		present -	-		angular	absent	distin			-
	2-138	PCSP	small	med	ium f	ew rings	small	present -	u	ni a	angular angular	absent	distin	ot -		-
140 - S2N (root)	2-140	PCSP PCSP	small small, t	med r low	ium f	ew rings ew rings	small small	present - present -	u	ni a	angular angular angular	absent absent	distin	ot -		
140 - S2N (root) 146 - S2L	2-140 2-146	PCSP PCSP PCSP	small small, t small	med r low med	ium f f ium f	ew rings ew rings ew rings	small small small	present - present - present -	u u u	ni a ini a ini a	angular angular angular angular	absent absent absent	distine distine distine	ot - ot - ot -		- -
140 - S2N (root) 146 - S2L 160 - S2L	2-140 2-146 2-160	PCSP PCSP PCSP PCSP	small small, t small small, t	med r low med r med	ium f f ium f ium z	ew rings ew rings ew rings cones	small small small small	present - present - present - present -	u u u	ni a ni a ni a ni a	angular angular angular angular angular	absent absent absent absent	distine distine distine distine	ot - ot - ot -		- - scars full of resi
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N	2-140 2-146 2-160 3-30	PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t	med r low med r med r low	ium f f ium f ium z	ew rings ew rings ew rings cones arge zones	small small small small small	present - present - present - present - present -	u u u u	ni a ni a ni a ni a	angular angular angular angular angular angular	absent absent absent absent absent	distine distine distine distine distine	ot - ot - ot - ot - ot -		- - scars full of resi -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N	2- 140 2- 146 2- 160 3- 30 3- 36	PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large	med r low med r med r low med	ium f fium f ium f ium z li ium li	ew rings ew rings ew rings cones arge zones arge zones	small small small small small small	present - present - present - present - present - present -	u u u u u	ni a ni a ni a ni a ni a ni a	angular angular angular angular angular angular angular	absent absent absent absent absent absent	distine distine distine distine distine distine	ot -		- - scars full of resi - -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L	2-140 2-146 2-160 3-30 3-36 3-39	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, t small, t small, t large no	med r low med r med r low med med	ium f ium f ium z ium z ium la ium la ium r	ew rings ew rings ew rings cones arge zones arge zones	small small small small small small small	present -	u u u u u	ni a ini a ini a ini a ini a ini a	angular angular angular angular angular angular angular angular	absent absent absent absent absent absent absent	distine distine distine distine distine distine distine	ot -		- - - scars full of resi - -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L 43- S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large	med r low med r med r low med med med	ium f ium f ium f ium z li ium li ium r ium r	ew rings ew rings ew rings cones arge zones arge zones	small small small small small small small small	present -	u u u u u u	ni a	angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent absent present	distinution distin	ot -		- - scars full of resi - - -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L 43- S3N 45 - S3L	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small	med r low med r med r low med med med med med med	ium f f ium f ium z lium l ium l ium r ium r ium r ium l ium r	ew rings ew rings ew rings ew rings cones arge zones arge zones io io arge zones	small	present -	u u u u u u	ni a ini a	angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent absent present	distinct absented in the distinct disti	ot -		- - - scars full of resi - -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L 143 - S3N 145 - S3L 146 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, t small, t small, t small, t large no large small small, t	med r low med r med r low med med med med r low	ium f f ium f ium f ium z li ium li ium r ium r ium r ium f f	ew rings ew rings ew rings ew rings cones arge zones arge zones arge zones ew rings	small small small small small small small small small small small	present -	u u u u u u u	ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent	distinct absertables.	ot -		- - scars full of resi - - - -
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L 43 - S3N 45 - S3L 46 - S3N 47 - S3L	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small small, t small, t small, t small, t large no large small small, t small	med r low med r med r low med med med med r low low	ium f fium f ium f ium z lium li ium r ium r ium r ium f f	ew rings ew rings ew rings ew rings cones arge zones arge zones no no arge zones ew rings	small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent absent present present absent absent	distinct absert distinct disti	ot -		- - scars full of resi - - - -
140 - S2N (root) 146 - S2L 160 - S2L 160 - S3N 160 - S3N 160 - S3N 160 - S3N 161 - S3N 161 - S3L 161 - S3N 161 - S3N 163 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-45 3-46 3-47 3-67	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t small, t large no large small small, t small, t	med r low med r low med r med med med med r low low r low low r low	ium f fium f ium f ium z li ium li ium r ium r ium r ium f f	ew rings ew rings ew rings ew rings cones arge zones	small small small small small small small small small small small small small small	present -	u u u u u u u u u	ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent absent present present absent absent absent	distinct dis	Description		- - scars full of resi - - - - -
40 - S2N (root) 46 - S2L 60 - S2L 80 - S3N 86 - S3N 89 - S3L 83 - S3N 85 - S3L 66 - S3N 87 - S3L 88 - S3N 88 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-45 3-46 3-47 3-67 3-78	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t small, t large no large small, t small, t small, t large	med r low med r low med r low med med med med med r low r low med r low low r low med r low med r low med r low med r low	ium f ium f ium f ium z li ium li ium r ium r ium f ium f ium f	ew rings ew rings ew rings cones arge zones arge zones arge zones ew rings arge zones ew rings arge zones ew rings	small small small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent	distinu distinu distinu distinu distinu distinu distinu abser abser distinu	ot -		- - scars full of resi - - - - -
40 - S2N (root) 46 - S2L 60 - S2L 80 - S3N 89 - S3L 43 - S3N 45 - S3L 46 - S3N 47 - S3L 57 - S3L 88 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t small, t large no large small small, t small, t large small, t	med r low med r low med med med med med r low med r low med r low r low r low r low r low r low	ium f fium f ium f ium z liium k ium k ium r ium r ium f f r k ium f k	ew rings ew rings ew rings cones arge zones arge zones arge zones ew rings arge zones ew rings arge zones ew rings	small small small small small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent	distinu distin	ot -		- - scars full of resi - - - - -
40 - S2N (root) 46 - S2L 60 - S2L 80 - S3N 80 - S3N 89 - S3L 83 - S3N 85 - S3L 86 - S3N 87 - S3L 87 - S3L 88 - S3N 88 - S3N 88 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t small, t	med r low med r med r low med med med med r low r low r low r low r low r low low low	ium f ium f ium f ium z iium k iium k iium r iium r iium f f r k iium f	ew rings eringe zones ew rings ew rings eringe zones ew rings erings	small small small small small small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent absent absent	distinu distin	Det   Color   Color		- - scars full of resi - - - - -
140 - S2N (root) 146 - S2L 160 - S2L 160 - S3N 160 - S3N 160 - S3N 161 - S3N 171 - S3N 171 - S3N 172 - S3N 173 - S3N 174 - S3N 175 - S3N 176 - S3N 177 - S3N 177 - S3N 178 - S3N 179 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91 3-92	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t small, t small, t small, t small, t	med r low med r med r low med med med med med r low low r low	ium f ium f ium f ium z ium k ium k ium r ium r ium f f r k ium r k ium r	ew rings ew rings ew rings cones arge zones arge zones arge zones ew rings arge zones ew rings arge zones ew rings	small small small small small small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent	distinu distin	Det   Color   Color		- - scars full of resi - - - - -
140 - S2N (root) 146 - S2L 160 - S2L 160 - S3N 160 - S3N 160 - S3N 160 - S3N 161 - S3N 161 - S3N 162 - S3N 163 - S3N 164 - S3N 165 - S3N 166 - S3N 167 - S3N 168 - S3N 169 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91 3-92 3-2	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t small, t small, t small, t small, t	med r low med r med r low med med med med r low low r med r low r med r low r med r low r med	ium f ium f ium f ium z ium k ium k ium r ium r ium f ium f f r k ium r	ew rings eringe zones ew rings ew rings eringe zones ew rings erings	small small small small small small small small small small small small small small small small small small	present -		ni ani ani ani ani ani ani ani ani ani a	angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent absent absent	distinu distin	Det   Color   Color		- - scars full of resi - - - - - - -
140 - S2N (root) 146 - S2L 160 - S2L 160 - S3N 166 - S3N 167 - S3L 167 - S3L 167 - S3N 167 - S3N 167 - S3N 169 - S3N 170 - S3N	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91 3-92 3-2	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t small, t small, t small, t small, t	med r low med r med r low med med med med r low low r med r low r med r low r med r low r med	ium f ium f ium z ium z ium k ium r ium r ium r ium f ium f ium f ium f k ium f k ium f k ium f	ew rings ew rings ew rings ew rings ew rings ew rings earge zones arge zones ew rings ew ring	small small small small small small small small small small small small small small small small small small small	present -		ni a	angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent	distinct dis	Det   -   Det		- scars full of resi - scars full of resi 
140 - S2N (root) 146 - S2L 160 - S2L 30 - S3N 36 - S3N 39 - S3L 43 - S3N 45 - S3L 46 - S3N 47 - S3L 57 - S3N 78 - S3L 88 - S3N 91 - S3N 92 - S3N 92 - S3N 4 - S3L	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91 3-92 3-2	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t small, t small, t small, t small, t	med r low med r med r low med med med med r low low r med r low r med	ium f ium f ium z ium z iium l iium r ium r ium r iium f f r r l iiium f iiium f iiiium f	ew rings eringe zones ew rings	small small	present -		ni a	angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent absent absent absent absent absent absent absent absent absent absent	distinution distin	Description   Color   Color		- scars full of resi
136 - 321N (root) 146 - \$2L 146 - \$2L 160 - \$2L 30 - \$3N 336 - \$3N 339 - \$3L 43- \$3N 45 - \$3L 446 - \$3N 47 - \$3L 467 - \$3N 78 - \$3L 88 - \$3N 91 - \$3N 92 - \$3N 92 - \$3N 4 - \$3L	2-140 2-146 2-160 3-30 3-36 3-39 3-43 3-45 3-46 3-47 3-67 3-78 3-88 3-91 3-92 3-2	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, t small, t small, t large no large small, t small, t large small, t small, t	med r low med r med r low med med med med r low low r med r low r med	ium f ium f ium f ium z ium z ium r ium r ium l ium f r ium f r ium f ium f ium f	ew rings ew rings ew rings ew rings ew rings ew rings ere zones arge zones ew rings ew rings arge zones ew rings	small small	present -		ni a	angular angular angular angular angular angular angular angular angular angular angular angular angular angular angular	absent absent absent absent absent absent present present absent	distinu distinu distinu distinu distinu distinu distinu abser distinu	Description   Color   Color		- scars full of resi

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
18 - S3N	3- 18	PCSP	n	5- 10	У	low	-	50-100	N	RB	У	У	У	rc	n	6.5 cm
101 - S3N	3-101	PCSP	У	-	У	medium	open	<50	N	RB	у	У	У	rc	n	3 cm
108 - S3L	3- 108	PCSP	n	<5	٧	low	open	50-100	L	RB	У	٧	V	rc	n	7.5 cm
113 - S3N	3- 113	PCSP	У	-	У	low	closed	100-200	N	RB	У	٧	V	rc	n	7 cm
153 - L3 (root)	3- 153	PCSP	n	<5	٧	medium	-	50-100	root	RB	V	٧	V	rc	n	9.3 cm
157 - S3N	3- 157	PCSP	n	>10	У	medium	-	<50	N	RB	У	٧	V	rc	n	7.5 cm
160 - S3L	3- 160	PCSP	У	-	У	medium	open	100-200	L	RB	У	У	٧	rc	n	7 cm
164 - S3N	3- 164	PCSP	٧	-	٧	high	open	<50	N	RB	У	٧	٧	rc	n	5.3 cm
170 - S3N	3- 170	PCSP	У	-	٧	medium	open	50-100	N	RB	У	٧	٧	rc	n	9.5 cm
174 - S3L	3- 174	PCSP	У	-	У	high	open	50-100	L	RB	У	٧	٧	rc	n	6.7 cm
184 - S3N	3- 184	PCSP		>10	У	high	-	100-200	N	RB	У	У	У	rc	n	-
188 - S3N	3- 188	PCSP	У	-	У	high	open	50-100	N	RB	У	У	У	rc	n	5.2 cm
191- S3L	3- 191	PCSP	n	<5	У	low	-	100-200	L	RB	У	У	V	rc	n	9.5 cm
193 - S3N	3- 193	PCSP	У	-	У	high	closed	50-100	N	RB	У	٧	٧	rc	n	12.3 cm
195 - S3L	3- 195	PCSP	n	<5	-	medium	open	50-100	L	RB	У	У	У	rc	n	11 cm
199 - S3L	3- 199	PCSP	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	8.3 cm
203 - S3L	3-203	PCSP	٧	-	-	medium	closed	50-100	L	RB	У	V	V	rc	n	5.9 cm
204 - S3N	3-204	PCSP	У	-	У	low	open	50-100	N	RB	У	V	V	rc	n	5 cm
228 - S3L	3-228	PCSP	У	-	У	medium	open	50-100	L	RB	У	V	V	rc	n	7.2 cm
237 - S3L	3-237	PCSP	n	<5	-	medium	-	100-200	L	RB	У	У	У	rc	n	8 cm
238 - S3L	3-238	PCSP	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	4.5 cm
240 - S3root	3-240	PCSP	n	>10	V	high	-	50-100	root	RB	У	V	V	rc	n	-
- S4L	4-4	PCSP	n	5- 10	V	medium	_	100-200	L	RB	У	У	V	rc	n	12.8 cm
9 - S4N	4-9	PCSP	n	<5	У	medium	-	50-100	N	RB	У	У	V	rc	n	5.5 cm
Field Code	Lab Code	species	RD		/LW	CW	PR	TT	TTV		-			SW		red others
8 - S3N	3- 18	PCSP	small, t			no	small	present	1-	uni				distinct	-	little hole
101- S3N	3-101	PCSP	small	low		no	small	present	-	uni				distinct	_	-
108 - S3L	3-108	PCSP	small		dium	no	small	present	-	uni				distinct	-	_
13 - S3N	3- 113	PCSP	small		dium	few rings	small	present		uni				distinct	_	_
153 - L3 (root)	3- 153	PCSP	small, t		dium		Siliali		_							
157 - S3N	3- 157					few rings	small	-	-						-	_
60 - S3L		PCSP				few rings	small	present	-	uni	i angula	ar ab	sent	distinct	-	-
	3-160	PCSP	small, t	r me	dium	large zones	small	present present	-	uni uni	i angula	ar ab	sent sent	distinct distinct	-	-
164 - S3N	3-160	PCSP	small, t	r me me	dium dium	large zones no	small small	present present present	- - -	uni uni uni	i angula i angula i angula	ar ab: ar ab: ar ab:	sent sent sent	distinct distinct distinct	-	
	3-164	PCSP PCSP	small, t small small	r me me me	dium dium dium	large zones no no	small small	present present present present	- - -	uni uni uni uni	i angula i angula i angula i angula	ar abs ar abs ar abs ar abs	sent sent sent sent	distinct distinct distinct distinct	-	- - - -
70 - S3N	3- 164 3- 170	PCSP PCSP PCSP	small, t small small small, t	r me me me r me	dium dium dium dium	large zones no no large zones	small small small small	present present present present present	- - - -	uni uni uni uni bi	i angula i angula i angula i angula angula	ar abs ar abs ar abs ar abs ar abs	sent sent sent sent sent	distinct distinct distinct distinct distinct	- - - - -	- - - - -
70 - S3N 74 - S3L	3- 164 3- 170 3- 174	PCSP PCSP PCSP	small, t small small small, t large	r me me me r me me	dium dium dium dium dium	large zones no no large zones no	small small small small small	present present present present present present	- - -	uni uni uni uni bi uni	i anguli	ar absar	sent sent sent sent sent sent	distinct distinct distinct distinct	-	
170 - S3N 174 - S3L 184 - S3N	3- 164 3- 170 3- 174 3- 184	PCSP PCSP PCSP PCSP	small, t small small small, t large small	r me me r me low	dium dium dium dium dium	large zones no no large zones no zones	small small small small small small	present present present present present present present	- - - - -	uni uni uni uni bi uni uni	i anguli	ar abs	sent sent sent sent sent sent	distinct distinct distinct distinct distinct	-	- - - - - -
170 - S3N 174 - S3L 184 - S3N 188 - S3N	3- 164 3- 170 3- 174 3- 184 3- 188	PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small, t large small small	r me me me r me low low	dium dium dium dium dium	large zones no no large zones no zones zones	small small small small small small small	present present present present present present present present	- - - - -	uni uni uni uni bi uni uni	angula	ar abs	sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct distinct	- - - - -	- - - - - - - -
70 - S3N  74 - S3L  84 - S3N  88 - S3N  91- S3L	3- 164 3- 170 3- 174 3- 184 3- 188 3- 191	PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t small, t large small small small	r me me me r me low low me	dium dium dium dium dium dium	large zones no no large zones no zones zones few rings	small small small small small small small small	present present present present present present present present present	- - - - - - - -	uni uni uni uni bi uni uni uni	anguli	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct	- - - - - -	- - - - - - - -
70 - S3N   74 - S3L   84 - S3N   88 - S3N   91 - S3L   93 - S3N	3- 164 3- 170 3- 174 3- 184 3- 188 3- 191 3- 193	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small small, t	r me me r me low me r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings	small small small small small small small small	present present present present present present present present present present	- - - - - - - - -	uni uni uni bi uni uni uni uni	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - - distinct distinct	- - - - -	-
70 - S3N 74 - S3L 84 - S3N 88 - S3N 91 - S3L 93 - S3N 95 - S3L	3- 164 3- 170 3- 174 3- 184 3- 188 3- 191 3- 193 3- 195	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small, t small	r me me r me low me r me r me me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no	small	present present present present present present present present present present present	- - - - - - - - - - -	uni uni uni uni bi uni uni uni uni uni uni	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - - distinct distinct distinct	- - - - - - - -	- - - - - - - - - -
70 - S3N 74 - S3L 84 - S3N 88 - S3N 91 - S3L 93 - S3N 95 - S3L 99 - S3L	3- 164 3- 170 3- 174 3- 184 3- 188 3- 191 3- 193 3- 195 3- 199	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small, t small small small	r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - - distinct distinct	- - - - - - - - -	- - - - - -
70 - S3N 74 - S3L 84 - S3N 88 - S3N 91 - S3L 93 - S3N 95 - S3L 99 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small, t small small small small, t	r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni uni	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct distinct - distinct distinct distinct distinct - distinct	- - - - - - - -	-
70 - S3N 74 - S3L 84 - S3N 88 - S3N 91 - S3L 93 - S3N 99 - S3L 99 - S3L 203 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small, t small small small, t small, t small, t	r me me r me low low me r me r me low me r me r me me me r me me me me me r low	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings no no few rings	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct - distinct distinct distinct distinct distinct	- - - - - - - - -	- - - - - - -
70 - S3N 174 - S3L 184 - S3N 188 - S3N 191 - S3L 193 - S3N 195 - S3L 199 - S3L 199 - S3L 190 - S3L 190 - S3L 190 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204 3-228	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small, t small small, t small, t small, t small, t small, t	r me me r me low low me r me r	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings - no	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct distinct - distinct distinct distinct distinct - distinct	- - - - - - - - - - - - - - - - - - -	- - - - - -
70 - S3N 74 - S3L 84 - S3N 88 - S3N 91 - S3L 93 - S3N 95 - S3L 99 - S3L 203 - S3L 204 - S3N 228 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204 3-228 3-237	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small small, t large small small small small small small, t small small, t small small, t small, t	r me me me me r me low low me r me me me r me me r me me me r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings - no no	small	present		uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - -	- - - - - - -
170 - S3N 174 - S3L 184 - S3N 188 - S3N 1991 - S3L 1993 - S3N 1995 - S3L 1999 - S3L 1904 - S3N 1928 - S3L 1937 - S3L 1937 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204 3-228 3-237 3-238	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small, t small small, t small small, t small small, t small small, t	r me me me r me low low low me r me me me r me me r me me me r me me r me r	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct - distinct distinct distinct distinct distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -
164 - S3N 170 - S3N 174 - S3L 184 - S3N 188 - S3N 191 - S3L 193 - S3L 195 - S3L 199 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204 3-228 3-227 3-238 3-240	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small, small, small, small, small small small small small, t small, t small, t small, t small, t small, t small, t small small, t large	r me me me r me low me r me low me r me me r me me r me me me r me me low me r me me r low me r low me r me r low me r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings - no no no zones	small	present		uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct - distinct distinct - distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - -
170 - S3N 174 - S3L 184 - S3N 188 - S3N 191 - S3L 193 - S3L 199 - S3L 203 - S3L 204 - S3N 228 - S3L 237 - S3L	3-164 3-170 3-174 3-184 3-188 3-191 3-193 3-195 3-199 3-203 3-204 3-228 3-237 3-238	PCSP PCSP PCSP PCSP PCSP PCSP PCSP PCSP	small, t small small, t large small small small small, t small small, t small small, t small small, t small small, t	r me me me r me low me r me low me r me me r me me me r me me r low me r me low me r me r me me r me me r me me me r me	dium dium dium dium dium dium dium dium	large zones no no large zones no zones zones few rings few rings no no few rings	small	present		uni uni uni uni bi uni uni uni uni uni uni uni uni uni un	angula	ar absar abs	sent sent sent sent sent sent sent sent	distinct distinct distinct distinct distinct - distinct distinct distinct distinct distinct distinct distinct distinct distinct	- - - - - - - - - - - - - - - - - - -	- - - - - - - - -

Field Code	Lab Code	specie	s pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RB	Atech	Sec	radius
12 - S4N	4- 12	PCSP	У	-	-	medium	closed		N	RB	У	у	٧	rc	n	16.3 cm
16 - L4N	4- 16	PCSP	n	5- 10	-	medium	-	100-200	N	RB	V	У	У	rc	n	9.5 cm
18 - S4N	4- 18	PCSP	٧	-	n	very high	open	<50	N	RB	٧	V	У	rc	n	3 cm
31- S4L	4-31	PCSP	У	-	V	medium	open	100-200	L	RB	V	٧	V	rc	n	9 cm
43 - S4N	4-43	PCSP	У	-	V	medium	closed		N	RB	V	V	У	rc	n	5 cm
46 - S4N	4-46	PCSP	У	_	V	low	open	100-200	N	RB	V	y	У	rc	n	4.3 cm
48 - S4L	4-48	PCSP	У	-	У	high	open	50-100	L	RB	V	У	У	rc	n	8.5 cm
51- S4N	4-51	PCSP	У	-	V	very low	closed		N	RB	V	У	У	rc	n	6.4 cm
60 - S4N	4-60	PCSP	n	>10	У	high	-	50-100	N	RB	V	У	У	rc	n	0.4 0111
63 - S4N	4-63	PCSP	n	<5	- -	high	open	<50	N	RB	У			rc	n	6 cm
66 - S4L	4-66	PCSP	n	<5		medium	-	100-200	L	RB	-	У	У			O CIII
68 - S4N	4-68	PCSP		-	У			<50	N		У	У	У	rc	n	- F am
			У		У	high	open			RB	У	У	У	rc	n	5 cm
73 - S4N	4-73	PCSP	n	<5	У	medium	closed		N	RB	У	У	У	rc	n	14 cm
74 - S4L	4-74	PCSP	n	5- 10	У	medium	-	50-100	L	RB	У	У	У	rc	n	- 10
76 - S4L	4-76	PCSP	n	<5	-	medium	open	50-100	L	RB	У	У	У	rc	n	10 cm
78 - S4L	4-78	PCSP	У	-	У	medium	open	50-100	L	RB	У	У	У	rc	n	5 cm
81- S4L	4-81	PCSP	У	-	n	high	open	50-100	L	RB	у	у	У	rc	n	8 cm
85 - S4N	4-85	PCSP	n	5- 10	у	medium	-	50- 100	N	RB	у	у	У	rc	n	7 cm
88 - S4N	4-88	PCSP	У	-	у	low	open	50- 100	N	RB	у	у	У	rc	n	3.2 cm
92 - S4N	4-92	PCSP	У	-	У	very low	closed		N	RB	У	У	У	rc	n	3 cm
104 - S4L	4- 104	PCSP	n	<5	у	high	open	50- 100	L	RB	у	у	У	rc	n	7.5 cm
117 - S4N	4- 117	PCSP	У	-	у	high	open	<50	N	RB	у	у	У	rc	n	7 cm
121 - L4L	4-121	PCSP	n	5- 10	-	medium	-	50- 100	L	RB	у	у	У	rc	n	8.5 cm
122 - S4N	4-122	PCSP	n	<5	У	medium	open	50-100	N	RB	У	У	У	rc	n	11.3 cm
Field Code	Lab Code s	pecie I	RD	EWLW	CW		PR T	TT TT	W BP	SC	BP S	pTh	SW	LARre	ed ot	hers
12 - S4N			arge	intense	large	e zones	small	oresent -	uni	ang	gular a	bsent	-	-	-	
16 - L4N	4- 16 F	PCSP									and the same of the					
18 - S4N				medium	larg	e zones	small	oresent -	uni	anç	gular p	resent	-	-	-	
10 - 341V		PCSP s	small, tr	medium	no	ezones		oresent -	uni uni			resent bsent	- absent	-	-	
		PCSP s	small, tr small			ezones	small			ang	gular a		- absent distinct	- - -		
31- S4L	4-31 F	PCSP s		medium	no no	e zones e zones	small small	oresent -	uni	ang	gular a gular a	bsent		- - -	- - -	
31- S4L 43 - S4N	4-31 F 4-43 F	PCSP s PCSP s PCSP s	small	medium intense	no no		small   small   small	oresent -	uni uni	ang ang	gular a gular a a	bsent bsent	distinct	- - -	-	w rings haselwuch
31- S4L 43 - S4N 46 - S4N	4-31 F 4-43 F 4-46 F	PCSP SPCSP S	small small	medium intense low	no no large		small small small small	oresent - oresent - oresent - oresent -	uni uni uni	ang ang - ang	gular a gular a a gular a	bsent bsent bsent	distinct	- - - -	-	w rings haselwuch
31- S4L 43 - S4N 46 - S4N 48 - S4L	4-31 F 4-43 F 4-46 F 4-48 F	PCSP SPCSP S	small small small, tr	medium intense low low	no no large no no	e zones	small programmer small	oresent - oresent - oresent - oresent - oresent -	uni uni uni uni	ang ang - ang ang	gular a gular a a gular a gular a	bsent bsent bsent bsent	distinct distinct	- - - - - -	-	w rings haselwuch
31- S4L 43- S4N 46- S4N 48- S4L 51- S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F	PCSP SPCSP S	small small small, tr small no	medium intense low low intense low	no no large no no large	e zones e zones	small programmer small	oresent - oresent - oresent - oresent - oresent - oresent -	uni uni uni uni uni uni	ang ang - ang ang ang	gular a gular a gular a gular a gular a gular a	bsent bsent bsent bsent bsent bsent	distinct distinct - distinct distinct		- - fe	w rings haselwuch
31- S4L 43 - S4N 46 - S4N 48 - S4L 51- S4N 60 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F	PCSP SPCSP S	small small small, tr small no small, tr	medium intense low low intense low medium	no large no no large few	e zones	small psmall psm	oresent -	uni uni uni uni uni uni	and and and and and and	gular a	bsent bsent bsent bsent bsent bsent resent	distinct distinct - distinct	- - - - - - - -	- fev -	w rings haselwuch
31- S4L 43 - S4N 46 - S4N 48 - S4L 51- S4N 60 - S4N 63 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F	PCSP SPCSP S	small small, tr small, tr small no small, tr small	medium intense low low intense low medium medium	no no large no no large few no	e zones e zones	small   small	oresent -	uni uni uni uni uni uni uni	ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular a gular p gular a	bsent bsent bsent bsent bsent bsent bsent bsent resent bsent	distinct distinct - distinct distinct absent -		- fev -	w rings haselwuch
31- S4L 43 - S4N 46 - S4N 48 - S4L 51- S4N 60 - S4N 63 - S4N 66 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F	PCSP SPCSP S	small small, tr small, tr small no small, tr small small, tr	medium intense low low intense low medium medium low	no no large no no large few no	e zones e zones rings	small   small	oresent -	uni	ang ang ang ang ang ang ang	gular a gular p gular a gular a	bsent bsent bsent bsent bsent bsent bsent bsent bsent resent bsent bsent	distinct distinct - distinct distinct	-	- fev - - - -	J
31- S4L 43 - S4N 46 - S4N 48 - S4L 51- S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F	PCSP SPCSP S	small small, tr small, tr small no small, tr small small small small small, tr small	medium intense low low intense low medium medium low medium medium	no no large no no large few no no few	e zones e zones rings	small   small	oresent -	uni	ang ang ang ang ang ang ang ang	gular a gular p gular a gular a gular a	bsent bsent bsent bsent bsent bsent bsent bsent bsent resent bsent bsent	distinct distinct - distinct distinct absent -	-	- fev - - - -	w rings haselwuch rge piddock hole
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F	PCSP SPCSP S	small small, tr small, tr small, no small, tr small small, tr small small, tr small small, tr	medium intense low low intense low medium medium low medium low	no no large no no large few no no few zone	e zones e zones rings	small   small	oresent -	uni	ang ang - ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular a gular p gular a gular a gular a gular a gular a gular a	bsent bsent bsent bsent bsent bsent bsent bsent resent bsent bsent bsent bsent	distinct distinct distinct distinct absent distinct		- fev - - - - - - lar	J
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F	PCSP SPCSP S	small small, tr small, tr small, tr small, tr small, tr small small, tr small small, tr small small small, tr	medium intense low low intense low medium low medium low medium low	no no large no no large few no no few zone	e zones e zones rings	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a	bsent	distinct distinct - distinct distinct absent -	-	- fev - - - - - - lar	J
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F	PCSP SPCSP S	small small, tr small no small, tr small small, tr small small small small small small small small small	medium intense low low medium medium low medium low low low medium low medium low medium low low medium low low medium	no no largy no no largy few no no few zono	e zones e zones rings	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular a gular p gular a gular a gular a gular a gular a gular a	bsent	distinct distinct distinct distinct absent distinct - distinct	-	- fev - - - - - - lar	ge piddock hole
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 76 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-76 F 4-78 F	PCSP SPCSP S	small small, tr small, tr small no small, tr small small, tr small small small, tr small small, tr small small, tr small	medium intense low low intense low medium medium low medium low low medium low	no no large no no large few no no few zone no no	e zones e zones rings	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular p gular a	bsent bsent bsent bsent bsent bsent bsent resent bsent	distinct distinct distinct distinct absent distinct - distinct - distinct	-	- fev - - - - - - lar	J
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 78 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-81 F	PCSP SPCSP S	small small small, tr small no small, tr small small, tr small small small, tr small	medium intense low low intense low medium medium low medium low low low low low low	no no large no no large no no large few no no few zone no no no no	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular p gular a	bsent	distinct distinct distinct distinct absent distinct - distinct	- - - - - - - - - - - - - - - - - - -		rge piddock hole o holes
31 - S4L 43 - S4N 46 - S4N 48 - S4L 50 - S4N 60 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 85 - S4L 85 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-85 F	PCSP SPCSP S	small small, tr small no small, tr small no small, tr small small, tr small small, tr small small, tr small small, tr	medium intense low low intense low medium low medium low medium low low medium low medium low medium	no no largy no no largy no no largy few no no few zon no no no no few	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular p gular a	bsent bsent bsent bsent bsent bsent resent bsent	distinct distinct distinct distinct absent distinct distinct distinct distinct distinct	-		ge piddock hole
31 - S4L 43 - S4N 46 - S4N 48 - S4L 560 - S4N 660 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 78 - S4L 85 - S4N 88 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-81 F 4-85 F 4-88 F	PCSP SPCSP S	small small, tr small	medium intense low low intense low medium low medium low low medium low medium low medium medium low medium	no no large no no large no no large few no no few zone no no no few few gen no no few	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular p gular a	bsent bsent bsent bsent bsent bsent resent bsent	distinct distinct distinct distinct absent distinct - distinct - distinct	-		rge piddock hole o holes ar full of resin
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 77 - S4L 78 - S4L 88 - S4N 88 - S4N 89 - S4N 89 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-85 F 4-88 F 4-92 F	PCSP SPCSP S	small small, tr small no small, tr small small, tr small small, tr small small, tr small s	medium intense low low intense low medium low medium low low medium low medium low medium low low medium low	no no large no no large no no large few no no few zone no no no few few no	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a gular a gular a gular a gular a gular p gular a	bsent	distinct distinct distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct	-		rge piddock hole o holes
31 - S4L 43 - S4N 46 - S4N 48 - S4L 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4L 68 - S4L 76 - S4L 76 - S4L 778 - S4L 78 - S4L 81 - S4L 85 - S4N 92 - S4N 104 - S4L	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-81 F 4-85 F 4-88 F 4-92 F	PCSP SPCSP S	small small, tr small small, tr small small, tr small small, tr small	medium intense low low medium low medium low low medium low medium low medium low low medium low medium low medium medium medium low medium low medium low medium low medium low medium low medium	no no large no no large few no no few few no	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a	bsent	distinct distinct distinct distinct absent distinct distinct distinct distinct distinct	-		rge piddock hole o holes ar full of resin
31- S4L 43 - S4N 46 - S4N 48 - S4L 51- S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 78 - S4L 81 - S4L 85 - S4N 88 - S4N 92 - S4N 104 - S4L 117 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-81 F 4-85 F 4-88 F 4-92 F 4-104 F 4-117 F	PCSP SPCSP S	small small, tr small, tr small, tr small, tr small, tr small small, tr small	medium intense low low intense low medium medium low low medium low medium low medium low medium	no no large no no large no no large few no no few zone no	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a	bsent	distinct distinct distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct	-		rge piddock hole o holes ar full of resin
18 - S4N 43 - S4N 46 - S4N 48 - S4N 51 - S4N 60 - S4N 63 - S4N 66 - S4L 68 - S4N 73 - S4N 74 - S4L 76 - S4L 78 - S4L 81 - S4L 85 - S4N 82 - S4N 104 - S4L 117 - S4N 117 - S4N	4-31 F 4-43 F 4-46 F 4-48 F 4-51 F 4-60 F 4-63 F 4-66 F 4-68 F 4-73 F 4-74 F 4-76 F 4-78 F 4-81 F 4-85 F 4-88 F 4-92 F 4-104 F 4-117 F 4-121 F	PCSP SPCSP S	small small, tr small small, tr small small, tr small small, tr small	medium intense low low medium low medium low low medium low medium low medium low low medium low medium low medium medium medium low medium low medium low medium low medium low medium low medium	no no large no no large few no no few few no	e zones e zones rings rings es	small   small	oresent -	uni	ang ang ang ang ang ang ang ang ang ang	gular a	bsent	distinct distinct distinct distinct absent distinct distinct distinct distinct distinct distinct distinct distinct	-		rge piddock hole o holes ar full of resin

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
129 - S4N	4- 129	PCSP	n	5- 10	у	high	-	50-100	N	RB	У	у	у	rc	n	8 cm
142 - S4N	4-142	PCSP	n	>10	-	very low	-	100-200	N	RB	У	у	у	rc	n	-
155 - S4N	4- 155	PCSP	у	-	y	very low	closed	50-100	N	RB	У	у	У	rc	n	4 cm
157 - S4N	4- 157	PCSP	n	>10	y	low	-	100-200	N	RB	У	у	У	rc	n	-
164 - S4L	4-164	PCSP	n	<5	y	medium	-	50-100	L	RB	У	у	У	rc	n	8.7 cm
166 - S4N	4- 166	PCSP	n	<5	y	low	-	100-200	N	RB	У	у	У	rc	n	7.5 cm
25 - S3N	3-25	PCSP (LASP)	у	-	y	low	closed	>200	N	RB	У	у	У	rc	n	9 cm
121 - S3N	3-121	PCSP (LASP)	У	-	У	low	closed	50-100	N	RB	У	у	у	rc	n	3.5 cm
133 - S3L	3- 133	PCSP (LASP)	У	-	У	medium	open	50-100	L	RB	У	у	у	rc	n	4.7 cm
3 - S 5 4	4-3	PCSP (LASP)	У	-	У	low	closed	100-200	-	RB	У	у	у	rc	n	6.5 cm
29 - S4N	4-29	PCSP (LASP)	У	-	У	very low	closed	100-200	N	RB	У	у	у	rc	n	4.5 cm
Field Code	Lab Code	species	RD	EWI	_W	CW	PR	TT	TTW	BP	SOBP	SpTh	SV	N	LARre	dothers
129 - S4N	4-129	PCSP	small, tr	med	ium	no	small	present	-	uni	angular	absent	dis	stinct -		
	0	1 001					Siliali	procerre								-
	4-142	PCSP	small	med		zones	small	present	-	uni	angular	present	-		-	-
142 - S4N				med med	ium				-	uni uni			-		-	-
142 - S4N 155 - S4N	4- 142	PCSP	small	med	ium	zones	small	present	-		angular	present	-	-	- - -	-
142 - S4N 155 - S4N 157 - S4N 164 - S4L	4- 142 4- 155	PCSP PCSP	small small	med low	ium ium	zones zones	small small	present present	-	uni	angular angular	present absent	- - -	stinct	- - -	-
142 - S4N 155 - S4N 157 - S4N	4- 142 4- 155 4- 157	PCSP PCSP PCSP	small small large, tr	med low	ium ium ium	zones zones few rings	small small small	present present present	- - -	uni uni	angular angular angular	present absent absent	- - - dis	-	- - - -	- - - -
142 - S4N 155 - S4N 157 - S4N 164 - S4L	4- 142 4- 155 4- 157 4- 164	PCSP PCSP PCSP	small small large, tr small, tr	med low med	ium ium ium ium	zones zones few rings few rings	small small small small	present present present present	- - - -	uni uni uni	angular angular angular angular	present absent absent absent	- - dis	stinct -	- - - - reddish	-
142 - S4N 155 - S4N 157 - S4N 164 - S4L 166 - S4N	4- 142 4- 155 4- 157 4- 164 4- 166	PCSP PCSP PCSP PCSP PCSP	small small large, tr small, tr small	med low med med	ium ium ium ium	zones zones few rings few rings no	small small small small small	present present present present present	- - - - -	uni uni uni uni	angular angular angular angular	present absent absent absent absent	- - dis dis	stinct -	- - - - - reddish -	- - - - - - - bark,yellowray
142 - S4N 155 - S4N 157 - S4N 164 - S4L 166 - S4N 25 - S3N 121 - S3N	4-142 4-155 4-157 4-164 4-166 3-25	PCSP PCSP PCSP PCSP PCSP PCSP (LASP)	small small large, tr small, tr small small	med low med med med	ium ium ium ium ium	zones zones few rings few rings no large zones	small small small small small small	present present present present present present	- - - - -	uni uni uni uni uni	angular angular angular angular	present absent absent absent absent absent	- dis dis dis	stinct stinct	- - - - reddish -	- - - - - bark,yellowray
142 - S4N 155 - S4N 157 - S4N 164 - S4L 166 - S4N 25 - S3N	4-142 4-155 4-157 4-164 4-166 3-25 3-121	PCSP PCSP PCSP PCSP PCSP PCSP (LASP) PCSP (LASP)	small small large, tr small, tr small small small	med low med med med low	ium ium ium ium ium	zones zones few rings few rings no large zones zones	small small small small small small small	present present present present present present present	- - - - - - -	uni uni uni uni uni bi	angular angular angular angular	present absent absent absent absent absent absent	- dis dis dis dis	stinct stinct stinct stinct stinct	- - - - reddish - - reddish	- - - - - - bark,yellowray
42 - S4N 55 - S4N 57 - S4N 64 - S4L 66 - S4N 25 - S3N 21 - S3N 33 - S3L	4-142 4-155 4-157 4-164 4-166 3-25 3-121 3-133	PCSP PCSP PCSP PCSP PCSP PCSP (LASP) PCSP (LASP) PCSP (LASP)	small small large, tr small, tr small small small small	med low med med low med	ium ium ium ium ium ium ium	zones zones few rings few rings no large zones zones	small small small small small small small small	present present present present present present present present	- - - - - - -	uni uni uni uni uni bi uni	angular angular angular angular angular - -	present absent absent absent absent absent absent absent	- dis dis dis dis dis	stinct stinct stinct stinct stinct stinct stinct	-	- - - - - bark,yellowray -

Field Code	Lab Code	species	pith	RMTP	fungi	GL	9	S C	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
9 - S1L	1-9	ABSP		-	У	high		pen	50-100		RB	у	У	У	rc	n	6 cm
34 - S1L	1-34	ABSP	n	_	-	high		pen	50-100	L	RB	У	У	У	rc	n	7.2 cm
41- S1L	1-41	ABSP	У	-	У	medium		pen	50-100	L	RB	У	У	У	rc	n	7 cm
48 - S1N	1-48	ABSP	У	-	-	medium		pen	50-100	N	RB	У	У	У	rc	n	4.5 cm
93 - S1L	1-93	ABSP	У	-	٧	medium		losed	50-100	L	RB	y	y	У	rc	n	7.3 cm
98 - S1L	1-98	ABSP	n	<5	У	medium	-		50-100	L	RB	У	y	У	rc	n	11.5 cm
102 - S1N	1- 102	ABSP	У	-	У	high	C	pen	<50	N	RB	У	y	У	rc	n	5 cm
105 - S1L	1- 105	ABSP	У	-	У	high		pen	<50	L	RB	У	y	У	rc	n	5.5 cm
123 - S1N	1- 123	ABSP	٧	-	У	very high		pen	<50	N	RB	У	У	У	rc	n	6 cm
17 - S2L	2- 17	ABSP	n	5-10	٧	medium	-		50-100	L	RB	У	y	У	rc	n	10 cm
41- S2L	2-41	ABSP	n	5-10	У	medium	-		50-100	L	RB	У	У	у	rc	n	7.5 cm
51- S2N	2-51	ABSP	У	-	У	medium	C	losed	50-100	N	RB	У	y	У	rc	n	7 cm
76 - S2L	2-76	ABSP	n	5-10	У	medium	-		50-100	L	RB	У	y	У	rc	n	7.5 cm
98 - S2L	2-98	ABSP	У	-	У	high	C	pen	50-100	L	RB	y	У	У	rc	n	10 cm
104 - S2L	2-104	ABSP	У	-	٧	medium		losed	50-100	L	RB	У	У	У	rc	n	7.6 cm
105 - S2N	2- 105	ABSP	n	<5	У	high		pen	50-100	N	RB	У	У	У	rc	n	10 cm
118 - S2L	2- 118	ABSP	n	<5	-	medium	-		50-100	L	RB	У	У	У	rc	n	8 cm
157 - S2L	2- 157	ABSP	У	-	У	high	c	pen	50-100	L	RB	У	У	У	rc	n	7.1cm
159 - S2L	2- 159	ABSP	n	<5	-	medium		pen	100-200	L	RB	У	У	У	rc	n	11.8 cm
34 - S3L	3-34	ABSP	У	-	У	high		pen	50-100	L	RB	У	У	У	rc	n	7.2 cm
96 - S3L	3-96	ABSP	У	-	У	high		pen	<50	L	RB	У	У	У	rc	n	6 cm
7 - S3N	3-7	ABSP	У	_	У	very high		pen	<50	N	RB	У	У	У	rc	n	9.6 cm
9 - S3L	3-9	ABSP	n	<5	У	high	-		50-100	L	RB	У	У	У	rc	n	8 cm
129 - S3L	3- 129	ABSP	n	<5	У	high	-		<50	L	RB	У	У	У	rc	n	8.5 cm
Field Code	Lab Code	species	RD	EWL			D D										
9 - S1L							PR		I I W	BP	SU	BP SDI	n SI	N	other	S	
	1-9	ABSP	no	low	no		PR small	TT abse	ent -	<b>BP</b> uni	SO			nv stinct	other:	S	
	1-9 1-34				no		small		ent -			abse	nt dis			S	
34 - S1L	1-34	ABSP ABSP	no no	low low	no fe	w rings	small small	abse abse	ent - ent -	uni uni	-	abse abse	nt dis	stinct	-	S	
34 - S1L 41 - S1L	1-34 1-41	ABSP ABSP ABSP	no	low low mediu	no fev m no	w rings	small small small	abse abse	ent - ent - ent -	uni uni uni	-	abse abse abse	nt dis nt - nt dis	stinct stinct	-	<b>S</b>	
34 - S1L 41 - S1L 48 - S1N	1-34 1-41 1-48	ABSP ABSP	no no	low low mediu low	m no	w rings nes	small small small small	abse abse abse abse	ent - ent - ent -	uni uni	- - -	abse abse abse abse	nt dis nt - nt dis nt dis	stinct	-	<b>S</b>	
34 - S1L 41 - S1L 48 - S1N 93 - S1L	1- 34 1- 41 1- 48 1- 93	ABSP ABSP ABSP ABSP	no no no	low low mediu	m no m no zo m no	w rings nes	small small small small small	abse abse abse abse	ent - ent - ent - ent - ent -	uni uni uni uni uni	- - -	abse abse abse abse abse	nt dis nt - nt dis nt dis nt dis	stinct stinct stinct stinct	- - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L	1-34 1-41 1-48 1-93 1-98	ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no	low low mediu low mediu low	m no m no m no no no	w rings nes	small small small small small small	abse abse abse abse abse	ent -	uni uni uni uni uni uni	- - - -	abse abse abse abse abse abse	nt dis nt - nt dis nt dis nt dis nt dis	stinct stinct stinct stinct stinct	- - - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N	1-34 1-41 1-48 1-93 1-98 1-102	ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no no	low low mediu low mediu low low	m no m no m no no no	w rings nes	small small small small small small small	abse abse abse abse abse abse	ent -	uni uni uni uni uni uni uni	- - - - -	abse abse abse abse abse abse	nt dis nt - nt dis nt dis nt dis nt dis nt dis	stinct stinct stinct stinct stinct	- - - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L	1- 34 1- 41 1- 48 1- 93 1- 98 1- 102 1- 105	ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no no	low low mediu low mediu low low low	m no zo m no no no no no	w rings nes	small small small small small small small small	abse abse abse abse abse abse abse	ent -	uni uni uni uni uni uni uni bi	- - - - - - -	abse abse abse abse abse abse abse	nt dis nt - nt dis nt dis nt dis nt dis nt dis nt dis	stinct stinct stinct stinct stinct	- - - - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no no no	low low mediu low mediu low low low low low	m no m no m no n	w rings nes	small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt dis nt dis nt dis nt dis nt dis nt dis	stinct stinct stinct stinct stinct	- - - - - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no no no no small	low low mediu low mediu low low low low low low low	m no m no m no no no no no	w rings nes	small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt di nt di nt di nt di nt di nt di	stinct stinct stinct stinct stinct stinct stinct	- - - - - - - -	S	
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no - small no no no no small no	low low mediu low mediu low low low low low mediu mediu	m no m no m no n	w rings nes	small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis	stinct stinct stinct stinct stinct stinct stinct	- - - - - - - -		
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no no small no small no small	low low mediu low	m no n	w rings  w rings  w rings w rings	small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis	stinct stinct stinct stinct stinct stinct stinct	- - - - - - - - -		
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no no small no small small	low low mediu low	m no zo m no	w rings w rings w rings	small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt di nt - nt - nt dis nt dis	stinct stinct stinct stinct stinct stinct stinct	- - - - - - - - - - -		
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no no small no small no small no	low low mediu low	m no zo m no no no no no no fet	w rings w rings w rings w rings	small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis	stinct stinct stinct stinct stinct stinct stinct stinct	- - - - - - - - - - - - - -		
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no small no small no	low low mediu low low low low low low low low low mediu low mediu low mediu low mediu low mediu low	nc   fe'	w rings w rings w rings w rings w rings w rings	small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis nt dis nt dis nt dis	stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L 105 - S2N	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no small no small small no small small small small small small	low low mediu low low low low low low low low mediu low mediu low mediu mediu mediu mediu mediu	nc   fer	wrings wrings wrings wrings wrings wrings	small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni		abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt - nt dis nt dis nt dis nt dis nt dis	stinct stinct stinct stinct stinct stinct stinct stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L 105 - S2N 118 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no small no small no	low low mediu low low low low low low low mediu low mediu low mediu mediu mediu mediu mediu mediu mediu mediu	nc   fee   nc   nc   nc   nc   nc   nc   nc	w rings w rings w rings w rings w rings w rings	small small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni		abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis	stinct	- - - - - - - - - - - - - - - - - - -		
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 104 - S2L 105 - S2N 118 - S2L 157 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118 2-157	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small no small no small small no small small no no no	low low mediu low low low low low low low mediu low mediu r mediu low	nc	w rings	small small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni		abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis nt dis nt dis nt dis nt dis nt - nt dis	stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 104 - S2L 105 - S2N 118 - S2L 157 - S2L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118 2-157 2-159	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no no small no small no small no small small no	low low mediu low low low low low low low mediu low mediu low low mediu low mediu low mediu low mediu low	nc   fe   nc   fe   nc   nc   nc   nc   nc   nc   nc   n	w rings	small small small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis nt dis nt dis nt dis nt - nt dis	stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L 105 - S2N 118 - S2L 157 - S2L 159 - S2L 159 - S2L 34 - S3L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118 2-157 2-159 3-34	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no no small no small no small no small small no no small no no small no no	low low mediu low low low low low low low mediu low mediu r mediu low low low mediu mediu mediu mediu mediu mediu mediu mediu low	nc   fe   nc     nc   fe   nc   nc   nc   nc   nc   nc   nc   n	wrings wrings wrings wrings wrings wrings wrings	small small small small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis	stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L 105 - S2N 118 - S2L 157 - S2L 157 - S2L 159 - S2L 169 - S3L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118 2-157 2-159	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no no small no small no small no small small no	low low mediu low low low low low low low mediu low mediu low low mediu low mediu low mediu low mediu low	nc   fet   fet   nc   fet   fe	w rings	small small	abse abse abse abse abse abse abse abse	ent -	uni	- - - - - - - - - - - - - - - - - - -	abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis nt dis nt - nt dis nt dis nt - nt dis	stinct			
34 - S1L 41 - S1L 48 - S1N 93 - S1L 98 - S1L 102 - S1N 105 - S1L 123 - S1N 17 - S2L 41 - S2L 51 - S2N 76 - S2L 98 - S2L 104 - S2L 105 - S2N 118 - S2L 157 - S2L 159 - S2L 159 - S2L 34 - S3L	1-34 1-41 1-48 1-93 1-98 1-102 1-105 1-123 2-17 2-41 2-51 2-76 2-98 2-104 2-105 2-118 2-157 2-159 3-34 3-96	ABSP ABSP ABSP ABSP ABSP ABSP ABSP ABSP	no no no small small no no small small small no no small	low low mediu low low low low low low low mediu low	nc	w rings	small small small small small small small small small small small small small small small small small small small	abse abse abse abse abse abse abse abse	ent -	uni		abse abse abse abse abse abse abse abse	nt dis nt - nt dis nt - nt dis nt dis nt dis nt dis nt - nt dis	stinct			

Field Code	Lab Code	species	pith	RMT	P fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
130 - S3N	3- 130	ABSP	У	-	У	medium	closed	50-100	N	RB	У	у	у	rc	n	3.9 cm
142 - S3N	3-142	ABSP	У	-	У	medium	open	50-100	N	RB	У	у	у	rc	n	8.3 cm
159 - S3L	3- 159	ABSP	у	-	-	high	open	<50	L	RB	У	у	у	rc	n	6.3 cm
6 - S4L	4-6	ABSP	У	-	n	high	open	<50	L	RB	У	у	у	rc	n	5.5 cm
11 - S4L	4- 11	ABSP	n	<5	У	medium	open	50-100	L	RB	У	у	у	rc	n	6.5 cm
14 - S4L	4- 14	ABSP	У	-	У	high	open	<50	L	RB	У	у	у	rc	n	6 cm
20 - S4L	4-20	ABSP	n	5- 10	n	medium	-	<50	L	RB	У	у	у	rc	n	-
33 - S4N	4-33	ABSP	У	-	У	very high	open	<50	N	RB	У	у	у	rc	n	9 cm
113 - S4L	4- 113	ABSP	n	<5	У	medium	open	50-100	L	RB	У	у	у	rc	n	6.6 cm
131 - S4L	4- 131	ABSP	n	<5	У	high	open	<50	L	RB	У	у	у	rc	n	9 cm
154 - S4L	4- 154	ABSP	У	-	У	high	open	<50	L	RB	У	у	у	rc	n	7.3 cm
Field Code	Lab Code	species	RD	E	WLW	CW	PR	TT	TTW	BP	SOBP	SpTI	h	SW	oth	ers
130 - S3N	3- 130	ABSP	small	n	nedium	few rings	small	present	-	uni	angular	abse	nt	distinct	-	
142 - S3N	3-142	ABSP	small,	tr n	nedium	few rings	small	absent	-	uni	-	abse	nt	distinct	-	
159 - S3L	3-159	ABSP	no	n	nedium	no	small	absent	-	uni	-	abse	nt	-	-	
6 - S4L	4-6	ABSP	no	n	nedium	zones	small	absent	-	uni	-	prese	ent	absent	-	
11 - S4L	4- 11	ABSP	no	ir	ntense	no	small	absent	-	uni	-	abse	nt	absent	-	
14 - S4L	4- 14	ABSP	no	lo	w	few rings	small	absent	-	bi	-	abse	nt	distinct	-	
20 - S4L	4-20	ABSP	no	n	nedium	zones	small	absent	-	uni	-	abse	nt	absent	-	
33 - S4N	4-33	ABSP	no	lo	w	zones	small	absent	-	bi	-	prese	ent	distinct	-	
113 - S4L	4- 113	ABSP	small	lo	w	no	small	absent	-	uni	-	abse	nt	distinct	-	
131 - S4L	4- 13 1	ABSP	no	lo	w	no	small	absent	-	uni	-	abse	nt	distinct	-	
154 - S4L	4-154	ABSP	no		nedium	few rings	small	absent		uni		abse		distinct		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
73 - S1N	1-73	BESP	У	-	-	high	open	<50	N	RB	у	У	У	tc/rc	n	8.5 cm
114 - S3N	3- 114	BESP	y	-	-	medium	open	<50	N	RB	y	y	У	tc/rc	n	2.9 cm
143 - S3L	3- 143	BESP	y	-	У	medium	open	50-100	L	RB	y	y	У	tc/rc	n	5.2 cm
207 - S3L	3-207	BESP	y	-	У	medium	open	<50	L	RB	y	v	У	tc/rc	n	6 cm
208 - S3N	3-208	BESP	y	-	٧	high	open	<50	N	RB	y	v	V	tc/rc	n	3.8 cm
95 - S4N	4-95	BESP	У	-	У	medium	open	<50	N	RB	y	v	У	tc/rc	n	4 cm
13 - S1L	1- 13	PPSP	У	-	У	medium	open	100-200	L	RB	У	V	У	rc	n	9 cm
14 - S1N	1- 14	PPSP	y	-	У	medium	open	<50	N	RB	y	v	У	tc/rc	n	5.5 cm
20 - S1N	1-20	PPSP	У	-	٧	high	open	<50	N	RB	y	v	V	rc	n	4 cm
21- S1L	1-21	PPSP	n	>10	٧	medium	-	100-200	L	RB	y	v	У	rc	n	-
94 - S1N	1-94	PPSP	n	>10	-	very high	-	<50	N	RB	y	v	У	rc	n	-
108 - S1L	1- 108	PPSP	n	<5	У	medium	open	<50	L	RB	у	У	У	tc/rc	n	5.2 cm
114 - S1N	1- 114	PPSP	У	-	У	very high	open	<50	N	RB	у	У	у	tc/rc	n	11.4 cm
139 - S1N	1- 139	PPSP	n	<5	У	high	open	50-100	N	RB	у	V	У	tc/rc	n	10.1 cm
19 - S2L	2- 19	PPSP	n	5- 10	У	medium	-	50-100	L	RB	у	V	У	rc	n	11 cm
22 - S2L	2-22	PPSP	n	>10	V	high	-	100-200	L	RB	У	٧	У	rc	n	-
53 - S2N	2-53	PPSP	n	<5	У	high	open	50-100	N	RB	У	٧	У	rc	n	12 cm
64 - S2L	2-64	PPSP	n	<5	У	high	open	50-100	L	RB	У	٧	у	rc	n	13 cm
107 - S2N	2- 107	PPSP	У	-	V	medium	open	50-100	N	RB	У	V	V	rc	n	7.5 cm
124 - S2L	2- 124	PPSP	У	-	V	medium	closed	50-100	L	RB	У	V	У	rc	n	9.9 cm
72 - S3N	3-72	PPSP	У	-	-	high	open	<50	N	RB	У	V	У	rc	n	3 cm
105 - S3L	3- 105	PPSP	У	_	У	high	open	100-200	L	RB	У	V	У	tc/rc	n	12 cm
150 - S3L	3- 150	PPSP	n	<5	У	high	closed	<50	L	RB	У	У	У	tc/rc	n	7.4 cm
183 - S3L	3- 183	PPSP	n	<5	У	high	open	<50	L	RB	У	У	У	tc/rc	n	6 cm
Field Code				porous	ra v w		v type		plates	Sp		ension w		SW		0 0111
73 - S1N			y	polous	-	the state of the s	mogeneou			abs		10	100u	J-		
114 - S3N			y y		_		mogeneou			abs		10		-		
143 - S3L	-	BESP y			biseria		mogeneou			abs		10		distinct		
207 - S3L		BESP \			-		mogeneou			abs		10		-		
208 - S3N		BESP \	•		_		mogeneou			abs		10		-		
95 - S4N		BESP \	•		-		mogeneou			abs		10		distinct		
13 - S1L		PPSP \	•		uniseri		mogeneou			abs		10		distinct		
14 - S1N			y V		-		mogeneou			abs		10		distinct		
20 - S1N			y V		-		mogeneou			abs		10		-		
21- S1L		PPSP \			uniseri		mogeneou			abs		10		distinct		
94 - S1N			y V		-		mogeneou			abs		ew rings		-		
108 - S1L			y y		-		mogeneou			abs		10		-		
114 - S1N		PPSP \			-		mogeneou			abs		10		-		
139 - S1N		PPSP y			-		mogeneou			n		10		distinct		
19 - S2L		PPSP \			-		mogeneou			abs		10		-		
22 - S2L		PPSP \	•		-		mogeneou			abs		10		distinct		
53 - S2N		PPSP \			-		mogeneou			abs		10		-		
64 - S2L		PPSP \	•		uniseri		mogeneou			abs		10		distinct		
107 - S2N		PPSP \	•		-		mogeneou			abs		10		-		
124 - S2L		'	y V		uniseri		mogeneou			abs		10		distinct		
			,							abs		10		4.50.000		
72 - S3N	3-72	PPSP N	v		uniser	ate ho	modeneou	is simnia								
72 - S3N 105 - S3I	-		y ,		uniser		mogeneou							distinct		
105 - S3L	3- 105	PPSP y	у		uniser uniser	ate ho	mogeneou	ıs simple		abs	ent r	าด		distinct		
	3- 105 3- 150	PPSP y	y y			ate ho		ıs simple ıs simple			ent r ent r			distinct		

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micro	RBC	Atech	Sec	radius
190 - S3L	3- 190	PPSP	n	-	У	medium	open	50-100	1L	RB	У	У	У	tc/rc	n	10.9 cm
219 - S3L	3-219	PPSP	У	-	y	medium	open	100-200	L	RB	y	У	У	tc/rc	n	12 cm
233 - S3N	3-233	PPSP	n	<5	y	very high	-	<50	N	RB	У	У	У	rc	n	6 cm
234 - S3N	3-234	PPSP	У	-	У	medium	open	<50	N	RB	y	V	У	tc/rc	n	4.4 cm
10 - S4N	4- 10	PPSP	У	-	n	high	open	<50	N	RB	V	V	У	tc/rc	n	5.5 cm
42 - S4N	4-42	PPSP	У	-	У	high	open	<50	N	RB	y	٧	У	rc	n	4.5 cm
61- S4N	4-61	PPSP	У	-	-	medium	open	<50	N	RB	У	٧	У	rc	n	4 cm
65 - S4L	4-65	PPSP	У	-	-	medium	open	100-200	L	RB	У	٧	У	rc	n	9.5 cm
99 - S4L	4-99	PPSP	У	-	٧	low	open	50-100	L	RB	V	٧	٧	tc/rc	n	6 cm
111 - S4N	4- 111	PPSP	У	-	V	medium	open	<50	N	RB	У	٧	У	rc	n	3.5 cm
123 - S4L	4- 123	PPSP	У	-	У	low	open	100-200	L	RB	У	У	У	rc	n	10.5 cm
124 - L4N	4- 124	PPSP	У	-	٧	medium	open	<50	N	RB	У	У	У	tc/rc	n	3.3 cm
151 - S4N	4- 151	PPSP	У	-	У	medium	-	-	L	RB	У	У	У	tc/rc	n	5 cm
152 - S4N	4- 152	PPSP	У	-	٧	medium	open	50-100	N	RB	V	V	У	tc/rc	n	3 cm
17 - S1N	1- 17	SASP	У	-	٧	medium	open	50-100	N	RB	y	٧	У	tc/rc	n	4.5 cm
81 - S1N	1-81	SASP	У	-	V	high	open	50-100	N	RB	У	٧	У	rc	n	9.9 cm
84 - S1N	1-84	SASP	У	-	У	high	open	<50	N	RB	y	У	У	rc	n	5.8 cm
88 - S1N	1-88	SASP	n	<5	У	high	open	50-100	N	RB	У	У	У	rc	n	9.2 cm
113 - S1L	1- 113	SASP	n	5- 10	У	high	-	<50	L	RB	V	V	٧	tc/rc	n	5.5 cm
141 - S1N	1- 14 1	SASP	V	-	У	high	open	<50	N	RB	У	٧	У	tc/rc	n	3 cm
129 - S2N	2- 129	SASP	У	-	٧	high	open	<50	N	RB	V	٧	У	rc	n	5.3 cm
48 - S3N	3-48	SASP	У	-	У	medium	open	<50	N	RB	У	У	У	tc/rc	n	3.5 cm
49 - S3N	3-49	SASP	У	-	У	medium	open	<50	N	RB	У	У	У	tc/rc	n	2.2 cm
50 - S3N	3-50	SASP	V	-	У	medium	open	<50	N	RB	У	У	У	tc/radia		2.7 cm
Field Code	Lab Code		-	diffu	se poro			v type		f. plat	-			wood	SW	
190 - S3L																
	3- 190	PPSI	Р			uniseriate					abse				-	
219 - S3L	3- 190 3- 219	PPSI PPSI		y y			ho	mogeneous mogeneous	simp	le		ent n	0		- distir	nct
		_	Р	у		uniseriate	ho ho	mogeneous mogeneous	simp	ole ole	abse	ent n	0 0		-	nct
219 - S3L	3-219	PPSI	P P	у у у		uniseriate uniseriate uniseriate	ho ho ho	mogeneous mogeneous mogeneous	simp simp simp	ole ole ole	abse abse	ent n ent n ent n	0 0 0		-	nct
219 - S3L 233 - S3N	3-219 3-233	PPSI PPSI	P P P	y y		uniseriate uniseriate	ho ho ho ho	mogeneous mogeneous	simp simp simp simp	ole ole ole ole	abse abse	ent nent nent nent nent nent n	0 0 0		-	nct
219 - S3L 233 - S3N 234 - S3N	3-219 3-233 3-234	PPSI PPSI PPSI	P P P	у у у у у		uniseriate uniseriate uniseriate uniseriate	ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp	ole ole ole ole ole	abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0		-	
219 - S3L 233 - S3N 234 - S3N 10 - S4N	3-219 3-233 3-234 4-10	PPSI PPSI PPSI PPSI	P P P P	у у у у у у		uniseriate uniseriate uniseriate uniseriate 2-3	ho ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp simp	ole ole ole ole ole	abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0		- distin - - -	
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N	3-219 3-233 3-234 4-10 4-42	PPSI PPSI PPSI PPSI	P P P P P	у у у у у у у		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho ho ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp simp	ole ole ole ole ole ole	abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0		- distin - - -	
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N	3-219 3-233 3-234 4-10 4-42 4-61	PPSI PPSI PPSI PPSI PPSI	P P P P P	у у у у у у		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate	ho ho ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp simp	ole ole ole ole ole ole ole	abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0		- distin - - -	ent
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L	3- 219 3- 233 3- 234 4- 10 4- 42 4- 61 4- 65	PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P	y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate	ho ho ho ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0		distir	ent
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99	PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P	y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	ho ho ho ho ho ho ho	mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous mogeneous	simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0		distir	ent not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111	PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P	y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	ho	mogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0 0		distir	ent not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L	3- 219 3- 233 3- 234 4- 10 4- 42 4- 61 4- 65 4- 99 4- 111 4- 123	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P	y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	ho	mogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent neent ne	0 0 0 0 0 0 0 0 0 0		- distir abse distir distir	ent not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P	y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	ho h	mogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0 0 0 0		- distir abse distir distir	ent not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0 0 0 0 0		distir - abse - distir distir distir	ent not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 152 - S4N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent neent	0 0 0 0 0 0 0 0 0 0 0 0 0		distir - abse - distir distir distir	ent not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 17 - S1N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent neent	0 0 0 0 0 0 0 0 0 0 0 0 0		distir - abse - distir distir distir distir - distir	ent not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 152 - S4N 17 - S1N 81 - S1N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent	0 0 0 0 0 0 0 0 0 0 0 0 0 0		distir - abse - distir distir distir distir - distir	ent not not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 152 - S4N 17 - S1N 81 - S1N 84 - S1N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17 1-81 1-84	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous terogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent neent	0 0 0 0 0 0 0 0 0 0 0 0 0 0		distin - abse - distin distin distin - distin - distin - distin -	ent not not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 152 - S4N 17 - S1N 81 - S1N 88 - S1N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17 1-81 1-84 1-88	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate	ho h	mogeneous terogeneous terogeneous terogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent neent			distin - abse - distin distin distin - distin - distin - distin -	ent not not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 17 - S1N 81 - S1N 84 - S1N 88 - S1N 113 - S1L	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17 1-81 1-84 1-88 1-113	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate - uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	ho h	mogeneous terogeneous terogeneous terogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent nent nent nent nent			distin - abse - distin distin distin - distin - distin - distin -	ent net net net net net
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 152 - S4N 17 - S1N 81 - S1N 88 - S1N 113 - S1L 141 - S1N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17 1-81 1-84 1-88 1-113 1-141	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate - uniseriate	ho h	mogeneous terogeneous terogeneous terogeneous terogeneous terogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent nent neent			distin - abse - distin distin distin distin - distin - distin - distin -	ent not not not not not not not
219 - S3L 233 - S3N 234 - S3N 10 - S4N 42 - S4N 61 - S4N 65 - S4L 99 - S4L 111 - S4N 123 - S4L 124 - L4N 151 - S4N 17 - S1N 81 - S1N 88 - S1N 113 - S1L 141 - S1N 129 - S2N	3-219 3-233 3-234 4-10 4-42 4-61 4-65 4-99 4-111 4-123 4-124 4-151 4-152 1-17 1-81 1-84 1-88 1-113 1-141 2-129	PPSI PPSI PPSI PPSI PPSI PPSI PPSI PPSI	P P P P P P P P P P P P P P P P P P P	y y y y y y y y y y y y y		uniseriate uniseriate uniseriate uniseriate 2-3 uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate - uniseriate	ho h	mogeneous terogeneous terogeneous terogeneous terogeneous terogeneous terogeneous terogeneous terogeneous	simp simp simp simp simp simp simp simp	ole	abse abse abse abse abse abse abse abse	ent nent nent neent neen			distin - abse - distin distin distin distin - distin - distin - distin -	ent not not not not not not not

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree	L/N	WI	macro	micro	RBC	Atech	Sec	radius
65 - S3N	3-65	SASP	У	-	У	high	open	<50	N	RB	У	У	У	tc/rc	n	6 cm
73 - S3N	3-73	SASP	У	-	y	high	open .	<50	N	RB	у	У	У	rc	n	3 cm
74 - S3N	3-74	SASP	у	-	У	high	closed	<50	N	RB	У	У	У	tc/rc	n	1.6 cm
84 - S4N	3-84	SASP	n	5-10	У	medium	-	50-100	N	RB	У	У	У	rc	n	10.5 cm
19 - S3N	3- 19	SASP	V	-	n	medium	open	<50	N	RB	У	٧	V	rc	n	1.9 cm
107 - S3N	3- 107	SASP	У	-	-	medium	open .	<50	N	RB	У	У	V	tc/rc	n	3 cm
112 - S3N	3- 112	SASP	У	-	У	medium	open	<50	N	RB	У	У	У	tc/rc	n	2.5 cm
118 - S3N	3- 118	SASP	у	-	У	medium	open	<50	N	RB	у	У	У	tc/rc	n	6 cm
125 - S3N	3- 125	SASP	У	-	У	very high	open	<50	N	RB	У	У	V	rc	n	3.5 cm
140 - S3N	3- 140	SASP	У	-	У	very high	open	<50	N	RB	У	У	V	rc	n	8.5 cm
156 - S3N	3- 156	SASP	У	-	У	medium	open	50-100	N	RB	У	У	y	rc	n	6.7 cm
161 - S3L	3- 161	SASP	У	-	У	high	open	<50	L	RB	у	У	y	rc	n	5.3 cm
168 - S3N	3- 168	SASP	у	-	У	medium	open	<50	N	RB	у	У	y	tc/rc	n	3 cm
173 - S3N	3- 173	SASP	У	-	У	very high	open	<50	N	RB	У	У	٧	tc/rc	n	2.5 cm
177 - S3L	3- 177	SASP	n	<5	-	medium	-	<50	L	RB	У	У	٧	rc	n	2.5 cm
206 - S3N	3-206	SASP	У	-	У	very high	open	<50	N	RB	У	У	У	rc	n	2.5 cm
217 - S3N	3-217	SASP	n	<5	У	medium	-	50-100	N	RB	У	У	У	tc/rc	n	11 cm
241- S3N	3-241	SASP	У	-	У	medium	open	<50	N	RB	У	У	У	tc/rc	n	2 cm
34 - S4N	4-34	SASP	У	-	У	medium	open	<50	N	RB	У	У	V	tc/rc	n	3 cm
35 - S4N	4-35	SASP	n	<5	-	medium	open	<50	N	RB	У	У	V	tc/rc	n	3.7 cm
41- S4N	4-41	SASP	У	-	У	very high	open	<50	N	RB	У	У	У	rc	n	6.5 cm
55 - S4N	4-55	SASP	У	-	У	medium	open	<50	N	RB	У	У	У	rc	n	2.3 cm
56 - S4L	4-56	SASP	У	-	У	high	open	<50	L	RB	У	V	У	rc	n	2.5 cm
59 - S4N	4-59	SASP	У	-	У	high	open	<50	N	RB	У	У	У	rc	n	4 cm
Field Code	Lab Code	species		use por		ray width	ray typ			rf. pla	-	oTh		n wood	SW	
65 - S3N	3-65	SASP	У	use por	ous	uniseriate		geneous	sim			sent	no	ii wood	- J	
73 - S3N	3-73	SASP	У			-		geneous	sim			sent	no		-	
74 - S3N	3-74	SASP	У			uniseriate		geneous	sim			sent	no		dist	inct
84 - S4N	3-84	SASP	У			uniseriate		geneous	sim			sent	У		dist	
19 - S3N	3- 19	SASP	У			-		eneous	sim			sent	no		dist	
107 - S3N	3- 107	SASP	У			uniseriate		geneous	sim			sent	no		-	
112 - S3N	3- 112	SASP	У			-		geneous	sim			sent	no		_	
118 - S3N	3- 118	SASP	У			uniseriate		geneous	sim			sent	zones			
125 - S3N	3- 125	SASP	У			uniseriate		geneous	sim			sent	zones		dist	inct
140 - S3N	3- 140	SASP	У			uniseriate		eneous	sim			sent	few ring	10	uist	iiict
156 - S3N	3- 156	SASP	У			-		geneous	sim			sent	no	,,,	dist	inct
161 - S3L						_		geneous	sim			sent	no		uisi	iiiCt
								jeneous					_		dist	inct
	3- 161	SASP	У			_		annonie	eim	വമ						IIICL
168 - S3N	3- 168	SASP	У			-	heterog	geneous	sim	•		sent	no		0.00	
168 - S3N 173 - S3N	3- 168 3- 173	SASP SASP	y			-	heterog	geneous	sim	ple	ab	sent	no		-	
168 - S3N 173 - S3N 177 - S3L	3- 168 3- 173 3- 177	SASP SASP SASP	y y y				heterog heterog heterog	jeneous jeneous	sim sim	ple ple	at at	sent sent	no no		-	inet
168 - S3N 173 - S3N 177 - S3L 206 - S3N	3- 168 3- 173 3- 177 3- 206	SASP SASP SASP SASP	y y y y			-	heterog heterog heterog heterog	jeneous jeneous jeneous	sim sim sim	ple ple ple	ak ak ak	sent sent sent	no no no		- dist	inct
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N	3- 168 3- 173 3- 177 3- 206 3- 217	SASP SASP SASP SASP SASP	y y y y			- - uniseriate	heterog heterog heterog heterog	jeneous jeneous jeneous jeneous	sim sim sim	ple ple ple ple	at at at at	sent sent sent sent	no no no		-	inct
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241	SASP SASP SASP SASP SASP SASP	y y y y y			- - - uniseriate uniseriate	heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous	sim sim sim sim sim	ple ple ple ple ple	ab ab ab ab	esent esent esent esent esent	no no no no no		- dist - -	
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N 34 - S4N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241 4- 34	SASP SASP SASP SASP SASP SASP SASP	y y y y y y			- - uniseriate uniseriate uniseriate	heterog heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous geneous	sim sim sim sim sim sim	ple ple ple ple ple ple ple	at at at at at	osent osent osent osent osent osent	no no no no no no		- dist - - abs	ent
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N 34 - S4N 35 - S4N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241 4- 34 4- 35	SASP SASP SASP SASP SASP SASP SASP SASP	y y y y y y y			- - - uniseriate uniseriate uniseriate uniseriate	heterog heterog heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous geneous geneous	sim sim sim sim sim sim sim	ple ple ple ple ple ple ple	ak ak ak ak ak ak	esent esent esent esent esent esent esent	no no no no no no no		- dist - -	ent
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N 34 - S4N 35 - S4N 41 - S4N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241 4- 34 4- 35 4- 41	SASP SASP SASP SASP SASP SASP SASP SASP	y y y y y y y			uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	heterog heterog heterog heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous geneous geneous	sim sim sim sim sim sim sim	ple ple ple ple ple ple ple ple	ak ak ak ak ak ak ak	osent osent osent osent osent osent osent osent	no no no no no no no		- dist - - abs abs	ent ent
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N 34 - S4N 35 - S4N 41 - S4N 55 - S4N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241 4- 34 4- 35 4- 41 4- 55	SASP SASP SASP SASP SASP SASP SASP SASP	y y y y y y y y			uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	heterog heterog heterog heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous geneous geneous geneous	sim sim sim sim sim sim sim sim	ple ple ple ple ple ple ple ple ple	at at at at at at at at at	osent osent osent osent osent osent osent osent osent osent	no no no no no no no no no few ring	gs	- dist abs abs - dist	ent ent inct
168 - S3N 173 - S3N 177 - S3L 206 - S3N 217 - S3N 241 - S3N 34 - S4N 35 - S4N 41 - S4N	3- 168 3- 173 3- 177 3- 206 3- 217 3- 241 4- 34 4- 35 4- 41	SASP SASP SASP SASP SASP SASP SASP SASP	y y y y y y y			uniseriate uniseriate uniseriate uniseriate uniseriate uniseriate	heterog heterog heterog heterog heterog heterog heterog heterog heterog	geneous geneous geneous geneous geneous geneous geneous	sim sim sim sim sim sim sim	ple	at at at at at at at at at at	osent osent osent osent osent osent osent osent	no no no no no no no	<b>js</b>	- dist - - abs abs	ent ent inct

Field Code	Lab Code	species	pith	RMTP	fungi	GL	SC	tree age	L/N	WI	macro	micr	o RBC	Atech	Sec
90 - S4N	4-90	SASP	у	[-	у	high	open	<50	N	RB	у	У	У	tc/rc	n
94 - S4N	4-94	SASP	у	-	У	medium	open	<50	N	RB	У	У	У	rc	n
96 - S4N	4-96	SASP	у	-	У	medium	open	<50	N	RB	У	У	У	tc/rc	n
119 - S4N	4- 119	SASP	у	-	У	medium	open	<50	N	RB	У	У	У	rc	n
132 - S4N	4- 132	SASP	у	-	У	medium	open	<50	N	RB	У	У	У	rc	n
141 - S4L	4- 14 1	SASP	у	-	У	high	open	<50	L	RB	У	У	У	rc	n
144 - S4N	4- 144	SASP	n	<5	У	very high	open	<50	N	RB	У	У	У	rc	n
156 - S4N	4- 156	SASP	у	-	У	medium	closed	<50	N	RB	У	У	У	tc/rc	n
169 - S4N	4- 169	SASP	у	-	-	medium	open	<50	N	RB	У	У	У	rc	n
170 - S4N	4- 170	SASP	у	-	У	medium	open	<50	N	RB	У	У	У	rc	n
Field Code	Lab Code	species	diffu	se porou	ıs ra	ay width	ray type		perf.	plates	SpTh	te	nsion we	ood	SW
90 - S4N	4-90	SASP	У		-		heteroger	neous	simple		absen	t fe	w rings		-
94 - S4N	4-94	SASP	У		-		heteroger	neous	simple		absen	t no	)		-
96 - S4N	4-96	SASP	У		u	niseriate	heteroger	neous	simple		absen	t no	)		distinct
119 - S4N	4- 119	SASP	У		u	niseriate	heteroger	neous	simple		absen	t zc	nes		distinct
132 - S4N	4- 132	SASP	У		-		heteroger	neous	simple		absen	t no	)		-
141 - S4L	4- 14 1	SASP	У		u	niseriate	heteroger	neous	simple		absen	t no	)		distinct
144 - S4N	4- 144	SASP	У		-		heteroger	neous	simple		absen	t no	)		distinct
156 - S4N	4- 156	SASP	У		-		heteroger	neous	simple		absen	t no	)		distinct
169 - S4N	4- 169	SASP	У		u	niseriate	heteroger	neous	simple		absen	t no	)		-

species	pith	fungi	GL	SC	L/N	WI	macro	micro	RBC	Atech	Sec	radius	others			
BESP	У	-	1-	-	-	RB	У	у	У	tc/rc	n	1cm	branch			
BESP	У	-	-	-	-	RB		-	У	rc	n	<0.5 cm	branch			
BESP	У	-	-	-	-	RB	V	У	У	rc	n	0.5 cm	branch			
BESP	У	-	-	-	-	RB		-	У	rc	n	<0.5 cm	branch			
BESP	У	-	-	-	-			-	У	rc	n	<0.5 cm	branch			
BESP	У	-	-	-	-	RB		-	У	rc	n	<0.5 cm	branch			
BESP	У	-	-	-	-			-		rc	n	<0.5 cm	branch			
BESP	У	-	-	-	-			-	У	rc	n	<0.5 cm	branch			
BESP	V	-	-	-	-	RB ·		-	٧	rc	n	<0.5 cm	branch			
BESP	V	-	-	-	-			-	٧	rc	n	<0.5 cm	branch			
BESP	V	-	-	-	-			-	٧	rc	n	<0.5 cm	branch			
BESP	V	-	-	-	-			•		rc	n	<0.5 cm	branch			
Larix	V	V	-	-	-			•			n					
Larix	V	-	-	-	-			-								
Larix	-	-	-	-	-			•				-				
LASP	-	v	mediu	-	-		_	-	,			5 cm				
	n	-			-			-	-							
	-	-	-	-	L		_	-	-			-				
	-	v	-	-	-			-	-			-				
	v	-	-	-	L			-	-			7.5 cm				
	,	-	-	-	L			-	-							
		-	-	-				-				-				
		V	mediu	open	_			-	-			2 3 cm				
	-	-			_			•				-				
species	conifer			CW	PR	TT	TTW	BP	SOBP			duous dif	•	th ray type	perf. plates	SpTh
	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-			-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	homogeneous	scalariform	-
BESP	n	-	-	-	-	-	-	-	-	-	У	У	-	-	scalariform	-
LASP	У	-	-	-	smal	l pres	e -	bi	smooth	-	n	-	-	-	-	-
LASP	У	-	-	-	smal	pres	e -	bi	smooth	-	n	-	-	-	-	-
	-	-	-	-	smal	l pres	e -	bi	smooth	-	n	-	-	-	-	-
	-	-	intense	-	smal	l pres	e -	bi	smooth	-	n	-	-	-	-	-
	У	-	intense	-	smal	l pres	e -	bi	smooth	-	n	-	-	-	-	-
PCSP	У	-	-	-	smal	l pres	e -	uni	angular	-	n	-	-	-	-	-
	-	-			smal	l proc	e -	bi	angular	-	n	-	-	-	-	-
PCSP	V	-	-	-	Siliai	i bies										
PCSP	y y		- medium	no	smal			uni	angular	-	n	-	-	-	-	-
PCSP	у	-	medium medium			l pres	e -	_	angular angular		n n		-	-	-	-
PCSP	y y	-		no	smal	l pres	e - e -	uni	angular	-	n		- - -	-	-	-
PCSP PCSP/LA	y y	- -		no no	smal smal	l pres	e - e -	uni uni bi		-	n	-	-   -   -   -		- - -	- - -
	BESP BESP BESP BESP BESP BESP BESP BESP	BESP	BESP	BESP         y         -         -         -         -         -         BESP         y         - </td <td>BESP         y         -         -         -         -         -         BESP         y         -<!--</td--><td>BESP         y         -</td><td>BESP         y         -         -         -         RB           BESP         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           LASP         n         y<td>  BESP   y</td><td>  BESP</td><td>  BESP   Y</td></td></td>	BESP         y         -         -         -         -         -         BESP         y         - </td <td>BESP         y         -</td> <td>BESP         y         -         -         -         RB           BESP         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           LASP         n         y<td>  BESP   y</td><td>  BESP</td><td>  BESP   Y</td></td>	BESP         y         -	BESP         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           Larix         y         y         -         -         -         RB           LASP         n         y <td>  BESP   y</td> <td>  BESP</td> <td>  BESP   Y</td>	BESP   y	BESP   y	BESP   Y	BESP   Y	BESP   Y	BESP   Y	BESP   Y	BESP	BESP   Y

Lab C.	species		pi	th f	ungi	GL	SC	L/N	WI r	ma c ro	micro	RBC	Atech	Sec	radius	others				
L-74	PISY		-	-		-	-	-	RB y	/	У	У	rc	n	-	small piece				
L-8	plywood (	(NO Abies or P	ine) -	-		-	-	-	RB y		У	У	-	n	-	timber				
L-6	PSME	`	-	-		-	-		RB y		٧	٧	rc	n	-	timber				
L-2	SASP		у	-		-	-	-	RB y		У	У	tc/rc	n	1cm	branch				
L-3	SASP		У	-		-	-	-	RB y	/	У	У	tc/rc	n	1cm	branch				
L-4	SASP		У	-		-	-	-	RB y	/	У	У	tc/rc	n	2 cm	branch				
L-5	SASP		у	-		-	-	-	RB y	/	У	У	tc/rc	n	1.5 cm	branch				
L-9	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L- 10	SASP		У	-		-	-	-	RB y	/	У	У	tc/rc	n	0.5 cm	branch				
L- 11	SASP		у	-		-	-	-	RB y	/	У	У	tc/rc	n	0.5 cm	branch				
L- 12	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L- 14	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	<0.5 cm	branch				
L- 15	SASP		у	-		-	-	-	RB y	/	У	У	rc	n	<0.5 cm	branch				
L- 17	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	1cm	branch				
L- 18	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L- 19	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L-20	SASP		у	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L-22	SASP		у	-		-	-		RB y	/	У	У	rc	n	0.5 cm	branch				
L-23	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	0.5 cm	branch				
L-24	SASP		у	-		-	-	-	RB y	/	У	У	rc	n	<0.5 cm	branch				
L-25	SASP		У	-		-	-	-	RB y	/	У	У	rc	n	<0.5 cm	branch				
L-27	SASP		у	-		-	-		RB y	/	У	У	rc	n		branch				
L-28	SASP		у	-		-	-		RB \	/	У	У	rc	n		branch				
L-30	SASP		У	-		-	-	-	RB y	/	У	V	rc	n	<0.5 cm	branch				
							_				-	,								
Lab C.		conifer R		VLW	CW	PR		ĪΤ	TTW		SOBP	Sp	Th De	ciduo		use porous			perf. plates	SpTh
L-74	PISY	у -	D EV	VLW	-	larg	e p	oresent	tooth	uni	-	Sp <sup>-</sup>	Th De	ciduo	-	use porous	-	-	perf. plates	SpTh -
L-74 L-8	PISY plywood	y - y -		VLW		larg sma	e p	oresent oresent	tooth -	uni bi	-	-	Th De n n	ciduo	-	use porous				SpTh - -
L-74 L-8 L-6	PISY plywood PSME	y - y - y -		VLW	-	larg sma sma	e p	oresent	tooth - -	uni	-	- - pres	Th De n n sent n	ciduo	- - -	use porous	-	-  -  -	-	SpTh - -
L-74 L-8 L-6 L-2	PISY plywood PSME SASP	y - y - y - n -		VLW	-	larg sma sma	e p	oresent oresent	tooth - - -	uni bi uni -	-	-	Th De n n sent n y	ciduo	- - - y	use porous	-	- - - heterogeneous	- - - simple	SpTh - - - -
L-74 L-8 L-6 L-2 L-3	PISY plywood PSME SASP SASP	y - y - y - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth - - - -	uni bi uni -	-	- pres	n n sent n y	ciduo	-  -  -   y   y	use porous	-	- - - heterogeneous heterogeneous	- - - simple simple	SpTh
L-74 L-8 L-6 L-2 L-3 L-4	PISY plywood PSME SASP SASP SASP	y - y - y - n - n -		VLW	-	larg sma sma	e p	oresent oresent	tooth	uni bi uni - -	-	- - pres	Th De n n sent n y y y	ciduo	- - - y y	use porous	-	- - - heterogeneous heterogeneous heterogeneous	- - - simple simple simple	SpTh
L-74 L-8 L-6 L-2 L-3 L-4 L-5	PISY plywood PSME SASP SASP SASP SASP	y - y - n - n - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni - - -	-	- pres - - -	Th De n n n sent n y y y y y	ciduo	- - - y y y	use porous	- - - - -	- - - heterogeneous heterogeneous heterogeneous	simple simple simple simple	SpTh
L-74 L-8 L-6 L-2 L-3 L-4 L-5 L-9	PISY plywood PSME SASP SASP SASP SASP SASP SASP	y - y - n - n - n - n - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni - - - - -	-	- pres	Th De n n sent n y y y y y y y	ciduo	- - y y y y	use porous	- - - - -	- - heterogeneous heterogeneous heterogeneous heterogeneous	- - simple simple simple simple simple	SpTh
L-74 L-8 L-6 L-2 L-3 L-4 L-5 L-9 L-10	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP	y - y - n - n - n - n - n - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	Th De  n n sent n y y y y y y y y	ciduo	- - - y y y y	use porous	- - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	- - simple simple simple simple simple simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni - - - - -	-	- pres - - -	Th De n n n n sent n y y y y y y y y y y y y	ciduo	- - - y y y y y	use porous	- - - - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple simple simple simple simple simple simple simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n -		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	Th De n n n n sent n y y y y y y y y y y y y y y y y	ciduo	- - - y y y y y y	use porous	- - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	Th De n n n n sent n y y y y y y y y y y y y y y y y y y	ciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	rh De	eciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 11 L- 12 L- 14 L- 15 L- 17	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	Th De n n n n n n n n n n n n n n n n n n	ciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 17	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	rh De	eciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-	- pres - - -	rh De n n n n n n n n n n n n n n n n n n	eciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-		Th De n n n n n n n n n n n n n n n n n n	eciduo	- - y y y y y y y y	use porous	- - - - - - - -	heterogeneous	simple	SpTh
L-74 L-8 L-6 L-2 L-3 L-4 L-5 L-9 L-10 L-11 L-12 L-14 L-15 L-17 L-18 L-19 L-20 L-22	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n		VLW	-	larg sma sma -	e p	oresent oresent	tooth	uni bi uni	-		rh De	ciduo	- - - y y y y y y y	use porous	- - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20 L- 22 L- 23	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n		VLW	-	larg sma sma -	e p	oresent present present - - - - - - - - - - - - - - - - - - -	tooth	uni bi uni	-	- pres	Th De n n n n n n n n n n n n n n n n n n	eciduo	- - y y y y y y y y	use porous	- - - - - - - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20 L- 22 L- 23 L- 24	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e   Kall   Kall	oresent present present - - - - - - - - - - - - - - - - - - -	tooth	uni bi uni	-	- pres	rh De	eciduo	- - y y y y y y y y y	use porous	- - - - - - - - - - - - - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20 L- 22 L- 23 L- 24 L- 25	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e   Kall   Kall	oresent present present - - - - - - - - - - - - - - - - - - -	tooth	uni bi uni	-	- pres	rh De n n n n n n n n n n n n n n n n n n	eciduo	- - - y y y y y y y y y	use porous	- - - - - - - - - - - - - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20 L- 22 L- 23 L- 24 L- 25 L- 27	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e   Kall   Kall	oresent present present - - - - - - - - - - - - - - - - - - -	tooth	uni bi uni	-	- pres	Th De n n n n n n n n n n n n n n n n n n	eciduo	- - - y y y y y y y y y y	use porous	- - - - - - - - - - - - - - - - - - -	heterogeneous	simple	SpTh
L- 74 L- 8 L- 6 L- 2 L- 3 L- 4 L- 5 L- 9 L- 10 L- 11 L- 12 L- 14 L- 15 L- 17 L- 18 L- 19 L- 20 L- 22 L- 23 L- 24 L- 25	PISY plywood PSME SASP SASP SASP SASP SASP SASP SASP SAS	y - y - y - n - n - n - n - n - n - n - n - n - n	- - - - - - - - - - - - - - - - - - -	VLW	-	larg sma sma -	e   Kall   Kall	oresent present present - - - - - - - - - - - - - - - - - - -	tooth	uni bi uni	-	- pres	Th De n n n n n n n n n n n n n n n n n n	eiduo	- - - y y y y y y y y y y y	use porous	- - - - - - - - - - - - - - - - - - -	heterogeneous	simple	SpTh

L-31 L-33 L-35 L-36 L-37 L-38 L-39 L-40 L-42 L-43 L-44 L-45 L-47	SASP SASP SASP SASP SASP	y y y y	- - -	- - -	-	-		y y	y y	y v	rc	n n	0.5 cm <0.5 cm	branch			
L-35 L-36 L-37 L-38 L-39 L-40 L-42 L-43 L-44 L-45 L-47	SASP SASP SASP SASP	y y	-	_	-			у	У	V	rc	n	.0 E am	To the second of the			
36 37 38 39 40 42 43 44 45 47	SASP SASP SASP	У		-	-	_				,	.0	11	<0.5 0111	branch			
37 38 39 40 42 43 44 45 47	SASP SASP	-	_			_	RB	у	У	У	rc	n	<0.5 cm	branch			
38 39 40 42 43 44 45 47	SASP	1/		-	-	-	RB	у	у	У	rc	n	<0.5 cm	branch			
L-39 L-40 L-42 L-43 L-44 L-45 L-47		У	-	-	-	-	RB	у	У	У	rc	n	<0.5	branch			
L-40 L-42 L-43 L-44 L-45 L-47	0.4.0.0	У	-	-	-	-	RB	у	у	У	rc	n	<0.5 cm	branch			
L-42 L-43 L-44 L-45 L-47	SASP	У	-	-	-	-	RB	у	у	У	rc	n	<0.5 cm	branch			
L-43 L-44 L-45 L-47	SASP	У	-	-	-	-	RB	у	у	У	rc	n	<0.5 cm	branch			
L-44 L-45 L-47	SASP	У	-	-	-	-	RB	у	У	У	rc	n	<0.5 cm	branch			
L-45 L-47	SASP	У	-	-	-	-	RB	у	У	У	rc	n	<0.5 cm	branch			
L-47	SASP	У	-	-	-	-		y	У	У	rc	n	<0.5 cm	branch			
L-47	SASP	y	-	-	-	-		у	y	y	rc	n	<0.5 cm	branch			
	SASP	y	-	-	-	-		у	У	У	rc	n	<0.5 cm	branch			
L-48	SASP	y	-	-	-	-		у	y	У	rc	n	<0.5 cm	branch			
L-49	SASP	٧	-	-	-	-	RB	У	V	V	rc	n	<0.5 cm	branch			
L-50	SASP	У	-	-	-	-		У	٧	V	rc	n	<0.5 cm	branch			
L-52	SASP	V	-	-	-	-	RB	У	V	V	rc	n	<0.5 cm	branch			
L-54	SASP	У	-	-	-	-		У	V	V	rc	n	<0.5 cm	branch			
L-55	SASP	У	-	-	-	-	RB	У	V	V	rc	n	<0.5 cm	branch			
L-56	SASP	У	-	-	-	-		У	V	V	rc	n	<0.5 cm	branch			
L-57	SASP	У	-	-	-	-	RB	У	V	V	rc	n	<0.5 cm	branch			
L-61	SASP	У	-	-	-	-		У	V	V	rc	n	<0.5 cm	branch			
L-63	SASP	У	-	-	-	-	RB	У	V	V	rc	n	<0.5 cm	branch			
L-64	SASP	V	-	-	-	-		У	У	V	rc	n	<0.5 cm	branch			
Lab C		,	ifer RD		EWLW	CW	PR	TT		-			Deciduous			rous ray width	prous ray width ray type
L-31	SASP	n	-	, <u> </u>		-	-	-		-  -	O D .		/	у	٠.	-	
L-33	SASP	n	-	-		-	-	-					, ,	у		_	
L-35	SASP	n	-				-	-				,		У		-	
L-36	SASP	n				-	_	-						y			- heterogeneous
L-36	SASP	n	-			-	-	-						У		-	- heterogeneous
L-37	SASP	n				-		-						-			- heterogeneous
L-36	SASP	n	-	-		-	-	-			-			У		-	
L-39	SASP	n	-			-	-	-			-			У		-	- heterogeneous
L-40 L-42	SASP					-	-	-						У		-	- heterogeneous
		n					-				-			У		-	- heterogeneous
L-43	SASP	n	-	-		-	-	-			-			У		-	- homogeneous
L-44	SASP	n	-	-		-	-	-			-			У		-	- heterogeneous
L-45	SASP	n	-	-		-	-	-			-			У		-	- heterogeneous
L-47	SASP	n	-	-		-	-	-			-			У		-	- heterogeneous
L-48	SASP	n	-	-		-	-	-			-			У		-	- heterogeneous
L-49	SASP	n	-	-		-	-	-			-			у		-	- heterogeneous
L-50	SASP	n	-	-		-	-	-			-	1	/	у		-	neterogeneous
L-52	SASP	n	-	-		-	-	-	-		-		/	у		-	- heterogeneous
L-54	SASP	n	-	-		-	-	-	-		-		/	у		-	- heterogeneous
L-55	SASP	n	-	-		-	-	-	-		-		/	у		-	- heterogeneous
	SASP	n	-	-		-	-	-	-		-	1	/	у		-	- heterogeneous
L-56								-	-				/	У		-	- heterogeneous
	SASP	n	-	-		-	-	-	-	-  -			,	y			
L-56	SASP SASP	n n	-	-		-	-	-				,		У		-	

Lab C.	species	pith	fungi	GL	SC	L/N	WI	macro	micro	RBC	Atech	Sec	radius	others				
L-65	SASP	у	<b>-</b>	-	-	-	RB	У	У	У	rc	n	<0.5 cm	branch				
L-66	SASP	у	-	-	-	-	RB	У	У	У	rc	n	<0.5 cm	branch				
L-67	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-72	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-75	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-76	SASP	у	-	-	-	-	RB	У	У	У	rc	n	1cm	branch				
L-77	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-78	SASP	у	-	-	-	-	RB	У	У	У	rc	n	1cm	branch				
L-80	SASP	у	-	-	-	-	RB	У	У	У	rc	n	1cm	branch				
L-81	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-82	SASP	у	-	-	-	-	RB	У	У	У	rc	n	0.5 cm	branch				
L-83	SASP	У	-	-	-	-	RB	У	У	У	rc	n	1cm	branch				
L-7	SASP	-	-	-	-	-	RB	У	У	У	-	n	-	timber				
L-68	SASP	у	-	-	-	-	RB	у	У	У	rc	n	0.5 cm	branch				
Lab C.	species	coni	fer RD	) EV	VLW	CW	PR	TT T	TW BP	SOBF	SpTh	Dec	iduous	diffuse porous	ray width	ray type	perf. plates	SpTh
L-65	SASP	n	-	-		-	-		1-	-	-	У		у	-	heterogeneous	simple	-
L-66	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-67	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-72	SASP	n	-	-		-	-		-	-	-	У		у	uni	heterogeneous	simple	-
L-75	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-76	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-77	SASP	n	-	-		-	-		-	-	-	n		у	-	heterogeneous	simple	-
L-78	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-80	SASP	n	-	-		-	-		-	-	-	У		у	uni	heterogeneous	simple	-
L-81	SASP	n	-	-		-	-		- 1-	-	-	У		y	uni	heterogeneous	simple	-
L-82	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-83	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-
L-7	SASP	n	-	-		-	-		-	-	-	У		у	-	heterogeneous	simple	-