# A gradient analysis of communities of macrofungi and slime moulds on decaying beech logs

## En gradientanalyse af samfund af storsvampe og slimsvampe på faldne bøgestammer

**Specialerapport**

Jacob Heilmann-Clausen
Afdeling for alger og svampe
Botanisk Institut, Københavns Universitet
1999

Vejleder: Thomas Læssøe (Lektor).

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## INDHOLD

Forord side 4
Dansk sammenfatning side 7
Artikelmanuskript side 10
    Summary side 10
    Introduction side 10
    Material & methods side 11
    Results side 15
    Discussion side 28
    References side 36

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Appendix 1 (Total artsliste) side 42
Appendix 2 (Taxonomiske og floristiske noter) side 51
Appendix 3 (Stamme/arts matrix) side 59
Appendix 4 (Stamme/variabel matrix) side 77
Appendix 5 (Stammekort, Suserup Skov) side 81

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Illustrationer.

Forside. Far samler svampe i Suserup Skov (tegning Sofia Heilmann-Clausen)
side 3. Lokalitetsbillede, Suserup Skov.
side 6. Myceliestrenge, *Phanerochaete velutina.*
side 9. Mycelieskjolde.
side 41. Løv-tjæreporesvamp (*Ischnoderma resinosum*)
side 50. Nemania chestersii

Skovbillede fra Suserup Skov. I forgrunden ses stammen F3NW-B7 (nedbrydningsstadie 5), bagved ses F3NW-B8 (nedbrydningsstadie 4).
Insite Suserup Skov. In the foreground the log F3NW-B7 (decay class 5), is seen, in the background F3NW-B8 (decay class 4) is situated.
Photo Jacob Heilmann-Clausen, May 1995.

# Forord

Mit specialeforløb har været usædvanligt. Det feltarbejde der ligger til grund for den foreliggende rapport udførte jeg så tidligt som i 1994 og 1995, mens bearbejdelsen af data samt en væsentlig del af bestemmelsesarbejdet er foregået i 1998 og 1999. I 1994, da jeg påbegyndte registreringsarbejdet, var jeg i færd med at afslutte biologistudiets første del. Jeg havde ikke en udviklet kritisk tilgang til projektdesign og metodevalg og havde ikke et speciale i tankerne. Arbejdet udviklede sig imidlertid i omfang og i begyndelsen af 1995 blev det klart for mig, at en systematisk og videnskabelig bearbejdning af det indsamlede materiale var mere end jeg kunne klare ved siden af det almindelige studieliv. Som alternativ til at opgive undersøgelsen valgte jeg at fortsætte feltarbejdet året ud, for derefter at putte hele projektet i skuffen til bedre tider. Samtidigt traf jeg aftale med Thomas Læssøe, som indvilgede i at være vejleder for mig.
De væsentligste ulemper ved forløbet har været at jeg ikke har haft tid og viden nok til at designe feltarbej-det optimalt og at jeg ikke har haft en vejleder inde i billedet på et tidligere tidspunkt. Konkret har det medført et mindre optimalt undersøgelsesdesign:

- Registreringen af svampe på stammerne har udelukkende baseret sig på tilstedeværelse kontra fravær af arter. En estimering af forekomstmønstre (areal, mikrohabitater) havde været interessant, og i et vist omfang muligt indenfor forsøgsdesignet.
- Registreringen af miljøvariable er ikke optimal. Bl.a. måtte jeg, efter adskillige arbejdsdage opgive et storstilet forsøg på at måle mikroklima vha. træklodser, pga. tidsmangel og et ugennemtænkt fsøgsdesign. Tilsvarende løb et forsøg på mekanisk at måle trehårdhed i vasken, idet jeg ikke havde tid til at kalibrere og tilpasse det lånte udstyr til nedbrudt ved.
- Min forståelse for betydningen af repræsentative indsamlinger var begrænset, hvilket har medført at adskillige arter ikke er belagt fra undersøgelsen.

Forløbet har dog også haft klare fordele, ikke mindst tidsmæssigt. Projektet havde næppe fået det nuværende omfang indenfor et "standardiseret" specialeforløb, da et sådant ikke tillader to hele feltsæsoner.

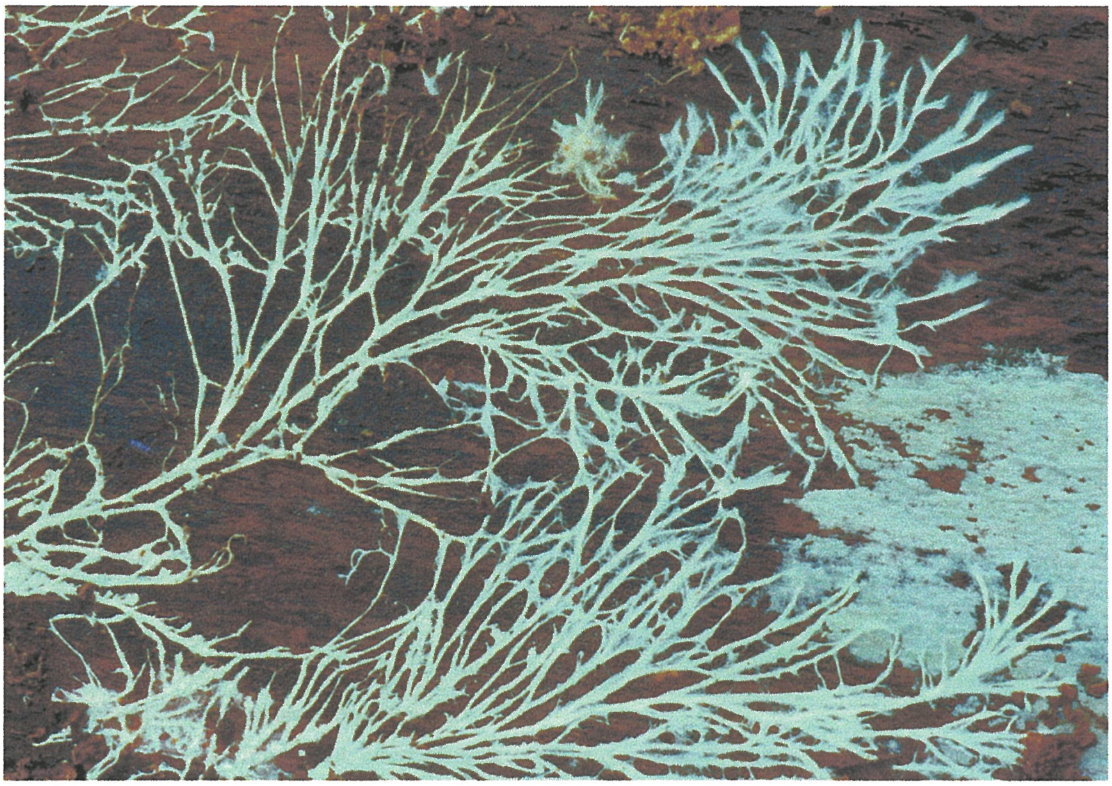
Jeg har valgt i min bearbejdning af det indsamlede materiale at koncentrere indsatsen om at skrive et artikelmanuskript, så vidt muligt i en form der gør det umiddelbart klart til indsendelse til et internationalt anderkendt og "peer-reviewet" tidsskrift. Det her præsenterede manuskript foreligger dog i en "brutto-version" som skal beskæres inden det indsendes.
Konkret har jeg skrevet manuskriptet med henblik på publicering i det engelske tidsskrift "Mycological Research", med de krav til tekstudformning det indebærer. Den lidt besynderlige citering af artikler med tre forfattere (1ste gang nævnt f.eks. Chapela, Boddy & Rayner 1988; 2den gang nævnt Chapela et al 1988), er en konsekvens af disse krav.

En del personer er takket i artikel-manusriptet og vil ikke blive yderligere individuelt takket her. De skal dog alle vide at deres hjælp har været uvurderlig. Yderligere vil jeg gerne takke ansatte og studerende ved AAS, Københavns Universitet for hjælp med diverse opgaver, diskussioner mv. En særlig tak skal lyde til Chris B. Jakobsen, for hjælp med diverse computerproblemer. Desuden en stor tak til Christian Lange, Århus Universitet, som har været til uvurderlig hjælp, da det brændte på med de sidste figurer. Sidst, men ikke mindst vil jeg takke Malene, Silja og Sofia for god opbakning gennem hele forløbet

Den her foreliggende rapport er ikke den første der belyser samfund af ved-nedbrydende svampe i Suserup Skov. To projekthold under fagmodulet Thalofytter (Svampe) / a-modulet Svampetaxonomi vejledt af Thomas Læssøe har barslet med rapporter indenfor området. Ikke mindst den sidstnævnte er relevant i forhold til den her foreliggende rapport:

Hellensten, H. S., Closter, R. M. & Wamberg, C. (1997). Fungaen på egestammer i tre nedbrydningsstadier. - Projetrapport, a-modulet svampetaxonomi, AAS, Københavns Universitet.
Madsen, B. & Johansen, C. (1994). Succession af kernesvampe på væltede bøgestammer i Suserup Skov. – Projetrapport, fagmodulet thalofytter (svampe), AAS, Københavns Universitet.

Begge rapporter er upublicerede, men tilgængelige via Thomas Læssøe, AAS, Botanisk Institut, Københavns Universitet.



Myceliestrenge af *Phanerochaete velutina* i kontakt med et frugtlegeme af *Hyphoderma argillaceum*.
Mycelial cords of *Phanerochaete velutina* makes contact to a sporocarp of *Hyphoderma argillaceum*.
Photo: Jacob Heilmann-Clausen.

# Dansk sammenfatning.

## En gradientanalyse af samfund af storsvampe og slimsvampe på faldne bøgestammer.

Svampe er en dominerende organismegruppe i nedbrydningen af dødt ved, og spiller derved en uhyre vigtig rolle i alle skov-økosystemer. Nedbrydningen af dødt ved af store dimensioner, f.eks. hele stammer, er en kompliceret og langvarig proces, som typisk involverer mange forskellige svampearter, foruden repræsentanter fra andre organismegrupper, heriblandt slimsvampe. Generelt regnes mikroklima, substratkvalitet (træart, nedbrydningsstadie) og den tilgængelige svampe-artspulje som de vigtigste parametre i forhold til udformningen af svampesamfund på ved under nedbrydning. Talrige undersøgelser har undersøgt effekterne af disse parametre hver for sig, men kun meget få undersøgelser har forsøgt en mere overordnet analyse. Hovedformålet med denne rapport er et forsøg på en sådan analyse.
Mit speciale baserer sig på registreringer af svampefrugtlegemer på 70 systematisk udvalgte faldne bøgestammer i Suserup Skov, syd for Sorø. Alle de undersøgte stammer er store. De mindste har en brysthøjdediameter på 70 cm, mens den største når en diameter på 168 cm. (Til sammenligning hugges bøg i Danmark normalt ved en diameter på maximalt 70 cm). Udover svampe indgår slimsvampe (også knedt som svampedyr) i undersøgelsen. Forekomsten (+/-) af frugtlegemer blev undersøgt på hver stamme ved ialt 9 besøg i løbet af 1994 og 1995, og er opsummeret i en stamme/arts datamatrix (se appendix 3). En del materiale blev bestemt i felten, men i mange tilfælde var det nødvendigt at indsamle materiale til mikroskopisk bestemmelse. I tilknytning til hver undersøgt stamme har jeg målt eller estimeret en række miljø- parametre (se appendix 4) som groft kan deles i tre grupper: 1. Stamme-variable (dimension, komplexitet, nedbrydninsgrad, alder mv.) 2. Mikroklimatiske variable (vindexponering, jordfugtighed, afstand til skovbryn mv.). 3. Floristiske variable (antal plantearter omkring stammen, frekvens af enkelt-plantearter). Strukturen i stamme/arts datamatrix'en blev undersøgt ved hjælp af DCA* (detrended correspondance analysis). De resulterende DCA-akser blev herefter analyseret i forhold til de undersøgte miljøparametre, dels ved hjælp af simpel korrelations analyse, dels ved hjælp af multibel regressions analyse.
Ialt er 302 arter erkendt i materialet, heraf 25 arter af slimsvampe og 277 arter af svampe. En del af de fundne arter er ikke tidligere rapporteret fra Danmark (se appendix 2). For både svampe og svampedyr blev det fundet at artsantallet er højst på intermediært nedbrudte stammer.
Den første DCA-akser (DCA1) repræsenterer langt den stærkeste gradient i materialet og fremstår som en utvetydig successionsgradient, beskrivende nedbrydningsforløbet fra det friskfaldne stamme til den stærkt nedbrudte. DCA2 er mere kompleks men afspejler især graden af mikroklimatisk stress (udtørrings-stress) og stammens nedbrydningshastighed. Endelig fremstår DCA3 som en svag og noget tvivlsom jordbundsgradient (fra fattig til rig bund). På grund af den svage gradientstruktur langs DCA3 blev yderligere DCA-akser ikke undersøgt.
De fundne resultater stemmer generelt godt overens med tidligere undersøgelser og teorier på området. En markant dominans af en successionsgradient er flere gange beskrevet fra studier af svampesamfund på nåletræ. Den konkrete samfundsudvikling langs aksen afspejler navnlig en tilpasning til øget konkurrence efterhånden som nedbrydningsforløbet skrider frem, men synes også at afspejle, at svampearter der forekommer sent i forløbet ofte er særligt tilpassede til at videreføre nedbrydningen af ved, der allerede er delvist nedbrudt. Koblingen mellem nedbrydingshastighed og mikroklimatisk stress langs DCA2 stemmer godt overens med laboratorieforsøg, men er ikke tidligere beskrevet fra naturlige forhold. Koblingen mellem de to faktorer er kompleks og det synes sandsynligt at nedbrydngshastigheden afspejler graden af mikroklimatisk stress påført

både udefra (vind mv.) men også indefra, idet visse kærnesvampe tilsyneladende udtørrer erobret ved aktivt for at holde andre nedbrydersvampe på afstand. Aksen er stærkt negativt korreleret med diversiteten (antal arter pr. stamme) af både svampe og svampedyr, dvs. at langsomt nedbrudte/mikroklimatisk stressede stammer generelt er artsfattige. Kun barksvampe er ligeligt repræsenteret langs aksen og fremstår derved som en generelt udtørringstolerant gruppe.

Jordbundsgradienten udtrykt langs DCA3 er som nævnt noget svag og tvivlsom, men ville formodentlig blive mere klart udtrykt, hvis stammer fordelt over et bredere spektrum af jordbundstyper end repræsenteret i Suserup Skov, blev inkluderet i analysen.

Som helhed giver undersøgelsen et overordnet indblik i svampe-samfundsudviklingen på faldne bøge-stammer og vil være et godt udgangspunkt for mere detaljerede studier, f.eks på mikrohabitatniveau, eller mht. at undersøge samspil med andre organismegruppers betydning for nedbrydningsforløbet.

*DCA er en metode til indirekte gradientanalyse, dvs. at metoden fremdrager gradienter fra et givet materiale udelukkende udfra de enkelte arters fordeling på prøveflader (i dette tilfælde bøgestammer). De fremkomne gradienter kan derefter tolkes udfra målte miljøvariable. Til forskel er f.eks. CCA (canonical correspondance analysis) en metode til direkte gradient analyse, der direkte indrager undersøgte miljøvariable i udtrækningen af akser.

Den første akse i en DCA (DCA1) udtrækkes således, at de undersøgte enkeltarters optima bliver bedst muligt spredt langs aksen, samtidigt med at prøvefladerne bliver fordelt således, at dissimilariteten imellem disse bliver bedst muligt bevaret. Successive akser udtrækkes på tilsvarende vis, dog således at den variation der er udtrykt langs allerede udtrukne akser holdes udenfor analysen.

Fremgangsmåden gør at DCA1 altid er den akse, der forklarer mest variation. "Eigen-værdien" fortæller hvor meget variation efterfølgende akser forklarer. Når der, som i den her præsenterede undersøgelse, er et stort spring i eigen-værdi mellem DCA1 og DCA2-3, indikerer dette, at DCA1 forklarer betydeligt mere variation end de to andre akser.

Gradientlængden er et udtryk for mængden af β-diversitet (arts-turnover) udtrykt langs en given akse. En gradientlængde på 3.5 SD enheder indikerer populært sagt at prøvefelter (stammer) placeret i hver sin ende af aksen ikke har nogen arter til fælles.

Mycelieskjolde (zone-lines) opdeler en bøgestamme i territorier, hver optaget af en bestemt svampeindivid. Mycelieskjolde dannes af mange svampe som barrierer imod indtrængende konkurrenter.
Pseudosclerotial plates (zone-lines) dividing a beech log in compartments, each occupied by one fungal individual.
Photo: Jacob Heilmann-Clausen, May 1995.

# A gradient analysis of communities of macrofungi and slime moulds on decaying beech logs

**Jacob Heilmann-Clausen**

Department of mycology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 København K., Denmark.

The occurrence of fungi and slime moulds on 70 decaying beech logs was surveyed based on the presence/absence of sporocarps. In total 275 species of fungi and 25 of slime moulds were recognised. The recordings were summarised in a log/species datamatrix, the structure of which was investigated using detrended correspondance analysis (DCA). The ecological nature of the gradients, expressed by the first three DCA-axes were subsequently investigated by considering a number of environmental and log related variables. The first and strongest gradient was found to reflect the community development from newly dead logs, through the complete process of decay. The second gradient was found to be complex, reflecting both the rate of decay and the amount of microclimatic stress. The third rather weak gradient was found to reflect an influence of soil conditions.

Finally the gradients are discussed in a context of fungal ecological strategy theories, and a generalised model of the community development on the studied logs is proposed.

Running title: Macrofungi and slime moulds on beech logs
Keywords: DCA, Fagus, saprotrophic, succession, wood.

The perception and acceptance of dead wood as a key element in forest ecosystem functioning have increased dramatically in recent times (e.g. Harmon et al. 1986, Franklin, Shugart & Harmon 1987, Samuelsson, Gustafsson & Ingelög 1994), and so has the need to understand the associated biological processes. Dead wood is of crucial importance for biodiversity (Samuelsson et al. 1994, Christensen & Emborg 1996, Ohlson et al. 1997) and may constitute a important resource and sink of nutrients, which are gradually released from the wood during decomposition (Harmon et al. 1986, 1994). The process of wood decomposition involves several groups of organisms, such as bacteria, protozoa, nematoda, arthropods and insects, but under normal conditions fungi are the primary agents of decay (Rayner & Boddy 1988, Boddy 1992). The decay of large woody units, in particular whole logs, is a slow process which may take decades or even centuries to complete (Harmon et al. 1986, Rayner & Boddy 1988). The associated decomposer community development is very complex even when only fungi are considered (Boddy 1992, Renvall 1995).

In general the available species pool, microclimate and substrate quality (as determined i.e. by tree species and decay stage) have been denoted as the most important variables determining the fungal community structure in decaying wood (Gilbertson 1980, De Vries & Kuyper 1988, Rayner & Boddy 1988).

Several studies have dealth with the effects of these factors separately. For instance Coates & Rayner (1985a-c), Chapela, Boddy & Rayner (1988), Lange (1992) and Renvall (1995) have investigated the community changes occuring as decay proceeds. Butin & Kowalski (1983, 1986), Griffith & Boddy (1990) and Keizer & Arnolds (1990) have compared the wood decaying funga of several different tree species. Boddy (1983), Boddy, Gibbon & Grundy (1985) and Griffith & Boddy (1991a,b) have surveyed the effects of microclimate, and De Vries & Kuyper (1988) and Lindblad (1996) have surveyed the impacts of the available species pool. On the other hand very few studies have tried to evaluate the relative importance of these variables in a multivariate context.

Several kinds of multivariate methods are available for ecological studies (Økland 1990, Kenkel & Booth 1992, Legendre & Legendre 1998). In vegetation ecology ordination methods have been widely applied during recent years, and in several cases new insigth in complex vegetation processes and structures have been gained (Økland 1990). In studies of fungal ecology ordination methods have been applied much more occasionally, and has yet to gain popularity. Høiland & Bendiksen (1996) and Lindblad (1997) applied detrended correspondance analysis (DCA) in their studies of fungal communities of decaying conifer logs. However, the main subject of both studies were to investigate the impacts of forestry on the wood funga, hence less attention was given to the understanding of the general community processes of the studied logs.

In the present study detrended correspondance analysis (DCA) was applied in order to reveal the fungal community structure on decaying logs of beech (*Fagus sylvatica* L.). Apart from fungi, slime moulds were included in the study. Slime moulds are not known as active wood decayers, but seems mainly to be phacotrophic, feeding on bacteria and fungi (Ing 1994). The main questions adressed by the study are:

1. Which coenoclines are the most important in the material?
2. Can these be interpreted to reflect underlaying ecological gradients?
3. How do the observed coenoclines/ecological gradients relate to current theories of fungal ecological strategies and decay development?

The study is entirely based on registration of sporocarps, a method which is considered in detail in the discussion.

## MATERIAL AND METHODS

Suserup Skov (19.2 ha, 7-31 m a.s.l., 55°22'N, 11°34'E) is a near-natural temperate deciduous forest situated in the eastern part of Denmark on the island Zealand. The climate is cool-temperate and suboceanic with an annual mean temperature of $8.1^0$ C and an annual mean precipitation of 635 mm with maximum occurring in July to December (Emborg, Christensen & Heilmann-Clausen 1996).

The forest borders open land with scattered woody vegetation to the north and east, and pasture-land with a fairly well-developed woody vegetation to the west. To the south, the forest borders lake Tystrup.

The forest is situated on an undulating elevated plateau to the north and some +/- south-facing slopes towards the lake, intermixed with smaller flat areas. The soils are generally deep mull or moder-soils, developed on various types of glacial tills in the elevated parts and on lacustrine deposits towards the lake (Vejre & Emborg 1996). The pH in the topsoil generally varies from 3.9 to 4.5, but locally values above 7 are reached (Feilberg 1993, Møller1997).

The growth conditions are generally favorable and the typical maximum tree-heigth is about 40 m. The dominant tree-species are beech (*Fagus sylvatica* L.), ash (*Fraxinus excelsior* L.), oak (*Quercus robur* L.) and elm (*Ulmus glabra* L.), which in most parts of the forest forms a complete and dense canopy. The herb-layer is well developed, but is generally completely dominated by early flowering herbs such as *Anemone* spp., *Mercularialis perennis* L. and *Corydalis bulbosa* (L.)DC.

The cultural history of the forest is well-studied (Fritzbøger & Emborg 1996, Emborg et al. 1996). The impact of forestry has been very limited, at least since 1854, with only minor, selective cuttings having been made, especially during war time. Since 1960 the forest has been kept as a strict non-intervention forest, and it is now close to a dynamic steady-state (Emborg, Christensen & Heilmann-Clausen 1999), with plenty of standing and fallen dead wood, and equillibrum between regeneration, mature stands and breakdown. Further details on the forest structure and -composition have been published by Emborg et al.(1996).

### *Dating and selection of logs.*

In total 70 logs were selected for the study. Prior to this an attempt was made to establish the time of death (log age) of all dead beech trees in the forest with a diameter in breast height (dbh) above ca. 60 cm. For this purpose a sequence of high resolution aerial photos were used. All dead beech trees known by 1994 were tracked backwards in the photo sequence, until they were identified as standing, living trees.

The log age was succesfully determined for 130 beech logs, which were subsequently divided into seven age-classes (1960-67, 1967-72, 1972-78, 1978-81, 1981-1985, 1985-90, 1990-93), and four dbh classes (70-89 cm, 90-109 cm, 110-129 cm, >130 cm). The unequality in the age classes mirrors the unequal distribution of available aerial photos.

The seven age classes were used as basis for the selection of logs for the study. - From each age class ten logs were selected with the attempt to obtain an equal representation of the dbh classes within each. In cases of multiple possible choices to fulfill this aim, logs were selected randomly.

### *Registration of log variables*

In addition to the log variables mentioned above (**log age** and **dbh**) the following variables were measured or recorded for each log:

**Log type** (uprooted with a distinct root plate, broken at root neck, broken 2-7 m above ground-level, broken 8-15 m above ground-level). Number of **fractures** and **forks** on the log, incl. major branches, with diam. equal to or larger than 50 cm. Medium **decay class**, **soil humidity**, **wind exposure** and **sun exposure**, subjectively judged according to the parametres given in Tables 1 & 2. **Bark cover**, **moss cover** and distribution of stromata and black-stained wood of the pyrenomycete *Eutypa spinosa* (**Eutypa cover**) on the log surface, estimated to the nearest 10 % of the total log surface. Degree of **soil contact**, estimated to the nearest 10 % of the log-length. **Distance to** the forest **edge** measured to the next 5 m.

The occurence of the plants *Allium ursinum* L., *Anemone*

| | Characteristics |
|---|---|
| Class 1 | Wood hard, a knife (with a thin blade) penetrates only a few mm into the wood, bark intact, twigs (diam. < 1 cm) intact. |
| Class 2 | Wood rather hard, a knife penetrates less than 1 cm into the wood, bark starting to break up, twigs +/- lost, branches (diam. 1-4 cm) intact |
| Class 3 | Wood distinctly softened, knife penetrates ca. 1-4 cm into the wood, excepts for parts colonized by certain pyrenomycetes (in particular Eutypa spinosa, Kretzschmaria deusta and Xylaria hypoxylon), bark partly lost, branches +/- lost, original log circumference intact |
| Class 4 | Wood strongly decayed, knife penetrates ca. 5-10 cm into the wood, except for parts colonized by certain pyrenomycetes (see above), bark lost in most places, original log circumference disintegrating |
| Class 5 | Wood very strongly decayed, either to a very soft crumbly substance, or beeing flaky and fragile with numerous remnants of pseudosclerotial plates, these defining the log surface, knife penetrates in most places more than 10 cm into the wood, original log circumference not or hardly recognizable. |

Table 1. Characteristics used for the classification of logs in decay classes.

| | Soil humidity | Wind exposure | Sun exposure |
|---|---|---|---|
| Class 1 | Well drained forest soils on hill tops. | Exposed forest at edges and on hills. | Forest edges and open forest on south facing slopes. |
| Class 2 | Other high, well drained forest soils. | Open forest, without a proper understorey. | Open, sunlit forest. |
| Class 3 | Normal, well drained forest soils. | Normal forest, with sparse understorey. | Normal forest on level areas. |
| Class 4 | Low, +/- waterlogged soils. | Normal forest, with a well developed understorey. | Normal forest, either with a dense canopy or on north facing slopes. |
| Class 5 | Swamp soils, +/- inundated during wintertime. | Well sheltered places, protected by a dense understorey. | High forest with a dense canopy and on north facing slopes. |

Table 2. Characterstics used for the classification of logs in classes of soil humidity, wind exposure and sun exposure.

*nemorosa* L., *A. ranunculoides* L., *Arum maculatum*. L., *Corydalis bulbosa, C. intermedia* (L.)Merat, *Ranunculus ficaria* L., *Gagea spathacea* (Hayne)Salisb., *Galium odoratum* (L.)Scop., *Lamiastrum galeobdolon* (L.)Ehrend. & Polatschek, *Mercurialis perennis, Pulmonaria obscura* Dumont., *Sanicula europaea* L. and *Viola riviana* Reichenb./*reichenbachiana* Jordan, were recorded around each log in May 1995. The relative distribution of each species, and of vegetation-less areas were estimated to the nearest 10 % of the forest-floor area surrounding the individual log. The variable **floristic deviation** was derived by considering the forest floor area covered by plants other than the generally dominant *A. nemorosa*, whereas **plant diversity** was obtained by summing up the number of plant species occuring in the vicinity of each log.

The independent registration of log age and decay rate made it possible to estimate the log specific **decay rate**, by considering the deviation from the mean decay class within each age class. To obtain a more precise comprehension of the log specific decay development, the logs were re-investigated in 1999, and the decay stage were re-estimated. In this estimation an additional decay class (class 6) were introduced for almost completely decomposed logs.

In Table 3 all log variables are summarized.

***Registration of sporocarps***

Sporocarps of fungi and slime moulds were recorded on all logs at nine occasions between May 1994 and December 1995. (8-9 May 1994, 10 July 1994, 23-24 Aug.1994, 4 Oct. 1994, 24 Feb. 1995, 25 Sep. 1995, 1 Oct. 1995, 15 Oct. 1995, 14+17 Dec. 1995). The whole log were investigated, including the stump and branches thicker than 10 cm. Sporocarps were identified *in situ* or collected for later identification. The visits in September and October 1995 were rather superficial and included only species determinable in the field.

Within the basidiomycetes and slime moulds all taxonomic groups are included in the study, within the ascomycetes, non-stromatic pyrenomycetes are excluded. However, due to the project-scale it was not intended to make a complete registration of all species on all logs. In all likelihood genera with very inconspicuos sporocarps (e.g. *Basidiodendron, Botryobasidium, Sistotrema* and *Tulasnella* within the basidiomycetes and *Arachnopeziza* and *Hyaloscypha* within the ascomycetes) are underrepresentated. Some common species were treated in an un-

| Variable | Data type | Scale | Range | Median | Unit |
|---|---|---|---|---|---|
| Log type | Nominal | 4 levels | | | Class |
| Dbh. | Ratio | continuous | 70-168 | 110 | cm |
| Fractures | Ratio | count | 0-5 | 2 | Number |
| Bole forks | Ratio | count | 0-4 | 1 | Number |
| Decay stage | Ordinal | 5 levels | 1-5 | 3 | Class |
| Log age | Ratio | continuous | 2-31 | 15 | Years |
| Bark cover | Ratio | 12 levels | 0-100 | 10 | % |
| Moss cover | Ratio | 12 levels | 0-60 | 5 | % |
| Eutypa cover | Ratio | 12 levels | 0-70 | 20 | % |
| Soil contact | Ratio | 11 levels | 10-100 | 90 | % |
| Soil type | Nominal | 3 levels | | | Class |
| Soil humidity | Ordinal | 5 levels | 1-5 | 4 | Class |
| Wind exposure | Ordinal | 5 levels | 1-5 | 4 | Class |
| Sun exposure | Ordinal | 5 levels | 1-5 | 4 | Class |
| Dist. to edge | Ratio | continuous | 5-135 | 70 | m |
| Plant diversity | Ratio | count | 1-6 | 2 | Number |
| Plant cover | Ratio | 11 levels | 20-100 | 90 | % |
| Floristic deviance | Ratio | 12 levels | 0-100 | * | % |
| Decay rate | Ordinal | 5 levels | -2 - +2 | 0 | Class |

Table 3. Log variables measured or estimated for each log. *The variable, floristic deviance, is further subdivided in eigth variables, each represententing a plant species; Anemone nemorosa (Ane nem), Anemone ranuculoides (Ane ran), Corydalis bulbosa (Cor bul), Galium odoratum (Gal odo), Lamiastrum galeobdolon (Lam gal), Mercurialis perrenis (Mer per), Ranunculus ficaria (Ran fic), Viola riviana/reichenbachiana (Vio riv)and a ninth variable (Other species) with the remaining species (Allium ursinum, Arum maculatum, Corydalis intermedia, Gagea lutea, Pulmonaria obscura and Sanicula europaea)

critical or broad sense, in order to reduce microscopical work. This was the case for *Galerina marginata* (Batsch)Kühn., *Scuttelinia scutellata* (L. ex St. Amans)Lambotte, *Mollisia cinerea* (Batsch ex Mérat)Karst., *Athelia epiphylla* Pers.:Fr., *Botryobasidium conspersum* J. Erikss, and *Peziza micropus* Pers. which were all determined using macroscopical characters, although a microscopical examination is nescessary for a critical determination of these taxa. This uncritical approach was chosen after microscopical examinations of dozens of specimens in each species-group, which failed to detect more than one species in each case. Also the concept of *Bisporella citrina* is broad and seems to include an undescribed taxon, microscopically defined by asci regularly shorter than 100 um.

### *Nomenclature*

The nomenclature and species-concepts of basidiomycetes follows Hansen & Knudsen (1992, 1997), except for Sistotrema pp. (follows Hallenberg 1984), Tomentella (follows Kóljalg 1996) and Stypella and Exidia pp. (follows Roberts 1998). Within the ascomycetes, nomenclature and species-concepts in generel follows Hansen & Knudsen (1999). However, within the discomycetes reference to special literature has been nescessary in several cases. The nomenclature of slime moulds follows Nannenga-Bremekamp (1991).

### *Data Treatment*

Detrended correspondance analysis (DCA) was chosen as ordination method for several reasons. It is easy to access and assumes unimodal species/gradient response curves, in contrast to principal component analysis (PCA) which assumes linear responses. Linear species/gradient responses appears to be rare in nature, and PCA has in general appeared to perform badly on vegetation data (Økland 1990). In DCA, samples (logs) and species are ordinated simultaneously in the same ordination space following an iterative procedure, which aims to optimise the dispersion of species optima. Sample scores are derived from species scores by a process of weigthed averaging. For more details on DCA see Hill & Gauch (1980) or Økland (1990).

The relative powers of DCA axes can be established by comparing eigenvalues and gradient lengths. The gradient length express the amount of ß-diversity (species turnover) expressed along the individual axis, whereas the eigenvalue tells how much of the sample variation which can be explained. The eigenvalue is most informative in comparison with eigenvalues of other axes of the same ordination. Økland (1999) has shown that the much used measures of total inertia and percent explained variation have little significance. Hence these measures are omitted in the present paper.

DCA was run using the program PC-ORD 3.0 (McCune & Mefford 1997) using default options. Downweigthing of rare species was avoided in the final ordinations, since it tended to weaken correlations with environmental variables. However species occurring on two logs or less were excluded from the ordination.

The consistence of the found DCA axes were evaluated by ordination of subsets as suggested by Laweson (1997) and Ejrnæs & Bruun (1999). Three subsets derived from the full data set, were analysed:

1. slime moulds excluded.
2. Common species (Species occurring on 6 logs or less excluded).
3. Subordinate species (Species occurring on 20 logs or more excluded).

Relationships between DCA-axes and environmental variables were evaluated by Kendall rank correlation. Rank correlation was chosen in favour of its parametric alternatives, since several variables are on ordinal scale while other deviate strongly from normality. Kendall rank correlation was favoured over Spearman rank correlation, since the latter method is less efficient in the presence of many tied ranks (Legendre & Legendre 1998). Subsequently multiple regression was applied in order to clarify the structures of the ecological gradients expressed along the DCA-axes. Backward elimination (see Zar 1999) was used to evaluate which variables should be selected for the multiple regression models. In the case of curvi-linear relationships polynomial regression was applied. The two nominal variables, soil type and log type were coded as 'dummy' variables (see Zar 1999).

To easen the interpretation of the DCA-axes in respect to fungal community development, the reported fungal species were sub-divided into six morpho-groups (Table 4). For each group the relative contribution to overall species richness were calculated per log, prior to correlation analysis.

All regression and correlation analysis was run using the program JMP for MacIntosh (SAS Institute Inc. 1997).

## RESULTS

In total 302 taxa, 277 species of fungi and 25 species of slime moulds, were recorded during the study, (Table 4). More than one third (124) of the recorded species were found on one or two logs only, and were hence omitted from the ordination. 15 species were found on 35 logs or more.

The number of fungal species per log averaged 30.6, with the highest numbers obtained on logs in intermediate age classes, Fig. 1. At the single most species rich log 78 species were recorded. Logs 7-20 years old were

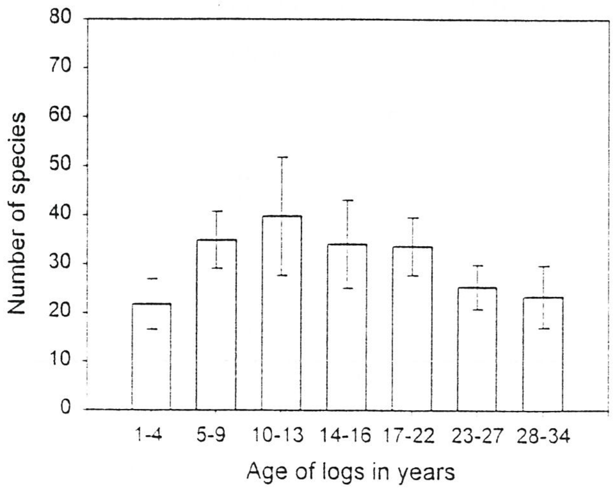


Fig 1. Average number of fungal species per log in the seven age classes. The bars represents 95% confidence limits.Number of logs = 10 in each class.

| Abbreviation in DCA-diagrams | Species | Number of logs | Collection-numbers of selected voucher specimens preserved at the Botanical Museum, Copenhagen (C.) |
|---|---|---|---|
| | **PYRENOMYCETES** | | |
| cam poly | Camarops polysperma (Mont.) Miller | 9 | JHC94-350 |
| | Camarops tubulina (Alb. & Schw.) Shear | 2 | C |
| dia disc | Diatrype disciformis (Hoffm.: Fr.) Fr. | 5 | C |
| | Diatrype flavovirens (Pers.: Fr.) Fr. | 1 | JHC94-015 |
| | Diatrype stigma (Hoffm.: Fr.) Fr. | 1 | |
| eut spin | Eutypa spinosa (Pers.: Fr.) Tul. & C.Tul. | 62 | JHC94-139; JHC94-144 |
| | Eutypella quaternata (Pers.: Fr.) Rappaz | 2 | JHC94-351 |
| hyp gela | Hypocrea gelatinosa (Tode: Fr.) Fr. | 4 | C |
| | Hypomyces aurantius (Pers.: Fr.) Tul. & C.Tul. | 1 | C |
| hyp coha | Hypoxylon cohaerens (Pers.: Fr.) Fr. | 3 | JHC94-146 |
| hyp frag | Hypoxylon fragiforme (Pers.: Fr.) Kickx | 15 | C |
| hyp rubi | Hypoxylon rubiginosum (Pers.: Fr.) Fr. | 15 | C |
| kre deus | Kretzschmaria deusta (Hoffm.: Fr.) P.M.D. Martin | 45 | C |
| | Lopadostoma turgidum (Pers.) Traverso | 1 | JHC94-009 |
| nec cocc | Nectria coccinea (Pers.: Fr.) Fr. | 4 | C |
| | Nectria episphaeria (Tode: Fr.) Fr. | 1 | C |
| | Nectria peziza (Tode: Fr.) Fr. | 2 | JHC94-159; JHC94-160 |
| nem atro | Nemania atropurpurea (Fr.: Fr.) Pouzar | 4 | JHC94-019; JHC94-062; JHC94-356 |
| nem ches | Nemania chestersii (J. D. Rogers & Whalley) Pouzar | 9 | JHC94-140; JHC94-143; JHC94-162 |
| nem serp | Nemania serpens (Pers.: Fr.) Gray | 6 | JHC94-352; JHC94-354; JHC94-357 |
| | Protocrea cfr. farinosa (Berk. & Broome) Petch | 1 | JHC94-010 |
| xyl hypo | Xylaria hypoxylon (L.: Fr.) Grev. | 42 | C |
| xyl poly | Xylaria polymorpha (Pers.: Fr.) Grev. | 17 | C |
| | **DISCOMYCETES** | | |
| | Arachnopeziza aurata Fuckel | 3 | JHC94-420 |
| | Arachnopeziza variepilosa (Galán & Raitviir) Huhtinen | 1 | JHC94-035 |
| asc cyli | Ascocoryne cylichnium (Tul.) Korf | 8 | C |
| bis citr | Bisporella citrina (Batsch : Fr.) Korf & S.Carp. s.l. | 10 | JHC95-224; JHC95-253; JHC95-254 |
| | Cystopezizella conorum (Rehm) Svrcek | 1 | JHC94-359 |
| | Dasyscyphella nivea (Hedw.: Fr.) Raitv. | 1 | JHC95-202 |
| | Hyaloscypha fuckelii Nannf. | 1 | JHC94-036; JHC95-210 |
| lac brev | Lachnum brevipilosum Baral | 5 | JHC95-252 |
| lac impu | Lachnum impudicum Baral | 22 | JHC94-069; JHC95-201 |
| lac virg | Lachnum virgineum (Batsch: Fr.) P.Karst. | 4 | JHC94-360 |
| mol cine | Mollisia cinerea (Batsch) P.Karst. | 49 | JHC94-432 |
| | Mollisia ligni (Desm.) P.Karst. | 1 | JHC95-206 |
| neo pura | Neobulgaria pura (Fr.) Petrak | 6 | C |
| | Ombrophila sp. | 1 | JHC94-421 |
| | Orbilia cfr. alnea Velen. | 2 | JHC94-430; JHC94-150 |
| orb deli | Orbilia delicatula (P.Karst.) P.Karst. | 19 | JHC94-101b; JHC94-423 |
| | Orbilia epipora (Nyl.) P.Karst. | 2 | JHC94-037; JHC94-102; JHC94-103 |
| pez micr | Peziza micropus Pers.: Fr. | 26 | C |
| pol prui | Polydesmia pruinosa (Jerdon in Berk. & Broome) Boud. | 12 | JHC95-221 |
| scu scut | Scutellinia scutellata (L.: Fr.) Lambotte | 29 | C |
| | Tapesia lividofusca (Fr.: Fr.) Rehm | 1 | JHC95-209 |
| | **CORTICIOID FUNGI** | | |
| ath epip | Athelia epiphylla Pers. | 37 | JHC95-248; JHC95-249 |
| | Athelopsis glaucina (Bourd. & Galz.) Parm. | 1 | JHC94-057 |
| | Basidiodendron caesiocinereum (Höhn. & Litsch.) Luck-Allen | 1 | JHC95-207 |
| | Botryobasidium botryosum (Bres.) J.Erikss. | 1 | JHC94-028 |
| bot cons | Botryobasidium conspersum J.Erikss. | 29 | C |
| | Botryobasidium laeve (J.Erikss.) Parm. | 2 | JHC94-124 |
| bot prui | Botryobasidium pruinatum (Bres.) J.Erikss. | 6 | JHC94-055 |
| bot subc | Botryobasidium subcoronatum (Höhn. & Litsch.) Donk | 5 | C |
| bre oliv | Brevicellicium olivascens (Bres.) Larss. & Hjortst. | 9 | JHC95-230; JHC95-231 |
| bys cori | Byssomerulius corium (Fr.) Parm. | 3 | JHC95-240 |
| cer exce | Ceriporia excelsa (Lund.) Parm. | 8 | JHC94-198; JHC94-344; JHC95-250 |
| cer reti | Ceriporia reticulata (Hoffm.: Fr.) Dom. | 38 | C |
| | Coniophora arida (Fr.) P.Karst. | 2 | JHC95-195 |
| con pute | Coniophora puteana (Schum.: Fr.) P.Karst. | 17 | C |
| | Cristinia gallica (Pilát) Jülich | 2 | JHC94-183 |
| | Cristinia helvetica (Pers.) Parm. | 2 | JHC94-081 |
| cyl laev | Cylindrobasidium laeve (Pers.: Fr.) Chamuris | 7 | JHC95-241 |

Table 4. Total species list subdivided in morphological groups. Note that several heterobasidiomycetes are assigned as corticioid fungi, due to their thin, apressed sporocarps. A 'C' in the voucher specimen column indicates that the species is preserved at C from the locality, but not from the present investigation.

Table 4 continued.

| | | | |
|---|---|---|---|
| | Exidiopsis effusa (Bref. ex Sacc.) A.M^ller | 1 | JHC95-217 |
| | Gloeocystidiellum luridum (Bres.) Boid. | 1 | JHC94-047 |
| glo anal | Gloeohypochnicium analogum (Bourd. & Galz.) Hjortst. | 3 | JHC94-021; JHC95-255 |
| glo lact | Gloiothele lactescens (Berk.) Hjortst. | 19 | C |
| | Hyphoderma argillaceum (Bres.) Donk | 2 | JHC94-074; JHC94-111; JHC94-130 |
| | Hyphoderma medioburiense (Burt) Donk | 1 | JHC95-192 |
| | Hyphoderma pallidum (Bres.) Donk | 2 | JHC94-025 |
| hyp prae | Hyphoderma praetermissum (P.Karst.) J.Erikss. & Strid | 6 | JHC94-024; JHC94-123 |
| hyp pube | Hyphoderma puberum (Fr.) Wallr. | 17 | JHC94-115; JHC95-189; JHC95-242 |
| hyp rose | Hyphoderma roseocremeum (Bres.) Donk | 4 | JHC94-075 |
| | Hyphoderma aff. roseocremeum (Bres.) Donk | 2 | JHC95-214; JHC95-215 |
| hyp seti | Hyphoderma setigerum (Fr.) Donk | 9 | JHC94-026; JHC94-132; JHC95-228 |
| hyp argu | Hyphodontia arguta (Fr.) J.Erikss. | 6 | JHC95-178 |
| | Hyphodontia aspera (Fr.) J.Erikss. | 2 | JHC95-179 |
| hyp para | Hyphodontia paradoxa (Schrad.: Fr.) E.Langer & Vesterh. | 6 | C |
| hyp radu | Hyphodontia radula (Pers.: Fr.) E.Langer & Vesterh. | 16 | JHC94-122; JHC95-233 |
| | Hyphodontia sambuci (Pers.) J.Erikss. s.l. | 1 | JHC95-216 |
| hyp suba | Hyphodontia subalutacea (P.Karst.) J.Erikss. | 3 | JHC94-022; JHC94-076 |
| | Hypochnicium eichleri (Bres.) J.Erikss. & Ryvarden | 1 | JHC95-185 |
| | Hypochnicium polonense (Bres.) Strid | 2 | JHC94-027 |
| hyp punc | Hypochnicium punctulatum (Cooke) J.Erikss. | 3 | JHC94-029; JHC94-113 |
| | Lindtneria cfr. flava Parm. | 1 | JHC95-213 |
| | Mycoacia uda (Fr.) Donk | 1 | C |
| pen cine | Peniophora cinerea (Pers.: Fr.) Cooke | 3 | JHC95-232 |
| pen inca | Peniophora incarnata (Pers.: Fr.) P.Karst. | 8 | C |
| pen lyci | Peniophora lycii (Pers.) Höhn. & Litsch. | 3 | JHC95-247 |
| | Peniophora nuda (Fr.) Bres. | 1 | JHC95-186 |
| | Peniophora quercina (Pers.: Fr.) Cooke | 1 | C |
| | Phanerochaete sordida (P.Karst.) J.Erikss. & Ryvarden | 1 | JHC94-056 |
| | Phanerochaete tuberculata (P.Karst.) Parm. | 1 | C |
| | Phanerochaete velutina (DC.: Fr.) P.Karst. | 1 | JHC95-204 |
| phl livi | Phlebia livida (Pers.: Fr.) Bres. | 10 | JHC95-187; JHC95-226 |
| phl radi | Phlebia radiata Fr.: Fr. | 13 | JHC94-422 |
| phl rufa | Phlebia rufa (Pers.: Fr.) M.P.Christ. | 2 | JHC95-229 |
| phl trem | Phlebia tremellosa (Schrad.: Fr.) Burds. & Nakas. | 6 | C |
| | Phlebiella allantospora (Oberw.) Larss. & Hjortst. | 1 | JHC95-184 |
| rad conf | Radulomyces confluens (Fr.: Fr.) M.P.Christ. | 20 | JHC94-030; JHC95-219; JHC95-220; |
| sco rimo | Scopuloides rimosa (Cooke) Jülich | 4 | JHC94-085b |
| | Sistotrema biggsiae Hallenb. | 1 | JHC94-058 |
| sis brin | Sistotrema brinkmannii (Bres.) J.Erikss. | 20 | JHC95-235; JHC95-237; JHC95-238 |
| sis coro | Sistotrema coroniferum (Höhn. & Litsch.) Donk | 3 | JHC95-181; JHC95-182 |
| | Sistotrema oblongisporum M.P.Christ. & Hauerslev | 1 | JHC95-188 |
| | Sistotrema octosporum (Schroet. ex Höhn. & Litsch.) Hallenb. | 2 | JHC94-125 |
| sis sern | Sistotrema sernanderi (Litsch.) Donk | 5 | JHC95-180; JHC95-239 |
| | Sistotremastrum niveocremeum (Höhn. & Litsch.) J.Erikss. | 2 | JHC95-234 |
| ste ochr | Steccherinum ochraceum (Pers.: Fr..) Gray | 16 | C |
| ste hirs | Stereum hirsutum (Willd.: Fr.) Gray | 21 | C |
| ste rugo | Stereum rugosum (Pers.: Fr.) Fr. | 7 | JHC95-243 |
| sty gril | Stypella grilletii (Boudier) P. Roberts | 4 | JHC94-334; JHC95-205 |
| sty subh | Stypella subhyalinum (A.Pears.) P. Roberts | 4 | JHC94-033; JHC94-336 |
| sub long | Subulicystidium longisporum (Pat.) Parm. | 12 | JHC94-128 |
| tha fusi | Thanatephorus fusisporus (J.Schroet.) Hauerslev & P.Roberts | 3 | JHC94-106 |
| | Tomentella ferruginea (Pers.) Pat. | 1 | JHC94-105 |
| | Tomentella radiosa (P.Karst.) Rick | 1 | JHC94-196 |
| tom subl | Tomentella sublilacina (Ellis & Holway) Wakef. | 5 | JHC94-031; JHC94-341 |
| tre coha | Trechispora cohaerens (Schwein.) Jülich & Stalpers | 9 | JHC94-089; JHC95-244; JHC95-245; |
| tre fari | Trechispora farinacea (Pers.: Fr.) Lib. | 7 | JHC94-088; JHC94-109 |
| tre hyme | Trechispora hymenocystis (Berk. & Broome) K.H.Larss. | 4 | JHC94-095; JHC95-227 |
| | Trechispora microspora (P.Karst.) Lib. | 1 | JHC95-203 |
| | Trechispora praefocata (Bourd. & Galz.) Lib. | 1 | JHC95-177 |
| tre stev | Trechispora stevensoni (Berk. & Broome) Larss. | 7 | JHC94-092; JHC94-096 |
| | Tulasnella eichleriana Bres. | 1 | JHC95-208 |
| tul toma | Tulasnella tomaculum P.Roberts | 3 | JHC94-034; JHC94-036; JHC94-335 |
| tul viol | Tulasnella violea (Quél.) Bourd. & Galz. | 4 | C |
| | Xenasma pulverulentum (Litsch.) Donk | 1 | JHC94-117 |
| | **POLYPORES** | | |
| | Antrodiella hoehnelii (Bres.) Niemelä | 2 | C |
| | Antrodiella semisupina (Berk. & Curt.) Ryvarden & Johans. | 2 | C |
| bje adus | Bjerkandera adusta (Willd.: Fr.) P.Karst. | 17 | C |
| | Bjerkandera fumosa (Pers.: Fr.) P.Karst. | 1 | JHC95-197 |
| cer gilv | Ceriporiopsis gilvescens (Bres.) Dom. | 9 | JHC95-251 |
| dat moll | Datronia mollis (Sommerf.: Fr.) Donk | 6 | C |

Table 4. continued.

| | | | |
|---|---|---|---|
| Fom fome | Fomes fomentarius (L.: Fr.) Fr. | 38 | |
| fom pini | Fomitopsis pinicola (Swartz: Fr.) P.Karst. | 6 | C |
| fus ferr | Fuscoporia ferrea (Pers.) G. Cunn. | 5 | JHC95-194 |
| gan lips | Ganoderma lipsiensis (Batsch) Atk. | 22 | C |
| | Ganoderma pfeifferi Bres. | 1 | C |
| ino nodu | Inonotus nodulosus (Fr.) P.Karst. | 6 | C |
| isc resi | Ischnoderma resinosum (Schrad.: Fr.) P.Karst. | 14 | C |
| mer giga | Meripilus giganteus (Pers.: Fr.) P.Karst. | 18 | C |
| phy sang | Physisporinus sanguinolentus (Alb. & Schw.: Fr.) Pilát | 16 | C |
| phy vitr | Physisporinus vitreus (Pers.: Fr.) P.Karst. | 14 | JHC94-199 |
| | Polyporus badius (Pers.) Schw. | 1 | C |
| pol brum | Polyporus brumalis (Pers.) Fr.: Fr. | 3 | C |
| pol cili | Polyporus ciliatus Fr.: Fr. | 3 | C |
| pol squa | Polyporus squamosus (Huds.: Fr.) Fr. | 3 | C |
| pol tube | Polyporus tuberaster (Pers.: Fr.) Fr. | 3 | C |
| pol vari | Polyporus varius (Pers.) Fr.: Fr. | 13 | C |
| | Skeletocutis nivea (Jungh.) Keller | 2 | JHC94-349 |
| | Trametes gibbosa (Pers.: Fr.) Fr. | 2 | C |
| tra hirs | Trametes hirsuta (Wulfen: Fr.) Pilát | 7 | C |
| tra vers | Trametes versicolor (L.: Fr.) Quél. | 20 | C |
| | Tyromyces chioneus (Fr.: Fr.) P.Karst. | 1 | JHC95-093 |
| | Tyromyces wynnei (Berk. & Broome) Donk | 1 | C |
| | **AGARICS** | | |
| arm gall | Armillaria gallica Marxm. & K.Korh. | 44 | C |
| | Armillaria mellea (Vahl: Fr.) P.Kumm. | 1 | C |
| bol reti | Bolbitius reticulatus (Pers.: Fr.) Rick. | 7 | C |
| cli diat | Clitocybe diatreta (Fr.: Fr.) P.Kumm. | 21 | JHC94-166 |
| cli nebu | Clitocybe nebularis (Batsch: Fr.) P.Kumm. | 9 | C |
| cli phyl | Clitocybe phyllophila (Pers.: Fr.) P.Kumm. | 3 | C |
| cli hobs | Clitopilus hobsonii (Berk.) P.D.Orton | 10 | JHC94-424 |
| col buty | Collybia butyracea (Bull.: Fr.) P.Kumm. | 8 | C |
| | Collybia fusipes (Bull.: Fr.) Quél. | 1 | C |
| | Collybia peronata (Bolt.: Fr.) P.Kumm. | 1 | |
| | Collybia tuberosa (Bull.: Fr.) P.Kumm. | 2 | C |
| con brun | Conocybe brunnea (J.E.Lange & Kühner)ex Watling | 3 | JHC94-183 |
| | Conocybe sordida (Kühner)ex Kühner & Watling | 1 | JHC94-185 |
| con tene | Conocybe tenera (Schaeff.: Fr.) Fayod | 3 | JHC94-184; JHC95-147 |
| cop dome | Coprinus domesticus (Bolt.: Fr.) Gray | 3 | C |
| | Coprinus echinosporus Buller | 1 | JHC94-054 |
| | Coprinus lagopus (Fr.: Fr.) Fr. | 1 | C |
| cop mica | Coprinus micaceus (Bull.: Fr.) Fr. | 36 | C |
| | Coprinus xanthothrix Romagn. | 1 | JHC94-426 |
| | Cystolepiota adulterina (F.H.Møller) Bon | 1 | C |
| | Cystolepiota hetieri (Boud.) Singer | 1 | JHC94-187 |
| | Entoloma dichroum (Pers.: Fr.) P.Kumm. | 1 | JHC94-361 |
| | Flammulaster muricatus (Fr.: Fr.) Watling | 1 | JHC94-370; JHC95-092 |
| | Galerina nana (Petri) Kühner | 1 | JHC94-181 |
| gal unic | Galerina unicolor (Fr.) Singer s.l. | 24 | C |
| gym juno | Gymnopilus junonius (Fr.: Fr.) P.D.Orton | 3 | C |
| hem cucc | Hemimycena cucullata (Pers.: Fr.) Singer | 3 | JHC94-167 |
| hen cand | Henningsomyces candidus (Pers.: Fr.) Kuntze | 5 | C |
| hyd suba | Hydropus subalpinus (Höhn.) Singer | 3 | C |
| hyp fasc | Hypholoma fasciculare (Huds.: Fr.) P.Kumm. | 35 | C |
| | Inocybe petiginosa (Fr.: Fr.) Gillet | 1 | JHC94-186 |
| kue muta | Kuehneromyces mutabilis (Schaeff.: Fr.) Sing. & Smith | 15 | C |
| | Laccaria laccata (Scop.: Fr.) Berk. & Broome | 1 | C |
| lac subd | Lactarius subdulcis (Bull.: Fr.) Gray | 4 | C |
| lep aspe | Lepiota aspera (Pers.: Fr.) QuÈl. | 6 | C |
| | Lepiota boertmannii Knudsen | 1 | JHC95-261 |
| lep cris | Lepiota cristata (Bolt.: Fr.) P.Kumm. | 7 | C |
| lep fulv | Lepiota fulvella Rea | 4 | C |
| | Lepiota jacobii Vellinga & Knudsen | 1 | C |
| | Lepiota ochraceofulva P.D.Orton | 2 | C |
| lep flacc | Lepista flaccida (Sow.: Fr.) Pat. | 14 | C |
| | Lepista nuda (Bull.: Fr.) Cooke | 1 | C |
| mac rhac | Macrolepiota rhacodes (Vitt.) Singer | 12 | C |
| mar alli | Marasmius alliaceus (Jacq.: Fr.) Fr. | 40 | C |
| | Marasmius cohaerens (Alb. & Schw.: Fr.) Cooke & Quél. | 1 | C |
| mar rotu | Marasmius rotula (Scop.: Fr.) Fr. | 27 | C |
| mar torq | Marasmius torquescens Quél. | 9 | C |
| | Marasmius wynnei Berk. & Broome | 1 | C |
| meg plat | Megacollybia platyphylla (Pers.: Fr.) Kotl. & Pouz. | 22 | C |
| | Melanophyllum aimatospermum (Bull.: Fr.) Kreisel | 2 | C |

Table 4 continued.

| | | | |
|---|---|---|---|
| | Melanotus horizontalis (Bull.) P.D.Orton | 1 | JHC95-191 |
| | Merismodes anomalus (Pers.: Fr.) Singer | 2 | JHC95-198 |
| | Micromphale brassicolens (Romagn.) P.D.Orton | 1 | C |
| myc amic | Mycena amicta (Fr.) Quél. | 3 | JHC94-053 |
| myc croc | Mycena crocata (Schrad.: Fr.) P.Kumm. | 35 | C |
| myc dios | Mycena diosma Krieglsteiner & Schwöbel | 6 | C |
| | Mycena erubescens Höhn. | 2 | C |
| myc gale | Mycena galericulata (Scop.: Fr.) Quél. | 28 | C |
| myc galo | Mycena galopus (Pers.: Fr.) P.Kumm. | 4 | C |
| myc haem | Mycena haematopus (Pers.: Fr.) P.Kumm. | 50 | C |
| myc hiem | Mycena hiemalis (Osb.: Fr.) Quél. | 3 | C |
| myc peli | Mycena pelianthina (Fr.) Quél. | 5 | C |
| | Mycena polygramma (Bull.: Fr.) Gray | 2 | C |
| myc pura | Mycena pura (Pers.: Fr.) P.Kumm. | 17 | C |
| myc rena | Mycena renati Quél. | 11 | C |
| myc rose | Mycena rosea Gramberg | 4 | C |
| myc spei | Mycena speirea (Fr.: Fr.) Gillet | 4 | C |
| myc tint | Mycena tintinabulum (Fr.) Quél. | 7 | C |
| omp epic | Omphalina epichysium (Pers.: Fr.) Quél. | 8 | C |
| oud muci | Oudemansiella mucida (Schrad.: Fr.) Höhn. | 14 | |
| pan sero | Panellus serotinus (Pers.: Fr.) Kühn. | 8 | C |
| pho auri | Pholiota aurivellus (Fr.) P.Kumm. | 6 | C |
| pho squa | Pholiota squarrosa (Weigel: Fr.) P.Kumm. | 2 | JHC95-155 |
| | Pleurotus dryinus (Pers.: Fr.) P.Kumm. | 1 | C |
| ple oste | Pleurotus ostreatus (Jacq.: Fr.) P.Kumm. | 10 | |
| plu cerv | Pluteus cervinus (Batsch) Singer | 37 | C |
| plu chry | Pluteus chrysophaeus (Schaeff.) Quél. | 11 | C |
| | Pluteus ephebeus (Fr.: Fr.) Gillet | 2 | JHC94-362 |
| | Pluteus godeyii Gill. ss. Lange | 1 | JHC94-176 |
| plu inqu | Pluteus inquilinus Romagn. | 4 | JHC94-174; JHC95-094 |
| plu nanu | Pluteus nanus (Pers.: Fr.) P.Kumm. | 5 | JHC94-178; JHC94-363 |
| plu phle | Pluteus phlebophorus (Dittm.: Fr.) P.Kumm. | 22 | JHC94-050 |
| | Pluteus podospileus Sacc. & Cub. | 1 | JHC94-175 |
| plu sali | Pluteus salicinus (Pers.: Fr.) P.Kumm. | 8 | C |
| plu semi | Pluteus semibulbosus (Lasch)Gill. | 4 | JHC94-171; JHC94-172; JHC95-154 |
| plu thom | Pluteus thomsonii (Berk. & Broome) Dennis | 3 | JHC95-153 |
| plu umbr | Pluteus umbrosus (Fr.) P.Kumm. | 5 | C |
| | Psathyrella candolleana (Fr.: Fr.) Maire | 1 | JHC94-098 |
| | Psathyrella conopilus (Fr.: Fr.) A.Pears. & Dennis | 1 | JHC94-188 |
| | Psathyrella cortinarioides P.D.Orton | 1 | JHC94-191 |
| | Psathyrella fusca (Schum.) A.Pears. | 1 | JHC94-192 |
| | Psathyrella lacrymabunda (Bull.: Fr.) Moser | 1 | |
| psa obtu | Psathyrella obtusata (Pers.: Fr.) A.H.Smith | 19 | JHC94-425 |
| psa pilu | Psathyrella piluliformis (Bull.: Fr.) P.D.Orton | 8 | JHC95-148; JHC95-212 |
| | Psathyrella populina (Britz.) Kits. | 1 | JHC94-365 |
| | Psathyrella pygmaea (Bull.: Fr.) Singer | 1 | JHC94-193 |
| psa rost | Psathyrella rostellata Örstadius | 4 | JHC94-194; JHC94-195 |
| | Psathyrella spadiceogrisea (Schaeff.) Maire | 1 | JHC94-364 |
| | Psathyrella tephrophylla (Romagn.) Bon | 1 | C |
| pse cyat | Pseudoclitocybe cyathiformis (Bull.: Fr.) Singer | 9 | C |
| | Ramicola centunculus (Fr.: Fr.) Watl. | 1 | JHC94-368 |
| | Resupinatus trichotis (Pers.) Singer | 1 | C |
| | Ripartites tricholoma (Alb. & Schw.: Fr.) P.Karst. | 1 | C |
| str cyan | Stropharia cyanea (Bull.) Tuomikoski | 3 | C |
| | Tricholoma lascivum (Fr.) Gillet | 1 | C |
| | Tubaria furfuracea (Pers.: Fr.) Gillet | 2 | C |
| | Volvariella hypopithys (Fr.) Shaffer | 1 | JHC95-086 |
| xer radi | Xerula radicata (Relhan: Fr.) Dörfelt | 10 | C |
| | **OTHER BASIDIOMYCETES** | | |
| | Auricularia auricula-judae (Bull.: Fr.) Wettst. | 1 | C |
| cal corn | Calocera cornea (Batsch: Fr.) Fr. | 6 | |
| | Dacryomyces stillatus Nees: Fr. | 1 | JHC95-200 |
| exi glan | Exidia glandulosa (Bull: Fr.) Fr. | 4 | JHC95-199 |
| exi nucl | Exidia nucleata (Schwein.) Burt. | 3 | C |
| her cora | Hericium coralloides (Scop.: Fr.) Pers. | 4 | C |
| | Lycoperdon echinatum Pers.: Pers. | 1 | C |
| lyc perl | Lycoperdon perlatum Pers.: Pers. | 13 | C |
| lyc pyri | Lycoperdon pyriforme Schaeff.: Pers. | 36 | C |
| mut cani | Mutinus caninus (Huds.: Pers.) Fr. | 3 | |
| pha impu | Phallus impudicus L.: Pers. | 5 | |
| phl fagi | Phleogena faginea (Fr.: Fr.) Link | 11 | C |
| ram stri | Ramaria stricta (Pers.: Fr.) Quél. | 15 | C |
| sch comm | Schizophyllum commune Fr.: Fr. | 5 | C |

Table 4 continued.

| | | | |
|---|---|---|---|
| tre mese | Tremella mesenterica Retz: Fr. | 7 | C |
| | **SLIME MOULDS** | | |
| | Arcyria affinis Rostr. | 1 | JHC95-260 |
| arc cine | Arcyria cinerea (Bull.) Pers. | 3 | C |
| arc denu | Arcyria denudata (L.) Wettst. | 4 | C |
| | Arcyria incarnata (Pers.) Pers. | 2 | JHC94-099 |
| cer fruc | Ceratiomyxa fruticulosa (Müll.) Macbr. | 24 | C |
| | Comatricha alta Preuss | 1 | JHC94-002 |
| | Comatricha nigra (Pers.) Schroet. | 2 | JHC94-100 |
| cri argi | Cribraria argillacea (Pers.) Pers. | 5 | JHC94-082 |
| ent lyco | Enteridium lycoperdon (Bull.) Farr. | 18 | JHC94-361 |
| ful sept | Fuligo septica (L.) Wiggers | 19 | C |
| lam arcy | Lamproderma arcyrioides (Sommerf.) Rost. | 3 | JHC95-258; JHC95-259 |
| lyc epid | Lycogala epidendrum (L.) Fr. | 35 | C |
| | Metarichia floriformis (Schw.) Nann.-Brem. | 1 | C |
| | Metatrichia vesparium (Batsch) Nann.-Brem. | 2 | JHC95-257 |
| phy cine | Physarum cinereum (Batsch) Pers. | 1 | JHC94-094 |
| ste axif | Stemonitis axifera (Bull.) Macbr. | 7 | C |
| ste fusc | Stemonitis fusca Roth | 6 | C |
| | Stemonitopsis hyperopta (Meylan) Nann.-Brem. | 1 | JHC94-090 |
| ste typh | Stemonitopsis typhina (Wiggers) Nann.-Brem. | 6 | C |
| | Symphytocarpus amaurochaetoides Nann.-Brem. | 2 | JHC94-101 |
| | Trichia contorta (Ditmar) Rost. | 1 | JHC95-256 |
| | Trichia persimilis P.Karst. | 1 | C |
| tri scab | Trichia scabra Rost. | 10 | JHC94-429 |
| tri vari | Trichia varia (Pers.) Pers. | 29 | JHC94-427; JHC94-428 |
| | Tubifera ferruginosa (Batsch) J.F.Gmel. | 1 | C |

found to be significantly more species-rich than both older and younger logs (ANOVA on ranks; Newman-Keuls test, P<0.05).

With respect to slime moulds, the largest diversity were found somewhat later in the succession, Fig. 2. Logs12-20 years old were found to be most species-rich (ANOVA on ranks; Newman-Keuls test P<0.05).

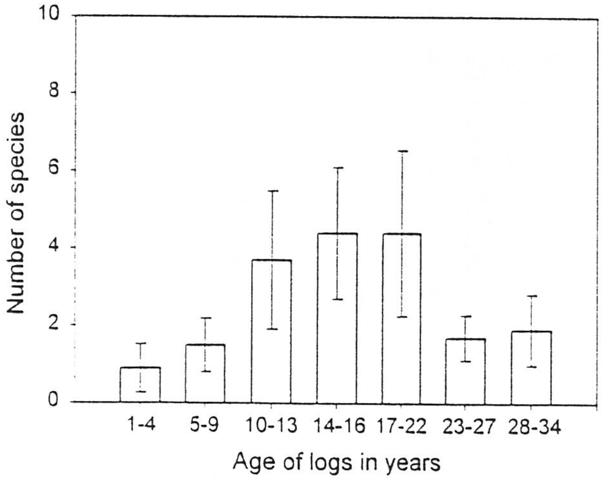


Fig 2. Average number of slime moulds species per log in the seven age classes. The bars represents 95% confidence limits. Number of logs = 10 in each class.

Table 5 shows correlation coefficients between the investigated variables. Basically three groups of intercorrelated variables are distinguishable. The first group consists of decay related variables (log age, decay class, bark cover and soil contact), the second of log size and outline variables (dbh, fractures, bole forks) whereas the third, complex set, is constituted by variables related to microclimatic conditions (distance to edge, sun exposure, wind exposure, soil humidity, moss cover).

### *Ordination*

After a visual inspection of the initial DCA scattergrams, one distinctly outlaying log was omitted from further analysis. Outlayers are potentially interesting but may cause serious distortions overruling the general patterns of the ordination. The excluded log was newly dead, but with extensively decayed parts. Hence the associated funga was a mixture of species associated with initial phases of decay and typical late-stage decayers, which may explain why the log behaved aberrantly.

Table 6 shows the overall properties of the full data sets after exclusion of the outlayer, as well as the properties of the three subsets. Table 7 shows the properties of the DCA-axes in the ordination of the full set.

| | Dbh. | Bole forks | Frac- tures | Log age | Decay stage | Bark cover | Soil- contact | Dist. to edge | Wind exposure | Sun exposure | Soil- humidity | Moss cover | Eutypa cover | Plant cover | Plant diversity | Floristic deviance | Decay rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dbh. | 1 | | | | | | | | | | | | | | | | |
| Bole forks | 0.41**** | 1 | | | | | | | | | | | | | | | |
| Fractures | 0.35*** | 0.46**** | 1 | | | | | | | | | | | | | | |
| Log age | 0.03 | -0.18 | -0.02 | 1 | | | | | | | | | | | | | |
| Decay stage | 0.12 | -0.17 | 0.06 | 0.80**** | 1 | | | | | | | | | | | | |
| Bark cover | -0.03 | 0.15 | 0.01 | -0.77**** | -0.81**** | 1 | | | | | | | | | | | |
| Soil-contact | 0.16 | -0.01 | 0.19 | 0.38**** | 0.50**** | -0.43**** | 1 | | | | | | | | | | |
| Dist. to edge | 0.22** | 0.06 | 0.06 | -0.07 | -0.02 | 0.06 | 0.07 | 1 | | | | | | | | | |
| Wind exposure | 0.19* | 0.04 | 0.12 | -0.17 | -0.09 | 0.12 | 0.02 | 0.51**** | 1 | | | | | | | | |
| Sun exposure | 0.12 | 0.04 | 0.14 | 0.19* | 0.25* | -0.19 | 0.16 | 0.13 | 0.31** | 1 | | | | | | | |
| Soil-humidity | 0.07 | -0.01 | 0.12 | 0.08 | 0.16 | -0.09 | 0.20* | -0.09 | 0.20* | 0.14 | 1 | | | | | | |
| Moss cover | 0.24* | 0.17 | 0.32** | 0.18 | 0.19 | -0.19 | 0.25* | 0.12 | 0.35*** | 0.26* | 0.34** | 1 | | | | | |
| Eutypa cover | -0.04 | 0.99 | 0.13 | 0.21* | 0.11 | -0.18 | -0.08 | -0.03 | -0.11 | 0.05 | -0.13 | 0 | 1 | | | | |
| Plant cover | 0.01 | -0.07 | -0.03 | 0 | -0.06 | 0.02 | 0.03 | 0.21* | 0.19 | 0.05 | -0.01 | -0.02 | 0.05 | 1 | | | |
| Plant diversity | -0.12 | -0.01 | -0.14 | -0.08 | 0.21* | 0.1 | -0.15 | -0.23* | -0.01 | -0.11 | 0.08 | 0.08 | -0.01 | 0.08 | 1 | | |
| Floristic deviance | -0.06 | -0.07 | -0.07 | -0.02 | -0.12 | 0.04 | -0.08 | 0,22* | 0.1 | -0.04 | 0.09 | 0.14 | 0.01 | 0.08 | 0.63**** | 1 | |
| Decay rate | 0.07 | 0.06 | 0.21* | -0.21* | 0.03 | 0.06 | 0.28** | 0.15 | 0.13 | 0.09 | 0.07 | -0.07 | -0.27** | -0.07 | -0.29** | 0.21* | 1 |

Table 5. Kendall rank correlations between variables. **** P <0.0001; *** P= 0.0001 - <0.001; ** P= 0.001 - <0.01; * P= 0.01 - < 0.05.

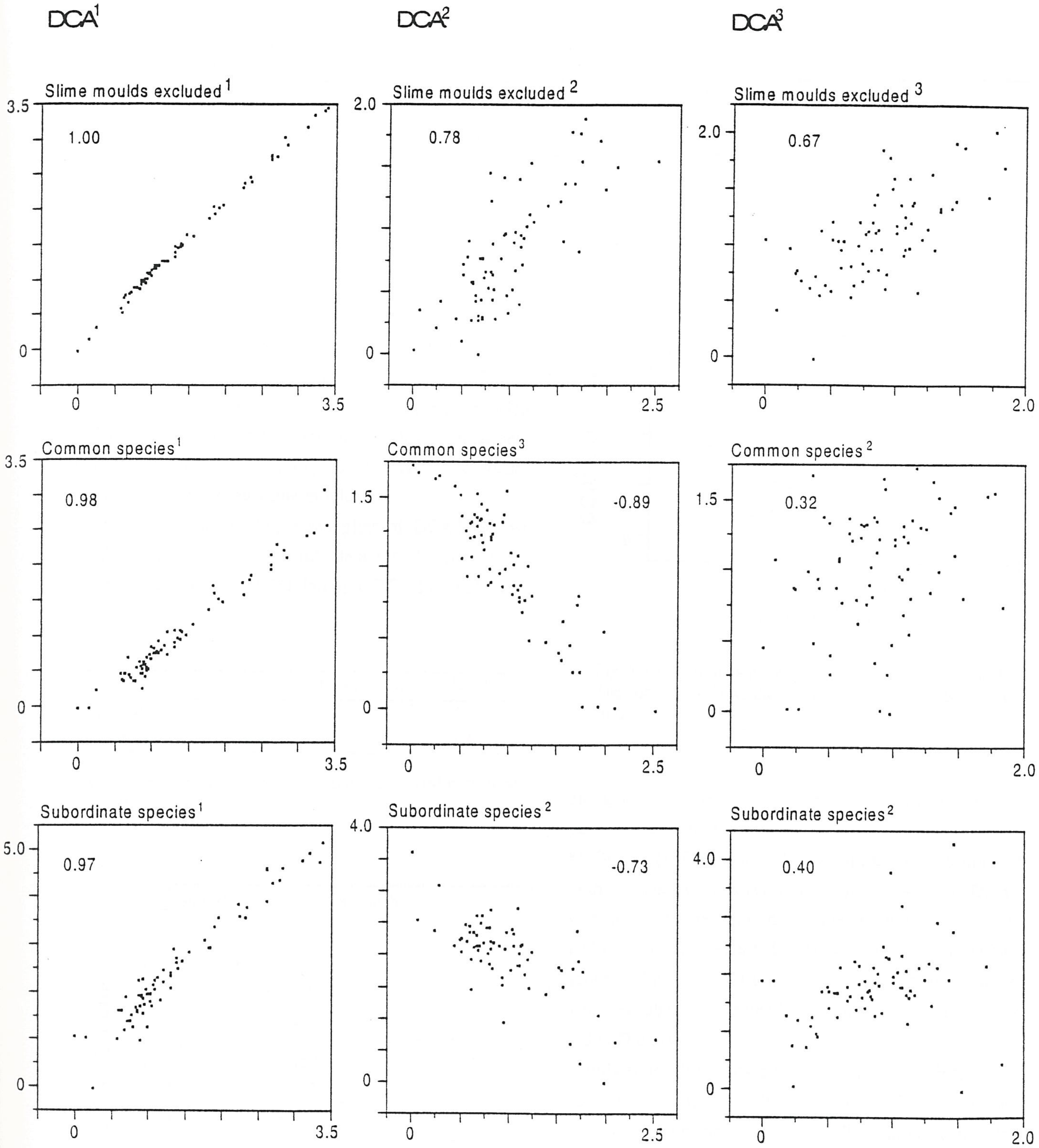


Fig. 3. Evaluation of DCA coenoclines by ordinations of subsets. The three columns represent scatterplots of the three DCA-axes of the full set against the best correlated of the DCA-axes within the three subsets. Coefficients of the Pearson product moment correlation are indicated within the plots. Axes are scaled in SD units.

|  | Full set | Slime moulds excluded | Common species | Subordinate species |
|---|---|---|---|---|
| Number of samples (logs) | 69 | 69 | 69 | 69 |
| Number of species | 179 | 164 | 96 | 146 |
| Number of non-zero data items | 2041 | 1957 | 1794 | 1082 |

Table 6. Properties of the full data set and of the three investigated subsets.

A scatterplot matrix of DCA1-3 in the full data set against the best correlated axes in three sub-sets (Fig. 3) reveals DCA1 to be very consistently expressed. Also DCA2 is reproduced fairly well in the subset ordinations, whereas DCA3 is clearly expressed only in the subset obtained by excluding slime moulds.

Figs. 4 and 5 shows log based plots of DCA1 against DCA2 and DCA3 in the full data set. A pronounced 'tongue' (cf. Økland 1990) relating to DCA2 is evident along DCA1. The nature of this was evaluated by departing the samples (logs) in two sub-sets as suggested by Økland (1990), followed by a careful examinations of both subsets. A cut level at 1.25 SD units along DCA1 was found to be superior in the attempt to interpret DCA2 from the recorded variables. Logs with DCA1 scores below 1.25 SD units are referred to as subset a, whereas subset b contains logs with DCA1 scores above 1.25 SD units.

|  | DCA1 | DCA2 | DCA3 |
|---|---|---|---|
| Eigenvalue | 0.42 | 0.15 | 0.13 |
| Gradient length (SD units) | 3.4 | 2.5 | 1.8 |

Table 7. Properties of the DCA-axes in the ordination of the full data set.

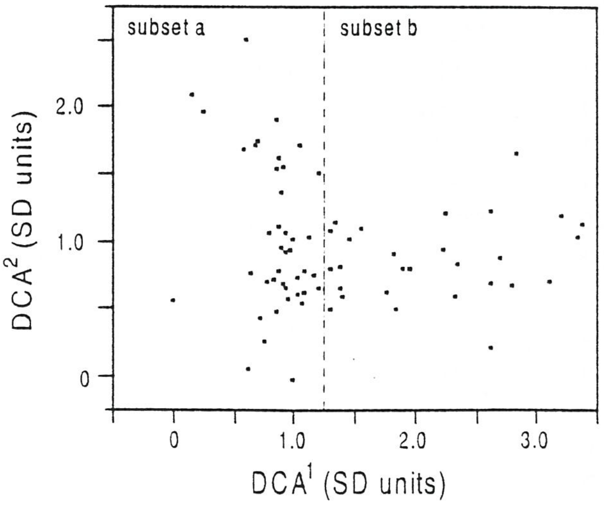


Fig. 4. DCA ordination diagram of the logs on axes 1 and 2. The dotted line shows the cut-level dividing subset a from subset b.

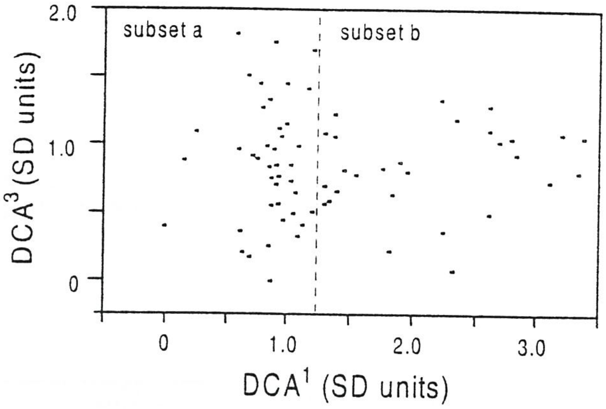


Fig. 5. DCA ordination diagram of the logs on axes 1 and 3. The dotted line shows the cut-level dividing subset a from subset b.

If only subset b is considered, correlations with the variables correlating with DCA2 in the full data set are mostly non-significant (Table 8). This indicate that the tongue represents a true structure in the data set and that DCA2 express an ecological gradient that is only expressed at the lower end of DCA1 (Økland 1990, type c.). Accordingly logs with high DCA1 scores represent noise in the interpretation of DCA2.

A separate ordination of the subsets, as suggested in similar cases by Peet (1980) and Økland (1990), was not

|  | Subset a. (n=41) | Subset b (n=28) | Full set (n=69) |
|---|---|---|---|
| Log age | 0.5156**** | -0.0770 | 0.2346** |
| Decay rate | -0.4976**** | -0.0193 | -0.3544*** |
| Wind exposure | -0.4661*** | -0.2320 | -0.3647**** |
| Dist. to dge | -0.3862*** | -0.1853 | -0.3134*** |
| Fractures | -0.3768** | 0.1144 | -0.2162* |
| Other plants | 0.3447** | 0.0176 | 0.1963 |
| Bole forks | -0.3059* | -0.0156 | -0.2337* |
| Decay stage | 0.3004* | -0.1210 | 0.1413 |
| Bark cover | -0.2915* | 0.1089 | -0.1467 |
| Ane nem | -0.2749* | -0.1490 | -0.2150* |
| Sun exposure | -0.2649* | -0.3046* | -0.2290* |
| Floristic deviance | 0.2613* | 0.0958 | 0.1830* |
| Plantdiv | 0.2548* | 0.1902 | 0.2348** |

Table 8. Kendall rank correlations for $DCA^2$ in subset a and subset b. compared to the full data set. Only variables with significant correlation qoutients in a set are shown. **** P <0.0001; *** P=0.0001 – <0.001; ** P= 0.001 - <0.01; * P= 0.01 - < 0.05.

|  | DCA1 | DCA1# | DCA2 | DCA2# | DCA3 | DCA3# |
|---|---|---|---|---|---|---|
| DCA1 | 1.00 | 1.00 | -0.08 | -0.17 | 0.00 | -0.04 |
| DCA2 | -0.08 | -0.17 | 1.00 | 1.00 | -0.04 | -0.04 |
| DCA3 | 0.00 | -0.04 | -0.04 | -0.10 | 1.00 | 1.00 |
| Decay stage | -0.68**** | -0.33** | 0.14 | 0.30* | -0.11 | -0.24 |
| Log age | -0.66**** | -0.27* | 0.23* | 0.52**** | -0.10 | -0.17 |
| Bark cover | 0.65**** | 0.30* | -0.15 | -0.29* | 0.05 | 0.12 |
| Soil contact | -0.41**** | -0.27* | -0.09 | -0.05 | -0.02 | 0.07 |
| Moss cover | -0.23* | -0.04 | -0.12 | -0.12 | 0.12 | 0.22 |
| Sun exposure | -0.22* | 0.10 | -0.23* | -0.26* | 0.02 | -0.04 |
| Soil humidity | -0.20* | -0.36** | -0.07 | -0.04 | 0.09 | 0.16 |
| Decay rate | -0.01 | -0.17 | -0.35*** | -0.50**** | 0.01 | -0.04 |
| Wind exposure | 0.00 | 0.02 | -0.36**** | -0.45*** | 0.05 | 0.14 |
| Dist. to edge | -0.00 | 0.01 | -0.31*** | -0.39*** | -0.07 | 0.01 |
| Fractures | -0.06 | 0.08 | -0.22* | -0.38*** | 0.12 | 0.12 |
| Other plants | -0.08 | -0.33** | 0.20* | 0.34** | 0.11 | 0.16 |
| Bole forks | 0.14 | 0.20 | -0.23* | -0.31* | -0.09 | -0.07 |
| Ane nem | -0.00 | 0.10 | -0.22* | -0.27* | 0.00 | -0.04 |
| Ran fic | -0.17 | -0.23 | 0.14 | 0.12 | 0.37*** | 0.43*** |
| Ane ran | 0.03 | -0.01 | 0.13 | 0.16 | 0.28** | 0.41*** |
| Plant diversity | 0.07 | 0.01 | 0.23* | 0.25* | 0.26** | 0.42*** |
| Floristic deviance | 0.04 | -0.03 | 0.18* | 0.26* | 0.24** | 0.38** |
| Plant cover | -0.06 | -0.06 | -0.03 | -0.03 | 0.23* | 0.25* |
| Mer per | 0.06 | -0.05 | 0.19 | 0.16 | 0.10 | 0.25* |

Table 9. Kendall rank correlations between DCA axes and log variables in the full set and subset b (#) respectively. Only variables with significant correlation quotients in a set are shown. **** P<0.0001; *** P= 0.0001 - <0.001; ** P= 0.001 - <0.01; * P= 0.01 - < 0.05.

found to increase the informative power, compared to a separate analysis of subset a of the full ordination. Probably because of a decrease in the amount of informative data in the diminished data set. Table 9 shows correlation coefficients between DCA axes and variables, both for the full data set and subset a.

DCA1 correlates strongly with all decay-associated variables, but below 1.25 SD units (subset a) the importance of log age, bark cover and soil contact ceases. Decay stage is however still distinctly expressed. The same is the case for soil humidity, in contrast to the case in the full data set.

DCA2 correlates both in the full data set and in sub-set 1 significantly with several variables, most notably wind exposure, distance to edge and decay rate. In subset a, log age is the best correlated variable, in contrast to the case in the full data set.

DCA3 is associated mainly with a turn-over in the floristic variables (plantcover, plant diversity and floristic deviation). More specific the frequency of *Anemone ranunculoides* and *Ranunculus ficaria* ssp. *bulbifera* is positively correlated with the axis.

### *Modelling*

The strong intercorrelation between several variables in the material (Table 5) obscures the structures of the complex environmental gradients behind the axes, and prevents a quantitative interpretation of these, since the correlation quotients are in no way additive. Multiple regression was applied in an attempt to overcome these shortcomings. Properties of the resulting models are shown in Table 10 and Figs. 6 and 7. Due to the bad recover of DCA3 in the ordination of subsets, models of this axis are not presented.

The model of DCA1 is dominated by a single variable, log age, which explain as much as 84% of the sample variation. Inclusion of other decay related variables did not strengthen the model, but a weak improvement was obtained by including distance to edge and soil contact.

The model of DCA2(subset a) is more complex and has, compared with the model of DCA1, a lower coefficient of determination. The model contains four variables which all contribute significantly in the explanation of sample variation.

The attempt to model for DCA3 was not very successful for the full data set. Obtained models were not very powerful ($r^2$ about 0.3), or appeared more or less spurious by the inclusion of variables which independently are not correlated with the axis. Therefore a model based on subset a is presented. The model has a even lower coefficient of determination than the model of DCA2. Plant diversity is the variable most strongly expressed in the model, but soil contact and the 'dummy variable' soil type contributes as well. With respect to the latter variable the model implies that logs with high DCA3 scores tends to be situated on the richer soil types, viz. clay tills

| Terms | Res. Df. | Sum of Squares | Prob. (F) | R$^2$ |
|---|---|---|---|---|
| DCA$^1$ | | | | |
| log age (polynomial, 2. degree) | 67 | 362726 | <0,0001 | 0.83 |
| + edge (polynomial, 2. degree) | 65 | 15924 | <0,0001 | 0.87 |
| + soil contact | 64 | 7529 | 0.003 | 0.89 |
| DCA$^2$ | | | | |
| decay rate | 68 | 44335 | 0.0019 | 0.33 |
| + decay stage (polynomial, 2. degree) | 66 | 26267 | 0.0113 | 0.53 |
| + wind exposure | 65 | 12564 | 0.0014 | 0.62 |
| + floristic deviance | 64 | 10428 | 0.0046 | 0.70 |
| DCA$^3$ | | | | |
| plant diversity | 68 | 22815 | <0,0001 | 0.28 |
| + soil type | 67 | 13641 | 0.0048 | 0.44 |
| + soil contact | 66 | 5442 | 0.032 | 0.51 |

Table 10. ANOVA's comparing successively more complicated multible regression models predicting DCA$^{1-3}$. All values except R$^2$ and residual degrees of freedom (Res. Df) refer to the added variable.

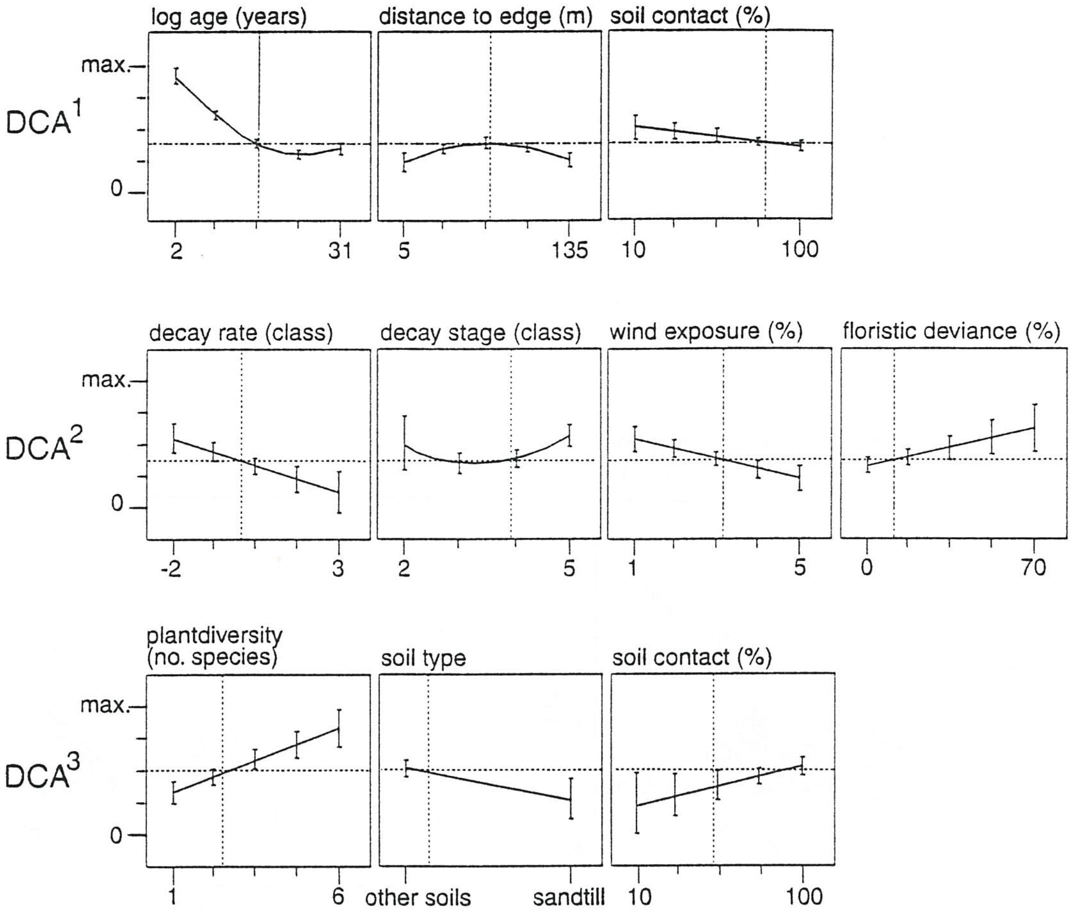


Fig. 6. Prediction profiles showing the roles of individual variables in the multiple regression models optained for DCA$^{1-3}$.

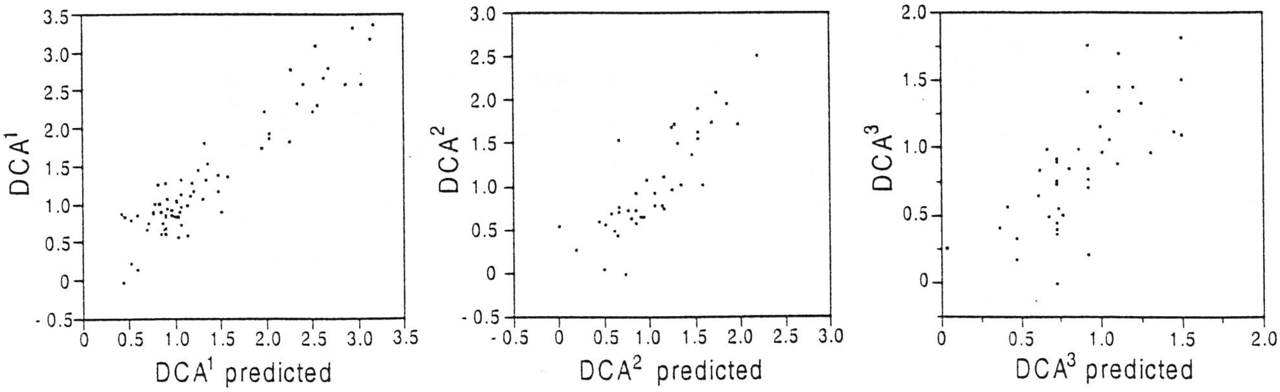


Fig. 7. Plots of the three DCA-axes against the respective fitted multiple regression models. Axes are scaled in SD units.

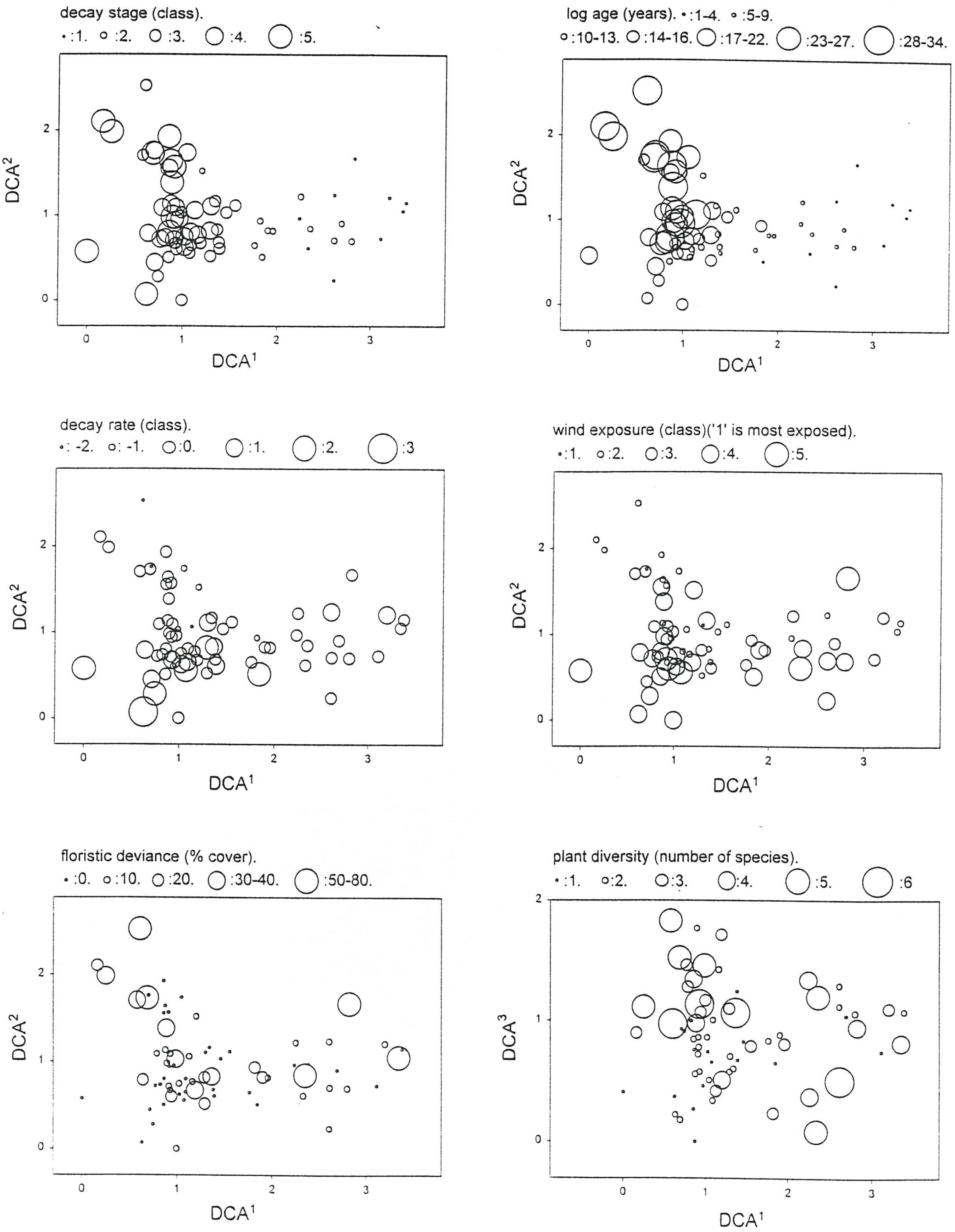


Fig. 8. Biplots showing the log specific scores in the DCA ordination diagrams with respect to various key-variables. Axes are scaled in SD units.

and lacustrine deposits, whereas logs on sandy tills tends to have low DCA3 scores.

*Distribution of species along DCA-axes*

Figs. 9 and 10 shows the distribution of species in the log based DCA ordination space. The pattern is obviously difficult to overview, but some help for the interpretation may be gained from the correlation quotients given in Table 11, and from the accompanying overlay plots (Fig. 11).

The diversity of slime moulds is negatively correlated with DCA1, and a distinct turnover in fungal morphogroups is evident, except for the corticioid fungi. Polypores and pyrenomycetes are very strongly positively correlated with the axis, whereas agarics are negatively correlated. Weaker correlations are found for discomycetes and other basidiomycetes.

DCA2 correlates strongly negative with both fungal and slime mould diversity. Only within the corticioid fungi the tendency is not evident, and the relative contribution

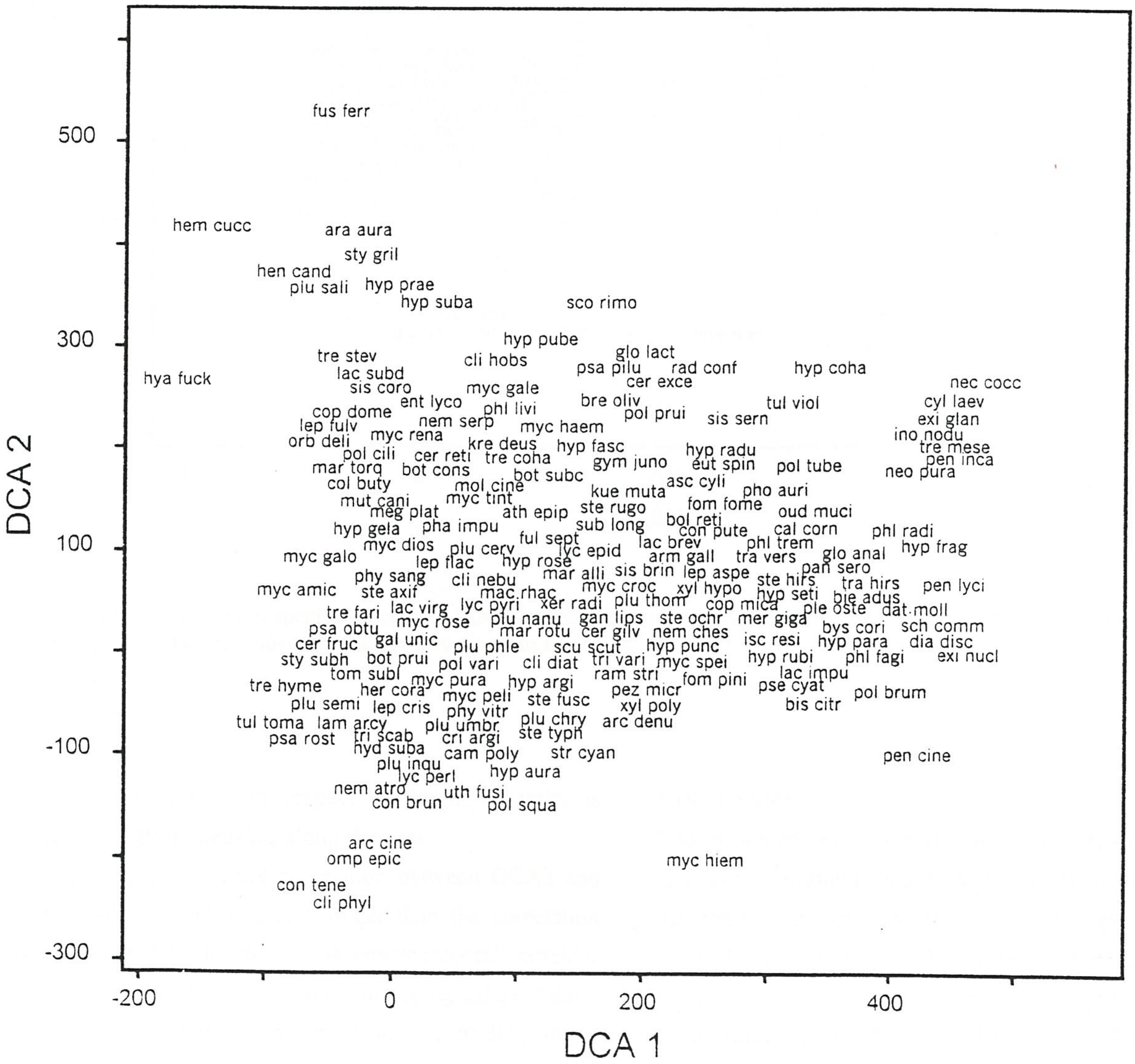


Fig. 9. The distribution of species in the DCA1/DCA2 coenoplane. Names of species are abbreviated according to Table 4. Some species have been moved slightly to give place for all names. Axes are scaled in SD units x 100.

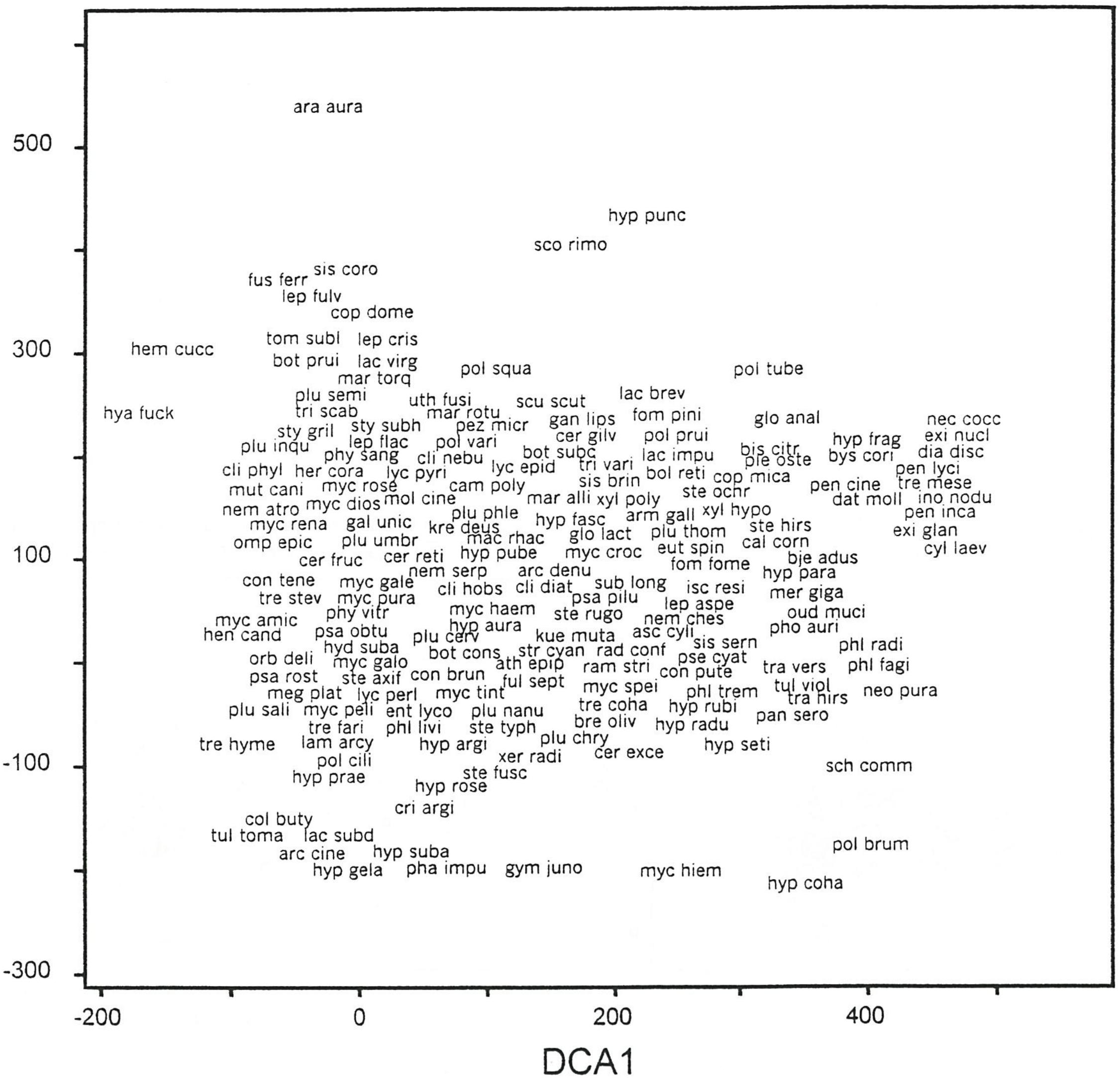


Fig. 10. The distribution of species in the DCA1/DCA2 coenoplane. Names of species are abbreviated according to Table 4. Some species have been moved slightly to give place for all names. Axes are scaled in SD units x 100.

of corticoid fungi with respect to fungal diversity is hence strongly increasing along the axis.

It is noteworthy that the correlation between DCA2 and overall species richness is stronger than the correlation between DCA2 and any of the environmental variables (Table 9). Apart from describing an ecological gradient the axis is in other words representing a gradient in diversity.

DCA3 correlates positively with the relative importance of discomycetes, but apart from this no evident trends are expressed along the axis.

## DISCUSSION

The presented results clearly show that DCA1 responds to a decay gradient, which is dominant in determining the community structure of the studied logs. Compared to DCA2 and DCA3, DCA1 express considerably more sample variation (Table 7), the axis is highly insensitive to modifications of the data set (Fig. 3) and has a very clear model structure (Table 10, Figs. 6 and 7).

Several previous investigations based on registrations of fungal sporocarps have yielded comparable results. A distinct species turnover during decay has been described

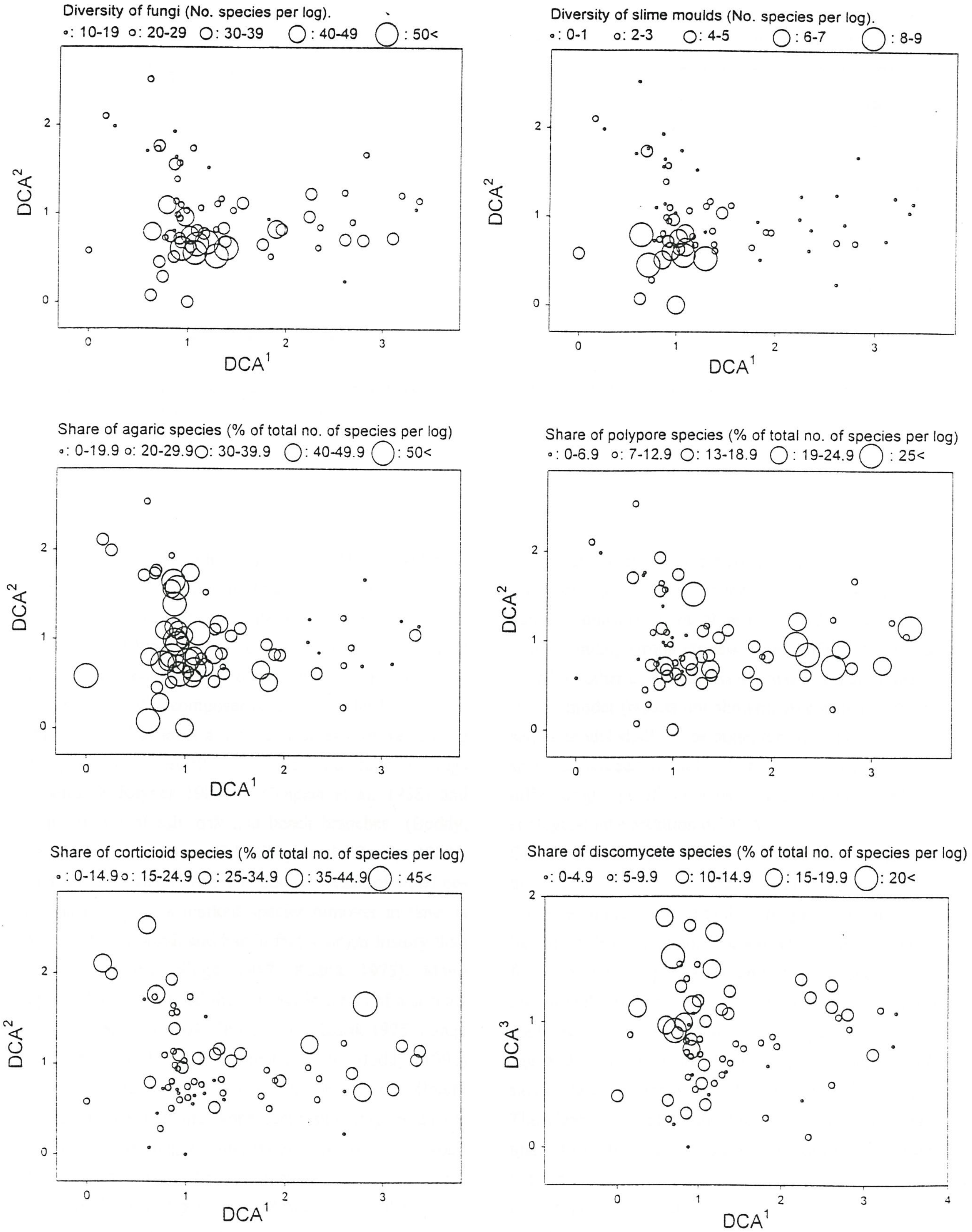


Fig. 11. Biplots showing the species diversity and the relative share of various morpho-groups in the DCA ordination diagrams. Axes are scaled in SD units.

| | DCA1 | DCA1# | DCA2 | DCA2# | DCA3 | DCA3# |
|---|---|---|---|---|---|---|
| Species number of | | | | | | |
| Fungi | -0.00 | 0.20 | -0.39**** | -0.47**** | -0.02 | 0.04 |
| Slime moulds | -0.24** | 0.18 | -0.40**** | -0.58**** | -0.06 | -0.03 |
| Share of | | | | | | |
| Pyrenomycetes | 0.29*** | 0.11 | 0.05 | 0.08 | 0.08 | 0.04 |
| Discomycetes | -0.19* | -0.13 | -0.07 | -0.07 | 0.30*** | 0.29** |
| Agarics | -0.40**** | 0.09 | -0.11 | -0.20 | -0.10 | -0.09 |
| Corticioid fungi | 0.11 | -0.16 | 0.37**** | 0.43**** | -0.19 | -0.28 |
| Polypores | 0.37**** | 0.22* | -0.10 | -0.10 | 0.02 | 0.05 |
| Other basidiomycetes | 0.24** | -0.14 | -0.20* | -0.30** | -0.024 | -0.00 |

Table 11. Kendall rank correlations between various species groups and DCA axes in the full dataset and in subset a(#). The two first rows considers raw species numbers, the others relative shares. **** P<0.0001; *** P= 0.0001 - <0.001; ** P= 0.001 - <0.01; * P= 0.01 - < 0.05.

repeatedly from beech logs (Lange 1992, Willig & Schlegte 1995) and stumps (e.g. Kreisel 1961, Andersson 1997). Based on DCA, Renvall (1995), Høiland & Bendiksen (1996) and Lindblad (1997) even recognized a decay gradient to be the dominant factor in structuring communities of decomposer fungi on conifer logs.

On the mycelial level a distinct species turnover during decay has been described from studies of cut beech logs (Coates & Rayner 1985a-c, Chapela et al. 1988) and from studies of ash, oak and beech branches (Boddy, Bardsley & Gibbon 1987, Chapela & Boddy 1988c, Griffith & Boddy 1990). The understanding of wood decay as involving a marked species turnover in time, is thus well supported, and has in fact a longer history than indicated above (Shigo 1967, Käärik 1975). Many authors have described the process in terms of a succession (e.g. Kreisel 1961, Shigo 1967, Käärik 1975, Lange 1992, Renvall 1995), but most recently Boddy (1992) has argued against using this term deliberately. Boddy (1992) argues that the word succession implies an ordered stepwise change, whereas the true process of wood decay is complex and multidimensional, with a diverse array of 'optional' pathways. However, complexity and multidimensionality are features of many accepted successional processes (Walker & Chapin 1987) and I see no reason not to use the term also in the present case.

The gradient expressed along DCA2 is complex, as reflected by the axis/variable correlations (Table 9) and by the regression model, which includes several almost equally contributing variables (Table 10). In fact several almost equally strong models were obtained for the axis, based on other combinations of variables than in the presented model (results not shown). Accordingly, the presented model shall not be taken too literally in respect to specific included variables. Rather it implies that several different groups of variables should be considered in an ecological interpretation of DCA2.

One of two ruling parameters of the gradient seem to be the decay rate, as this variable compared to the other variables in the models has the strongest individual coefficient of determination. The variable seems to account for most of the explainatory power of log age, which is the variable, which has the most significant correlation coefficient to DCA2, when tested singly (Table 9). Log age and decay rate are naturally autocorrelated, since slowly decayed logs obtain older ages than fast decayed. The clear effect of decay stage in the model however implies that the substitution of log age by decay rate is not perfect, maybe because of the rather non-precise nature of the latter variable.

Another obvious key parameter of the gradient is related to the amount of externally induced microclimatic fluctuations. The parameter is in the model represented by wind exposure, which seems to account for the effects of the variables distance to edge and sun exposure, which both are significantly correlated with DCA2, when tested singly (Table 9). Most wood decay fungi have optima at intermediate moisture levels, but considerable differences exist between different species of fungi; both in respect to their optima and tolerances (Boddy 1983, Boddy et al. 1985, Chapela & Boddy 1988b, Griffith & Boddy 1991b). Unfortunately, the effects of a fluctuating microclimate, as expressed along DCA2 has never been investigated. However, a strongly fluctuating microclimate must be considered a distinct stress factor, implying an altered community structure and a decreased decay rate.

The role of the last variable in the model, floristic deviation, is more difficult to interpret. The variable might reflect a long-term response to certain microclimatic or soil related conditions, favouring other plant species than the very tolerant *Anemone nemorosa.*

DCA3 adds little to the description of overall community development of the studied logs. The model of the axis (Fig. 7; Table 10) is not very powerful and the low eigenvalue and gradient length scores (Table 7) indicate that the axis may partly represent noise or polynomial distortions (Økland 1990), an indication which is supported by the bad recover of the axis in the ordinations of subsets (Fig. 3). The axis seems to respond to a weak soil richness gradient, and it is somewhat surprising that the axis is so weakly expressed, as soil conditions have been found to influence the occurence and fitness of several wood decaying fungi (Eriksson et al. 1973-1988, Rayner & Boddy 1988, Kuyper & de Vries 1990, Abdalla & Boddy 1996). Probably the gradient would be

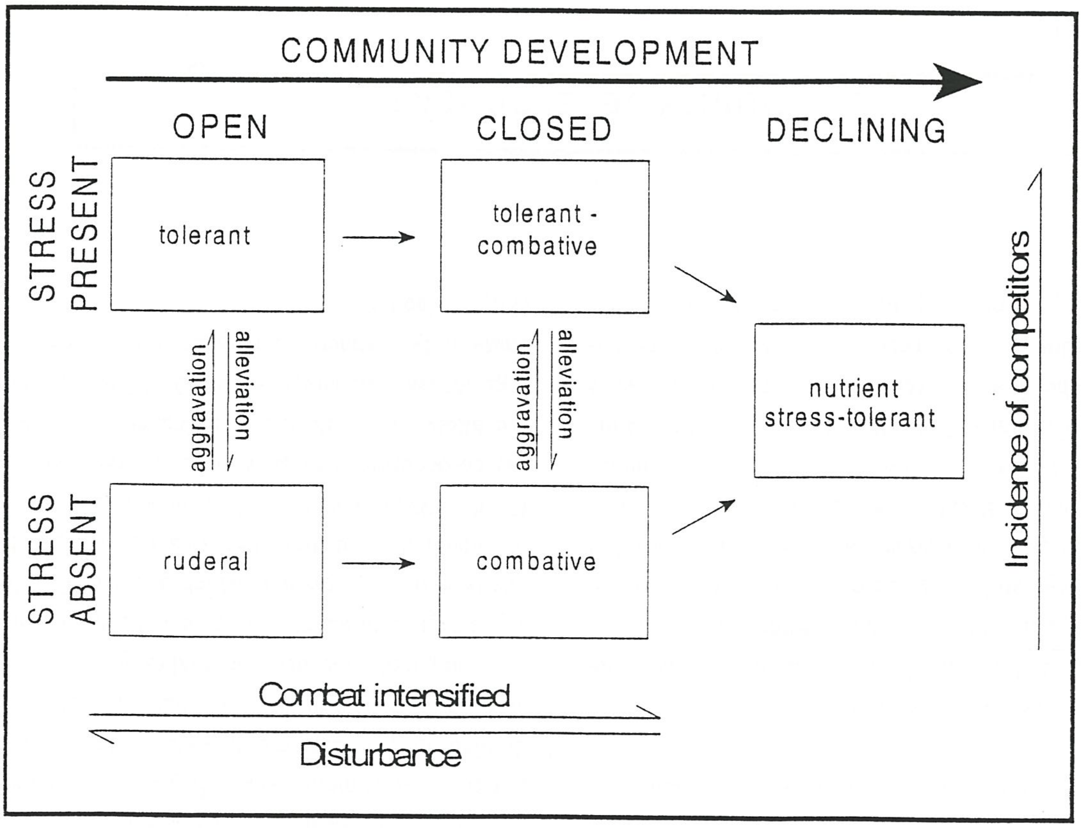


Fig. 12. A diagram of fungal community development pathways, slightly modified from Rayner &Webber (1984). The diagram describes the development from totally unoccupied woody resources to the left to a declining communitystage, characterized by nutrient stress to the right.

more clearly expressed if logs distributed across a bigger spectre of soil types, than present at the locality, were studied. The increasing share of discomycetes along DCA3 (Table 11) is intriguing, but shall not be taken to literally in the light of the unreliability of the gradient.

### *Overall community development*

A generalised diagram of fungal community development in organic substrata was presented by Cooke & Rayner (1984) and has since been simplicified and discussed in respect to decaying wood (Rayner & Webber 1984, Rayner & Boddy 1988, Boddy 1992). The diagram, Fig. 12, is based on the theories of ecological strategies of Grime (1974, 1979) and invokes two ruling gradients; the first representing an increasing incidence of competition as decay proceeds, the second representing stress, e.g. imposed by an extreme microclimatic regime. If DCA2 is accepted as representing a microclimatic stress gradient, the plot of DCA1 against DCA2 (Fig. 4) equals this model in a modified form.

The main modification concerns the initial open community development, which Rayner & Webber (1984) divided in two extreme pathways, depending on the amount of stress present. If various types of woody units are compared, this division makes good sense, as the stress regime in heartwood is very different from that of newly exposed sapwood, which again differs from that of attached dead branches (Rayner & Boddy 1988, Boddy 1992). When considering whole logs, however, the co-occurrence of several such stress related niches are likely to outrule the significance of stress between logs. At least the stress related DCA2 was in the present study only distinctly expressed among the older logs (Fig. 4; Table 8).

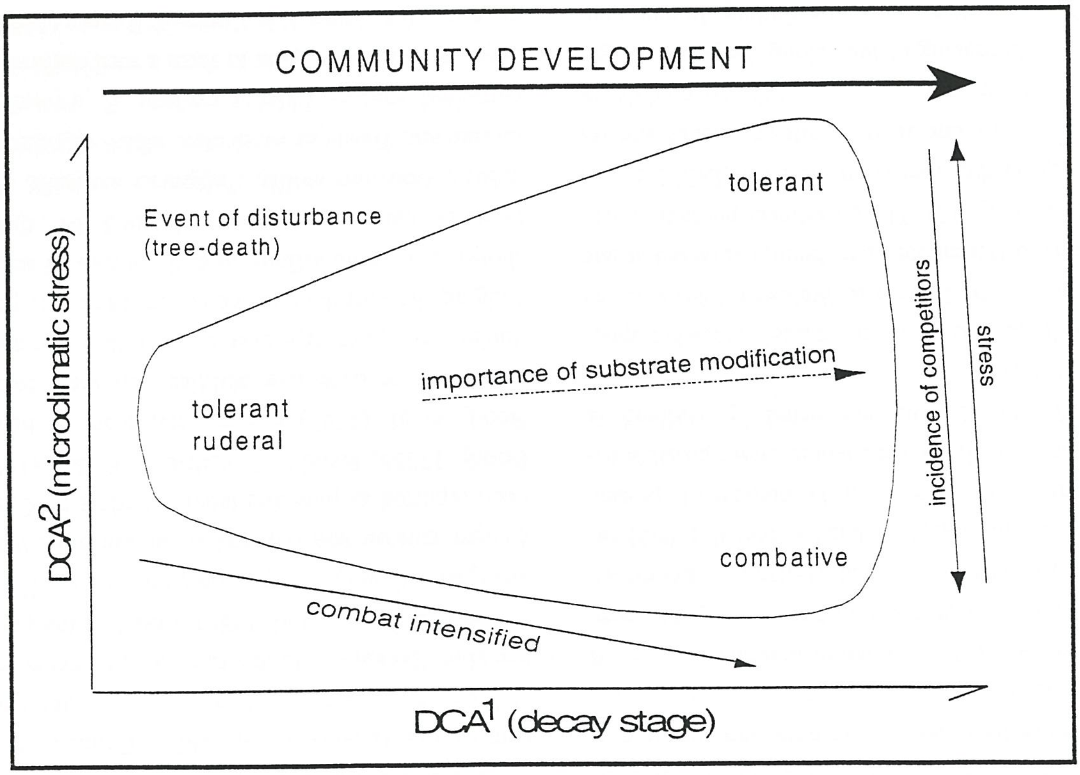


Fig. 13. A model of the fungal community development on the studied logs, based on the plot of DCA$^1$ against DCA$^2$(Fig. 4), but laterally reversed. The model refers to the same ecological principles as the community diagram of Rayner & Webber (1984), (Fig. 12), but with substrate modification (pre-conditioning) added as an additional factor.

A second modification regards the other extreme of community development, which in the model of Rayner & Webber (1984) is implied to culminate in a predictable, declining, nutrient stress tolerant community. In contrast the present study implies that the fungal community structure becomes increasingly unpredictable as decay proceeds, as logs in the final phase of decay occur very wide spread in the ordination diagram (Fig. 8). A similar decay related increase in heterogenity has been reported by Renvall (1995) and Høiland & Bendiksen (1996) from conifer logs, and was by Renvall (1995) explained to mirror an increase in the number of present micro-habitats in well decayed wood. Other possible explanations for the finding are listed by Høiland & Bendiksen (1996).

The two modifications result in a model somewhat opposite to the diagram by Rayner & Webber (1984) with the broadest, most differentiated part being expressed at late stages of decay (Fig. 13). The curvilinear prediction profile of log age in the regression model of DCA1 shows that the biggest amount of axis shift and hence species turnover occurs during the first half of the covered decay period. The wide spacing of logs along the younger right half of DCA1 (Fig 8) supports the finding. In combination with the two modifications this indicate that the overall course of succession shifts from being fast and predictable in early phases of decay to become increasingly slow, and unpredictable as decay proceeds.

### *Distribution of species groups*

Along DCA1 a distinct turnover in combative ability is evident. Among the first species to obtain optima along the axis, *Nectria coccinea* and *Hypoxylon fragiforme* have been reported as endophytic latent invaders in beech (Chapela & Boddy 1988b), and a similar strategy of 'specialised opportunism' (Rayner & Boddy 1988) seems to apply for *Inonotus nodulosus*, *Diatrype disciformis*, *Neobulgaria pura*, *Exidia glandulosa* and *E. nucleata*. All typically produce extensive fructifications within the very first years after tree death and most are selective for beech. Especially the first feature is highly characteristic of endophytic decay fungi (Rayner & Boddy 1988, Boddy 1994). The two species of *Exidia* have a broader host selection (Hansen & Knudsen 1997), but other members of the genus, with a similar appearance, appears to be endophytic in ash and oak (Boddy & Rayner 1983, Boddy et al. 1987).

In general latent invaders have been reported to be poor competitors (Boddy et al. 1987, Chapela & Boddy 1988a,c) and their general early optima are hence expectable. Exceptions to this rule have, however, been reported (e.g. Boddy et al. 1987). Based on the present investigation *Coniophora puteana, Oudemansiella mucida, Eutypa spinosa* and *Hypoxylon rubiginosum*, which has been reported as potential latent invaders by Chapela & Boddy 1988b, Hendry, Lonsdale & Boddy (1998) and Boddy et al. (1987) respectively, seem to have good combative or defensive abilities. All were found producing new sporocarps even on the oldest logs studied.

Judging the correlations shown on Table 11, polypores shows as a whole affinity to early phases of decay. Particularly early optima are obtained by *Bjekandera adusta, Datronia mollis, Polyporus brumalis, Trametes hirsuta* and *Trametes versicolor,* which together with the corticioid species *Phlebia radiata, P. tremellosa,* and *Stereum hirsutum* appear to form a well defined ecological group (cf. 'class 1' in Coates & Rayner (1985c)). The species often co-occur, *Trametes hirsuta,* however, has a strong preference for sun exposed wood. All are white rotters and several have been found to be very fast decayers, either experimentally (Worral, Anagnost & Zabel 1997) or under field conditions (Chapela et al. 1988, Willig & Schlegte 1995). Species of the group seem typically to replace ruderal unspecialized opportunists and latent invaders, but are themselves beeing replaced e.g. by cord-forming basidiomycetes a few years after establishment (Boddy & Rayner 1983, Coates & Rayner 1985c, Chapela & Boddy 1988c, Chapela et al 1988).

In line with this, basidiomycetes forming mycelial cords, such as *Ramaria stricta, Clitocybe diatreta, Hypholoma fasciculare, Lycoperdon perlatum, L. pyriforme, Megacollybia platyphylla, Mutinus caninus, Phallus impudicus* and *Stropharia cyanea,* all have their optima in the 'older' half of the ordination diagram. Interestingly the optimum of the rhizomorphic *Armillaria gallica* (syn. *A. bulbosa (*Barla)Kile & Watling) is slightly earlier, which supports the findings of Coates & Rayner (1985c), Chapela et al. (1988) and Dowson, Rayner & Boddy (1988) that *Armillaria* species in general are less combative than the true cord formers.

Cord formers are generally regarded as among the most combative of wood decomposers (e.g. Coates & Rayner 1985c, Boddy 1993). Under field conditions they have been found to cause a rapid decay (Chapela et al. 1988), but surprisingly this contrasts with *in vitro* experiments, in which several cord formers have been shown to have little or no ablity to decay fresh wood (Dix & Cairney 1985, Tanesaka, Masuda & Kinugawa 1993, Worral et al 1997). The reason behind this paradox is probably that the cord formers depend on a preconditioning of the wood by earlier colonisers, before they can act as decayers. The understanding of DCA1 as representing a community trend solely related to the intensity of competition might thus represent a gross oversimplification. The role of substrate modification may be just as important, especially during the late phases of decay, as discussed by Renvall (1995) and by Holmer, Renvall & Stenlid (1997).

Most species of *Pluteus, Psathyrella* and *Mycena* have even later optima than the cord formers in the ordination diagram. Unfortunately these species, which are all agarics, have been included in very few experimental studies, and little is known about their wood degrading abilities and strategies. *Psathyrella piluliformis* (syn. *P. hydrophila*) however was by Chapela et al. (1988) found able to replace several cord formers, and a strong combative ability may play an important role for the group in general. However, it is noteworthy that the isolation of *Pluteus* species is difficult, and depends on special nutritive media (Banerjee & Sundberg 1993, Banerjee 1994). This may on the one hand explain why the genus is not reported from studies based on isolation procedures (e.g. Chapela et al 1988), and suggests on the other hand, that members of the genus are highly dependend of a special nutritive environment, e.g. imposed by preconditioning by fungi occuring earlier in the succession.

Two ruling parametres, viz. decay rate and externally induced microclimatic stress, were regocnized in the complex gradient underlaying DCA2. Wheras the latter variable acts fully independent of the fungal community structure, the relation between decay rate and community structure appears to be intricate. It is possible that both parametres are solely determined by the external microclimatic regime, but the strong expression of decay rate in the model indicates, that this is not the case. The decay rate varies considerably among species of wood decaying fungi (Worral et al. 1997). In beech wood several pyrenomycetes, including *Xylaria hypoxylon* and *Nemania serpens* (syn. *Hypoxylon serpens*) have been found to be especially slow decayers, both experimentally (Boddy, Owens & Chapela 1989) and in the field (Chapela et al. 1988). Chapela et al. (1988) found that *X. hypoxylon* was always associated with very dry decay columns sealed by pseudosclerotial plates. Apparently the species is able actively to decrease the water content of occupied wood, probably as a defense against invasion of more combative fungi. The slow decay rate of the species seems to be a direct result of this strategy (Boddy et al. 1989, Boddy 1992). Similar strategies might be archieved also by other fungi forming pseudosclerotial plates, but might appear to be especially distributed among pyrenomycetes of which several has been found to be well adopted to water stress (Griffith & Boddy 1991b, Boddy 1992).

*Eutypa spinosa* and *Kretzschmaria deusta* (syn. *Ustulina deusta*) are known to cause a decay characterized by well developed pseudosclerotial plates (Pearce 1991, Hendry et al. 1998). Both species were in the present investigation recorded very frequently (Table 4) and in several logs appeared to occupy large volumes of wood, estimated from very extensive fructifications. In contrast the equally frequent *X. hypoxylon* appeared generally to be confined to small patches. Considered isolated, the decay rate is correlated negatively with the relative cover of *E. spinosa* (Table 5), but this correlation is not evident with respect to DCA2 (Table 9). The relative cover of *K. deusta* was not estimated, but the species has a rather high score on DCA2 (Fig. 9), and may have a significant effect on the decreasing decay rate expressed along the axis. This opens up for the somewhat speculative, but intriguing possibility, that the shift in community structure along DCA2 is caused not only by external microclimatic stress but also by microclimatic stress induced by pyrenomycetes, in particular *K. deusta.*

The most significant community trend along DCA2 is the decline in overall diversity accompanied by an increasing relative share of corticioid fungi (Table 11, Fig. 11). This trend may appear surprising as several, rare corticioid fungi are supposed to be highly dependend of a humid forest environment (Eriksson et al. 1973-1988, Larsson 1997). In general the group seems however to exhibit good adaptions to environments marked by microlimatic stress. adaptions include resistance to prolounged desiccation e.g. by clamydospore formation (Boddy 1992), resistent basidiomata regaining functionality only during humid periods (Eriksson et al. 1973-1988, Nunez & Ryvarden 1993, Nunez 1996), psychrophily, allowing growth and sporulation at low temperatures under snow or during moderately cold, humid winterperiods (Gilbertson 1973, Larsen, Jurgensen & Harwey 1981, Griffith & Boddy 1991b) and cryptic sporulation under logs and large branches where close soil contact creates a more stable, humid microenvironment (Høiland & Bendiksen 1996). The latter strategy appears to be obtained by several species with high scores on DCA2, such as *Gloiothele lactescens, Hyphoderma praetermissum, Scopoloides rimosa, Stypella grilletii* and *Trechispora stevensonii,* and psychrophily appears to be a part of the strategy of *Brevicellicium olivascens, Hyphodontia radula, Radulomyces confluens, Phlebia livida, Sistotrema sernanderi* and *Tulasnella violea,* all of which were found most frequently during the winther months. In both groups several members have fruitbodies adapted to repeated cycles of desiccation and rewetting, but this adaption seems to be especially prominent among corticioid fungi with low DCA1 scores, notably *Cylindrobasidium evolvens, Peniophora cinerea, P. incarnata* and *P. lycii.* These are all confined to the exposed bark and outermost sapwood of newly dead trees, an environment which offers little protection from the dessicating forces of wind and sun. Also *Schizophyllum commune*, which has appeared to be closely related to, or even congeneric with the corticoid genera *Auriculariopsis* (Nakasone 1996), is evidently well adapted to this habitat.

The diversity of slime moulds is negatively correlated with both DCA1 and DCA2 (Table 11; Fig. 11), which implies that the group has a strong partiality for well decayed, moist wood. This is not surprising since water availability has been stated to be of crucial importance for the group (Ing 1994). Interestingly the three species with highest DCA2 scores, viz. *Enteridium lycoperdon, Fuligo septica* and *Lycoperdon epidendrum*, all form large aethalia, in contrast to all other species included in the ordination. The significance of this finding remain unsolved.

Relatively little is known about the activity of slime moulds in decaying wood, but their role is most likely entirely indirect (Rayner & Boddy 1988, Ing 1994). Several species are able to digest fungi in artificial culture (Howard & Curie 1932) and digestion of fungal mycelia and sporocarps are also recorded in nature (Elliott & Elliott 1920, Ing 1994). Another important food ressorce of slime moulds is bacteria (Madelin 1984), which could explain the late peak of the group, since bacteria in general appears to occur abundantly in well decayed wood (Rayner & Boddy 1988).

Exclusion of slime moulds from the ordination resulted in a less distinct expression of DCA2 (Fig. 3), and in less powerfull correlations with environmental variables (results not shown). This indicate that slime moulds might be good indicators of the environmental characteristics of decaying wood, and a rich occurence seems to be highly indicative of a humid wood environment. Whether a rich occurence of slime moulds can be indicative of the biotic characteristics of wood is uncertain at present, but is likely since their biomass production in some logs appears to be considerable, estimated from the amounts of sporocarps.

### *Sampling-methods.*

Several authors (e.g. Shigo 1967, Rayner & Todd 1979, Rayner & Boddy 1988) have seriously doubted the relevance of studies of wood decaying fungal communities, if based solely on the registration of fungal sporocarps. Most seriously it has been disputed whether the distribution of fungal sporocarps gives a realistic impression of how active mycelia are distributed within the wood. The most thorough review on methods relevant for the study of fungal communities in decaying wood appears to be that of Boddy & Rayner (1988; chapter 3). For general purposes the authors recommend a methology involving the cutting of wood samples to reveal the spatial distribution of mycelial individuals, based on the combined analysis of decay columns, zone lines, associated sporocarps and hyphal structures, the latter eventually inferred from cultures isolated from wood samples.

The application of such a methology in a large scale study like the present is unfortunately unrealistic. Especially, since the amount of work needed to do this would be immense, but also for reasons of conservation. Fortunately, the shortcomings of the sole reliance of sporocarps seem to be partly outruled by the project scale, as the focus is moved from the consideration of individuals within single units, to an estimation of the relative distribution of species across a large number of units (e.g. logs).

Logs and other coarse woody debris appear in general as well spaced units on the forest floor. Each unit is gradually decomposed and is therefore a suitable habitat only for a limited period. Consequently, wood decaying fungi depends highly on spore dispersal, apart from cord forming and rhizomorphic basidiomycetes, which have an effective vegetative dispersal. In practice little is known about how mycelial activity and sporocarp production are correlated in time. However, it is a common experience that many wood decaying fungal species are very persistent in their production of sporocarps (pers. obs., Lange 1992, Renvall 1995). This indicate that mycelial activity and sporocarp production in many cases are concurring events.

With respect to macrofungi the main drawbacks by the solely sporocarp based approach, seems thus to be a modest lack of precision in the understanding of mycelial activity in time, and a potential underrepresentation of cord forming and rhizomorphic basidiomycetes. With respect to non-hymenomycetous fungi more serious drawbacks persist, though some attempts has been made to include these in solely non-destructive inventories (Høiland & Bendiksen 1996, Penttilä & Kotiranta 1996). Microfungi are often richly represented in decaying wood, apparently mostly in the first phases of decay, e.g. as endophytes (Shigo 1967, Chapela & Boddy 1988a, Griffith & Boddy 1990), in strongly decayed wood (Chapela et al. 1988, Rayner & Boddy 1988) or associated with insect activity (Shigo 1967, Swift & Boddy 1984). However, it remains uncertain to which degree they take active part in the primary decomposition of wood under normal conditions, and to which degree they may influence the overall community structure. It is also unclear to which degree fungi reported as microfungi in various studies, in fact are linked with teleomorph stages, producing conspicous sporocarps under certain conditions, e.g. during wintertime, where the activity of field mycologist are generelly limited. Future studies dealing with these aspects are highly welcome.

I wish to thank Thomas Læssøe for highly useful comments and improvements to the manuscript and Morten Christensen for fruitful discussions and nice hours in the field. Rasmus Ejrnæs is thanked for introducing me to the world of ordination. Henrik F. Gøtzsche, Nils Hallenberg, Seppo Huhtinen, Henning Knudsen, Ewald Langer, Thomas Læssøe, Ain Raitviir, Peter Roberts, Leif Örstadius and last but not least Jan Vesterholt are thanked for help with the determination of various critical specimens. Finally I want to thank the Foundation of Sorø Akademi for giving me the permission to work in Suserup Skov.

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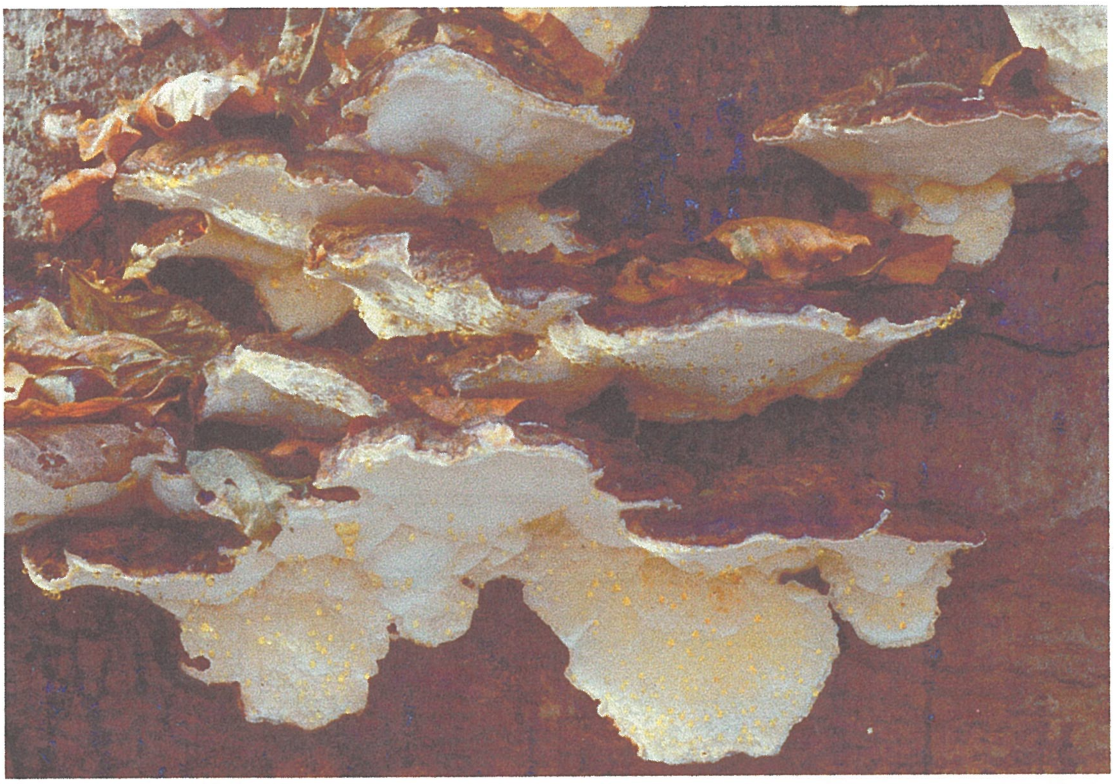


*Ischnoderma resinosum* er for tiden kun kendt fra en dansk lokalitet – Suserup Skov. Her er arten til gengæld ganske udbredt.
At present *Ischnoderma resinosum* is only known from one Danish locality – Suserup Skov. Here the species occurs quite abundantly.
Photo: Jacob Heilmann-Clausen, 13/11 1998 (coll. JHC 98-117)

Appendix 1. Total artsliste. Arterne er inddelt i praktiske grupper af vekslende taxonomisk værdi. Med sikkerhed kunstige grupper er anført med anførselstegn. I kolonnen benævnt "det.", er det angivet, hvis andre end jeg har selv har været indblandet I bestemmelsesarbejdet. AI: Ain Raitviir (Tartu), EL: Ewald Langer (Tübingen), NH: Nils Hallenberg (Göteborg), HFG: Henrik F. Gøtzsche (København), HK: Henning Kudsen (København), JV: Jan Vesterholt (Vejle), LÖ: Leif Örstadius (Kristiansstad), SH: Seppo Huhtinen (Turku), PR: Peter Roberts (Kew), TL: Thomas Læssøe (København)

| | Det. | Antal registreringer fordelt på indsamlinsdatoer | | | | | | | | | | | Frekvens af arter fordelt på stamme alders-klasser (år) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
| **ASCOMYCETES** | | | | | | | | | | | | | | | | | | | | |
| **Diatrypales** | | | | | | | | | | | | | | | | | | | | |
| Diatrype disciformis (Hoffm.: Fr.) Fr. | | | 2 | | | 3 | | | | | | 1 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| Diatrype flavovirens (Pers.: Fr.) Fr. | TL | | 1 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Diatrype stigma (Hoffm.: Fr.) Fr. | | | | | | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Eutypa spinosa (Pers.: Fr.) Tul. & C.Tul. | TL | | 5 | 1 | 4 | | | 62 | | | | | 9 | 10 | 10 | 10 | 8 | 8 | 7 | 62 |
| Eutypella quaternata (Pers.: Fr.) Rappaz | | | | | | 1 | | | 1 | | | | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| **Hypocreales** | | | | | | | | | | | | | | | | | | | | |
| Hypocrea gelatinosa (Tode: Fr.) Fr. | | | | | | 1 | | | 2 | | | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 4 |
| Hypomyces aurantius (Pers.: Fr.) Tul. & C.Tul. | | | 2 | | | | | | | | | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| Nectria coccinea (Pers.: Fr.) Fr. | | | 1 | | | 2 | | | 2 | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Nectria episphaeria (Tode: Fr.) Fr. | TL | | | | | | | | 1 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Nectria peziza (Tode: Fr.) Fr. | TL | | | | | | | | 2 | | | | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| Protocrea cfr. farinosa (Berk. & Br.) Petch | TL | | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **Leotiales** | | | | | | | | | | | | | | | | | | | | |
| Arachnopeziza aurata Fuckel | | | 1 | 1 | | 1 | | | | | | | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 3 |
| Arachnopeziza variepilosa (Galán & Raitviir) Huhtinen | SH | | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Ascocoryne cylichnium (Tul.) Korf | | | | | | | | | | | | 8 | 1 | 3 | 1 | 1 | 1 | 0 | 1 | 8 |
| Bisporella citrina (Batsch : Fr.) Korf & S.Carp. s.l. | | 3 | | | 1 | | | | 1 | | | 10 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 10 |
| Cystopezizella conorum (Rehm) Svrcek | AR | | | | | 1 | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Dasyscyphella nivea (Hedw.: Fr.) Raitv. | | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Hyaloscypha fuckelii Nannf. | | | 1 | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 |
| Lachnum brevipilosum Baral | | | 3 | | | | | | | | | 3 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 5 |
| Lachnum impudicum Baral | | 16 | | 1 | | | | | | | | 15 | 2 | 3 | 8 | 3 | 2 | 4 | 0 | 22 |
| Lachnum virgineum (Batsch: Fr.) P.Karst. | | | 3 | | | 1 | | | | | | | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 4 |
| Mollisia cinerea (Batsch) P.Karst. | | 3 | 42 | 4 | 20 | 9 | | | 1 | | | | 1 | 6 | 10 | 7 | 10 | 7 | 8 | 49 |
| Mollisia ligni (Desm.) P.Karst. | | | | | | | | | | | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Neobulgaria pura (Fr.) Petrak | | 3 | | | | 1 | | | 6 | | | 4 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Ombrophila sp. | AR | | | | | 1 | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Orbilia cfr. alnea Velen. | | | | | 2 | | | | | | | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Orbilia delicatula (P.Karst.) P.Karst. | | 2 | 1 | 1 | 4 | 9 | | | | | | 7 | 0 | 1 | 2 | 2 | 5 | 6 | 3 | 19 |
| Orbilia epipora (Nyl.) P.Karst. | | | 1 | | 2 | | | | | | | | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| Polydesmia pruinosa (Jerdon in Berk. & Br.) Boud. | | 11 | | | | | | | | | | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 | 12 |
| Tapesia lividofusca (Fr.: Fr.) Rehm | | | | | | | | | | | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

|  |  | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pezizales** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peziza micropus Pers.: Fr. |  |  | 5 | 12 | 1 | 7 |  | 1 | 13 | 11 |  |  | 2 | 3 | 5 | 6 | 5 | 4 | 1 | 26 |
| Scutellinia scutellata (L.: Fr.) Lambotte |  | 1 |  | 12 | 18 | 2 |  |  | 6 |  |  | 1 | 1 | 5 | 6 | 7 | 6 | 3 | 1 | 29 |
| **Sordariales** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Camarops polysperma (Mont.) Miller |  |  |  |  |  | 11 |  |  |  |  |  |  | 0 | 2 | 2 | 3 | 1 | 1 | 0 | 9 |
| Camarops tubulina (Alb. & Schw.) Shear |  |  |  |  |  |  | 1 |  |  |  |  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| **Xylariales** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hypoxylon cohaerens (Pers.: Fr.) Fr. |  |  |  |  | 1 |  |  |  |  |  |  | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| Hypoxylon fragiforme (Pers.: Fr.) Kickx |  | 1 | 6 |  | 2 | 10 |  |  | 7 |  |  | 2 | 8 | 6 | 0 | 1 | 0 | 0 | 0 | 15 |
| Hypoxylon rubiginosum (Pers.: Fr.) Fr. |  |  | 3 |  | 2 | 5 |  |  |  |  | 1 | 9 | 2 | 5 | 4 | 1 | 2 | 0 | 1 | 15 |
| Kretzschmaria deusta (hoffm.: Fr.) P.M.D. Martin |  |  | 40 | 3 |  | 4 |  |  |  |  |  |  | 1 | 5 | 9 | 8 | 5 | 8 | 9 | 45 |
| Lopadostoma turgidum (Pers.) Traverso | TL |  | 1 |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Nemania atropurpurea (Fr.: Fr.) Pouzar | TL |  | 2 | 1 |  | 1 |  |  |  |  |  | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 4 |
| Nemania chestersii (Rogers & Whalley) | TL |  |  | 1 | 2 | 1 |  |  | 1 |  |  | 6 | 0 | 3 | 2 | 3 | 0 | 1 | 0 | 9 |
| Nemania serpens (Pers.: Fr.) Gray | TL |  | 1 |  |  | 3 |  |  |  |  |  | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 6 |
| Xylaria hypoxylon (L.: Fr.) Grev. |  | 1 |  |  |  | 6 |  |  | 39 |  |  | 8 | 7 | 10 | 8 | 6 | 8 | 2 | 1 | 42 |
| Xylaria polymorpha (Pers.: Fr.) Grev. |  |  |  | 1 | 3 | 13 |  |  | 9 |  |  | 1 | 1 | 5 | 5 | 3 | 1 | 1 | 1 | 17 |
| **BASIDIOMYCOTA** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **"Gastromyceter"** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lycoperdon echinatum Pers.: Pers. |  |  |  |  |  |  | 1 |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Lycoperdon perlatum Pers.: Pers. |  |  |  |  |  |  |  |  | 12 | 3 |  |  | 1 | 1 | 3 | 4 | 3 | 0 | 1 | 13 |
| Lycoperdon pyriforme Schaeff.: Pers. |  |  |  |  |  |  |  |  | 32 | 26 |  | 2 | 2 | 2 | 7 | 8 | 8 | 6 | 3 | 36 |
| Mutinus caninus (Huds.: Pers.) Fr. |  |  |  | 1 |  |  |  |  | 3 |  |  |  | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 3 |
| Phallus impudicus L.: Pers. |  |  |  |  | 2 | 1 |  |  | 3 |  |  |  | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 5 |
| **"Heterobasidiomyceter"** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Auricularia auricula-judae (Bull.: Fr.) Wettst. |  |  | 1 |  |  |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Basidiodendron caesiocinereum (Höhn. & Litsch.) Luck-Allen |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Calocera cornea (Batsch: Fr.) Fr. |  |  |  |  |  | 2 |  |  | 5 | 2 |  | 2 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| Dacrymyces stillatus Nees: Fr. |  | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Exidia glandulosa (Bull: Fr.) Fr. |  | 4 |  |  |  |  |  |  |  |  |  | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| Exidia nucleata (Schwein.)Burt |  |  |  |  |  |  |  |  |  |  |  | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Exidiopsis effusa (Bref. ex Sacc.) A.M¨ller | PR | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Phleogena faginea (Fr.: Fr.) Link |  |  |  |  |  |  |  |  | 4 |  |  | 10 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 11 |
| Stypella grilletii (Boudier) Roberts |  | 1 | 1 |  |  | 2 |  |  |  |  |  | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 4 |
| Stypella subhyalina (A. Pears.) Roberts |  |  | 1 |  |  | 3 |  |  |  |  |  |  | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| Tremella mesenterica Retz: Fr. |  | 6 |  |  |  |  |  |  | 1 |  |  | 3 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 7 |
| Tulasnella eichleriana Bres. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Tulasnella tomaculum P.Roberts |  |  | 2 |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| Tulasnella violea (Quél.) Bourd. & Galz. |  |  |  |  |  |  |  |  |  |  |  | 4 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 4 |
| **Agaricales s.l.** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Armillaria gallica Marxm. & K.Korh. |  |  |  |  |  |  |  |  | 37 | 23 |  |  | 4 | 8 | 7 | 7 | 8 | 6 | 4 | 44 |

|  |  | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Armillaria mellea (Vahl: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Bolbitius reticulatus (Pers.: Fr.) Rick. |  |  |  | 1 |  | 6 |  |  |  |  |  |  | 0 | 1 | 2 | 1 | 2 | 0 | 1 | 7 |
| Clitocybe diatreta (Fr.: Fr.) P.Kumm. |  |  |  |  |  |  | 1 | 5 | 16 | 19 |  |  | 1 | 2 | 6 | 5 | 3 | 4 | 0 | 21 |
| Clitocybe nebularis (Batsch: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 7 | 7 |  | 1 | 1 | 1 | 2 | 1 | 0 | 4 | 0 | 9 |
| Clitocybe phyllophila (Pers.: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 2 | 2 |  |  | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| Clitopilus hobsonii (Berk.) P.D.Orton |  |  |  | 1 |  | 1 |  | 1 | 9 | 2 |  |  | 2 | 1 | 2 | 0 | 0 | 1 | 4 | 10 |
| Collybia butyracea (Bull.: Fr.) P.Kumm. |  |  |  |  |  | 1 |  |  | 7 |  |  |  | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 8 |
| Collybia fusipes (Bull.: Fr.) QuÈl. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Collybia peronata (Bolt.: Fr.) P.Kumm. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Collybia tuberosa (Bull.: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 2 |  |  |  | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Conocybe brunnea (J.E.Lange & K¸hner) ex Watling |  |  |  |  |  | 1 |  |  | 2 | 1 |  |  | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 3 |
| Conocybe sordida (Kühner ex) Kühner & Watling |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Conocybe tenera (Schaeff.: Fr.) Fayod |  |  |  |  |  |  |  |  | 1 | 2 |  |  | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 |
| Coprinus domesticus (Bolt.: Fr.) Gray |  |  | 2 | 1 |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 3 |
| Coprinus echinosporus Buller |  |  |  | 1 |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Coprinus lagopus (Fr.: Fr.) Fr. |  |  |  |  |  |  | 1 |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Coprinus micaceus (Bull.: Fr.) Fr. |  |  | 6 | 4 |  |  | 5 | 6 | 26 | 11 | 1 | 1 | 6 | 5 | 6 | 4 | 6 | 6 | 3 | 36 |
| Coprinus xanthothrix Romagn. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Cystolepiota adulterina (F.H.Møller) Bon |  |  |  |  |  |  | 1 |  |  | 1 |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Cystolepiota hetieri (Boud.) Singer |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Entoloma dichroum (Pers.: Fr.) P.Kumm. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Flammulaster muricatus (Fr.: Fr.) Watling |  |  |  |  |  | 1 |  | 1 |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Galerina nana (Petri) Kühner |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Galerina unicolor (Fr.) Singer |  |  |  |  |  |  | 3 | 6 | 19 | 15 |  | 8 | 1 | 0 | 4 | 4 | 5 | 6 | 4 | 24 |
| Gymnopilus junonius (Fr.: Fr.) P.D.Orton |  |  |  |  |  |  |  | 1 | 3 |  |  |  | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| Hemimycena cucullata (Pers.: Fr.) Singer |  |  |  |  |  |  | 1 |  | 1 | 1 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Henningsomyces candidus (Pers.: Fr.) O.K. |  |  |  |  | 1 | 4 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 |
| Hydropus subalpinus (Höhn.) Singer |  |  |  | 5 |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 5 |
| Hypholoma fasciculare (Huds.: Fr.) P.Kumm. |  |  | 1 |  |  |  |  | 8 | 26 | 22 |  |  | 0 | 8 | 7 | 4 | 5 | 7 | 4 | 35 |
| Inocybe petiginosa (Fr.: Fr.) Gillet |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Kuehneromyces mutabilis (Schaeff.: Fr.) Sing. & Smith |  |  | 1 |  | 3 |  |  | 3 | 11 | 5 |  |  | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 15 |
| Laccaria laccata (Scop.: Fr.) Berk. & Br. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Lepiota aspera (Pers.: Fr.) QuÈl. |  |  |  |  |  |  |  | 1 | 5 | 2 |  |  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 6 |
| Lepiota boertmannii Knudsen | HK |  |  |  |  |  |  | 1 |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Lepiota cristata (Bolt.: Fr.) P.Kumm. |  |  |  |  |  | 1 | 2 |  | 4 | 1 |  |  | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 7 |
| Lepiota fulvella Rea |  |  |  |  |  |  |  | 1 | 2 | 3 |  |  | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 4 |
| Lepiota jacobii Vellinga & Knudsen |  |  |  |  |  |  |  | 1 |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Lepiota ochraceofulva P.D.Orton |  |  |  |  |  |  |  |  | 2 | 1 |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Lepista flaccida (Sow.: Fr.) Pat. |  |  |  |  |  |  |  |  | 11 | 7 |  |  | 0 | 1 | 4 | 2 | 3 | 3 | 1 | 14 |
| Lepista nuda (Bull.: Fr.) Cooke |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Macrolepiota rhacodes (Vitt.) Singer |  |  |  |  |  |  |  |  | 10 | 3 |  |  | 0 | 2 | 6 | 1 | 0 | 3 | 0 | 12 |
| Marasmius alliaceus (Jacq.: Fr.) Fr. |  |  | 4 | 1 |  | 21 | 1 | 3 | 27 | 6 |  | 14 | 1 | 8 | 7 | 6 | 6 | 8 | 4 | 40 |

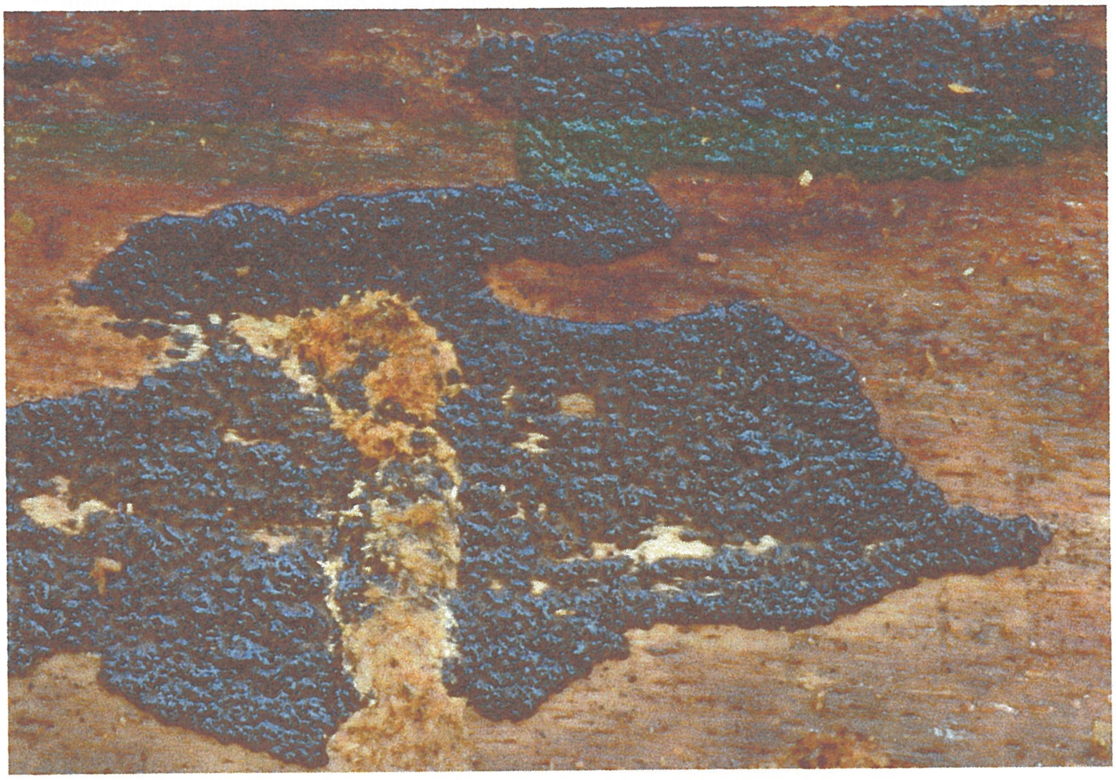
|  |  | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Marasmius cohaerens (Alb. & Schw.: Fr.) Cooke & Quél. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Marasmius rotula (Scop.: Fr.) Fr. |  |  |  |  |  | 13 | 2 | 1 | 7 | 14 |  | 1 | 0 | 3 | 8 | 6 | 4 | 3 | 3 | 27 |
| Marasmius torquescens Quél. |  |  |  |  |  | 4 |  |  | 7 | 3 |  |  | 0 | 1 | 2 | 1 | 3 | 1 | 1 | 9 |
| Marasmius wynnei Berk. & Br. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Megacollybia platyphylla (Pers.: Fr.) Kotl. & Pouz. |  |  |  |  |  | 16 | 4 | 3 | 4 | 5 |  |  | 0 | 2 | 4 | 2 | 7 | 4 | 3 | 22 |
| Melanophyllum aimatospermum (Bull.: Fr.) Kreisel |  |  |  |  |  | 1 |  |  | 1 | 1 |  |  | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| Melanotus horizontalis (Bull.) P.D.Orton |  | 1 |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Merismodes anomalus (Pers.: Fr.) Singer |  | 1 |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| Micromphale brassicolens (Romagn.) P.D.Orton |  |  |  |  |  | 1 |  |  |  | 1 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Mycena amicta (Fr.) Quél. |  |  |  | 1 |  |  |  |  | 2 |  |  |  | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 3 |
| Mycena crocata (Schrad.: Fr.) P.Kumm. |  |  |  | 2 |  | 1 | 1 | 7 | 28 | 9 |  | 2 | 3 | 4 | 8 | 4 | 6 | 5 | 5 | 35 |
| Mycena diosma Krieglsteiner & Schwöbel |  |  |  |  |  |  | 1 |  | 3 | 3 |  |  | 0 | 0 | 3 | 0 | 1 | 0 | 2 | 6 |
| Mycena erubescens Höhn. |  |  |  |  |  |  |  |  | 2 |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 |
| Mycena galericulata (Scop.: Fr.) Quél. |  |  |  | 1 |  |  | 4 |  | 22 | 13 |  | 3 | 1 | 2 | 3 | 3 | 7 | 8 | 4 | 28 |
| Mycena galopus (Pers.: Fr.) P.Kumm. |  |  |  | 1 |  |  |  |  | 3 | 1 |  |  | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 4 |
| Mycena haematopus (Pers.: Fr.) P.Kumm. |  |  |  |  |  |  | 5 | 13 | 35 | 25 |  |  | 2 | 8 | 5 | 7 | 9 | 9 | 10 | 50 |
| Mycena hiemalis (Osb.: Fr.) Quél. |  |  |  |  |  |  |  |  | 3 |  |  |  | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 |
| Mycena pelianthina (Fr.) Quél. |  |  |  |  |  | 2 |  | 1 | 2 |  |  |  | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 5 |
| Mycena polygramma (Bull.: Fr.) Gray |  |  |  |  |  |  |  |  |  | 1 |  | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Mycena pura (Pers.: Fr.) P.Kumm. |  |  |  |  |  | 2 |  | 1 | 14 | 4 |  | 1 | 1 | 0 | 3 | 4 | 5 | 4 | 0 | 17 |
| Mycena renati Quél. |  |  |  |  | 1 | 10 |  |  |  |  |  |  | 0 | 1 | 2 | 2 | 4 | 0 | 2 | 11 |
| Mycena rosea Gramberg |  |  |  |  |  |  |  |  | 4 | 1 |  |  | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 4 |
| Mycena speirea (Fr.: Fr.) Gillet |  |  |  |  |  |  |  |  | 3 |  |  | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 4 |
| Mycena tintinabulum (Fr.) Quél. |  | 7 |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 2 | 7 |
| Omphalina epichysium (Pers.: Fr.) Quél. |  |  |  |  |  |  |  | 2 | 6 | 1 |  |  | 0 | 0 | 1 | 3 | 2 | 2 | 0 | 8 |
| Oudemansiella mucida (Schrad.: Fr.) Höhn. |  |  | 1 |  |  |  |  | 1 | 13 | 3 |  |  | 4 | 4 | 2 | 2 | 0 | 0 | 2 | 14 |
| Panellus serotinus (Pers.: Fr.) Kühn. |  | 1 |  |  |  |  |  |  |  |  |  | 7 | 1 | 5 | 1 | 0 | 0 | 1 | 0 | 8 |
| Pholiota aurivellus (Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 5 | 4 |  |  | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 6 |
| Pholiota squarrosa (Weigel: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 2 | 1 |  |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Pleurotus dryinus (Pers.: Fr.) P.Kumm. |  |  |  |  |  |  |  |  | 1 |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Pleurotus ostreatus (Jacq.: Fr.) P.Kumm. |  | 7 |  |  |  |  |  |  |  |  |  | 5 | 3 | 2 | 3 | 2 | 0 | 0 | 0 | 10 |
| Pluteus cervinus (Batsch) Singer |  |  |  | 3 | 4 | 9 | 10 |  | 38 | 12 |  |  | 0 | 4 | 5 | 7 | 8 | 7 | 6 | 37 |
| Pluteus chrysophaeus (Schaeff.) Quél. |  |  |  |  |  |  | 3 |  | 10 |  |  |  | 1 | 1 | 3 | 2 | 1 | 2 | 1 | 11 |
| Pluteus ephebeus (Fr.: Fr.) Gillet |  |  |  |  |  | 1 |  | 1 |  |  |  |  | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| Pluteus godeyii Gill. ss. Lange |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Pluteus inquilinus Romagn. |  |  |  |  |  |  | 1 | 1 | 1 | 1 |  |  | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| Pluteus nanus (Pers.: Fr.) P.Kumm. |  |  |  |  |  | 1 |  | 1 | 3 |  |  |  | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 5 |
| Pluteus phlebophorus (Dittm.: Fr.) P.Kumm. |  |  |  | 3 |  | 2 | 1 | 4 | 16 | 10 |  |  | 1 | 3 | 5 | 5 | 5 | 1 | 2 | 22 |
| Pluteus podospileus Sacc. & Cub. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Pluteus salicinus (Pers.: Fr.) P.Kumm. |  |  |  |  |  | 1 | 3 | 1 | 2 | 3 |  |  | 0 | 1 | 1 | 1 | 1 | 1 | 3 | 8 |
| Pluteus semibulbosus (Lasch)Gill. |  |  |  |  |  |  |  |  | 4 | 1 |  |  | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 4 |
| Pluteus thomsonii (Berk. & Br.) Dennis |  |  |  |  |  | 1 |  | 1 | 1 | 2 |  |  | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |

|  |  | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pluteus umbrosus (Fr.) P.Kumm. |  |  |  |  |  |  | 2 | 2 | 5 | 1 |  |  | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 5 |
| Psathyrella candolleana (Fr.: Fr.) Maire |  |  |  |  | 2 |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Psathyrella conopilus (Fr.: Fr.) A.Pears. & Dennis |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Psathyrella cortinarioides P.D.Orton | LÖ |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Psathyrella fusca (Schum.) A.Pears. |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Psathyrella lacrymabunda (Bull.: Fr.) Moser |  |  |  |  |  |  |  | 1 |  | 1 |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Psathyrella obtusata (Pers.: Fr.) A.H.Smith |  |  | 4 | 10 |  | 2 |  |  | 8 | 2 |  |  | 0 | 1 | 3 | 5 | 4 | 4 | 2 | 19 |
| Psathyrella piluliformis (Bull.: Fr.) P.D.Orton | LÖ |  |  |  |  |  |  | 2 | 6 | 5 |  | 1 | 1 | 0 | 4 | 0 | 0 | 2 | 1 | 8 |
| Psathyrella populina (Britz.) Kits. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Psathyrella pygmaea (Bull.: Fr.) Singer |  |  |  |  |  |  |  |  | 1 |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Psathyrella rostellata Örstadius | LÖ |  |  |  |  |  |  |  | 3 |  |  |  | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 4 |
| Psathyrella spadiceogrisea (Schaeff.) Maire |  |  |  |  |  | 1 |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Psathyrella tephrophylla (Romagn.) Bon |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Pseudoclitocybe cyathiformis (Bull.: Fr.) Singer |  | 1 |  |  |  |  |  |  |  | 4 |  | 6 | 2 | 3 | 2 | 0 | 1 | 1 | 0 | 9 |
| Ramicola centunculus (Fr.: Fr.) Watl. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Resupinatus trichotis (Pers.) Singer |  | 1 |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Ripartites tricholoma (Alb. & Schw.: Fr.) P.Karst. |  |  |  |  |  |  |  |  |  | 1 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Stropharia cyanea (Bull.) Tuomikoski |  |  |  |  |  |  |  |  | 2 | 1 | 1 |  | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| Tricholoma lascivum (Fr.) Gillet |  |  |  |  |  |  |  |  | 1 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Tubaria furfuracea (Pers.: Fr.) Gillet |  | 2 |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Volvariella hypopithys (Fr.) Shaffer |  |  |  |  |  |  | 1 |  |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Xerula radicata (Relhan: Fr.) Dörfelt |  |  |  |  |  | 6 |  |  | 7 |  |  |  | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 10 |
| **Boletales** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Coniophora arida (Fr.) Karst. |  | 1 |  |  |  |  |  |  |  |  |  | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Coniophora puteana (Schum.: Fr.) P.Karst. |  | 1 |  |  |  |  | 1 |  | 15 | 4 |  | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 1 | 17 |
| **“Corticiales”** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Athelia epiphylla Pers. |  | 15 |  |  |  |  |  |  |  |  |  | 26 | 2 | 4 | 7 | 5 | 7 | 7 | 5 | 37 |
| Athelopsis glaucina (Bourd. & Galz.) Parm. |  |  |  | 1 |  |  |  |  |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Botryobasidium botryosum (Bres.) J.Erikss. |  |  | 1 |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Botryobasidium conspersum J.Erikss. |  |  |  |  | 2 |  |  |  |  |  |  |  | 1 | 2 | 5 | 4 | 5 | 5 | 7 | 29 |
| Botryobasidium laeve (J.Erikss.) Parm. | EL |  |  |  |  | 10 |  |  | 22 |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Botryobasidium pruinatum (Bres.) J.Erikss. |  |  |  | 1 | 2 | 1 |  |  | 2 |  |  | 1 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 6 |
| Botryobasidium subcoronatum (Höhn. & Litsch.) Donk |  |  | 2 | 1 |  | 2 |  |  |  |  |  |  | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 5 |
| Brevicellicium olivascens (Bres.) Larss. & Hjortst. | JV | 3 | 1 |  |  | 2 |  |  |  |  |  | 2 | 0 | 2 | 1 | 3 | 1 | 1 | 1 | 9 |
| Byssomerulius corium (Fr.) Parm. |  | 3 |  |  |  |  |  |  |  |  |  |  | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 3 |
| Ceriporia excelsa (Lund.) Parm. |  | 1 |  |  | 4 | 4 |  |  | 1 |  |  |  | 1 | 1 | 3 | 1 | 1 | 0 | 1 | 8 |
| Ceriporia reticulata (Hoffm.: Fr.) Dom. |  |  | 12 | 3 | 13 | 25 |  |  | 2 |  |  |  | 1 | 3 | 6 | 6 | 6 | 9 | 7 | 38 |
| Cristinia gallica (Pilát) Jülich |  |  |  |  |  | 1 |  |  | 1 |  |  |  | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| Cristinia helvetica (Pers.) Parm. |  |  |  |  |  | 2 |  |  |  | 1 |  |  | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Cylindrobasidium evolvens (Fr.: Fr.) Jülich |  | 7 | 3 | 1 |  |  |  |  | 3 |  |  |  | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Gloeocystidiellum luridum (Bres.) Boid. |  |  | 1 |  |  |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Gloeohypochnicium analogum (Bourd. & Galz.) Hjortst. |  |  | 1 |  |  |  |  |  |  |  |  | 3 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 |

|  |  | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gloiothele lactescens (Berk.) Hjortst. |  |  | 1 | 1 |  | 3 |  | 2 | 17 |  |  | 3 | 2 | 1 | 3 | 2 | 3 | 2 | 6 | 19 |
| Hyphoderma aff. roseocremeum (Bres.) Donk | NH | 2 |  |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| Hyphoderma argillaceum (Bres.) Donk | JV |  |  |  | 2 | 5 |  |  |  |  |  |  | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 6 |
| Hyphoderma medioburiense (Burt) Donk |  | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Hyphoderma pallidum (Bres.) Donk |  |  | 1 |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Hyphoderma praetermissum (P.Karst.) J.Erikss. & Strid | JV |  | 1 |  | 2 | 4 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 6 |
| Hyphoderma puberum (Fr.) Wallr. |  | 2 | 1 | 1 | 4 | 5 |  |  |  |  |  | 10 | 1 | 3 | 3 | 2 | 2 | 2 | 4 | 17 |
| Hyphoderma roseocremeum (Bres.) Donk |  |  | 1 |  |  | 3 |  |  |  |  |  |  | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 4 |
| Hyphoderma setigerum (Fr.) Donk | JV | 1 | 1 |  | 4 | 2 |  |  |  |  |  | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 9 |
| Hyphodontia arguta (Fr.) J.Erikss. |  |  |  |  |  |  |  |  |  |  |  | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| Hyphodontia aspera (Fr.) J.Erikss. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hyphodontia paradoxa (Schrad.: Fr.) E.Langer & Vesterh. |  | 3 | 1 |  |  | 1 |  |  | 1 |  |  |  | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 6 |
| Hyphodontia radula (Pers.: Fr.) E.Langer & Vesterh. |  | 10 | 3 |  | 2 | 2 |  |  | 2 |  |  | 6 | 2 | 3 | 2 | 2 | 4 | 2 | 1 | 16 |
| Hyphodontia sambuci (Pers.) J.Erikss. | NH | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hyphodontia subalutacea (P.Karst.) J.Erikss. | JV |  | 1 |  |  | 2 |  |  |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 3 |
| Hypochnicium eichleri (Bres.) J.Erikss. & Ryvarden |  |  |  |  |  |  |  |  |  |  |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hypochnicium polonense (Bres.) Strid |  |  | 2 |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| Hypochnicium punctulatum (Cooke) J.Erikss. |  |  |  |  | 1 | 2 |  |  |  |  |  |  | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 3 |
| Lindtneria cfr. flava Parm. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Mycoacia uda (Fr.) Donk |  |  | 1 |  |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Peniophora cinerea (Pers.: Fr.) Cooke |  | 2 |  |  |  |  |  |  |  |  |  | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| Peniophora incarnata (Pers.: Fr.) P.Karst. |  | 7 | 3 |  |  |  |  |  | 3 |  |  | 5 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 8 |
| Peniophora lycii (Pers.) Höhn. & Litsch. |  |  | 2 |  |  |  |  |  |  |  |  | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Peniophora nuda (Fr.) Bres. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Peniophora quercina (Pers.: Fr.) Cooke |  |  | 1 |  |  |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Phanerochaete sordida (P.Karst.) J.Erikss. & Ryvarden |  |  |  | 1 |  |  |  |  |  |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Phanerochaete tuberculata (P.Karst.) Parm. |  |  |  |  |  | 1 |  |  |  |  |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Phanerochaete velutina (DC.: Fr.) P.Karst. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Phlebia livida (Pers.: Fr.) Bres. |  | 4 | 3 |  |  | 3 |  |  |  |  |  | 5 | 0 | 1 | 2 | 3 | 1 | 1 | 2 | 10 |
| Phlebia radiata Fr.: Fr. |  | 3 |  |  |  |  |  |  | 6 | 1 |  | 10 | 8 | 3 | 0 | 1 | 0 | 0 | 1 | 13 |
| Phlebia rufa (Pers.: Fr.) M.P.Christ. |  |  |  |  |  | 1 |  |  |  |  |  | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Phlebia tremellosa (Schrad.: Fr.) Burds. & Nakas. |  |  |  |  |  |  | 1 |  | 3 | 5 |  | 4 | 1 | 1 | 2 | 0 | 1 | 0 | 1 | 6 |
| Phlebiella allantospora (Oberw.) Larss. & Hjortst. |  |  |  |  |  |  |  |  |  |  |  | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Radulomyces confluens (Fr.: Fr.) M.P.Christ. | JV, NH | 16 | 1 |  |  |  |  |  | 2 |  |  | 3 | 2 | 5 | 1 | 3 | 4 | 3 | 2 | 20 |
| Schizophyllum commune Fr.: Fr. |  | 3 | 1 |  |  |  |  |  | 1 | 1 |  |  | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 5 |
| Scopuloides rimosa (Cooke) Jülich |  |  |  |  |  | 3 |  |  |  |  |  | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 4 |
| Sistotrema biggsiae Hallenb. | NH |  |  | 1 |  |  |  |  |  |  |  |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Sistotrema brinkmannii (Bres.) J.Erikss. | JV, NH | 11 | 2 | 1 |  | 3 |  |  |  |  |  | 7 | 4 | 1 | 2 | 2 | 6 | 2 | 3 | 20 |
| Sistotrema coroniferum (Höhn. & Litsch.) Donk | NH | 1 |  |  |  |  |  |  |  |  |  | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 |
| Sistotrema oblongisporum M.P.Christ. & Hauerslev |  | 1 |  |  |  |  |  |  |  |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Sistotrema octosporum (Schroet. ex Höhn. & Litsch.) Hallenb. |  |  |  |  | 1 |  |  |  |  |  |  | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| Sistotrema sernanderi (Litsch.) Donk |  | 2 |  |  |  |  |  |  |  |  |  | 3 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 5 |

| | | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sistotremastrum niveocremeum (Höhn. & Litsch.) J.Erikss. | | 2 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Steccherinum ochraceum (Pers.: Fr..) Gray | | 5 | 2 | | 1 | 5 | | | 5 | | | 6 | 2 | 3 | 7 | 1 | 1 | 2 | 0 | 16 |
| Stereum hirsutum (Willd.: Fr.) Gray | | 16 | 16 | | | 5 | | | 8 | | | 12 | 5 | 9 | 3 | 3 | 1 | 0 | 0 | 21 |
| Stereum rugosum (Pers.: Fr.) Fr. | | 3 | 2 | | | | | | | | | 2 | 0 | 2 | 1 | 1 | 2 | 0 | 1 | 7 |
| Subulicystidium longisporum (Pat.) Parm. | | | 1 | | 3 | 10 | | | | | | | 1 | 1 | 4 | 1 | 2 | 1 | 2 | 12 |
| Thanatephorus fusisporus (J.Schroet.) Hauerslev & P.Roberts | | | | | 1 | | | | | | | | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| Trechispora cohaerens (Schw.) J¸lich & Stalpers | JV | 4 | 1 | | 1 | 1 | | | | | | 5 | 0 | 2 | 2 | 1 | 0 | 2 | 2 | 9 |
| Trechispora farinacea (Pers.: Fr.) Lib. | JV | 4 | | | 1 | 2 | | | | | | 2 | 0 | 1 | 0 | 2 | 2 | 0 | 2 | 7 |
| Trechispora hymenocystis (Berk. & Br.) K.H.Larss. | JV | | | | | 1 | | | 1 | | | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 4 |
| Trechispora microspora (P.Karst.) Lib. | | | | | | | | | | | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Trechispora praefocata (Bourd. & Galz.) Lib. | | | | | | | | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Trechispora stevensoni (Berk. & Br.) Larss. | JV | 2 | | | 1 | 7 | | | 1 | | | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 2 | 7 |
| Xenasma pulverulentum (Litsch.) Donk | | | | | 1 | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Ganodermatales** | | | | | | | | | | | | | | | | | | | | |
| Ganoderma lipsiensis (Batsch) Atk. | | | 19 | 1 | 1 | 3 | | | | | | | 1 | 5 | 6 | 5 | 2 | 3 | 0 | 22 |
| Ganoderma pfeifferi Bres. | | | 1 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **Gomphales** | | | | | | | | | | | | | | | | | | | | |
| Ramaria stricta (Pers.: Fr.) Quél. | | | | | | | | | 14 | 10 | | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 15 |
| **Hericiales** | | | | | | | | | | | | | | | | | | | | |
| Hericium coralloides (Scop.: Fr.) Pers. | | | | 1 | 1 | | 1 | | 3 | 2 | | | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 4 |
| **Hymenochaetales** | | | | | | | | | | | | | | | | | | | | |
| Fuscoporia ferrea (Pers.) G. Cunn. | | | 3 | | | 1 | | | 1 | | | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 5 |
| Inonotus nodulosus (Fr.) P.Karst. | | | | | | 2 | 1 | | 4 | | | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| **"Polyporales"** | | | | | | | | | | | | | | | | | | | | |
| Antrodiella hoehnelii (Bres.) Niemelä | | | | | | 1 | | 1 | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Antrodiella semisupina (Berk. & Curt.) Ryvarden & Johans. | | | | | | 2 | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Bjerkandera adusta (Willd.: Fr.) P.Karst. | | 8 | 7 | | | 2 | | | 6 | 1 | | 11 | 6 | 8 | 2 | 1 | 0 | 0 | 0 | 17 |
| Bjerkandera fumosa (Pers.: Fr.) P.Karst. | | | | | | | | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Ceriporiopsis gilvescens (Bres.) Dom. | | 2 | | | 1 | | | | 3 | | 1 | 4 | 0 | 2 | 3 | 2 | 0 | 2 | 0 | 9 |
| Datronia mollis (Sommerf.: Fr.) Donk | | 2 | 1 | | 1 | | | | 1 | | | 4 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 6 |
| Fomes fomentarius (L.: Fr.) Fr. | | | 39 | 1 | 1 | 1 | | | 1 | | | | 6 | 7 | 8 | 7 | 5 | 4 | 1 | 38 |
| Fomitopsis pinicola (Swartz: Fr.) P.Karst. | | | 3 | 1 | | 1 | | 1 | 1 | | | | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 6 |
| Ischnoderma resinosum (Schrad.: Fr.) P.Karst. | | | 6 | | | 5 | 3 | 1 | 12 | 1 | | 1 | 0 | 4 | 4 | 4 | 0 | 1 | 1 | 14 |
| Meripilus giganteus (Pers.: Fr.) P.Karst. | | | | | | 8 | 4 | 2 | 11 | 3 | | | 3 | 5 | 5 | 3 | 1 | 1 | 0 | 18 |
| Physisporinus sanguinolentus (Alb. & Schw.: Fr.) Pilát | | | 1 | | 3 | 9 | 1 | | 4 | | | | 0 | 2 | 3 | 5 | 3 | 1 | 2 | 16 |
| Physisporinus vitreus (Pers.: Fr.) P.Karst. | | | | | | | | | 14 | | | | 0 | 2 | 1 | 4 | 4 | 2 | 1 | 14 |
| Polyporus badius (Pers.) Schw. | | | | | | | | | 1 | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Polyporus brumalis (Pers.) Fr.: Fr. | | 1 | 1 | | | | | | 2 | | | | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Polyporus ciliatus Fr.: Fr. | | | | 3 | 1 | | | | | | | | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 |
| Polyporus squamosus (Huds.: Fr.) Fr. | | | 1 | 1 | 2 | 2 | | | | | | | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 3 |
| Polyporus tuberaster (Pers.: Fr.) Fr. | | | | 1 | | 1 | 1 | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| Polyporus varius (Pers.) Fr.: Fr. | | | | 3 | 3 | 6 | | | 4 | | | | 0 | 0 | 7 | 4 | 2 | 0 | 0 | 13 |

| | | 24/2 1995 | 7-8/5 1994 | 29/5 1994 | 10/7 1994 | 23-24/8 1994 | 25/9 1995 | 1/10 1995 | 4/10 1994 | 15/10 1995 | 1/11 1995 | 14+17/12 1995 | 1-4 | 5-9 | 10-13 | 14-16 | 17-22 | 23-27 | 28-34 | sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skeletocutis nivea (Jungh.) Keller | | 2 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Trametes gibbosa (Pers.: Fr.) Fr. | | | 1 | | 1 | | | | 2 | | | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Trametes hirsuta (Wulfen: Fr.) Pilát | | 1 | 3 | | 1 | | | | 2 | | | 2 | 2 | 3 | 0 | 1 | 0 | 1 | 0 | 7 |
| Trametes versicolor (L.: Fr.) Quél. | | 10 | 5 | | 1 | 2 | | | 7 | 3 | | 7 | 4 | 8 | 1 | 3 | 3 | 1 | 0 | 20 |
| Tyromyces chioneus (Fr.: Fr.) P.Karst. | | | | | | | | 1 | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tyromyces wynnei (Berk. & Br.) Donk | | | | | | | 1 | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **Thelepohorales** | | | | | | | | | | | | | | | | | | | | |
| Tomentella ferruginea (Pers.) Pat. | | | | | 1 | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Tomentella radiosa (P.Karst.) Rick | | | | | | | | | 1 | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Tomentella sublilacina (Ellis & Holway) Wakef. | | | 1 | | | 5 | | | | | | | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 5 |
| **Russulales** | | | | | | | | | | | | | | | | | | | | |
| Lactarius subdulcis (Bull.: Fr.) Gray | | | | | | | 1 | | 2 | 1 | | | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 4 |
| **MYXOMYCOTA** | | | | | | | | | | | | | | | | | | | | |
| Arcyria affinis Rostr. | | | | | | | | | | | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Arcyria cinerea (Bull.) Pers. | HFG | | | | 3 | | | | | | | | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| Arcyria denudata (L.) Wettst. | HFG | | | | 1 | | | 1 | | | | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| Arcyria incarnata (Pers.) Pers. | | | | | 1 | 1 | | | 1 | | | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Ceratiomyxa fruticulosa (Müll.) Macbr. | | | | 14 | 8 | 10 | | | | | | | 0 | 0 | 6 | 3 | 6 | 5 | 4 | 24 |
| Comatricha alta Preuss | HFG | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Comatricha nigra (Pers.) Schroet. | HFG | | | | 1 | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Cribraria argillacea (Pers.) Pers. | HFG | | | | 1 | 4 | | | | | | | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 5 |
| Enteridium lycoperdon (Bull.) Farr. | | | 18 | | | | | | | | | | 0 | 2 | 2 | 4 | 4 | 3 | 3 | 18 |
| Fuligo septica (L.) Wiggers | | | | | 12 | 10 | | | | | | | 1 | 1 | 4 | 4 | 5 | 1 | 3 | 19 |
| Lamproderma arcyrioides (Sommerf.) Rost. | | | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| Lycogala epidendrum (L.) Fr. | | | 2 | 14 | 7 | 18 | 1 | | 2 | 1 | | | 1 | 5 | 7 | 8 | 6 | 4 | 4 | 35 |
| Metatrichia floriformis (Schw.) Nann.-Brem. | HFG | | | | | | | | 1 | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Metatrichia vesparium (Batsch) Nann.-Brem. | | 1 | | | | | | | | | | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| Physarum cinereum (Batsch) Pers. | HFG | | | | 1 | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Stemonitis axifera (Bull.) Macbr. | | | 3 | 1 | 3 | | | | 1 | | | | 0 | 0 | 3 | 0 | 2 | 0 | 2 | 7 |
| Stemonitis fusca Roth | | | | | 6 | | | | | | | | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 6 |
| Stemonitopsis hyperopta (Meylan) Nann.-Brem. | HFG | | | | 1 | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Stemonitopsis typhina (Wiggers) Nann.-Brem. | | | | 1 | 5 | | | | | | | | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 6 |
| Symphytocarpus amaurochaetoides Nann.-Brem. | HFG | | | | 1 | | | | | | | | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Trichia contorta (Ditm.) Fr. | | | | | | | | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Trichia persimilis P.Karst. | HFG | | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Trichia scabra Rost. | HFG | | 2 | | 3 | | | | 1 | | | 2 | 0 | 0 | 2 | 3 | 2 | 3 | 0 | 10 |
| Trichia varia (Pers.) Pers. | HFG | | | | | | | | 28 | | | 7 | 4 | 1 | 6 | 7 | 6 | 3 | 2 | 29 |
| Tubifera ferruginosa (Batsch) J.F.Gmel. | | | | | | | | | 1 | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |



*Nemania chestersii* er ikke tidligere angivet fra Danmark, men er en karakterart for flere af de allerbedste danske dødt-veds lokaliteter. Se iøvrigt under taksonomiske og floristiske noter.
*Nemania chestersii* is not officially reported from Denmark, but is an abundant species on several of the best Danish "dead wood localities".
Photo: Jacob Heilmann-Clausen, 13/11 1998 (JHC98-112)

## APPENDIX 2.

Taksonomiske og floristiske noter.

Kærnesvampe

*Camarops tubulina*
Arten er ikke tidligere angivet fra bøg i Danmark, men er efterhånden fundet på dette substrat på en del sjællandske lokaliteter, samt i Stenderup Midtskov i Østjylland. Arten findes tillige på ædelgran og er fundet et par gange på denne vært i Danmark.

*Nemania atropurpurea*
Arten er ikke tidligere angivet fra Danmark, men forekommer dog ganske udbredt og på flere forskellige værter (Granmo & Læssøe in prep.). Den typiske habitat er blottet (uægte) kærneved af bøg, i modsætning til slægtens øvrige arter, der normalt findes på splintved.

*Nemania chestersii*
Arten er ikke tidligere angivet fra Danmark og er tilsyneladende sjælden og tilknyttet naturskove med større dødtvedsmængder. Den normale vært er bøg (Granmo & Læssøe in prep.), men arten kan sjældent findes også på andre substrater.

*Protocrea* cfr. *farinosa*
En indsamling i materialet er indtil videre henført under dette navn (se f.eks. Dennis 1968). Artsgruppen omkring dette taxon er dog langt fra udredt til bunds, og det er usikkert om navnet i dette tilfælde er brugt rigtigt (pers. komm. Thomas Læssøe).

Skivesvampe

*Arachnopeziza variopilosa*
Arten er ikke tidligere angivet fra Danmark. Den blev først beskrevet af Gàlan & Raitviir (1986), som *Protoungiucularia variepilosa.* Huhtinen (1987) kombinerede arten ind i Arachnopeziza og citerer materiale af arten fra 2 lokaliteter i henholdsvis Spanien (holotype) og Tjekkiet. Gàlan & Raitviir (1986), nævner ingen indsamlinger udover typen. Kendt fra én indsamling i materialet, som er bestemt af Seppo Huhtinen (Turku).

*Bisporella citrina* s.l.
Tre indsamlinger i materialet har afveget fra *B. citrina* ss.auct. ved at have markant kortere sække end normalt (< 100 um mod normalt 100-125 um (Breitenbach & Kränzlin 1981) / op til 135 um (Dennis 1968).
Ain Raitviir (Tartu), der har studeret indsamlingen, har ikke umidelbart haft et alternativt navn at foreslå. Da de fleste bestemmelser af *B. citrina* er foregået i felten, uden indsamling af kontrolmateriale, har det desværre ikke været muligt at holde *B. citrina* ss.str. adskilt fra de afvigende kollektioner.

*Cystopezizella conorum*
Arten er beskrevet fra fyrrekogler, og findes sjældent på andre substrater. Ain Raitviir der har bestemt materialets enlige kollektion, kender til to andre indsamlinger af arten fra råddent løvtræ; en fra Spanien og en fra Estland. I følge Jan Vesterholt (Vejle) er arten ikke ualmindelig på fyrrenåle i Danmark.

*Orbilia* cfr. *alnea.*
Denne og den følgende art er begge bestemt ved hjælp af Jan Vesterholts upublicerede skivesvampenøgler. Jeg har ikke fundet Vesterholts originalkilde til *O. alnea.* Svrcek (1954) synonymiserer arten med *O. xanthostigma* (Fr.) Fr., som Vesterholt udnøgler som en selvstændig art, adskillende sig bla. ved lidt bredere sporer. *O. acuum* Velen. er et andet muligt navn for arten. Denne art er dog beskrevet fra fyrrenåle, men er med nogen tøven angivet fra dødt ved hos Kirk & Spooner (1984). Slægten trænger kraftigt til en revision.

*Orbilia epipora.* Bestemmelsen af denne art er rimelig sikker. Arten er kendetegnet ved at asci er delvis sammenhængende (danner et epithecium) og ved at sporerne er forholdsvis små og cylindriske (Svrcek 1954, Hansen & Knudsen 1999). *O. oreadum* Velen. som Vesterholt udnøgler selvstændigt, synes at stå meget nær. Arten adskiller sig navnligt fra *O. epipora* ved at sporene er svagt krumme. *O. epipora* er ikke tidligere angivet fra Danmark.

*Ombrophila sp.*
Kendt fra én indsamling i materialet, men senere samlet på bøgestammer i Stenderup Midtskov (Østjylland) samt i Lellinge Skovhusvænge (Sydsjælland). Desuden samlet af Thomas Læssøe (København) på en aske-stamme i Suserup Skov. Jeg har sendt materiale til Ain Raitviir, som har meddelt at han kender arten fra adskillige norske lokaliteter, men at han ikke har kunnet finde et navn for den. Formodentlig vil arten blive nybeskrevet af Ain Raitviir og Seppo Huhtinen indenfor en overskuelig fremtid.

*Peziza micropus*
Navnet er brugt forholdsvis ukritisk om en stor gulbrun, +/- stilket bægersvamp, der forekommer almindelig på bøgeved ikke bare i Suserup Skov, men også på andre lokaliteter med indslag af dødt ved. Arten tilhører en dårlig udredt gruppe indenfor slægten. Gruppen er pt. under udredning i forbindelse med et PhD projekt ved Karen Hansen, Københavns Universitet, og det er endnu uvist om *P. micropus* er det rette navn for arten.

Barksvampe

*Athelia epiphylla* s.l.
En af de mest almindelige barksvampe i Suserup Skov. Ifølge Eriksson & Ryvarden (1973) udgør *Athelia epiphylla* nærmere et artskompleks end en enkel art, og den er da også hos Jülich (1984) splittet op i adskillige arter. Jeg har her ukritisk fulgt det brede arts-koncept hos Eriksson & Ryvarden (1973). Det er sandsynligt at enkelte angivelser i materialet dækker over andre arter i slægten, navnlig *A. neuhofii* (Bres.)Donk., der makroskopisk minder meget om *A. epiphylla.* Jeg har dog undersøgt talrige indsamlinger af *Athelia* fra Suserup Skov, uden at støde på andre arter end *A. epiphylla* s.l.

*Botryobasidium conspersum*

Det kønnede stadie af denne art kan ikke tilfredstillende adskilles fra den nærtstående *B. aureum* Parm. Begge arter danner gullige til brunlige pudeformede anamorfer tilhørende formslægten *Alysidium* Kunz., men med individuelle forskelle der tillader en uproblematisk artsadskillelse (Eriksson & Ryvarden 1973, Vesterholt i Hansen & Knudsen 1997). Kun *B. conspersum* er med sikkerhed kendt fra Suserup Skov, men jeg finder det sandsynligt at også *B. aureum* forekommer, på trods af arten er kendt fra uhyre få nordiske indsamlinger (Eriksson & Ryvarden 1973). Jeg er dog først blevet opmærksom på at det forholder sig således, flere år efter at indsamlingsarbejdet blev afsluttet, og har således ikke taget højde for problemet, hvilket jeg beklager.

*Hyphoderma* aff. *roseocremeum*

To indsamliger henført under denne betegnelse afviger fra typisk materiale af arten ved at hyferne i context er amyloide og ved at basidierne er extremt lange (60-80 um, mod normalt 25-30(-35) um (Eriksson & Ryvarden 1975)). Desuden forekommer der spredte, svagt grenede hyphidier og sporerne er noget bredere end normalt (4-5 um mod normalt 3-4 um (Eriksson & Ryvarden 1975)). Umiddelbart bedømte jeg indsamlingerne til at repræsentere en art indenfor slægten *Corticium*, der bl.a. er karakteriseret ved meget lange basidier og forekomsten af dendrohyphidier. Jeg sendte derefter en indsamling af arten til Nils Hallenberg (Göteborg), der bestemte den til *H. roseocremeum*. Dog havde han selv sin tvivl om bestemmelsen og havde selv været omkring *Corticium* s.l. (Der hos Hansen & Knudsen 1997 henføres til en helt anden orden end *Hyphoderma*). Det er nu planen at få arten i kultur, for at fastslå artens rette idenditet. Ifølge Nils Hallenberg (pers. komm.) er der sandsynligvis tale om et ubeskrevet taxon.

*Hyphodontia sambucina* s.l.

Sporerne og cystiderne angives hos denne art til at måle henholdsvis 4.5-6(-7) x (3-) 3.5-4 (-4.5) um og 20-50 x 3.5-5 um hos Eriksson & Ryvarden (1976), mens Langer (1994) giver målene 4.5-7 x 3.5-4.5 um (sporer) 19-33 x 3.5-5 µm (cystider). Til sammenligning målte jeg sporerne på materialets enlige indsamling til 6-8 x 4-5µm, cystiderne til 40-60 x 4-7 µm; dvs. klart I overkanten. Nils Hallenberg (pers. komm), som har set indsamlingen, og konfirmeret bestemmelsen, betegner *H. sambucina* som et artskompleks, der kun kan afklares ved hjælp af omfattende parrings-studier.

*Lindtneria* cfr. *flava*

Slægten *Lindtneria* indeholder ifølge den senest publicerede nøgle 11 arter (Bernicchia & Ryvarden 1998). En gennemgang af litteraturen om slægten åbenbarer at hovedparten af disse er beskrevet udfra enkelt-indsamlinger, og der er ikke publiceret revisioner af slægten baseret på en gennemgang af et større antal indsamlinger.

Hymenoforets udformning er en karakter der især på det seneste er blevet tillagt afgørende betydning ved adskillelsen af arter indenfor slægten (Hjortstam 1987, Larsen & Bernicchia 1990, Hansen & Knudesn 1997, Bernicchia & Ryvarden 1998) på trods af at det aldrig er undersøgt hvorvidt dette er holdbart. Alt i alt finder jeg at det er uhyre vanskeligt at gennemskue, hvor mange af de beskrevne arter, der reelt repræsenterer forskellige taxa.

Da jeg så fandt en *Lindtneria* som ikke passede på nogle af de anerkendte arter indenfor slægten, slog jeg efter nogen overvejelse koldt vand i blodet, og valgte ikke at nybeskrive endnu en tvivlsom art. Min indsamling afviger fra samtlige anerkendte arter i slægten ved de ganske små ellipsoidiske sporer (6-7 x 4-4.5 µm) og fra størsteparten af dem ved det glatte hymenie. *Lindtneria flava* og *L.*

*leucobryophila* (P. Henn.) Jülich er tilsyneladende de arter der kommer tættest på min indsamling. Begge arter, især sidstnævnte, er dog beskrevet med betydeligt større sporer. *L. flava* afviger desuden ved at være beskrevet med et poroidt hymenium. Da jeg finder det fornuftigt at ligge større vægt på mikroskopiske forskelle end på makroskopiske, har jeg valgt at anføre min kollektion som *L.* cfr. *flava*. Erast Parmasto (pers. comm.) mener udfra en beskrivelse, at min indsamling kan repræsentere "hans" art. I øvrigt anser jeg det for sandsynligt at *L. flava* og *L. leucobryophila* baserer sig på en og samme art, hvilket i fald min antagelse holder stik, vil give prioritet til navnet *L. leocubryophila.*

*Phlebia livida*

Eriksson et al. (1981) såvel som Vesterholt i Hansen & Knudsen (1997) angiver sporerne hos denne art til at måle 5-6 x 2-2.5 um, mens Christiansen (1959) angiver sporemålene 4-5 x 2 um. De indsamlinger jeg har tjekket har generelt haft sporer der målte ca. 4.5 x 2 um; dvs. De har passet perfekt med angivelserne hos Christiansen (1960) men mindre godt med de andre nævnte kilder.

*Sistotrema biggsiae*

Ikke tidligere angivet fra Danmark, og ikke udnøglet hos Hansen & Knudsen (1997). Tilhører arts-gruppen omkring *S. brinkmanii.* Beskrevet udfra nordamerikansk materiale af Hallenberg (1984) på baggrund af parringsforsøg, understøttet af morfologiske karakterer. Materialets enlige indsamling er bestemt af Nils Hallenberg.

*Sistotrema brinkmannii*

Arts-gruppen omkring *S. brinkmanii*, blev revideret af Hallenberg (1984) på baggrund af omfattende parrings-forsøg og morfologiske studier. Arbejdet resulterede i adskillige nybeskrivelser. Kærne-arten fremstår dog stadig efter denne revision som et artskompleks, snarere end som en veladskilt art (Hallenberg pers. komm.). I hvert fald én af materialets indsamlinger adskilte sig fra typisk *S. brinkmanii*, ved et helt glat hymenie.

*Tulasnella tomaculum*

Arten er ikke angivet som kendt fra Danmark hos Hansen & Knudsen (1997). Jan Vesterholt (pers. komm.) kender dog arten fra Høstemark Skov i Nordjylland. I Suserup Skov er arten tilsyneladende ganske udbredt, og er også samlet på ved af ask. Arten blev beskrevet af Roberts (1993), der angiver arten som almindelig.

Poresvampe

*Ceriporia excelsa*

Både hos Ryvarden & Gilbertson (1993) og Vesterholt i Hansen & Knudsen (1997) adskilles *C. excelsa* fra *C. viridians* på større porer og mere rødlige til pink farver. Hos sidstnævnte kilde anvendes dog også frugtlemets udformning som nøglekarakter; ofte vidt udbredt hos *C. viridians* - småt og afgrænset hos *C. excelsa.* De fleste af mine indsamlinger har placeret sig lidt "mellem to stole" i forhold til disse kriterier, dog er jeg ikke i tvivl om at de alle har repræsenteret en og samme art. Mine specimens har generelt været ret små, med porer af intermediær størrelse og med pink til rødviolette farver, dog evt. blandet med creme til grønlige nuancer (sidstnævnte angives som typiske for *C. viridians*). Flest karakterer har således peget i retning af *C. excelsa*, hvorfor jeg konsekvent har valgt at bruge dette navn. Jeg kan dog kun tilslutte mig Ryvarden & Gilbertson (1993), der i noterne til *C. viridians* skriver at krydsningsforsøg er nødvendige for at afklare afgrænsningen de to arter imellem.

## Bladhatte

### *Armillaria gallica*

*A. gallica* tilhører en yderst vanskelig gruppe indenfor slægten. Gruppens arter er kendetegnede bla. ved en +/- kølleformet stok. Parringsforsøg er reelt nødvendige for en sikker artsbestemmelse indenfor gruppen, men materiale fra Suserup Skov passer generelt bedst på *A. gallica*, ifølge bestemmelseskriterierne angivet hos Marxmüller & Printz (1985; som *A. bulbosa*) og Watling i Hansen & Knudsen (1992).
Marxmüller & Printz (1985) fandt at *A. gallica* er meget almindelig i Danmark – og klart mere almindelig end de to mest oplagte forvekslingsmuligheder *A. borealis* (art A) og *A. cepistipes* (art B). Det stemmer godt overens med en senere dansk undersøgelse (Koch 1991), hvor der af de tre nævnte arter kun blev konstateret *A. gallica,* selv om flere afvigende kollektioner blev undersøgt. *A. borealis* og *A. cepistipes* er ifølge Koch (1991) slet ikke belagt med danske materiale. På den baggrund har jeg valgt konsekvent at bruge navnet *A.gallica* for honningsvampe af den køllestokkede type, uden forsøg på at udskille afvigende former i andre taxa vha. parringsforsøg mv.

### *Clitocybe diatreta*

Denne art, der forekommer ganske almindeligt på nedbrudte bøgestammer i Suserup Skov, har voldt mig en del kvaler. Indenfor slægten tillægges økologi en del betydning i afgrænsningen af arter (Gulden i Hansen & Knudsen 1992, Bas et al. 1995), og flere arter angives som decideret vedboende. Det gælder bl.a. *Clitocybe lignatilis* (Pers.: Fr) Karst., *C. truncicola* (Peck) Sacc. og *C. subbulbipes* Murril. Fra starten gjorde jeg meget for at henføre mine fund til et af disse taxa, men uden succes. De mikroskopiske karakterer var helt forkerte.
Da jeg derefter i stedet prøvede at bestemme mit materiale som en førne-nedbryder gik det meget bedre. Ved hjælp af nøglen hos Kuyper i Bas et al. (1995) nåede jeg utvetydigt frem til navnet *C. diatreta*, som passer på alle karakterer, undtagen økologi. Jeg ser dog ikke stor grund til at tvivle på rigtigheden af bestemmelsen på grund af denne afvigelse, da også andre typiske førne-nedbrydere indenfor slægten af og til danner frugtlegemer på bøgestammer, i hvert fald i Suserup Skov. Det gælder bl.a. for *C. phyllophila* og *C. nebularis.*

### *Galerina unicolor* s.l.

Petersen & Vesterholt (1990) udnøgler hele tre vedboende arter af *Galerina* med ring (*Galerina marginata* (Batsch) Kühner, *G. unicolor* og *G. autumnalis* (Peck) Smith & Singer), som navnlig adskilles på hathudsmorfologi. De ca. 10 indsamlinger, jeg har tjekket fra Suserup Skov har alle passet bedst på *G. unicolor*. Jeg har dog siden konfereret sagen med Gro Gulden (Oslo), som overfor mig har sagt, at hun tvivler på at det er rimeligt at anderkende mere end en art i gruppen, hvilket i øvrigt delvist fremgår af hendes nøgle til slægten hos Hansen & Knudsen (1992). Anses de tre navne som synonymer, har *G. unicolor* tilsyneladende prioritet, da det som ifølge Gulden I Hansen & Knudsen (1992) som det eneste er sanktioneret af Fries. Jeg har valgt at bruge navnet ukritisk for alle "store" træboende hjelmhatte med ring, uden studier af hathudsmorfologi mv. hos alle indsamlinger.

*Lepiota boertmanii*

Kendt fra én indsamling i materialet, som venligst blev bestemt af Henning Knudsen (København). Hermed kendt fra to danske lokaliteter (Se Rald et al. 1992). Indsamlingen blev gjort i træsmuld på fugtig muld, tæt klinet op ad den tykke del af en nedbrudt stamme.

*Lepiota ochraceofulva*

Denne i Danmark meget sjældne art er kendt fra to indsamlinger i materialet, men er alt i alt fundet ganske udbredt i Suserup Skov. Se i øvrigt Rald & Heilmann-Clausen (1993).

*Omphalina epichysium*

Tilsyneladende ikke kendt fra andre danske lokaliteter end Suserup, men her ret udbredt. Hos Hansen & Knudsen (1992) er arten ikke angivet som kendt fra Danmark og det anses som tvivlsomt om den er arts-forskellig fra *O. oniscus*. Jeg finder dog at de to taxa med hensyn til økologi (*O. oniscus* forekommer i tørvemoser) er så forskellige at det er rimeligt at give dem begge artsrang, så længe intet andet er bevist. Mig bekendt findes der ikke et evt. analogt eksempel på én art med præference for begge de nævnte substrater. *O. epichysium* er meget almindelig i tempererede asiatiske naturskove (Thomas Læssøe pers. komm.).

*Pluteus chrysorrheus*

Tilhører den uhyre vanskelige gruppe af skærmhatte omkring *P. phlebophorus*. Jeg har brugt navnet for indsamlinger med varme, ret lyse gulbrune hatfarver og en +/- cocnagfarvet stok (+/- som tavle 72D hos Lange (1937)). Jeg er dog ikke overbevidst om at denne form virkelig er artsforskellig fra *L. phlebophorus*.

*Pluteus ephebeus*

Navnet dækker nærmere over et artskompleks end en art. Her er fulgt det meget brede artskonsept hos Vellinga i Bas et al. (1990) og Døssing i Hansen & Knudsen (1992). Følges Orton (1986), som har en meget snæver artsopdeling, passer materialets indsamlinger bedst på *P. murinus* Bres.

*Pluteus godeyi*

Kendt fra én indsamling i materialet. Betragtes af Vellinga i Bas et al. (1990) som et synonym af *P. cinereofuscus* Lange, men adskilles hos Døssing i Hansen & Knudsen (1992) på at være mindre og hygrofan, dog med en note om at der sandsynligvis blot er tale om en lille form af*P. cinereofuscus*. At jeg har valgt at bruge navnet *P. godeyi* skal ikke tages som udtryk for en kritisk stillingstagen til artsafgrænsningen, blot at min indsamling passede bedst på dette navn i Hansen & Knudsen (1992). Interresant nok har jeg aldrig set typisk *P. cinereofuscus* i Suserup Skov.

*Pluteus nanus*

Ifølge Vellinga i Bas et al. (1990) er denne art let at adskille fra arterne omkring *P. phlebophorus* på grund af hathudens afvigende struktur. Jeg har haft ret svært ved at erkende denne forskel, og har baseret mine bestemmelser på makroskopiske karakterer, navnlig hatfarve og statur. Ifølge mine erfaringer er *P. nanus* generelt mindre, mere kortstokket og betydeligt mørkere på hatten end *P. phlebophorus*-gruppens arter. Derimod finder jeg ikke hattens struktur (radiærrynket eller glat) som af nogle (fx. Petersen & Vesterholt 1990, Døssing i Hansen & Knudsen 1992) angives som skillekarakter mellem *P. nanus* og *P. phlebophorus* pålidelig.

Else Vellinga har ved en tidligere lejlighed bestemt materiale fra Suserup Skov til *P. nanus*.

*Pluteus phlebophorus*

"Hovedarten" i *P. phlebophorus*-gruppen og som sådan mest defineret udfra negative karakterer. Mit koncept af arten stemmer rimeligt godt overens med det der anvendes af Vellinga i Bas et al. (1990). I modsætning til hende lægger jeg dog ikke vægt på, hvorvidt hatten er rynket eller ej, da jeg finder denne karakter ustabil. Se også *P. chrysophaeus.*

*Pluteus semibulbosus*

Af Vellinga i Bas et al. (1990) synonymiseret med *P. plautus.* Jeg finder dog at denne disposition er udtryk for en overforsimpling, selv om jeg dog må medgive at det ofte er meget vanskeligt at skelne mellem de mange arter der accepteres i gruppen omkring *P. plautus*, ikke mindst hos Orton (1986). Alle specimens jeg har set i Suserup Skov har dog været af samme type (ofte forholdsvis kortstokkede og uregelmæssige med lyse farver; hat creme til lyst grålig brun eller honninggul. - Meget lig Lange 1937: tab 71E og Phillips 1981: 119). *P. plautus* s.str. beskrives traditionelt som en meget mørk art (c.f. Orton 1986, Døssing i Hansen & Knudsen 1992. Hos Hansen & Knudsen (1992) nøgles uden problemer ud i *P. semibulbosus.*

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Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

|  | frekvens | B3NE-B1 | B3SW-B11 | B3SW-B13 | B4SE-B8 | C2NE-B1 | C2NE-B8 | C3NE-B3 | C3NW-B7 | C3NW-B8 | C3SE-B12 | C3SE-B3 | C3SW-B12 | C4NW-B1 | C4NW-B3 | C4NW-B9 | C4SE-B2 | D2NE-B12 | D2NE-B16 | D2NE-B3 | D2NE-B8 | D2NW-B20 | D2SE-B4 | D3NE-B1 | D3NE-B2 | D3NE-B5 | D3NE-B6 | D3NW-B1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ara vari | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arc affi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arm mell | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ath glau | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| aur auri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| bas caes | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bje fumo | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bot botr | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| col fusi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| col pero | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| com alta | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| con sord | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| cop lago | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop xant | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| cys adul | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys cono | 1 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys heti | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dac stil | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| das nive | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dia flav | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| dia stig | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ent dich | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| exi effu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| fla muri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| gal nana | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| gan pfei | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| glo luri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hetero | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp aspe | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp eich | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp medi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp samb | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ino peti | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac lacc | 1 |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac papy | 1 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep boer | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep jaco | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep nuda | 1 |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lin flav | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lop turg | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lyc echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
| mar coha | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mar wynn | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mel hori | 1 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| micr bras | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mol lign | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| myc uda | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| nec epis | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ombrop | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| pen nuda | 1 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen quer | 1 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha sord | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha tube | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| pha velu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| phl alla | 1 |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phy cine | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | B3NE-B | B3SW-B | B3SW-B | B4SE-B | C2NE-B | C2NE-B | C3NE-B | C3NW- | C3NW- | C3SE-B | C3SE-B | C3SW-B | C4NW- | C4NW- | C4NW- | C4SE-B | D2NE-B | D2NE-B | D2NE-B | D2NE-B | D2NW- | D2SE-B | D3NE-B | D3NE-B | D3NE-B | D3NE-B | D3NW- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ple dryi | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| plu gode | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| plu podo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pol badi | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| protocre | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa cand | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| psa cono | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa frus | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| psa fusc | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa lacr | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa popu | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| psa pygm | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa spad | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa teph | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ram cent | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| res tric | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| rip tric | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis bigg | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis oblo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ste hype | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tap livi | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tom ferr | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| tom radi | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| tre micr | 1 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| tre prae | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| tri cont | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| tri flor | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tri lasc | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tri pers | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tub ferr | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tul eich | 1 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| tyr chio | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| tyr wynn | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| vol hypo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xen pulv | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| ant hoeh | 2 | | | | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | |
| ant semi | 2 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| arc inca | 2 | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | |
| bot laev | 2 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| cam tubu | 2 | | | | | | | | | | | | | 1 | | | | | | | | 1 | | | | | | |
| col tube | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| com nigr | 2 | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | |
| con arid | 2 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| corticiu | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| cri gall | 2 | | | | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | |
| cri helv | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| eut quat | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyp argu | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| hyp pall | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyp polo | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| lep ochr | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| mel haem | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| mer anom | 2 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| met vesp | 2 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | |
| myc erub | 2 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| myc poly | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| nec pezi | 2 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 |

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Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | B3NE-B | B3SW-B | B3SW-B | B4SE-B | C2NE-B | C2NE-B | C3NE-B | C3NW- | C3NW- | C3SE-B | C3SE-B | C3SW-B | C4NW- | C4NW- | C4NW- | C4SE-B | D2NE-B | D2NE-B | D2NE-B | D2NE-B | D2NW- | D2SE-B | D3NE-B | D3NE-B | D3NE-B | D3NE-B | D3NW- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| orb alne | 2 | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | |
| orb epis | 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | 1 |
| phl rufa | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pho squa | 2 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| plu ephe | 2 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| sis nive | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis octo | 2 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ske nive | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sym amau | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tra gibb | 2 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| tub furf | 2 | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | |
| ara aura | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| arc cine | 3 | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | |
| bys cori | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| cli phyl | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| con brun | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| con tene | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| cop dome | 3 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| exi nucl | 3 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| glo anal | 3 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| gym juno | 3 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| hem cucc | 3 | | 1 | | | | 1 | | | | | | | | | | | | | | | | 1 | | | | | |
| hya fuck | 3 | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| hyp coha | 3 | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | |
| hyp punc | 3 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| hyp suba | 3 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| lam arcy | 3 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| mut cani | 3 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| myc amic | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| myc hiem | 3 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| pen cine | 3 | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| pen lyci | 3 | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| plu thom | 3 | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| pol brum | 3 | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | |
| pol cili | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pol squa | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| pol tube | 3 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| sis coro | 3 | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | 1 |
| str cyan | 3 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| tul toma | 3 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| uth fusi | 3 | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | 1 | |
| arc denu | 4 | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 | | |
| exi glan | 4 | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | |
| her cora | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyp aura | 4 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | |
| hyp gela | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| hyp rose | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| lac subd | 4 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| lac virg | 4 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| lep fulv | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| myc galo | 4 | | | | | 1 | | | 1 | | | | | | | | | | | | | | 1 | | 1 | | | |
| myc rose | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| myc spei | 4 | | | | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | |
| nec cocc | 4 | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | |
| nem atro | 4 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| plu inqu | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| plu semi | 4 | | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | B3NE-B | B3SW-B | B3SW-B | B4SE-B | C2NE-B | C2NE-B | C3NE-B | C3NW- | C3NW- | C3SE-B | C3SE-B | C3SW-B | C4NW- | C4NW- | C4NW- | C4SE-B | D2NE-B | D2NE-B | D2NE-B | D2NE-B | D2NW- | D2SE-B | D3NE-B | D3NE-B | D3NE-B | D3NE-B | D3NW- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| psa rost | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sco rimo | 4 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 |
| sty gril | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sty subh | 4 | | | | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | |
| tre hyme | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | |
| tul viol | 4 | | | | | | | | | | | 1 | | | | | | 1 | 1 | | | | | | | | | |
| bot subc | 5 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| cri argi | 5 | | | | | | | | 1 | | | | | | | | | | | 1 | | | | | | | | |
| dia disc | 5 | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| fus ferr | 5 | | 1 | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | |
| hen cand | 5 | | | | | | 1 | | | | | | | | | | | | | | | 1 | 1 | | | | | |
| hyd suba | 5 | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | | |
| lac brev | 5 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| myc peli | 5 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| pha impu | 5 | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | |
| plu nanu | 5 | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | |
| plu umbr | 5 | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| sch comm | 5 | | | | | | | | | | | 1 | | | 1 | | | | | | | | | 1 | | | | |
| sis sern | 5 | 1 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| tom subl | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| bot prui | 6 | | | | | | | | | | 1 | | 1 | | | 1 | | | | | | | | | | | | |
| cal corn | 6 | | | | | | | | | | | 1 | | | | | 1 | | 1 | | 1 | | | | 1 | | | |
| dat moll | 6 | | | | | | | | | | | | | | | | 1 | | 1 | | 1 | | | 1 | | | | |
| fom pini | 6 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| hyp argi | 6 | | | | | | | | | | | 1 | | | | | | | | | | 1 | | | | | | |
| hyp para | 6 | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1 | 1 | | |
| hyp prae | 6 | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | | |
| ino nodu | 6 | | | | | | | | | 1 | | 1 | | | | | | | | | 1 | | | 1 | | | | |
| lep aspe | 6 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| myc dios | 6 | | | | | | | 1 | | | | | 1 | | | | | | | | | 1 | | | | | | |
| nem serp | 6 | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | |
| neo pura | 6 | | | | | | | | | 1 | | | | | | | | | 1 | | | | | 1 | | | | |
| phl trem | 6 | | | | | | | | | | | | | | | 1 | | | | | | 1 | | 1 | | | | |
| pho auri | 6 | 1 | | | | | | | | 1 | | | | 1 | | | | | | | | | | | 1 | | | |
| ste fusc | 6 | | | | | | | | | | | | | 1 | | | | | | | | 1 | | | | | | |
| ste typh | 6 | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | 1 | | 1 | |
| bol reti | 7 | | 1 | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | |
| cyl laev | 7 | | | | | | | | | 1 | | | | | 1 | | | | | | | | | 1 | | | | |
| lep cris | 7 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | 1 |
| myc tint | 7 | 1 | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | |
| ste axif | 7 | | | | | | | | | | | | 1 | | | 1 | | | | | | 1 | | | | | | |
| ste rugo | 7 | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | |
| tra hirs | 7 | | | | | | | | | | | 1 | | | | | | | 1 | | 1 | | | 1 | | | | |
| tre fari | 7 | | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | 1 | | |
| tre mese | 7 | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | |
| tre stev | 7 | | | | | | 1 | | 1 | | | | 1 | | | | | | | | | | 1 | | | | | |
| asc cyli | 8 | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | |
| cer exce | 8 | | | 1 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| col buty | 8 | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | | | |
| omp epic | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| pan sero | 8 | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | 1 | | |
| pen inca | 8 | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | |
| plu sali | 8 | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| psa pilu | 8 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| bre oliv | 9 | | | | 1 | | | | | | | 1 | | 1 | | | 1 | 1 | | 1 | | | | | | | | |
| cam poly | 9 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| cer gilv | 9 | | | | 1 | 1 | | | | | | | | | | | | | 1 | | | | | | 1 | | | |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | B3NE-B | B3SW-B | B3SW-B | B4SE-B | C2NE-B | C2NE-B | C3NE-B | C3NW- | C3NW- | C3SE-B | C3SE-B | C3SW-B | C4NW- | C4NW- | C4NW- | C4SE-B | D2NE-B | D2NE-B | D2NE-B | D2NE-B | D2NW- | D2SE-B | D3NE-B | D3NE-B | D3NE-B | D3NE-B | D3NW- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cli nebu | 9 | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | |
| hyp seti | 9 | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 1 | 1 | 1 | | |
| mar torq | 9 | | | | 1 | 1 | | | | | 1 | | | | | | | | | | | | 1 | | | | | 1 |
| nem ches | 9 | | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | 1 | 1 | |
| pse cyat | 9 | | | | | | | | 1 | | | | 1 | | | | 1 | | | | | | | 1 | | 1 | 1 | |
| tre coha | 9 | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | |
| bis citr | 10 | | | | | | | | | | | | 1 | 1 | | | | | 1 | | 1 | | | 1 | 1 | | | |
| cli hobs | 10 | | | | | | | 1 | | | 1 | | | | 1 | 1 | | | | | | | 1 | | | 1 | | |
| phl livi | 10 | | | | | 1 | | | | | | 1 | | 1 | | | | | | | | 1 | | | | | | |
| ple oste | 10 | 1 | | | | | | | | 1 | | | 1 | | | 1 | 1 | | 1 | | | | | 1 | | | | |
| tri scab | 10 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| xer radi | 10 | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | 1 | | |
| myc rena | 11 | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | | | |
| phl fagi | 11 | | | | | | | | | 1 | | | 1 | 1 | | | 1 | | 1 | | | | | 1 | | | | |
| plu chry | 11 | 1 | | | | 1 | | | 1 | | | | 1 | | | | | | | | | 1 | | | | 1 | 1 | |
| mac rhac | 12 | | | | | | | | | | | | 1 | 1 | | | | 1 | | | | | | | 1 | | 1 | |
| pol prui | 12 | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| sub long | 12 | | | | | 1 | | | | 1 | | | 1 | 1 | | | | | | | | | 1 | | 1 | | | |
| lyc perl | 13 | | | | | | | | 1 | | | | 1 | 1 | | | | | | | | | | | | 1 | | |
| phl radi | 13 | | | | | | | | | 1 | | | | | | | | | 1 | | | | | 1 | | | | |
| pol. vari | 13 | 1 | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | |
| isc resi | 14 | 1 | | 1 | 1 | | | | | | | | 1 | 1 | | | 1 | | 1 | | | 1 | | | | 1 | 1 | |
| lep flacc | 14 | | | | 1 | | | | 1 | | 1 | | 1 | | | 1 | | 1 | | | | | | | | 1 | | |
| oud muci | 14 | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | | | | 1 | | |
| phy vitr | 14 | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | 1 | | |
| hyp frag | 15 | | | | | | | | | 1 | | | | | 1 | | | | 1 | | 1 | | | 1 | 1 | | | |
| hyp rubi | 15 | | | | | 1 | | | 1 | | | 1 | | 1 | | | 1 | | 1 | | 1 | 1 | | | | 1 | | |
| kue muta | 15 | | | | | | | | | | | | | 1 | | | 1 | 1 | | | | 1 | | | | | | 1 |
| ram stri | 15 | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | 1 | 1 | |
| hyp radu | 16 | | | | 1 | | | 1 | 1 | 1 | | 1 | | 1 | | | 1 | | | | | | | | | | | |
| phy sang | 16 | | | 1 | 1 | 1 | | | 1 | | | | | 1 | | | | | | | | 1 | 1 | | | 1 | | |
| ste ochr | 16 | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | 1 | | 1 | |
| bje adus | 17 | | | | | | | | | | | | | | | | 1 | | 1 | | 1 | | | 1 | 1 | 1 | | |
| con pute | 17 | 1 | | | | | | | 1 | | | 1 | | 1 | | | 1 | | | | 1 | | | | | | | |
| hyp pube | 17 | | | | | | | | | | | | 1 | | | | | 1 | | | 1 | | 1 | | | | | |
| myc pura | 17 | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | | 1 | |
| xyl poly | 17 | | | | 1 | | | | | | | | 1 | 1 | | | 1 | | | | | | | | 1 | 1 | | |
| ent lyco | 18 | 1 | | | | | | | 1 | | | | | 1 | | | | | | | | | 1 | | | 1 | | |
| mer giga | 18 | | | 1 | | | | | | | | 1 | | 1 | | 1 | | | 1 | | 1 | | | 1 | 1 | | 1 | |
| ful sept | 19 | 1 | 1 | 1 | | | | | | | | | 1 | 1 | | | | 1 | 1 | | | | | | | | | |
| glo lact | 19 | 1 | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | | | | 1 | | | | | |
| orb deli | 19 | | | | | 1 | 1 | | 1 | | | | | | | | | 1 | | | | 1 | | | | | | |
| psa obtu | 19 | | | | 1 | 1 | | | 1 | | | | | 1 | | | | 1 | | | | | | | | | | |
| rad conf | 20 | 1 | | | | | | 1 | 1 | | | 1 | | | | | 1 | 1 | | | 1 | | | | | 1 | | |
| sis brin | 20 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | | | 1 | 1 | | 1 | | | | | 1 | | 1 | | | | 1 |
| tra vers | 20 | | | | | | | | | | | 1 | | 1 | | | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | | |
| cli diat | 21 | | | | 1 | | | | | | 1 | | | | | 1 | | | 1 | | | | | | | 1 | 1 | |
| ste hirs | 21 | | | | | | | | | | | 1 | | | 1 | 1 | 1 | | 1 | | 1 | | | 1 | 1 | 1 | | |
| gan lips | 22 | 1 | | | 1 | | | | | | | | | 1 | | 1 | 1 | | | | 1 | | | | | 1 | 1 | |
| lac impu | 22 | | | | 1 | 1 | | | | | 1 | | 1 | | | 1 | 1 | | | | | | | 1 | | 1 | 1 | |
| meg plat | 22 | | | | | | | 1 | 1 | | | | 1 | | | | | | | | | | 1 | | 1 | 1 | | |
| plu phle | 22 | | | | | | 1 | | | | | | 1 | 1 | | 1 | | | | | | 1 | | | 1 | | | 1 |
| cer fruc | 24 | | 1 | | | 1 | | 1 | 1 | | 1 | | 1 | | | 1 | | | | | | 1 | | | | | 1 | |
| gal unic | 24 | | | | | | | | | | 1 | | | 1 | | | | 1 | | | | 1 | | | | | 1 | 1 |
| pez micr | 26 | 1 | | | 1 | 1 | | | | 1 | | | 1 | | | | | | | | 1 | 1 | | | | 1 | 1 | 1 |
| mar rotu | 27 | | | | 1 | 1 | | 1 | 1 | | 1 | | 1 | 1 | | | | | | | 1 | 1 | | | 1 | | | 1 |
| myc gale | 28 | | 1 | 1 | | | | 1 | 1 | | 1 | | | | | 1 | 1 | 1 | | | | | | | 1 | | | |

63

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | B3NE-B | B3SW-B | B3SW-B | B4SE-B | C2NE-B | C2NE-B | C3NE-B | C3NW- | C3NW- | C3SE-B | C3SE-B | C3SW-B | C4NW- | C4NW- | C4NW- | C4SE-B | D2NE-B | D2NE-B | D2NE-B | D2NE-B | D2NW- | D2SE-B | D3NE-B | D3NE-B | D3NE-B | D3NE-B | D3NW- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| bot cons | 29 | | 1 | 1 | | 1 | | 1 | 1 | | 1 | | | 1 | | | 1 | | | | | 1 | 1 | | | | | |
| scu scut | 29 | | 1 | | 1 | 1 | | | 1 | | | | 1 | 1 | | 1 | | | | 1 | 1 | | | 1 | 1 | 1 | 1 | |
| tri vari | 29 | 1 | 1 | | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 | 1 | | | | | | 1 | | | 1 | | 1 | 1 |
| hyp fasc | 35 | 1 | | 1 | 1 | | 1 | | 1 | | | 1 | 1 | | | | 1 | 1 | | | 1 | 1 | | | | 1 | 1 | 1 |
| lyc epid | 35 | 1 | 1 | | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | | 1 | | 1 | | | | 1 | |
| myc croc | 35 | | | | 1 | 1 | | 1 | | | | | 1 | | | 1 | 1 | 1 | 1 | | | 1 | | 1 | | 1 | 1 | |
| cop mica | 36 | | | | 1 | 1 | | | | | 1 | | 1 | 1 | | | 1 | 1 | | | | 1 | | 1 | 1 | | 1 | 1 |
| lyc pyri | 36 | 1 | | | 1 | | 1 | | 1 | | 1 | | 1 | 1 | | | 1 | | | | | 1 | | | | 1 | 1 | 1 |
| ath epip | 37 | 1 | | 1 | | | | | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | 1 | | 1 | 1 | 1 |
| plu cerv | 37 | 1 | | | 1 | | | 1 | 1 | | | | 1 | 1 | | 1 | | 1 | | | | 1 | 1 | | 1 | 1 | 1 | |
| cer reti | 38 | 1 | | | 1 | 1 | | 1 | 1 | | | | | | | 1 | 1 | 1 | | | | 1 | 1 | | | 1 | 1 | 1 |
| fom fome | 38 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | |
| mar alli | 40 | | | | 1 | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 |
| xyl hypo | 42 | 1 | | | 1 | 1 | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 |
| arm gall | 44 | 1 | 1 | | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | 1 |
| kre deus | 45 | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | 1 | | 1 | | 1 | | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| mol cine | 49 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 |
| myc haem | 50 | 1 | 1 | 1 | | | 1 | 1 | 1 | | | | | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 |
| eut spin | 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | |

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|  | frekvens | D3NW-B4 | D3NW-B5 | D3NW-B8 | D3SE-B12 | D3SW-B1 | D3SW-B3 | D3SW-B4 | D4NE-B1 | D4NW-B11 | D4SE-B13 | E2NE-B11 | E2NE-B12 | E3NE-B13 | E3NE-B16 | E3NW-B2 | E3NW-B5 | E3NW-B8 | E3SE-B10 | E3SE-B4 | E3SW-B2 | E3SW-B7 | E4SW-B1 | F2NE-B7 | F2NE-B9 | F2NW-B1 | F3NW-B3 | F3NW-B7 | F3NW-B8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ara vari | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arc affi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| arm mell | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |
| ath glau | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |
| aur auri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bas caes | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bje fumo | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |
| bot botr | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| col fusi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| col pero | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| com alta | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| con sord | 1 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop lago | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| cop xant | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys adul | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| cys cono | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys heti | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dac stil | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| das nive | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dia flav | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dia stig | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |
| ent dich | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| exi effu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| fla muri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| gal nana | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| gan pfei | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| glo luri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hetero | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp aspe | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp eich | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp medi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp samb | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ino peti | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| lac lacc | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac papy | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep boer | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep jaco | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep nuda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lin flav | 1 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lop turg | 1 |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lyc echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mar coha | 1 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mar wynn | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |
| mel hori | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| micr bras | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mol lign | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc uda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| nec epis | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ombrop | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen nuda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen quer | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha sord | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha tube | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha velu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phl alla | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phy cine | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | D3NW- | D3NW- | D3NW- | D3SE-B | D3SW-B | D3SW-B | D3SW-B | D4NE-B | D4NW- | D4SE-B | E2NE-B | E2NE-B | E3NE-B | E3NE-B | E3NW-B | E3NW-B | E3NW-B | E3SE-B | E3SE-B | E3SW-B | E3SW-B | E4SW-B | F2NE-B | F2NE-B | F2NW-B | F3NW-B | F3NW-B | F3NW-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ple dryi | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| plu gode | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| plu podo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| pol badi | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| protocre | 1 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| psa cand | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa cono | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| psa frus | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa fusc | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa lacr | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| psa popu | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa pygm | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa spad | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| psa teph | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| ram cent | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| res tric | 1 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| rip tric | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| sis bigg | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis oblo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ste hype | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| tap livi | 1 | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| tom ferr | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tom radi | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tre micr | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tre prae | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tri cont | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tri flor | 1 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| tri lasc | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| tri pers | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tub ferr | 1 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| tul eich | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tyr chio | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tyr wynn | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| vol hypo | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| xen pulv | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ant hoeh | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ant semi | 2 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| arc inca | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| bot laev | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| cam tubu | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| col tube | 2 | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| com nigr | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| con arid | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| corticiu | 2 | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| cri gall | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| cri helv | 2 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| eut quat | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyp argu | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyp pall | 2 | | | | | | | | | | | 1 | | | | | | | | | | 1 | | | | | | | |
| hyp polo | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 |
| lep ochr | 2 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| mel haem | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | |
| mer anom | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| met vesp | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| myc erub | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| myc poly | 2 | | | | | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | |
| nec pezi | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

66

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | D3NW- | D3NW- | D3NW- | D3SE-B | D3SW-B | D3SW-B | D3SW-B | D4NE-B | D4NW- | D4SE-B | E2NE-B | E2NE-B | E3NE-B | E3NE-B | E3NW-B | E3NW-B | E3NW-B | E3SE-B | E3SE-B | E3SW-B | E3SW-B | E4SW-B | F2NE-B | F2NE-B | F2NW-B | F3NW-B | F3NW-B | F3NW-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| orb alne | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| orb epis | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| phl rufa | 2 | | 1 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| pho squa | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| plu ephe | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis nive | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis octo | 2 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| ske nive | 2 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| sym amau | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tra gibb | 2 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| tub furf | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ara aura | 3 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| arc cine | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| bys cori | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| cli phyl | 3 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 |
| con brun | 3 | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 1 | |
| con tene | 3 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| cop dome | 3 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| exi nucl | 3 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| glo anal | 3 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| gym juno | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hem cucc | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hya fuck | 3 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| hyp coha | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| hyp punc | 3 | | | 1 | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| hyp suba | 3 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| lam arcy | 3 | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | |
| mut cani | 3 | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| myc amic | 3 | 1 | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | | | | |
| myc hiem | 3 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| pen cine | 3 | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| pen lyci | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| plu thom | 3 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| pol brum | 3 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| pol cili | 3 | | | | | | | | | 1 | | | | | | | | 1 | | | | | | | | | | | |
| pol squa | 3 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| pol tube | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sis coro | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| str cyan | 3 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 |
| tul toma | 3 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| uth fusi | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| arc denu | 4 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 | | |
| exi glan | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| her cora | 4 | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | 1 | | |
| hyp aura | 4 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| hyp gela | 4 | | | | | | | | | 1 | | | | | | | | 1 | | | | | 1 | | | | | | |
| hyp rose | 4 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| lac subd | 4 | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | 1 | |
| lac virg | 4 | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| lep fulv | 4 | 1 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| myc galo | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| myc rose | 4 | | | 1 | | | 1 | | | 1 | | | | | | | | 1 | | | | | | | | | | | |
| myc spei | 4 | | | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | |
| nec cocc | 4 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| nem atro | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | |
| plu inqu | 4 | | | 1 | | | | | | | | 1 | | | | | | | | 1 | | | | | | | | 1 | |
| plu semi | 4 | | | 1 | | | | | | | | | | | | | | | | | | 1 | | | | | | | |

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| | frekvens | D3NW- | D3NW- | D3NW- | D3SE-B | D3SW-B | D3SW-B | D3SW-B | D4NE-B | D4NW- | D4SE-B | E2NE-B | E2NE-B | E3NE-B | E3NE-B | E3NW-B | E3NW-B | E3NW-B | E3SE-B | E3SE-B | E3SW-B | E3SW-B | E4SW-B | F2NE-B | F2NE-B | F2NW-B | F3NW-B | F3NW-B | F3NW-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| psa rost | 4 | | | | | | | | | 1 | | | | | | 1 | | 1 | | | | 1 | | | | | | | |
| sco rimo | 4 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| sty gril | 4 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| sty subh | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| tre hyme | 4 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| tul viol | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| bot subc | 5 | 1 | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| cri argi | 5 | | | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | 1 | |
| dia disc | 5 | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | |
| fus ferr | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hen cand | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hyd suba | 5 | | | | | | | | 1 | | | | | | | | | | | 1 | | | | | | | | 1 | |
| lac brev | 5 | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | 1 | | | | |
| myc peli | 5 | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | | |
| pha impu | 5 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| plu nanu | 5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| plu umbr | 5 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | | |
| sch comm | 5 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| sis sern | 5 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| tom subl | 5 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | |
| bot prui | 6 | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 1 | | |
| cal corn | 6 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| dat moll | 6 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| fom pini | 6 | | | | | | | | | | | | | | | 1 | | 1 | | 1 | | | | | | | 1 | | |
| hyp argi | 6 | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1 |
| hyp para | 6 | | 1 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| hyp prae | 6 | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| ino nodu | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| lep aspe | 6 | | | | | 1 | | | | | | | | | | | | | | 1 | | | | 1 | | | | | |
| myc dios | 6 | | | 1 | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | |
| nem serp | 6 | | | | | | | | | | 1 | 1 | | | | | | 1 | | | | | | | | | | | |
| neo pura | 6 | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| phl trem | 6 | | | | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | |
| pho auri | 6 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| ste fusc | 6 | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | |
| ste typh | 6 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| bol reti | 7 | | 1 | 1 | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | |
| cyl laev | 7 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| lep cris | 7 | | | 1 | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | | |
| myc tint | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| ste axif | 7 | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | 1 | | |
| ste rugo | 7 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| tra hirs | 7 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| tre fari | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| tre mese | 7 | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| tre stev | 7 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | | |
| asc cyli | 8 | | | | 1 | | | | 1 | | | | | | | 1 | | | | | 1 | | | | | | | | |
| cer exce | 8 | 1 | | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | |
| col buty | 8 | | | | | | | | | 1 | | | | | | | | 1 | | | | | 1 | | | | | 1 | |
| omp epic | 8 | | | | | | | | 1 | | | | | | | | | 1 | 1 | 1 | | | | | | | | 1 | 1 |
| pan sero | 8 | | | | 1 | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | |
| pen inca | 8 | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| plu sali | 8 | 1 | | | | | 1 | | | | | | | | | | | | | 1 | | 1 | 1 | | | | | | |
| psa pilu | 8 | | | 1 | | | | 1 | | | | | | | | | | 1 | | | | | | | 1 | | | | |
| bre oliv | 9 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| cam poly | 9 | | | | | | | | | | | | | | | 1 | | 1 | | 1 | 1 | | | | | | 1 | 1 | |
| cer gilv | 9 | | | 1 | | | 1 | | | 1 | | | | | | 1 | | | | | | | | | | 1 | | | |

68

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | D3NW- | D3NW- | D3NW- | D3SE-B | D3SW-B | D3SW-B | D3SW-B | D4NE-B | D4NW- | D4SE-B | E2NE-B | E2NE-B | E3NE-B | E3NE-B | E3NW-B | E3NW-B | E3NW-B | E3SE-B | E3SE-B | E3SW-B | E3SW-B | E4SW-B | F2NE-B | F2NE-B | F2NW-B | F3NW-B | F3NW-B | F3NW-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cli nebu | 9 | | | 1 | | 1 | | | | 1 | 1 | | | | 1 | | | | 1 | 1 | | | | | | | | | |
| hyp seti | 9 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| mar torq | 9 | 1 | | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | |
| nem ches | 9 | 1 | 1 | | | | | | | | | | | | | 1 | | 1 | | | 1 | | | | | | | | |
| pse cyat | 9 | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | |
| tre coha | 9 | | | | | | 1 | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | 1 |
| bis citr | 10 | | | 1 | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | |
| cli hobs | 10 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| phl livi | 10 | | | | | | | | | | 1 | | | | | 1 | | 1 | | 1 | | | | | | | | | |
| ple oste | 10 | | 1 | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| tri scab | 10 | | | | | | | | 1 | | | | | | | | | 1 | 1 | 1 | | | | | | | 1 | | 1 |
| xer radi | 10 | | | | | | 1 | | | | | 1 | | | 1 | | | 1 | | | | | 1 | | | | | 1 | |
| myc rena | 11 | | | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | 1 | | 1 |
| phl fagi | 11 | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| plu chry | 11 | | | | 1 | | 1 | | | | | | | | | | | 1 | | | | | | | | | | 1 | |
| mac rhac | 12 | 1 | | | | | | | | 1 | | | | | | | 1 | 1 | | | | | | | | 1 | 1 | | |
| pol prui | 12 | 1 | 1 | 1 | | | | | 1 | 1 | | | | | | | | 1 | | | | | | | | 1 | | | |
| sub long | 12 | | | 1 | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | |
| lyc perl | 13 | | | | | | | | 1 | | | | | 1 | 1 | 1 | | 1 | | | | 1 | | | | | 1 | 1 | 1 |
| phl radi | 13 | | 1 | | 1 | | | | | | | | | 1 | 1 | | | | | | 1 | | | | 1 | | | | |
| pol vari | 13 | | | 1 | | | | | | | | 1 | | | | 1 | | 1 | | 1 | | | | | | 1 | 1 | | 1 |
| isc resi | 14 | | 1 | | | | | | | | | | | | | | | 1 | | | | | | | | 1 | | | |
| lep flacc | 14 | | | 1 | | | | | | | | | | 1 | | 1 | | 1 | 1 | | | | | 1 | | | | | |
| oud muci | 14 | | | | | | | | | | | | 1 | | | 1 | | | | | 1 | | | | 1 | 1 | | | |
| phy vitr | 14 | | | | | | 1 | | 1 | | | 1 | | | | 1 | | | 1 | 1 | | | | 1 | | | 1 | 1 | 1 |
| hyp frag | 15 | | 1 | | | | | | | | | | 1 | | | | | | | | 1 | | | | 1 | | | | |
| hyp rubi | 15 | | | | 1 | | | | | | | | 1 | | | | | 1 | | | | | | | | 1 | | | |
| kue muta | 15 | | 1 | | | 1 | | 1 | | | | 1 | | | 1 | | | 1 | | | 1 | | 1 | | | | 1 | | |
| ram stri | 15 | | | 1 | 1 | | 1 | | | | | | | | 1 | 1 | | | | | | | | 1 | | 1 | | 1 | |
| hyp radu | 16 | | | | | | | 1 | | | 1 | | | | 1 | | | 1 | | | | | | | | | | | |
| phy sang | 16 | | | | | | | | 1 | | | | | | | 1 | | 1 | 1 | 1 | | | | | | | | | |
| ste ochr | 16 | | | 1 | 1 | | | | | 1 | | 1 | | | | | 1 | 1 | | 1 | 1 | | | | | 1 | | | |
| bje adus | 17 | | 1 | | 1 | | | | | | | | | | 1 | | | | | | 1 | | | | 1 | 1 | | | |
| con pute | 17 | | | | 1 | | 1 | | | | | 1 | | | | | | 1 | 1 | 1 | | | | | | | | | |
| hyp pube | 17 | 1 | | | 1 | | | 1 | | | | | | | | | | | | 1 | 1 | | 1 | 1 | | | 1 | | |
| myc pura | 17 | | | 1 | | 1 | | | | | | | | | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | | | 1 | 1 |
| xyl poly | 17 | | | 1 | | | | | | | | | 1 | | | | | 1 | | | 1 | 1 | | | | 1 | 1 | 1 | |
| ent lyco | 18 | 1 | | 1 | | | 1 | 1 | | | 1 | 1 | | | | 1 | 1 | | | 1 | | | | | | | | | |
| mer giga | 18 | | | 1 | | | | | | | | | | | 1 | | 1 | | | 1 | 1 | | | | 1 | | | 1 | |
| ful sept | 19 | | | | 1 | | | | 1 | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | | | | | | |
| glo lact | 19 | | | | | | | | | 1 | | 1 | | | | | | | 1 | | | | 1 | | 1 | 1 | | | |
| orb deli | 19 | 1 | | | | | 1 | 1 | 1 | 1 | 1 | | | | | 1 | | 1 | 1 | | | 1 | | | | | | 1 | |
| psa obtu | 19 | 1 | | 1 | | 1 | | | 1 | 1 | | 1 | | 1 | | | | 1 | | 1 | | 1 | | | | | | 1 | 1 |
| rad conf | 20 | 1 | 1 | | | | | 1 | | | 1 | 1 | | | 1 | | 1 | | | 1 | | | | | | | | | |
| sis brin | 20 | | | | | | | | 1 | 1 | | | | | 1 | | | 1 | | | | | | 1 | | | 1 | | |
| tra vers | 20 | | 1 | | 1 | | | 1 | | | | 1 | 1 | | 1 | | | 1 | | | | | | | | | | | |
| cli diat | 21 | | | 1 | 1 | | | | | 1 | | 1 | | | | 1 | 1 | 1 | | 1 | | | | | | | 1 | 1 | 1 |
| ste hirs | 21 | | 1 | | | | | | | | | 1 | 1 | | 1 | 1 | | 1 | | 1 | 1 | | | | | | | | |
| gan lips | 22 | 1 | | 1 | | | | 1 | | | | 1 | 1 | | | | 1 | 1 | 1 | 1 | | | | | | 1 | 1 | | 1 |
| lac impu | 22 | | 1 | 1 | | | | 1 | 1 | 1 | | | 1 | | | | | 1 | | | | | | | | 1 | 1 | | 1 |
| meg plat | 22 | | | | | 1 | | 1 | 1 | 1 | | 1 | | | | 1 | 1 | 1 | | 1 | | 1 | | | | | | | |
| plu phle | 22 | 1 | | 1 | | 1 | | | 1 | | | 1 | | | 1 | 1 | | 1 | | 1 | 1 | | | | | 1 | | 1 | 1 |
| cer fruc | 24 | | | | | 1 | | | 1 | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | | | 1 | 1 | | 1 |
| gal unic | 24 | | | 1 | | | 1 | | 1 | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | | 1 | | | 1 | 1 | | 1 |
| pez micr | 26 | | 1 | 1 | | 1 | | | 1 | 1 | | 1 | | | | | | 1 | 1 | 1 | 1 | | | | 1 | 1 | | 1 | 1 |
| mar rotu | 27 | | | 1 | | | | | | 1 | | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 1 |
| myc gale | 28 | | | | | | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | | | | |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | D3NW- | D3NW- | D3NW- | D3SE-B | D3SW-B | D3SW-B | D3SW-B | D4NE-B | D4NW- | D4SE-B | E2NE-B | E2NE-B | E3NE-B | E3NE-B | E3NW-B | E3NW-B | E3NW-B | E3SE-B | E3SE-B | E3SW-B | E3SW-B | E4SW-B | F2NE-B | F2NE-B | F2NW-B | F3NW-B | F3NW-B | F3NW-B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| bot cons | 29 | 1 | | | | 1 | 1 | | 1 | 1 | | | | | | | 1 | 1 | | 1 | | 1 | | | | | 1 | 1 | 1 |
| scu scut | 29 | | | 1 | | 1 | | | 1 | 1 | | 1 | | | | | | 1 | | 1 | 1 | | | 1 | | | 1 | 1 | 1 |
| tri vari | 29 | | 1 | 1 | | 1 | | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | | 1 | | | | | | | 1 | | 1 |
| hyp fasc | 35 | 1 | | 1 | | 1 | 1 | 1 | | | | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | 1 | | |
| lyc epid | 35 | | 1 | 1 | | | | | 1 | 1 | | | | | | 1 | | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | |
| myc croc | 35 | | | 1 | 1 | 1 | | | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | | 1 | | | 1 | | | 1 |
| cop mica | 36 | | | 1 | 1 | | 1 | | | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | |
| lyc pyri | 36 | | | 1 | | | 1 | | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 |
| ath epip | 37 | 1 | | | | 1 | 1 | | 1 | 1 | | | | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | | | 1 | 1 | | 1 |
| plu cerv | 37 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | 1 | | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | | 1 | | 1 | 1 |
| cer reti | 38 | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | 1 | | 1 | 1 | 1 | | | 1 | 1 | | 1 | 1 | 1 | |
| fom fome | 38 | 1 | | 1 | | | 1 | 1 | | | 1 | | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | | 1 | | 1 |
| mar alli | 40 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | | 1 | | 1 | | 1 | | | | | 1 | 1 | 1 | 1 |
| xyl hypo | 42 | 1 | | 1 | 1 | | | | 1 | 1 | | 1 | 1 | | 1 | | | 1 | | 1 | 1 | | | 1 | 1 | 1 | 1 | | 1 |
| arm gall | 44 | 1 | 1 | 1 | 1 | 1 | | 1 | | | | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | |
| kre deus | 45 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | 1 |
| mol cine | 49 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| myc haem | 50 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 |
| eut spin | 62 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

|  | frekvens | F3SW-B8 | F4SW-B10 | G3NE-B13 | G3NW-B9 | G3SW-B1 | G3SW-B3 | H3NE-B10 | H3NE-B6 | H3NW-B2 | I3NW-B1 | I3NW-B4 | I3NW-B5 | I3SE-B4 | I3SE-B9 | I3SW-B4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ara vari | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arc affi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arm mell | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ath glau | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| aur auri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bas caes | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bje fumo | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bot botr | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| col fusi | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| col pero | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| com alta | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| con sord | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop lago | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop xant | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys adul | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys cono | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cys heti | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| dac stil | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| das nive | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| dia flav | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dia stig | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ent dich | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| exi effu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| fla muri | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| gal nana | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| gan pfei | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| glo luri | 1 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| hetero | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp aspe | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp eich | 1 |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| hyp medi | 1 |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |
| hyp samb | 1 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| ino peti | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac lacc | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac papy | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lep boer | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| lep jaco | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| lep nuda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lin flav | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lop turg | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lyc echi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mar coha | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mar wynn | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mel hori | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| micr bras | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mol lign | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc uda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| nec epis | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| ombrop | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen nuda | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen quer | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha sord | 1 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| pha tube | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pha velu | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phl alla | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phy cine | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ple dryi | 1 | | | | | | | | | | | | | | | |
| plu gode | 1 | | | | | | | | | | | | | | | |
| plu podo | 1 | | | | | | | | | | | | | | | |
| pol badi | 1 | 1 | | | | | | | | | | | | | | |
| protocre | 1 | | | | | | | | | | | | | | | |
| psa cand | 1 | | | | | | | | | | | | | | | |
| psa cono | 1 | | | | | | | | | | | | | | | |
| psa frus | 1 | | | | | | | | | | | | | | | |
| psa fusc | 1 | | | | | | | | | | | | | | | |
| psa lacr | 1 | | | | | | | | | | | | | | | |
| psa popu | 1 | | | | | | | | | | | | | | | |
| psa pygm | 1 | | | | 1 | | | | | | | | | | | |
| psa spad | 1 | | | | | | | | | | | | | | 1 | |
| psa teph | 1 | | | | | | | | | | | | | | | |
| ram cent | 1 | | | | | | | | | | | | | | | |
| res tric | 1 | | | | | | | | | | | | | | | |
| rip tric | 1 | | | | | | | | | | | | | | | |
| sis bigg | 1 | | | | | | | | | | | | | | | |
| sis oblo | 1 | | | | | | | | | | | | | 1 | | |
| ste hype | 1 | | | | | | | | | | | | | | | |
| tap livi | 1 | | | | | | | | | | | | | | | |
| tom ferr | 1 | | | | | | | | | | | | | | | |
| tom radi | 1 | | | | | | | | | | | | | | | |
| tre micr | 1 | | | | | | | | | | | | | | | |
| tre prae | 1 | | | | | | | | | | | | | | | |
| tri cont | 1 | | | | | | | | | | | | | | | |
| tri flor | 1 | | | | | | | | | | | | | | | |
| tri lasc | 1 | | | | | | | | | | | | | | | |
| tri pers | 1 | | | | | | | | | | | | 1 | | | |
| tub ferr | 1 | | | | | | | | | | | | | | | |
| tul eich | 1 | | | | | | | | | | | | | | | |
| tyr chio | 1 | | | | | | | | | | | | | | | |
| tyr wynn | 1 | | | | | | | | | | | | 1 | | | |
| vol hypo | 1 | | | | | | | | | | | | | 1 | | |
| xen pulv | 1 | | | | | | | | | | | | | | | |
| ant hoeh | 2 | | | | | | | | | | | | | | | |
| ant semi | 2 | | | | | | | | | | | | | | | |
| arc inca | 2 | | | | | | | | | | | | | | | |
| bot laev | 2 | | | | | | | | | | | 1 | | | | |
| cam tubu | 2 | | | | | | | | | | | | | | | |
| col tube | 2 | | | | | | | | | | | | | | | |
| com nigr | 2 | | | | | | | | | | | | | | | |
| con arid | 2 | | | | 1 | | | | | | | | | | | |
| corticiu | 2 | | | | | | | | | | | | | | | |
| cri gall | 2 | | | | | | | | | | | | | | | |
| cri helv | 2 | | | | | | | 1 | | | | | | | | |
| eut quat | 2 | | | | | | | | 1 | | | | | | 1 | |
| hyp argu | 2 | | | | | | | 1 | | | | | | | | |
| hyp pall | 2 | | | | | | | | | | | | | | | |
| hyp polo | 2 | | | | | | | | | | | | | | | |
| lep ochr | 2 | | | | | | | | | | | 1 | | | | |
| mel haem | 2 | | | | | | | | | | | | | | | |
| mer anom | 2 | | | | | | | | | | | | | | | |
| met vesp | 2 | | | | | | | | | | | | | | | |
| myc erub | 2 | | | | | | | | | | | | | | | |
| myc poly | 2 | | | | | | | | | | | | | | | |
| nec pezi | 2 | | | | | | | | | | | | | | | |

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|  | frekvens | F3SW-B | F4SW-B | G3NE-B | G3NW- | G3SW-B | G3SW-B | H3NE-B | H3NE-B | H3NW- | I3NW-B | I3NW-B | I3NW-B | I3SE-B4 | I3SE-B9 | I3SW-B4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| orb alne | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| orb epis | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| phl rufa | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pho squa | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| plu ephe | 2 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| sis nive | 2 |  |  |  |  |  |  | 1 |  |  |  |  |  | 1 |  |  |
| sis octo | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ske nive | 2 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| sym amau | 2 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  | 1 |
| tra gibb | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| tub furf | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ara aura | 3 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
| arc cine | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| bys cori | 3 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cli phyl | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| con brun | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| con tene | 3 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cop dome | 3 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
| exi nucl | 3 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |
| glo anal | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| gym juno | 3 |  |  |  |  |  |  | 1 |  |  |  | 1 |  |  |  |  |
| hem cucc | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hya fuck | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp coha | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp punc | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp suba | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| lam arcy | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mut cani | 3 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| myc amic | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc hiem | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen cine | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pen lyci | 3 |  |  | 1 |  |  |  |  | 1 |  |  |  |  |  |  |  |
| plu thom | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pol brum | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pol cili | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| pol squa | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pol tube | 3 |  |  | 1 |  |  |  |  |  |  |  |  |  | 1 |  |  |
| sis coro | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| str cyan | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| tul toma | 3 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |
| uth fusi | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| arc denu | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| exi glan | 4 |  | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| her cora | 4 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| hyp aura | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp gela | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp rose | 4 |  |  |  |  |  |  |  |  |  | 1 |  |  | 1 |  |  |
| lac subd | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac virg | 4 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| lep fulv | 4 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| myc galo | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc rose | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc spei | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| nec cocc | 4 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |
| nem atro | 4 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| plu inqu | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| plu semi | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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|  | frekvens | F3SW-B | F4SW-B | G3NE-B | G3NW- | G3SW-B | G3SW-B | H3NE-B | H3NE-B | H3NW- | I3NW-B | I3NW-B | I3NW-B | I3SE-B4 | I3SE-B9 | I3SW-B4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| psa rost | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| sco rimo | 4 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| sty gril | 4 |  |  |  |  |  |  |  |  | 1 |  |  |  |  | 1 |  |
| sty subh | 4 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| tre hyme | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| tul viol | 4 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| bot subc | 5 |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |
| cri argi | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dia disc | 5 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |
| fus ferr | 5 |  |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  |
| hen cand | 5 | 1 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| hyd suba | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| lac brev | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| myc peli | 5 | 1 |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |
| pha impu | 5 |  |  |  |  |  |  |  |  |  | 1 |  |  |  | 1 |  |
| plu nanu | 5 | 1 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |
| plu umbr | 5 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| sch comm | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| sis sem | 5 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| tom subl | 5 |  |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |
| bot prui | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cal corn | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| dat moll | 6 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |
| fom pini | 6 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp argi | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp para | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| hyp prae | 6 |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |
| ino nodu | 6 |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  |  |
| lep aspe | 6 |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  | 1 |
| myc dios | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| nem serp | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| neo pura | 6 |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| phl trem | 6 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pho auri | 6 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| ste fusc | 6 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |
| ste typh | 6 |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |
| bol reti | 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| cyl laev | 7 |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  | 1 |
| lep cris | 7 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| myc tint | 7 |  |  |  |  |  |  |  |  |  | 1 |  |  | 1 | 1 |  |
| ste axif | 7 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ste rugo | 7 |  |  |  |  |  | 1 |  |  |  | 1 | 1 |  |  |  |  |
| tra hirs | 7 |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |
| tre fari | 7 |  |  |  |  |  |  |  |  |  |  | 1 |  |  | 1 |  |
| tre mese | 7 |  | 1 |  | 1 |  |  |  | 1 |  |  |  |  |  |  |  |
| tre stev | 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| asc cyli | 8 |  |  | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |
| cer exce | 8 |  |  |  | 1 |  |  |  |  |  |  | 1 |  |  |  |  |
| col buty | 8 |  |  |  |  |  |  |  |  |  |  | 1 |  |  | 1 |  |
| omp epic | 8 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| pan sero | 8 |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| pen inca | 8 |  | 1 |  | 1 |  |  |  | 1 |  |  |  |  |  |  | 1 |
| plu sali | 8 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| psa pilu | 8 |  |  |  |  |  |  | 1 |  |  |  |  |  | 1 | 1 |  |
| bre oliv | 9 | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |
| cam poly | 9 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |
| cer gilv | 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cli nebu | 9 | | | | | | | | | | | | | | | |
| hyp seti | 9 | 1 | | | | | | | | | 1 | 1 | | | | |
| mar torq | 9 | | | | | | 1 | | | | | | | | | |
| nem ches | 9 | | | | | | | | | | | | | | | |
| pse cyat | 9 | | 1 | | | | | | | | | | | | | |
| tre coha | 9 | | | | | | | | | | | | | 1 | 1 | |
| bis citr | 10 | | 1 | | | | | | | | | | | | | |
| cli hobs | 10 | | | | | | | | | 1 | | | | | 1 | |
| phl livi | 10 | | | | | | | | | 1 | | 1 | | | | |
| ple oste | 10 | | | | | | | | | | | | | | | |
| tri scab | 10 | | | | | | | 1 | | | | | | | | |
| xer radi | 10 | | | | | | | | | | | | | 1 | | |
| myc rena | 11 | | | | | 1 | 1 | | | 1 | | 1 | | | 1 | |
| phl fagi | 11 | | | | | | | | 1 | | | | | | | 1 |
| plu chry | 11 | | | | | | | | | | | | | | | |
| mac rhac | 12 | | | | | | | | | | | | | 1 | | |
| pol prui | 12 | | | | 1 | | | | | 1 | | | 1 | 1 | | |
| sub long | 12 | 1 | | | | | | | | | | | 1 | | | |
| lyc perl | 13 | | | | | | | | | | | | | | | |
| phl radi | 13 | | 1 | | 1 | | | | 1 | | | | | | | 1 |
| pol vari | 13 | 1 | | | | | | | | | | | | 1 | | |
| isc resi | 14 | | 1 | | | | | | | | | | | | | |
| lep flacc | 14 | | | | | | | | | | | | 1 | | | |
| oud muci | 14 | | | | | | | | 1 | | | | | 1 | 1 | 1 |
| phy vitr | 14 | 1 | | | | | | | | | | | | | | |
| hyp frag | 15 | | 1 | 1 | 1 | | | | 1 | | | | | | | 1 |
| hyp rubi | 15 | 1 | | | | | | | | | | | | 1 | | |
| kue muta | 15 | 1 | | | | | | | | | | | | | | |
| ram stri | 15 | | | | | | | | | | | 1 | 1 | | | |
| hyp radu | 16 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | | |
| phy sang | 16 | | | 1 | | 1 | 1 | | | | | | | | | |
| ste ochr | 16 | | 1 | | 1 | | | | | | | | | 1 | | |
| bje adus | 17 | | 1 | 1 | | | | | 1 | | | | | 1 | | 1 |
| con pute | 17 | | | | | | 1 | 1 | 1 | | | | | 1 | 1 | |
| hyp pube | 17 | 1 | | | | 1 | | | | 1 | | | | 1 | 1 | |
| myc pura | 17 | 1 | | | | | | 1 | | | | 1 | 1 | | | |
| xyl poly | 17 | | | 1 | | | | 1 | | | 1 | | | | | |
| ent lyco | 18 | | | | | | 1 | | | | 1 | | 1 | | 1 | |
| mer giga | 18 | | | | | | | | | | | 1 | | 1 | | |
| ful sept | 19 | | | | | | | | | | 1 | 1 | 1 | 1 | | |
| glo lact | 19 | | 1 | | 1 | | 1 | | | 1 | | | 1 | 1 | 1 | |
| orb deli | 19 | | | | | | 1 | | | 1 | | 1 | | | | |
| psa obtu | 19 | | | | | | | 1 | | | | | | | 1 | |
| rad conf | 20 | | | | 1 | | 1 | | | | | | 1 | | 1 | |
| sis brin | 20 | 1 | | | | | | | | | | | 1 | | | |
| tra vers | 20 | | 1 | 1 | | | | | | | | 1 | 1 | | | |
| cli diat | 21 | | | | | | | 1 | | | | 1 | 1 | 1 | | |
| ste hirs | 21 | | 1 | 1 | 1 | | | | | | | | | 1 | | |
| gan lips | 22 | | 1 | | | | | | | | | | 1 | | | |
| lac impu | 22 | | 1 | | | | | | | | | 1 | | 1 | | |
| meg plat | 22 | | | | | | 1 | 1 | | | | 1 | 1 | 1 | 1 | |
| plu phle | 22 | 1 | | | | | | | | | | | 1 | | | |
| cer fruc | 24 | 1 | | | | | | 1 | | | | 1 | | | | |
| gal unic | 24 | | | | | | 1 | | | | 1 | 1 | | | | |
| pez micr | 26 | 1 | | | | | | | | | | 1 | | | | |
| mar rotu | 27 | | | | | | 1 | | | | | | | 1 | | |
| myc gale | 28 | 1 | | | 1 | 1 | 1 | 1 | | | | 1 | | | 1 | |

Appendix 3. Registreringer af arter på stammer, sorteret efter frekvens (antal stammer) og stammenummer. Bemærk at arter fundet på to eller færre stammer ikke er medtaget i ordinationen.

| | frekvens | F3SW-B | F4SW-B | G3NE-B | G3NW- | G3SW-B | G3SW-B | H3NE-B | H3NE-B | H3NW- | I3NW-B | I3NW-B | I3NW-B | I3SE-B4 | I3SE-B9 | I3SW-B4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| bot cons | 29 | | | | 1 | | | 1 | | 1 | 1 | 1 | 1 | | 1 | |
| scu scut | 29 | 1 | | 1 | | 1 | 1 | | | | | | | | | |
| tri vari | 29 | 1 | | | | | | | | | | 1 | | | | |
| hyp fasc | 35 | | 1 | 1 | | | 1 | 1 | | 1 | 1 | 1 | | 1 | | |
| lyc epid | 35 | 1 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | |
| myc croc | 35 | 1 | | | | 1 | 1 | | | | 1 | 1 | 1 | 1 | | |
| cop mica | 36 | 1 | 1 | 1 | 1 | | 1 | | | | 1 | 1 | | | | 1 |
| lyc pyri | 36 | | | | | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | |
| ath epip | 37 | | | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | |
| plu cerv | 37 | 1 | | | | | 1 | 1 | | | 1 | 1 | 1 | | | |
| cer reti | 38 | 1 | | | | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | |
| fom fome | 38 | 1 | | 1 | | | 1 | | 1 | | | 1 | 1 | 1 | | |
| mar alli | 40 | | 1 | | | 1 | 1 | 1 | | | 1 | 1 | | | | |
| xyl hypo | 42 | 1 | 1 | 1 | 1 | | 1 | | | | | 1 | | 1 | | |
| arm gall | 44 | | | 1 | | | 1 | 1 | | | 1 | 1 | 1 | | 1 | |
| kre deus | 45 | 1 | | | | 1 | 1 | 1 | | | 1 | | | 1 | 1 | |
| mol cine | 49 | 1 | | 1 | | 1 | 1 | | | 1 | | 1 | 1 | 1 | 1 | |
| myc haem | 50 | 1 | 1 | | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | |
| eut spin | 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Appendix 4. Variabelscorer for samtlige stammer medtaget i ordinationen.

| | B3NE-B1 | B3SW-B11 | B3SW-B13 | B4SE-B8 | C2NE-B1 | C2NE-B8 | C3NE-B3 | C3NW-B7 | C3NW-B8 | C3SE-B12 | C3SE-B3 | C3SW-B12 | C4NW-B1 | C4NW-B9 | C4SE-B2 | D2NE-B12 | D2NE-B16 | D2NE-B3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCA1 | 145,9303 | 68,38806 | 120,0688 | 116,1601 | 92,72056 | 24,59581 | 88,60235 | 63,51234 | 319,6446 | 98,44552 | 225,2966 | 108,982 | 129,1694 | 136,4356 | 195,3974 | 90,98615 | 261,4225 | 181,7401 |
| DCA2 | 103,2266 | 172,9866 | 151,8888 | 77,02613 | 67,02305 | 198,3654 | 138,4293 | 78,81122 | 120,6626 | 103,1323 | 121,9772 | 64,90662 | 51,83524 | 82,9986 | 81,6927 | 156,7257 | 70,37958 | 93,33617 |
| DCA3 | 82,47471 | 151,9926 | 50,82389 | 142,1769 | 113,4404 | 111,1742 | 97,62418 | 22,16642 | 109,6447 | 145,6057 | 37,35441 | 100,3104 | 57,54272 | 106,4906 | 80,5496 | 72,09447 | 50,00036 | 23,50505 |
| fractures | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 2 | 3 | 1 | 2 | 2 | 5 | 2 | 2 | 1 | 1 | 0 |
| soil contact | 90 | 100 | 10 | 100 | 60 | 100 | 100 | 100 | 50 | 50 | 90 | 90 | 90 | 100 | 100 | 100 | 90 | 50 |
| moss cover | 0 | 10 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 10 | 5 | 5 | 5 | 5 |
| bark cover | 30 | 0 | 50 | 10 | 20 | 0 | 5 | 5 | 100 | 5 | 80 | 10 | 30 | 10 | 80 | 0 | 60 | 30 |
| eytypa cover | 20 | 10 | 20 | 30 | 30 | 10 | 10 | 40 | 10 | 70 | 10 | 10 | 20 | 10 | 10 | 10 | 5 | 20 |
| plant cover | 70 | 90 | 70 | 90 | 90 | 100 | 100 | 90 | 90 | 100 | 100 | 90 | 90 | 80 | 100 | 100 | 80 | 20 |
| decay stage | 3 | 5 | 2 | 4 | 3 | 5 | 5 | 4 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 5 | 2 | 2 |
| log age | 15 | 31 | 12 | 15 | 12 | 31 | 31 | 20 | 2 | 27 | 8 | 12 | 15 | 12 | 7 | 27 | 5 | 15 |
| dbh | 116 | 132 | 98 | 100 | 82 | 70 | 128 | 110 | 96 | 75 | 106 | 112 | 132 | 86 | 128 | 90 | 120 | 84 |
| dist. to edge | 70 | 25 | 5 | 35 | 30 | 10 | 85 | 75 | 75 | 65 | 65 | 25 | 45 | 10 | 90 | 50 | 80 | 35 |
| plant diversity | 1 | 5 | 4 | 2 | 6 | 5 | 4 | 2 | 3 | 5 | 4 | 2 | 2 | 6 | 3 | 2 | 6 | 3 |
| floristic deviance | 0 | 60 | 10 | 10 | 10 | 30 | 30 | 20 | 10 | 30 | 10 | 0 | 20 | 40 | 10 | 0 | 10 | 20 |
| bole forks | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 2 | 4 | 2 | 2 | 1 | 4 | 0 |
| soil humidity | 2 | 4 | 1 | 2 | 3 | 4 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 5 |
| wind exposure | 2 | 3 | 4 | 2 | 2 | 2 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 4 | 3 |
| sun exposure | 2 | 2 | 4 | 3 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 3 | 3 | 2 | 2 |
| soil type | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill |
| log type | broken in 1-7 m. heigth | broken in 1-7 m. heigth | broken in 1-7 m. heigth | broken at root neck | broken in 8-15 m. heigth | with full root plate | broken in 1-7 m. heigth | broken in 1-7 m. heigth | broken in 1-7 m. heigth | with full root plate | broken in 8-15 m. heigth | broken in 8-15 m. heigth | broken at root neck | with full root plate | broken in 1-7 m. heigth | with full root plate | with full root plate | with full root plate |
| decay rate | 0 | 0 | -1 | 0 | 1 | 0 | 0 | 1 | 1 | -1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | -1 |
| ane ran | 0 | 10 | 5 | 0 | 5 | 20 | 10 | 0 | 0 | 10 | 5 | 0 | 0 | 0 | 5 | 0 | 5 | 0 |
| ane nem | 70 | 30 | 60 | 80 | 80 | 70 | 70 | 70 | 80 | 70 | 90 | 90 | 70 | 40 | 90 | 100 | 70 | 5 |
| cor bul | 0 | 0 | 0 | 10 | 0 | 5 | 20 | 20 | 10 | 20 | 5 | 0 | 20 | 5 | 10 | 0 | 5 | 0 |
| mer per | 0 | 50 | 10 | 0 | 5 | 0 | 0 | 0 | 5 | 5 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| ran fic | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 |
| lam gal | 0 | 5 | 5 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 20 |
| gal odo | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| vio rin | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| other plants | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 |

Appendix 4. Variabelscorer for samtlige stammer medtaget i ordinationen.

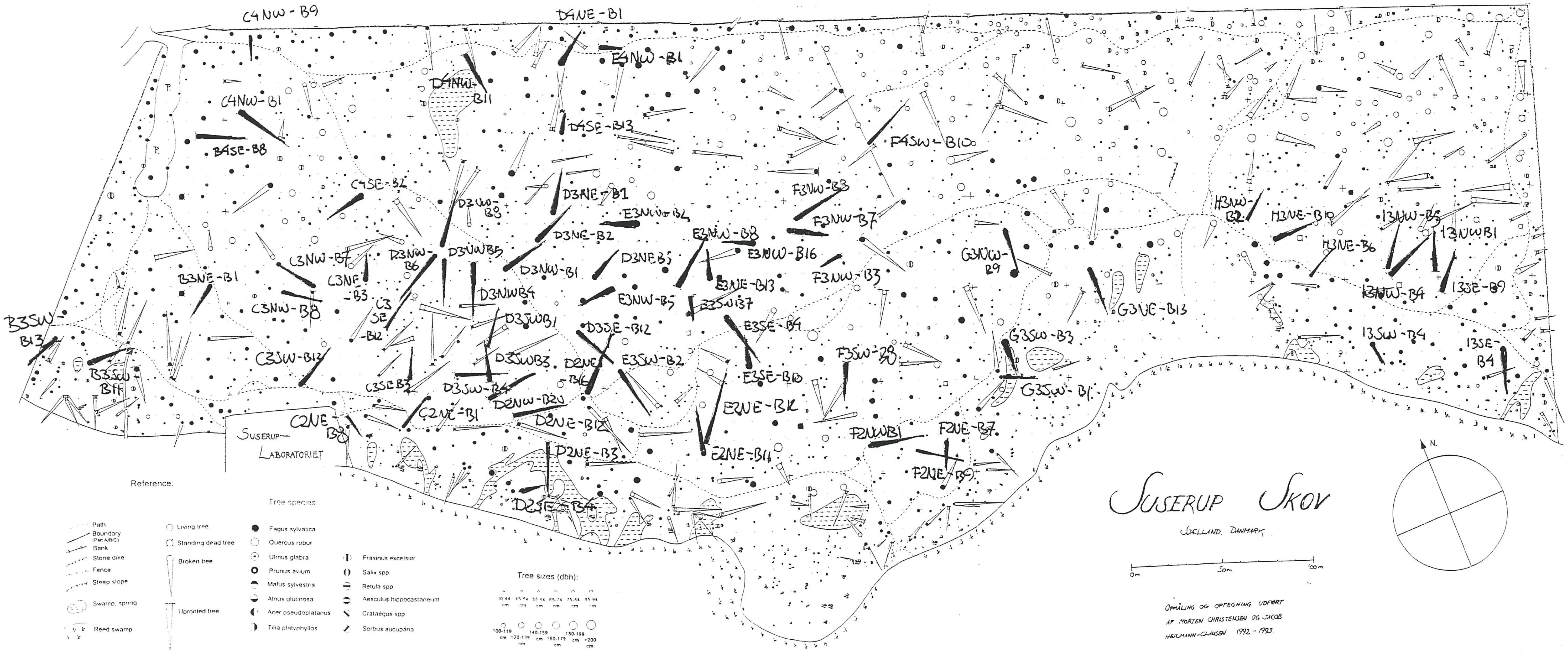
| | D2NE-B8 | D2NW-B20 | D2SE-B4 | D3NE-B1 | D3NE-B2 | D3NE-B5 | D3NW-B1 | D3NW-B4 | D3NW-B5 | D3NW-B6 | D3NW-B8 | D3SE-B12 | D3SW-B1 | D3SW-B3 | D3SW-B4 | D4NE-B1 | D4NW-B11 | D4SE-B13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCA1 | 223,7478 | 96,72174 | 15,80413 | 310,5948 | 176,0605 | 138,9038 | 89,27057 | 85,71695 | 279,9225 | 99,57628 | 119,0126 | 233,2131 | 91,80602 | 87,68096 | 104,3657 | 70,93513 | 82,21997 | 85,39236 |
| DCA2 | 96,39819 | 95,58926 | 210,3806 | 72,18427 | 64,73701 | 60,63694 | 98,02598 | 155,3644 | 69,50249 | 0 | 67,20736 | 61,13186 | 94,16202 | 113,2926 | 173,7722 | 44,61137 | 73,55215 | 192,638 |
| DCA3 | 133,8582 | 45,91608 | 89,60825 | 74,23377 | 83,30868 | 67,07516 | 176,6904 | 84,6374 | 106,0672 | 116,6493 | 171,1835 | 8,34406 | 77,88853 | 55,71993 | 50,62612 | 92,92442 | 99,67258 | 26,87848 |
| fractures | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 0 | 1 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 4 | 1 |
| soil contact | 70 | 100 | 100 | 80 | 90 | 90 | 100 | 50 | 30 | 80 | 100 | 70 | 100 | 70 | 60 | 100 | 90 | 60 |
| moss cover | 5 | 5 | 10 | 5 | 5 | 5 | 10 | 5 | 5 | 0 | 10 | 10 | 5 | 5 | 5 | 10 | 60 | 5 |
| bark cover | 80 | 0 | 0 | 90 | 80 | 60 | 0 | 10 | 90 | 20 | 10 | 90 | 0 | 0 | 10 | 20 | 5 | 0 |
| eytypa cover | 20 | 30 | 10 | 10 | 20 | 10 | 40 | 30 | 5 | 40 | 10 | 0 | 10 | 10 | 40 | 20 | 30 | 20 |
| plant cover | 90 | 90 | 40 | 90 | 90 | 90 | 80 | 100 | 100 | 90 | 90 | 50 | 100 | 100 | 90 | 70 | 50 | 50 |
| decay stage | 1 | 4 | 5 | 1 | 2 | 3 | 5 | 4 | 2 | 3 | 3 | 1 | 4 | 4 | 4 | 4 | 4 | 5 |
| log age | 5 | 31 | 31 | 4 | 7 | 9 | 27 | 20 | 7 | 15 | 13 | 4 | 27 | 27 | 27 | 20 | 27 | 27 |
| dbh | 90 | 115 | 120 | 130 | 130 | 132 | 120 | 130 | 114 | 104 | 112 | 100 | 70 | 100 | 80 | 144 | 100 | 112 |
| dist. to edge | 60 | 60 | 15 | 100 | 110 | 130 | 130 | 120 | 110 | 110 | 110 | 105 | 90 | 70 | 65 | 75 | 15 | 55 |
| plant diversity | 4 | 1 | 3 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 5 | 2 | 2 | 2 | 1 | 1 | 1 |
| floristic deviance | 0 | 0 | 20 | 0 | 0 | 0 | 10 | 0 | 10 | 10 | 30 | 10 | 0 | 10 | 0 | 0 | 0 | 0 |
| bole forks | 2 | 2 | 1 | 1 | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 2 | 0 | 2 | 3 | 0 |
| soil humidity | 3 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 3 |
| wind exposure | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 3 | 2 | 2 | 3 | 3 | 2 |
| sun exposure | 2 | 3 | 1 | 2 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 3 | 2 | 5 | 4 | 5 |
| soil type | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | sandtill |
| log type | broken in 1- 7 m. heigth | with full root plate | with full root plate | broken in 8- 15 m. heigth | broken in 1- 7 m. heigth | broken in 8- 15 m. heigth | with full root plate | broken in 1- 7 m. heigth | broken in 1- 7 m. heigth | broken in 1- 7 m. heigth | broken at root neck | broken in 8- 15 m. heigth | with full root plate | with full root plate | with full root plate | broken in 1- 7 m. heigth | with full root plate | broken in 8- 15 m. heigth |
| decay rate | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 |
| ane ran | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ane nem | 90 | 90 | 20 | 90 | 90 | 90 | 80 | 100 | 90 | 80 | 70 | 40 | 100 | 90 | 90 | 70 | 50 | 50 |
| cor bul | 5 | 0 | 0 | 0 | 5 | 0 | 10 | 5 | 10 | 10 | 20 | 5 | 5 | 10 | 5 | 0 | 0 | 0 |
| mer per | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| ran fic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| lam gal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| gal odo | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| vio rin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| other plants | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Appendix 4. Variabelscorer for samtlige stammer medtaget i ordinationen.

| | E2NE-B11 | E2NE-B12 | E3NE-B13 | E3NE-B16 | E3NW-B2 | E3NW-B5 | E3NW-B8 | E3SE-B10 | E3SE-B4 | E3SW-B2 | E3SW-B7 | E4NW-B1 | F2NE-B7 | F2NE-B9 | F2NW-B1 | F3NW-B3 | F3NW-B7 | F3NW-B8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCA1 | 102,0213 | 261,0073 | 85,96357 | 184,1914 | 91,40102 | 133,8997 | 107,1527 | 76,7499 | 93,9187 | 189,9385 | 0 | 87,28396 | 128,7587 | 260,9599 | 138,1251 | 85,63653 | 62,39252 | 74,32728 |
| DCA2 | 74,83033 | 23,45268 | 80,14588 | 50,93615 | 71,24533 | 116,311 | 55,58676 | 72,03576 | 59,8272 | 82,15681 | 57,60593 | 163,9562 | 81,75935 | 123,654 | 67,92207 | 50,52287 | 7,0206 | 28,04924 |
| DCA3 | 86,05448 | 129,087 | 75,81738 | 64,73048 | 86,00787 | 60,03586 | 65,33133 | 145,8854 | 106,7471 | 88,22461 | 40,88825 | 0 | 109,7064 | 111,9407 | 124,1586 | 134,2707 | 37,14113 | 91,04132 |
| fractures | 4 | 0 | 2 | 1 | 5 | 3 | 4 | 1 | 5 | 2 | 1 | 3 | 3 | 1 | 3 | 4 | 3 | 3 |
| soil contact | 100 | 60 | 100 | 100 | 80 | 70 | 80 | 100 | 90 | 100 | 100 | 100 | 100 | 50 | 60 | 90 | 100 | 100 |
| moss cover | 10 | 5 | 30 | 10 | 10 | 5 | 10 | 50 | 30 | 10 | 0 | 5 | 5 | 0 | 5 | 10 | 10 | 5 |
| bark cover | 10 | 100 | 0 | 80 | 10 | 40 | 50 | 0 | 5 | 70 | 0 | 10 | 0 | 100 | 20 | 60 | 0 | 40 |
| eytypa cover | 30 | 30 | 10 | 5 | 20 | 40 | 10 | 0 | 60 | 10 | 0 | 0 | 40 | 10 | 50 | 20 | 10 | 10 |
| plant cover | 80 | 100 | 90 | 80 | 90 | 100 | 90 | 90 | 100 | 100 | 70 | 70 | 70 | 70 | 90 | 100 | 90 | 100 |
| decay stage | 4 | 1 | 5 | 2 | 4 | 3 | 3 | 4 | 3 | 2 | 5 | 5 | 4 | 1 | 3 | 3 | 5 | 3 |
| log age | 20 | 3 | 31 | 4 | 16 | 11 | 13 | 27 | 16 | 7 | 20 | 31 | 20 | 2 | 13 | 13 | 16 | 15 |
| dbh | 118 | 90 | 104 | 100 | 144 | 134 | 132 | 140 | 138 | 108 | 70 | 106 | 110 | 74 | 98 | 106 | 120 | 110 |
| dist. to edge | 45 | 50 | 135 | 120 | 110 | 130 | 135 | 100 | 115 | 90 | 135 | 15 | 40 | 40 | 60 | 130 | 120 | 105 |
| plant diversity | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 1 | 1 | 3 | 2 | 1 | 4 | 1 | 1 |
| floristic deviance | 10 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 20 | 10 | 0 | 0 | 0 | 0 |
| bole forks | 3 | 1 | 1 | 0 | 2 | 3 | 3 | 1 | 3 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 |
| soil humidity | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 2 | 3 | 4 | 3 | 2 |
| wind exposure | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 2 | 3 | 2 | 2 | 4 | 4 | 4 |
| sun exposure | 4 | 4 | 3 | 2 | 4 | 2 | 4 | 4 | 5 | 2 | 5 | 4 | 3 | 2 | 3 | 3 | 2 | 3 |
| soil type | lac.sand | loamtill | loamtill | loamtill | loamtill | loamtill | loamtill | lac.sand | lac.sand | loamtill | loamtill | loamtill | lac.clay | lac.clay | lac.clay | loamtill | loamtill | loamtill |
| log type | broken in 1-7 m. heigth | with full root plate | broken in 1-7 m. heigth | broken in 8-15 m. heigth | broken in 8-15 m. heigth | broken in 1-7 m. heigth | broken at root neck | broken at root neck | broken in 1-7 m. heigth | broken in 1-7 m. heigth | with full root plate | broken at root neck | broken in 8-15 m. heigth | broken at root neck | broken at root neck | broken in 8-15 m. heigth | broken at root neck | broken at root neck |
| decay rate | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | -1 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 3 | 2 |
| ane ran | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ane nem | 70 | 90 | 90 | 80 | 80 | 100 | 90 | 90 | 80 | 80 | 70 | 70 | 50 | 60 | 90 | 100 | 90 | 100 |
| cor bul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| mer per | 0 | 0 | 0 | 0 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| ran fic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| lam gal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 10 | 0 | 0 | 0 | 0 |
| gal odo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| vio rin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| other plants | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Appendix 4. Variabelscorer for samtlige stammer medtaget i ordinationen.

| | F3SW-B8 | F4SW-B10 | G3NE-B13 | G3NW-B9 | G3SW-B1 | G3SW-B3 | H3NE-B10 | H3NE-B6 | H3NW-B2 | I3NW-B1 | I3NW-B4 | I3NW-B5 | I3SE-B4 | I3SE-B9 | I3SW-B4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCA1 | 102,4444 | 269,111 | 235,4405 | 282,3632 | 57,5112 | 78,41554 | 92,78378 | 337,7209 | 60,2855 | 112,7817 | 108,9088 | 129,8811 | 155,2431 | 69,72221 | 334,236 |
| DCA2 | 62,30295 | 90,25784 | 84,38843 | 166,7326 | 170,4183 | 109,086 | 109,2068 | 114,6503 | 252,9482 | 105,9167 | 80,2053 | 110,762 | 111,6674 | 176,0561 | 104,8492 |
| DCA3 | 74,05123 | 103,8455 | 119,528 | 94,33161 | 182,8238 | 127,9042 | 57,46194 | 107,134 | 97,24968 | 41,64962 | 33,86673 | 70,34692 | 78,75471 | 17,97541 | 81,08933 |
| fractures | 4 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 0 | 1 | 3 | 1 | 4 | 2 | 1 |
| soil contact | 100 | 50 | 40 | 50 | 100 | 100 | 90 | 30 | 60 | 50 | 100 | 100 | 80 | 100 | 30 |
| moss cover | 5 | 5 | 10 | 10 | 10 | 20 | 10 | 0 | 5 | 10 | 10 | 0 | 5 | 5 | 0 |
| bark cover | 10 | 30 | 90 | 100 | 20 | 5 | 0 | 90 | 10 | 10 | 10 | 10 | 40 | 0 | 100 |
| eytypa cover | 40 | 30 | 5 | 20 | 30 | 30 | 10 | 10 | 50 | 40 | 40 | 20 | 20 | 30 | 0 |
| plant cover | 100 | 100 | 90 | 90 | 100 | 100 | 90 | 80 | 90 | 50 | 30 | 70 | 50 | 90 | 90 |
| decay stage | 4 | 2 | 2 | 1 | 3 | 4 | 4 | 1 | 3 | 4 | 4 | 4 | 3 | 4 | 1 |
| log age | 20 | 5 | 7 | 3 | 16 | 20 | 27 | 2 | 31 | 31 | 20 | 20 | 12 | 31 | 2 |
| dbh | 110 | 80 | 106 | 110 | 84 | 168 | 120 | 90 | 86 | 100 | 120 | 110 | 130 | 105 | 126 |
| dist. to edge | 105 | 60 | 50 | 120 | 40 | 50 | 60 | 45 | 75 | 60 | 70 | 80 | 25 | 50 | 20 |
| plant diversity | 1 | 1 | 5 | 4 | 5 | 3 | 2 | 2 | 6 | 3 | 2 | 2 | 3 | 2 | 4 |
| floristic deviance | 0 | 0 | 80 | 50 | 40 | 10 | 10 | 0 | 70 | 10 | 0 | 0 | 0 | 0 | 50 |
| bole forks | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 2 | 2 |
| soil humidity | 3 | 2 | 4 | 3 | 5 | 4 | 2 | 1 | 2 | 2 | 3 | 2 | 4 | 2 | 3 |
| wind exposure | 4 | 3 | 4 | 5 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 |
| sun exposure | 4 | 2 | 5 | 3 | 3 | 5 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 1 |
| soil type | lac.sand | sandtill | lac.sand | loamtill | lac.sand | lac.sand | sandtill | sandtill | sandtill | sandtill | sandtill | sandtill | sandtill | sandtill | sandtill |
| log type | broken in 1-7 m. heigth | broken at root neck | broken in 8-15 m. heigth | broken in 8-15 m. heigth | broken in 8-15 m. heigth | broken in 1-7 m. heigth | with full root plate | broken in 8-15 m. heigth | with full root plate | with full root plate | with full root plate | with full root plate | broken in 1-7 m. heigth | with full root plate | broken in 1-7 m. heigth |
| decay rate | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 1 | 0 | -2 | 0 |
| ane ran | 0 | 0 | 20 | 30 | 10 | 10 | 0 | 0 | 20 | 5 | 0 | 0 | 5 | 0 | 10 |
| ane nem | 100 | 100 | 10 | 40 | 20 | 90 | 80 | 80 | 20 | 40 | 30 | 70 | 50 | 90 | 40 |
| cor bul | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 5 | 5 | 0 | 5 | 0 |
| mer per | 0 | 0 | 0 | 20 | 10 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ran fic | 0 | 0 | 50 | 5 | 20 | 5 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| lam gal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| gal odo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 40 |
| vio rin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| other plants | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |


SUSERUP SKOV
SJÆLLAND, DANMARK
0m
50m
100m
N.
OPMÅLING OG OPTEGNING UDFØRT
AF MORTEN CHRISTENSEN OG JACOB
HEILMANN-CLAUSEN 1992 - 1993.
SUSERUP-
LABORATORIET
P.
P.
Reference:
Path
Boundary (Part A/B/C)
Bank
Stone dike
Fence
Steep slope
Swamp, spring
Reed swamp
Living tree
Standing dead tree
Broken tree
Uprooted tree
Tree species:
Fagus sylvatica
Quercus robur
Ulmus glabra
Prunus avium
Malus sylvestris
Alnus glutinosa
Acer pseudoplatanus
Tilia platyphyllos
Fraxinus excelsior
Salix spp.
Betula spp.
Aesculus hippocastaneum
Crataégus spp
Sorbus aucupária
Tree sizes (dbh):
10-44 cm
45-54 cm
55-64 cm
65-74 cm
75-84 cm
85-94 cm
100-119 cm
120-139 cm
140-159 cm
160-179 cm
180-199 cm
>200 cm
C4NW-B9
D4NE-B1
E4NW-B1
D4NW-B11
C4NW-B1
B4SE-B8
D4SE-B13
F4SW-B10
C4SE-B2
D3NW-B8
D3NE-B1
E3NW-B2
D3NE-B2
E3NW-B8
F3NW-B3
F3NW-B7
E3NW-B16
C3NW-B7
D3NW-B6
D3NWB5
D3NW-B1
D3NEB5
F3NW-B3
G3NW-B9
H3NW-B2
H3NE-B10
I3NW-B5
I3NWB1
H3NE-B6
B3NE-B1
C3NE-B3
C3NW-B8
D3NWB4
E3NE-B13
E3NW-B5
E3SWB7
G3NE-B13
I3NW-B4
I3SE-B9
B3SW-B13
C3SE-B12
D3SWB1
D3SE-B12
E3SE-B4
G3SW-B3
I3SW-B4
I3SE-B4
C3SW-B12
B3SW-B11
D3SWB3
D2NE-B16
E3SW-B2
F3SW-B8
E3SE-B10
C3SEB3
D3SW-B4
D2NW-B20
G3SW-B1
C2NE-B1
E2NE-B12
C2NE-B8
D2NE-B12
F2NWB1
F2NE-B7
D2NE-B3
E2NE-B14
F2NE-B9
D2SE-B4