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A. Achhammer. *Pleurotus unter Stress. Ökofysiologische Untersuchungen zu Wasserhaushalt und Sporulation.* (Bibliotheca mycologica 141, J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin, Stuttgart. 1992). Pp. 206, 104 text-figs. and black-and-white photographs. Price: DM 130.-

Pleurotus ostreatus and *P. pulmonarius*, wood-destroying and edible basidiomycetes, were the subject of an ecophysiological study with regard to the connection between water household in the fruitbody and sporulation. Field observations were combined with controlled laboratory experiments on cultivated fruit-bodies. In the field it appeared that when it is about freezing point during the day, sporulation is mainly determined by temperature factors.

In milder periods, water content of the fruit-bodies is the major factor influencing the sporulation. There was not found a daily pattern in sporulation nor endogenic rhythm. In cultivated fruit-bodies, the field observations were confirmed as to the influence of relative humidity for the duration of the sporulation, but a change in humidity during the day did not influence sporulation in a uniform way. In the range of 8–22°C, temperature proved to be the most important factor, always positively correlated with sporulation intensity. *Pleurotus* is considered as a poikilohydric organism, as its water household is mainly determined by physical laws, not hampered by special structures preventing dehydration, etc. Fruit-bodies proved to be able to tolerate rather long periods of frost or dehydration, starting sporulation again under favourable conditions. The hymenial elements are able to withstand frost and/or drought, which is also demonstrated with SEM pictures of these structures.

R. Agerer (Editor). *Colour atlas of ectomycorrhizae Issue 6.* (Einhorn Verlag. Eduard Dietenberger GmbH, Schwäbisch Gmünd. 1992). 8 col. pls. Price: DM 28.-.

The sixth issue of this loose-leaf colour atlas of ectomycorrhizae comprises only 8 plates, each with 4 photos in natural colour, two pages in half-tone photos showing important anatomical features, and extensive legends. Of these ectomycorrhizae 5 are identified: *Cortinarius bolaris (Fagus sylvatica), Cortinarius cinnabarinus (Fagus sylvatica), Gomphidius roseus (Pinus sylvestris), Lactarius acris (Fagus sylvatica),* and *Tricholoma sciodes (Fagus sylvatica).* The other three are unidentified and denominated *Fagirhiza arachnoidea, Fagirhiza globulifera,* and *Piceirhiza bicolorata* respectively. Up till now 74 plates have been delivered in this series, that eventually will comprise 200–300 plates.

T.E. Brandrud, H. Lindström, H. Marklund, J. Melot & S. Muskos. *Cortinarius, Flora Photographica. Vol. 2.* (Cortinarius HB Svamp Konsult, Matfors, Sweden. 1992). Pp. 40, 60 col. pls., in ring binder. Price: approximately DM 120 excl. postage.

This is the second volume of the English version of this flora, presenting colour photographs and descriptions of another 60 taxa of *Cortinarius* in Europe. The text booklet provided offers an appendix with a systematic arrangement of the plates, explanations of terms and abbreviations, addenda and corrigenda on vol. 1, references to supplementary descriptions, nomenclatoral discussions and typification, Latin diagnoses and new combinations, author abbreviations, and references. The coloured photographs are of the same good quality as in the first volume of this series, that will be continued.

O. Constantinescu. *An annotated list of Peronospora names.* (Thunbergia 15, Botanical Museum, Uppsala). Pp. 110, 1 text-fig. Price: SEK 110 excl. postage.

This compilation lists information on 787 names of taxa referred to *Peronospora,* of which 551 epithets are valid and legitimate. For each taxon the author, bibliographical citation, host(s), and original specimen(s) are indicated. The nomenclatoral status is revised and 36 taxa are lectotypified. For most of the taxa the location of the original specimen(s) was checked. Comment on taxonomy are added. In some cases, particularly for species of economic importance, the generally accepted conspecifity is indicated. 113 names are excluded from *Peronospora.*

This compilation is very useful both for taxonomists and phytopathologists.

G. Gulden, K. Höiland, K. Bendiksen, T.B. Brandrud, B.S. Voss, H.B. Jenssen, and D. Laber. *Macromycetes and air pollution. Mycocoenological studies in three oligotrophic spruce forests in Europe.* (Bibliotheca mycologica 143, J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin, Stuttgart. 1992). Pp. 81, 31 text-figs., 22 tables. Price: DM 50.-.

The mycoflora of oligotrophic forests of *Picea abies* was examined at three different localities in Central Norway, Southern Norway, and South-west Germany. These forest stands were considered to be comparable with regard to climate, bedrock, soil, and phytosociological composition. The northernmost station has little atmospheric pollution, whereas the other two stations are exposed to air-pollution in varying degrees. Great differences were observed in the mycoflora between the three stations, both in number of macromycete species, diversity, and production, with clear trends in higher performance at the northern, least polluted station. The ectomycorrhizal species and terricolous saprophytes were more divers, abundant and productive in the north, with about twice the number of species and fruit-bodies, than in the German locality. The higher number of lignicolous species observed in the Norwegian localities were probably due to a difference in forest management between Norway and Germany. Attention has been paid to the adequacy of the methods applied for this research. The short period of investigation (3 years), and the impact of weather conditions in that period, made it impossible to obtain statistically significant results.

Various means of mycological assessment of forest decline are discussed. Recording of quantitative parameters and of genus and species composition is considered useful in early detection of forest decline. The need for more detailed studies on autecology in both natural, undisturbed and polluted ecosystems and standardisation of methods is acknowledged.

G. Guzmán & L. Guzmán-Dávalos. *A checklist of Lepiotaceous Fungi.* (Koelz Scientific Books, 1992). Pp. 216. Price: US $ 69.95 excl. postage.

The *Lepiotaceae* as defined by the authors, comprise three tribus: *Lepioteae,* with 6 genera (incl. *Lepiota* and *Cystolepiota*); tribus *Leucocoprineae,* with 8 genera (incl. *Chlorophyllum, Leucocoprinus, Leucoagaricus,* and *Sericeomyces*), and tribus *Cystodermateae* (*Cystoderma, Phaeolepiota, Pseudopaeospora,* and *Squamanita*). The checklist presents all the names of species, varieties and forms known to the authors, listed in alphabetical order. Each entry contains the name with author(s) name(s), without reference to the place where it was published. Sometimes synonyms are added, also without reference. The authors admit that they did not consult original literature in many cases. For the so-called 'accepted' species the world distribution is given, as well as a list of references (author and date), in chronological, not alphabetical order. The literature references can be traced in an extensive bibliography.

The present checklist is of limited use, which is also hampered by the incomplete references that are presented in unlogical order.

L. Hansen & H. Knudsen (Eds.). *Nordic Macromycetes. Vol. 2. Polyporales, Boletales, Agaricales. Russulales.* (Nordsvamp, Copenhagen). Pp. 474, 1020 figs. Price: Dkr 375.- plus postage.

This long awaited book is the first of two volumes on Nordic macromycetes to be published. The main part of the present volume is a treatment of four orders of agaric, bolets and polypores; the last one taken in a very restricted sense (*Polyporus* s.str., *Pleurotus, Phyllotopsis, Lentinus,* and *Faerberia*). The other groups of macrofungi will be published in volume 1, to be expected in the near future.

The framework of this flora closely resembles that of the well-known "Die Röhrlinge und Blätterpilze" by M. Moser, as descriptive notes on macroscopy and microscopy of the species are incorporated in the keys. Distribution data for the Nordic countries are rather precisely given.

Probably because of the long period of preparation and the great number of authors (31) there is a certain disproportion in respect of the manner in which the genera are treated, e.g. in *Boletus, Lactarius,* and *Russula* all species known from the Nordic countries, in *Mycena* about 90%, in *Hebeloma* and *Coprinus* about 60%.

The book is very well edited and printed. Indices to the vernacular generic names used in the different Nordic countries are added. The more than 1000 figures illustrating single microscopic features are brought together on 23 pages at the end of the book, together with 12 pages of references and an index of 33 pages.

G. Monti, M. Marchetii, L. Gorreri & P. Franchi. *Funghi e cenosi di aree bruciate.* (Ed. Pacini, Pisa.) Pp. 149, 45 col. photographs, 40 text-figs., 3 tables. Price: Lit. 25.000 excl. postage.

This publication gives a very interesting survey of the developments in the mycoflora of two forests near Pisa, Italy, after forest fires. These typical mediterranean forests, mainly consisting of *Pinus pinaster, Pinus pinea,* and *Quercus ilex,* with additional *Phil-*

lyrea angustifolia, P. latifolia, Erica arborea, E. scoparia, Juniperus oxycedrus, and *Tamarix africana,* were burnt in august 1989. The mycoflora was investigated in two years following the fire. The recorded fungi are listed in alphabetical order with information on the first date of observation. The most interesting 40 species are described in full detail, with very good coloured photographs and line-drawings of microscopical characters. The book, written in Italian, offers a very interesting survey or the ecology and taxonomy of fire-place fungi.

A.F.M. Reijnders & J.A. Stalpers. *The development of the hymenophoral trama in the aphyllophorales and the agaricales. Studies in Mycology 34.* (Centraal Bureau voor Schimmelcultures, Baarn.) Pp. 109, incl. 21 black-and-white tables. Price: Hfl. 45.-.

The authors studied the structure of the hymenophoral trama of many species of freshly collected Aphyllophorales and Agaricales with both SEM and light microscopy. Although this character generally is considered of great importance in the classifications of Agaricales, it has not been studied systematically in related Aphyllophorales. The results of the present study fill a gap, and help to solve a number of problems, and provide much new information. Five types of trama have been recognized: the trametoid type, the cantharelloid type, the boletoid type, the agaricoid type (with the coprinoid, russuloid and plutoid subtype), and the amanitoid type. Much attention has been paid to the relationships between the types. The authors made the following taxonomic conclusions based on these studies.

- The genera *Lentinellus* and *Bondarzewia* have a trametoid trama, and are in this respect related to Aphyllophorales rather than Agaricales.
- The genera *Lentinellus, Panus,* and *Pleurotus* cannot be distinguished on account of their hymenophoral trama, which shows a transition between the trametoid and the agaricoid type. This is especially true for *Panellus,* in which two groups (subgenera) can be distinguished with either typical trametoid, or agaricoid trama.
- *Hygrophoropsis* and *Omphalotus* fit in the Paxillaceae according to their trama, despite the cantharelloid hymenophoral trama. In *Gomphidius* transitions from boletoid to cantharelloid type are also found.
- In *Ripartites* the trama is agaricoid, which shows that it is not related to *Paxillus.*
- The hymenophoral trama of *Coprinus* deviates from the agaricoid type by the lack of development in the mediostratum.
- Within the Russulaceae there is a big difference between *Russula,* with a rather uniform type of trama, and *Lactarius* with a more complicated type than generally recognized.

The publication offers clear descriptions and photographs of the structures studied, interesting discussions, and is indispensable for all interested in the morphology and taxonomy of Agaricales and Aphyllophorales. It offers essential and often new material for a better definition of genera and higher taxa, and the relationships between them.

T. Schumacher & K.M. Jenssen. *Discomycetes from the Dovre mountains, Central South Norway. Arctic and Alpine Fungi – 4.* (Soppkonselenten A/S, Lyngveien 3, N-1430 As, Norway. 1992) Pp. 66, 25 col. pls., 2 black-and-white Pls. and 25 text-figs. Price: NOK 200.-.

In this fourth fascicle of a series on arctic and alpine fungi 21 species of Pezizales and 4 species of Leotiales from the Grimsdalen-valley and the surrounding mountains, in the Dovre area in Central South Norway are described and depicted. Of each species a very good colour photogaph and an anatomical section of the fruit body are presented. The two black-and-white plates show nice SEM-graphs of the ascospores of 13 species. The species included are very rare and characteristic of the nordic alpine habitats. Of most of them this is the first published illustration. Some of the species are new and formally published by the first author elsewhere.

Sneh, B., L. Burpee & A. Ogoshi. *Identification of Rhizoctonia species.* (APS Press, American Mycological Society, 3340 Pilot Knob Rd., St. Paul, MN 55121-2097, USA.) Pp. 133. Price: US$ 27 (USA), $ 34 (elsewhere), incl. postage.

This publication gives an introduction to the taxonomy, identification, anastomosis groups and techniques required to study these organisms. Keys are given to *Rhizoctonia* species and their teleomorphs, based on cultural and cytomorphological characters. All known anastomosis groups of *Rhizoctonia* are fully described, both of binucleate and multinucleate strains. One chapter is dedicated to *Rhizoctonia* spp. associated with orchids, a biological interesting group of mycorrhizal fungi. An extensive list of references concludes this book that is very useful to all taxonomists and plant-pathologists working with this group of fungi.

J.D. Zhao & X.Q. Zhang. *The Polypores of China.* (Bibliotheca mycologica 145, J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung, Berlin, Stuttgart. 1992). Pp. 524, 318 text-figs. Price: DM 190.-.

The present monograph included the poroid species usually ranged in the Polyporaceae, Hymenochaetaceae, and some poroid representatives of other families, except the Ganodermataceae and Fistulinaceae. A short introduction offers information on history and taxonomic status, economic importance, morphology, and ecology and distribution. The taxonomic part starts with a key to the families and genera. The genera are treated in alphabetical order. The generic treatments are all build up in the same way. A concise nomenclature is followed by a generic description and sometimes short remarks on status, generic limits, etc. Key to the species are given, followed by extensive descriptions of each species, often with short remarks on differences with other species, affinities etc. Numerous line-drawings give good and clear pictures of diagnostic microscopical details. An appendix lists the Polypores recorded from Taiwan. The work is concluded with a list of references and an index on scientific names. This very comprehensive monograph gives a thorough survey of the polypores in China and is indispensable for all interested in this group of macrofungi.