# REVIEWS

E. J. H. CORNER, *A monograph of Thelephora (Basidiomycetes)*. *In* Beih. Nova Hedwigia **27**: 110 pp., 52 figs., 6 plates. 1968. Price DM 40,—.

Referring to the author's own words (A monograph of Cantharelloid fungi, 1966: 2) one is perfectly justified in qualifying the present book as "another need ... fulfilled."

It is a rare accomplishment for a botanist, after having spent a full life in the tropics and occupying himself there with a variety of subjects, to offer the mycological world his third monograph. The author is to be congratulated on the completion of this work.

Fifty-one species have been treated—not counting the species incertae—, nineteen of which appear to be new, not seventeen as stated on p. 2.

The chapter "Form of Fruit-body" makes illuminating reading; it has been written by a mycologist who from his wide experience as a field-botanist and his intimate knowledge as a morphologist tries to reconstruct the evolutionary trend in *Thelephora*.

Morphology plays an equally important part in the chapter in which the difference between the thelephoroid papilla and the hydnoid spine is explained.

Incited by Malençon's paper on spore development in Thelephoraceae, Corner grouped some of his spore drawings according to the series he recognizes. The result, however, does not seem entirely convincing as, although some differences are apparent, similarities in the shapes of spores belonging to different series are also manifest.

Some of the descriptions are very unequal in length, compare those of *T. crustacea* and *T. ramarioides*, and of *T. arbuscula* and *T. magnifica*.

The way the collections are cited is not uniform, as for instance in *T. fuscella* and *T. gelatinoidea*, while in at least ten species collections are not mentioned at all.

Why such casualness? The author citation of *T. fuscella* should read (Ces.) Lloyd, not Lloyd; *Thelephora palmata* var. *diffusa* (Fr.) Bourd. & Galz., not Bourd. & Galz.; *Thelephora spiculosa* (Fr.) Fr., not Fr.

*Thelephora zeylanica* is a new name, not a new species.

The author regards *Hydnum nauseo-foetidum* Teng as a synonym of *Thelephora gelatinoidea*, but is he quite sure it is a *Thelephora*?

The basionym which served for Lloyd's recombination *Thelephora fuscella* is *T. multipartita* var. (not forma) *fuscella* Cesati. This variety was published in 1879 ["finita stampare il di 18 agosto 1879"], not 1878. It does not bear the number 43. Could it be that the symbol 3 has any relation with the serial number of Cesati's paper? It is number 3. Unfortunately variety *fuscella* is a nomen nudum, for, unlike varieties *soluta* and *isarioides* published on the same page, it lacks a description.

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*Mushroom Science VII.* Proceedings of the Second Scientific Symposium and the Seventh International Congress on Mushroom Science. Hamburg. 1968 (Centre for Agricultural Publishing and Documentation, Wageningen, 1969). Pp. 614, numerous text-figures and tables, 14 × 21.6 cm, sewn. Price *f* 50.—.

In general set-up, scope, style, and finish the present volume is identical to its predecessor. The quality of the paper used seems to be even better.

Fifty-eight papers are included, of which, to accentuate just a few, the following are of eminent importance for the mushroom grower and the taxonomist alike. M. J. Cross & L. Jacobs (*Some observations on the biology of spores of Verticillium malthousei*, pp. 239–244); D. M. Huffman (*Cytology of Collybia maculata var. scorzonera*, pp. 579–583); L. R. Kneebone (*Strain selection, development and maintenance*, pp. 531–541); R. von Sengbusch & Gerda Fritsche (*Neuester Stand der züchterischen Arbeiten an Stamm 59c*, pp. 507–513); H. O. Schwantes (*Wirkung unterschiedlicher Stickstoffkonzentrationen und -verbindungen auf Wachstum und Fruchtkörperbildung von Pilzen*, pp. 257–272); Charlotte Thielke (*Die Substruktur der Zellen im Fruchtkörper von Psalliota bispora*, pp. 23–30).

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M. J. LARSEN, *Tomentelloid fungi of North America. In* Techn. Publ. St. Univ. Coll. For., Syracuse No. 93: 157 + (i) pp. 1 (text) pl., 52 figs. 1960. Price $ 2.00.

Students of the Thelephoraceae (in the modern sense) may congratulate themselves with the recent publication of three important studies on the tomentellas and on *Thelephora*, two related groups that at present cannot be satisfactorily separated from each other except by artificial definitions. The tomentellas of North America (almost exclusively of subboreal and temperate North America) were the subject of the above-mentioned thesis by Larsen; those of the British Isles were reviewed in a paper by E. M. Wakefield (*in* Trans. Br. Mycol. Soc. **53**: 161—206). The third study I have in mind is by E. J. H. Corner, "A monograph of *Thelephora* (Basidiomycetes)", reviewed above. Among the principal characters used in both groups for describing the species are the hyphae and the spores. The problem of building up an adequate spore terminology has been differently approached by Corner and Larsen. There is still need here for unification and improvement. As to Larsen's spore terminology, more will be mentioned about it below.

Through the work of Bourdot & Galzin, Litschauer, Svrček, Christiansen, and Wakefield the number of European species of the tomentelloid fungi has been raised to a number that is perhaps slightly in excess of that described by Larsen (viz. 51). After Burt's treatment of "*Hypochnus*" (a very artificial genus, but mainly consisting of tomentellas) little has been done towards a better knowledge of the North American species, until the publication of Larsen's thesis which stands out as a notable achievement. Little is known about the tomentellas outside North America and western and central Europe.

Larsen distributes the species over *Pseudotomentella* Svrček (6), *Kneiffiella* P. Karst. (1), and *Tomentella* Pat. (43). The last genus includes *Caldesiella* Sacc. and, again, *Tomentellastrum* Svrček. The genus *Pseudotomentella* has been emended to contain species with basidia usually "sphaeropedunculate" when immature and spores with warts usually "dichotomously branched"; clamp-connections may be frequent in some of the species. By the revised definition the group of *Tomentella echinospora* has become displaced, a situation for which no remedy is as yet offered. As stated, *Tomentellastrum* (introduced for a group of clampless species) is retained in *Tomentella* which, under the present conditions, seems to be the most sensible solution, although it is one of the groups that in part has been placed also in *Thelephora*. The genus *Kneiffiella* received an improved definition that suggests perhaps a closer relationship with *Pseudotomentella* rather than with *Tomentella*. However, its only species has been given a new name, *K. fibrosa* (B. & C.) M. J. Lars.

No attempt was made to subdivide *Tomentella* as was done by Bourdot & Galzin. Neither did Wakefield. The lack of a well-founded subdivisional classification will be difficult to remedy; this makes the search for, and the insertion of, a species rather a cumbersome matter. This situation would suggest rather that the genus is a "homogeneous" one; yet I would not be surprised if eventually *Tomentella* would appear to consist of several "reduced" groups of different derivation within the Thelephoraceae.

Each species is fully described and accompanied by sets of figures which in most cases occupy a full page. These figures are extremely well done and merit a special word of admiration. The descriptions are fuller than is usual in connection with this group; each is followed by a short discussion of the differential characters. Following this detailed treatment of the species admitted is a chapter on "Excluded species" and another one on "Extra limital species"; the latter is of particular interest to European mycologists. All in all this monograph is indispensable to students of the tomentelloid fungi. Let us hope that when it is replaced, this will be by a monograph of all the species of the world by the same author.

If some objections have to be raised it will be in connection for instance with the terminology, in the first place of the spores. The introduction states, "Five basic types of spores are recognized here, following the definitions in Webster's Third International Dictionary (1963). They are aculeate, echinulate, aculeolate, warty, and verrucose (Plate 1, a-e)." No verbal definitions are given; apparently one is supposed to look these up in the dictionary mentioned. This is more than may be expected from the average user, especially if he is working outside the U.S.A. Why this neglect of that classic work by B. D. Jackson, "A glossary of botanic terms", or of that other one, W. T. Stearn's, "Botanical Latin"? The effect is that 'warty' and 'verrucose', which are used as having different meaning, in reality express precisely the same idea. The choice of the other three terms is also hardly fortunate.

'Sphaeropedunculate' for the young basidia of *Pseudotomentella* invokes an exaggeration of the average actual shape, usually a more or less broadly clavate body with a slender stalk.

As to the references, the abbreviations of titles of serials and books are often inconsistent and not free from errors. Why "känn." (without a capital); why the use of the subtitle "Ann. Mycol.... (series II)" for "Sydowia"? "Wein" should be "Wien"; and so on.

There are also a few nomenclatural questions that in my opinion have not been properly solved. Some of these may be discussed on another occasion in preliminary notes preceding a check list of the European resupinate Hymenomycetes by the reviewer.

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