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BOOK REVIEW

Malaysian boletes. The format of this book* is modelled on earlier publications for which the author is very well-known although there are a few minor differences which go to improve the text. Although the emphasis is on tropical boletes there is much of value to those working on temperate boletes and to those interested in the development of the hymenomycete fruit-body. The text is supported by excellent figures and reproductions of field paintings executed in the skill which one now associates with Professor Corner. However, what is a new innovation is the inclusion of some photographs (coloured and black and white). The book, like its predecessors, is a major contribution to our knowledge of higher fungi and is particularly helpful to the tropical botanist who has no modern texts when dealing with the bewildering number of unfamiliar taxa he meets: the introduction hints at these problems.

The book commences with a brief introduction to the classification of the boletes and continues by tracing the history and relationship of sixteen genera and a discussion about whether the author accepts them or not. The taxonomic significance of various characters formally used in defining genera and species are dealt with in turn—tramal structure of the tubes, the lacunose-reticulate stem, surface of the pileus and morphology of the spores; included in this section are the identities of boletes referred to only by number by Corner in his earlier papers on spores. Two artificial but useful units conclude this chapter, i.e. those species with dark brown or ferruginous spores and those with a strong smell. After this, Corner deals with the evolution of boletes, illustrated by an interlacing table, and then the growth of the fruit-body in selected Malaysian species. The latter studies are very useful and are supported by graphical information. The next sixteen pages are devoted to

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artificial keys to identify Malaysian boletes; keys are also found sporadically throughout the text where he deals also with some individual genera or complex groups of species.

The greatest bulk of the book, the next 193 pages, deals in his characteristic way with the Malaysian species which he classifies in the genera *Gyroporus*, *Strobilomyces*, *Heimiella* and *Boletus*. The acceptance of such a small number of genera is at variance with Singer whose ideas are generally repeated without question in many modern works. Such a difference of opinion may be confusing to some but only goes to show that the information we have at hand on the larger fungi is rather sparse and can be interpreted in more than one way, and is based moreover almost exclusively on north temperate groups.

Thus *Gyroporus* (3 sp. incl. 1 nov. sp. and our familiar European *G. castaneus*) is considered isolated because of its stipe structure, *Strobilomyces* (7 sp. incl. 4 nov. sp.) is recognised by the true universal veil and dark ornamented spores and *Heimiella* is considered a relict genus (5 sp. incl. 2 nov. sp. and 1 comb. nov.). *Boletus* covers all the other boletes within eight subgenera. Subgenus *Austroboletus* (new subgenus, 5 sp. incl. 2 comb. nov., 3 nov. sp. and 4 nov. var. in *B. dictyotus*) covers *Porphyrellus* sect. *Graciles* Singer, a move with which I entirely agree; the rest of *Porphyrellus* finds itself in synonymy with an enlarged subgenus *Tylopilus*, *Boletellus* s. Singer is a mixed group of unrelated taxa and Professor Corner's restriction of *Boletellus* to those fungi related to the type-species *B. ananus* as well as considering the group only worthy of subgeneric rank is refreshing (7 species incl. 3 nov. sp.). Subgenus *Leccinum* is poorly represented (2 nov. sp.) and subgenus *Suillus* only by the familiar *B. granulatus* of Europe (?) but *Pinus* spp. its usual mycorrhizal hosts, are not to be found in the neighbourhood! The treatment of subgenus *Pulveroboletus* (2 sp. incl. 1 nov. sp.) is endorsed by the reviewer, all those species not agreeing with the type *B. ravenelii* being removed to other subgenera. *Tylopilus* is also very different to that of Singer's concept but the reasons for such a move are discussed in detail; eight alliances are tabulated and described—and this necessarily introduces the interesting and until now problematic character of 'setae' in the boletes. In his expanded concept of *Tylopilus* (as a subgenus), Corner describes 40 species, including 27 nov. sp., 2 nom. nov. 1 comb. nov. & 3 nov. var., and discusses those species with a viscid pileus and selected exceptional species of uncertain affinity. Subgenera *Boletus* and *Xerocomus* cover all the other Malaysian boletes discussed, and Corner again emphasises that only a single character really separates the two subgenera (27 species incl. 14 nov. sp. 1 nov. subsp. and 2 nov. var., and 46 species incl. 43 nov. sp. and 2 nov. var. respectively). No keys are given to the members of these two subgenera, only a synopsis of the constituent members; one has to return to the earlier part of the book to key the species down.

I welcome Professor Corner's conservative approach but suggest that the fundamental and often very great subhymenial development on the stipe of species of *Leccinum* should be given more emphasis at generic level; I would personally also support *Suillus* and *Pulveroboletus* as independent genera. On the other hand I doubt whether e.g. *Xerocomus* and sg. *Boletus* will stand the test of time, as perhaps is hinted at by the author. These are, however, trivialities and although similar differences of opinion can be extended into the species discussions (e.g. morphological differences between *B. ravenelii* from N America and the suggested synonym *B. icterinus*) such divisions are personal preference. Corner has not allowed himself to be restricted by the rigid systems of bolete classification already proposed; with his vast field knowledge it is refreshing to see that the material now available allows Corner to reinterpret the data based on European and North American boletes. His references to mycorrhizal relationships are intriguing.

The book ends with descriptions of three Javan boletes of uncertain position, and a short list of references and Malaysian species of boleti, and a useful list of specific names (Index) of boleti mentioned in the text with authors and dates of publication.

It is very pleasing to see that the book includes reference to types and to herbarium collections, a criticism which has been levelled at Corner's earlier works. Although it may be said that some of his statements are premature and possibly, rather startling, if not sensational, they are not as premature as those who happily make evolutionary and taxonomic decisions without a knowledge of the tropical flora. Whilst many of us are only on nodding terms with the tropical taxa, Corner has had first hand 'interviews'; it is very exciting to have these in print and we must thank the Singapore Government for allowing us to share Corner's results. There are a few minor errors and inconsistencies in use of roman type etc. but these do not detract from the volume.

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