

BOOK REVIEW

***Rosellinia* – a World Monograph.** L. E. Petrini. *Bibliotheca Mycologica*, vol. 205. Stuttgart: J. Cramer in der Gebrüder Borntraeger Verlagsbuchhandlung. 2013. 410 pp., 72 figures. ISBN 978 3 443 59107 6, ISSN 0067 8066. 119 € (paperback).
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This is a classic monograph of the old school not often seen these days. It is, furthermore, a world monograph, with the intention of studying all known names associated with *Rosellinia* and also extensive collections from around the world. It is classic also in the sense that modern DNA-based data have not been included in the work – readers are not even given a small paragraph discussing what is known – but, under some species, hints are given to molecular phylogenetic arguments. The author (LP) has, with the help of Orlando Petrini, done a lot of useful statistical analyses on the biometrics. The author has studied the genus for almost 30 years, so it is undoubtedly a work of love, and I must also confess that these rather obscure black fungi have fascinated me for as long. They have some very nice if not always easy-to-see microscopic features, but at least the overall spore shape and the highly staining ascus plugs can always be admired in suitably ripe material. One of the challenges in this genus is that over-mature material abounds in fungaria, making many specimens very difficult to identify based on their key features.

LP states the genus to be a well-defined one, but then goes on to discuss the variation, and in a sense, concludes that this statement cannot be upheld, and that methods other than those used here would have to be applied to reach a verdict on how to define *Rosellinia s.s.*, and whether or not some further satellite genera should be accepted. LP already accepts *Astrocystis s.l.*, *Amphirosellinia* and *Entoleuca*. There is a key to those genera likely to be confused with *Rosellinia*. I should have liked to see some further notes on these genera, not least *Entoleuca*, which by molecular characters appears to be nested within *Rosellinia s.s.* Petrini (Bahl *et al.*, 2005). The index is ordered by genus – I should have preferred it by epithet.

Much debate concerns the presence or absence of the so-called ‘subiculum’ that I personally would term a false subiculum because the ascomata are not seated on the subiculum, as they should be according to the definition, but are surrounded by it, with the stromatal base situated directly on the substrate, at least initially. Later the ‘subiculum’ can be completely absent. Some species of *Nemania* can produce rosellinoid stromata, and one could argue that the split between some groups accepted here within *Rosellinia* and those in *Nemania* would appear to be artificial.

The statistical analyses are used to divide the species into six artificial groups, and the main bulk of the monograph takes you through the accepted species in alphabetical order within these groups. Before these, a synoptical key to all taxa is given, as are standard, dichotomous keys to taxa within the six groups. I find the synoptical key

rather coarse, making it difficult to narrow the choices down. I should have preferred more spore intervals. One interval includes taxa with spores 10–20 µm long. I also find the dichotomous keys not always fully satisfactory. *Rosellinia subiculata*, with spore average 11×6 µm, only comes out in the key with ascospores 12–16 µm long.

All in all, 142 taxa at species level are accepted, of which 39 are new – about 20 of these have epithets referring to past or present mycologists, including one for the mentor Jack D. Rogers, who wrote the preface to the monograph. I was surprised to learn that new taxa (*Rosellinia boukokoae*, p. 111) are proposed in the absence of asci with stainable plugs. There are no attempts at linking the species or types to a climatic zone so, for example, *Rosellinia canzacotoana*, typified from Ecuador and in the monograph reported from Yunnan (China), is accepted with two specimens studied. Both places have extremely variable climatic zones, so it would be useful to know the zones from which the specimens originated. As far as I can tell, there has been no attempt to separate type measurements in the descriptions from those obtained from other cited collections, but the plates, mostly of high quality, clearly indicate what is illustrated. The monograph includes as appendices some very useful tabulations of hosts and host ranges of individual species. These tabulations also clearly show the geographical bias that most monographs suffer from – France and Switzerland are among the top-ranking countries in the world when the known *Rosellinia* species are counted whereas, for example, Denmark has fewer species than accepted in Nordic macromycetes (Hansen & Knudsen, 2000). I have some reservations concerning the spelling of type localities and other sites. No checks seem to have been carried out. I am also surprised to see ‘India Occidentalis Gallica/French West Indies’, with no further geographical information given, as the type locality of material collected in 2004.

From a British perspective, it should be noted that LP replaces *Rosellinia britannica* L.E.Petrini with the older *R. marcucciana* Ces.

I have run a few tests of the keys with specimens collected in Ecuador. The first keyed out to *Rosellinia thelena* with the new host *Espeletia*, and the continent is also new. The next one is very similar to *Rosellinia markhamiae* from Kenya and to *R. megalosperma* from the Philippines, but the spores and not least the ascus plugs are even bigger. It would appear to be undescribed. Yet another specimen keys between *Rosellinia pepo* and *R. gigantea* and may also represent a new taxon. A further collection has characters approaching those of *Rosellinia beccariana*. A rather big-spored member of group 2.2 (*mammaeformis* group) has a white pseudosubiculum but does not key out to anything convincing, the nearest being two taxa based on Indian material said to have cream-coloured, evanescent ‘subiculae’. The last in the test would seem to match *Rosellinia carrollii*, previously known only from the Costa Rican type. The Ecuadorean material widens the geographical range and some of the characters, and is associated with a black pseudosubiculum (the type has none).

It is surprising to see how wide the geographical ranges are of some of the taxa, and one wonders whether this can be upheld in future, more molecular-based studies, or maybe these taxa have been introduced by humans?

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