

Book Review

Hirooka Y., Rossman A. Y., Samuels G.J., Lechat C., Chaverri P. (2012) *A monograph of Allantonectria, Nectria, and Pleonectria (Nectriaceae, Hypocreales, Ascomycota) and their pycnidial, sporodochial, and synnematos anamorphs* – Studies in Mycology 71: 210 pp.

In spring the long-wanted monograph of *Nectria* sensu Amy Rossman was published. It is a thorough teamwork study based on two main approaches: (1) detailed morphological examination of most of the type species, teleomorphs and anamorphs, as well as a huge amount of additional specimens from all over the world and (2) on a multigene phylogeny. Six loci were sequenced (act, ITS, LSU, rpb1, tef1 and tub). The phylogenetic placement of many species could be cleared except the species group around *N. balansae*. Genus delimitation could be redefined. *Allantonectria* and *Pleonectria* are resurrected.

Nectria ss. Rossman appeared to be paraphyletic and is now splitted in monophyletic entities: 26 species of *Pleonectria* (with ascoconidia produced by ascospores in asci, perithecial walls having bright yellow scurf, and immersed or superficial pycnidial anamorphs, ascospores septate or muriform), the monotypic genus *Allantonectria* (very small, aseptate ascospores, and trichoderma-like conidiophores and occurring on monocotyledonous plants), and the core genus *Nectria* with 29 species (perithecial walls not covered with bright yellow scurf, anamorphs sporodichial, synnematos or pycnidia, ascospores septate or muriform).

In the introduction the history of *Nectria*-like fungi is presented. Materials and methods contain the usual presentation of methods beginning with fieldwork, herbaria, isolation technique, culture deposition, methods of morphological study, growth experiments, statistical analysis, molecular techniques and phylogenetic analysis, including a table on isolates and accessions used in the phylogenetic analyses. In the Results first the phylogenetic analyses are presented including a cladogram showing the resulting clades in combination with morphology, geography and hosts. Second, the accepted genera are morphologically characterised. The Discussion deals with general and evolutionary aspects of generic and species concepts, morphological characters, ecology and host specificity and geographical distribution. Here again, a table allows a quick overview of morphology, geography and hosts. Economic and ecological importance is briefly touched. A trial to explain contradictions between phenotypic and genotypic characters and the future of research on *Nectria*-like fungi follows. The main part is dedicated to descriptions and illustrations of these genera and species. Thirteen new species and 16 new combinations are included. Each species is presented with accepted name, basionym, synonymy, character descriptions of teleomorph, anamorph(s) in nature (when known) and in culture, habitat, distribution, holotype (several lectotypes and epitypes are selected), specimens examined and notes. The species are amply illustrated by colour plates of teleo/anamorphs on natural substrata and in culture, microscopical characters of all morphs and fine drawings. Keys – dichotomous and synoptic – for identification are presented for the 56 species. An Appendix with herbarium and isolate numbers used in illustrations and References conclude the study.

I found only a few typos (algorithmisms, quer- icola, instead of querc- icola – making the etymology of *N. quercicola* on p. 157 incomprehensible). It is a pity that some of the macrophotographs have a blue tint (e.g. Fig. 78 B, 143 C, D), and that quite a lot of the micrographs in higher magnification are out of focus (e.g. 83 K, 111 D, 127 J, N, 138 N, O, 148

N, O). A short remark: *Nectria eustromatica* has black stromata sometimes with an orange-brown hue, but never dark red ones (as stated on p. 75).

Despite these criticisms it is good to have this monograph at hand. Undoubtedly, a lot of work has been done to be able to present this volume of the Studies in Mycology. Together with other recent studies on *Nectria*-like fungi (e.g. Chaverri et al. 2011: Studies in Mycology 68, Rossman et al. 1999: Studies in Mycology 42) it will certainly stimulate field mycologists to increasingly deal with this difficult group of fungi.

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Taxonomic novelties in *Sydowia* 64 (1) 2012:

Taxon	Page number
<i>Guepiniopsis fulva</i> , sp. nov.	21
<i>Athelopsis tenuicystidiata</i> , sp. nov.	31
<i>Hypoxyton hubeiense</i> , sp. nov.	104
<i>Hypoxyton yunnanense</i> , sp. nov.	104
<i>Arthrobotrys koreensis</i> , sp. nov.	140
<i>Junghuhnia taiwaniana</i> , sp. nov.	140
<i>Junghuhnia tropica</i> , sp. nov.	142

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