

Book review

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Taxonomy, Phylogeny, and Ecology of Bark-Inhabiting and Tree-Pathogenic Fungi in the *Cryphonectriaceae*

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This monograph is composed of a Preface, ten scientific chapters, a Bibliography, three Appendices, a Fungal names index and a Host name index.

The first chapter focuses on the history of the investigation of fungi from the *Cryphonectriaceae* family. All fungal teleomorphic and anamorphic genera included in this family are included here. Not only the well-known anamorphic genera *Endothiella* and *Chrysosporthe* are mentioned, but also the genera *Ursicolama* and *Aurapex*, whose teleomorphic states are unknown and which were classified into the family based on DNA sequences.

The second chapter deals with ecology and diseases of plants caused by *Cryphonectriaceae* members. The fungi belonging to this group are saprotrophs, facultative parasites or virulent pathogens, which can be the cause of several tree diseases. Most of these diseases occur in the tropic and subtropical zones. Only one of them (chestnut blight) has been recorded in Europe. The chestnut blight caused by *Cryphonectria parasitica* is the best known disease caused by fungi from the *Cryphonectriaceae*. *Chrysosporthe cubensis* (\equiv *Cryphonectria cubensis*) causes "Chrysosporthe canker of *Eucalyptus*" on many continents. Other species from this family cause "Canker of *Eucalyptus* caused by *Holocryphia eucalypti*", "Canker caused by *Microthia havanensis*", "Die-back caused by *Aurapex penicillata*", "Cryphonectria gyrosa stem canker", "Cankers on *Eucalyptus* caused by *Cryphonectria* spp.", "Celoporthe canker", "Canker of terminalia caused by *Rostraureum tropicale*", "Root cankers on *Eleaocarpus*" and "Endothia canker or Pin oak blight".

In the chapter on methodology all views concerning the identification of these fungi are included. It comprises observation in the field, isolation from plants, cultivation in vitro, microscopic examination of herbarium specimens, methodology of DNA analyses including the use of RFLP and comparison of DNA sequences.

The chapter concerning identification of genera and species gives important information on morphological and molecular-genetic characteristic. It includes tables and figures depicting morphological features.

The identification of these fungi on the species level is complicated and it is necessary to assess either features of teleomorph and anamorph stages or use molecular-genetic methods. The book provides a dichotomous and a synoptic key to the genera.

The largest part of the book provides a characterisation of each species belonging to this family. It contains information on taxonomy, nomenclature, description of specimens of the teleomorphic and anamorphic stages, cultural characteristics and distribution (incl. information about the host). The characterisations of all the genera (except genus *Microthia*) include dichotomous keys to identify species and morphological characteristics distinguishing species.

Four species were excluded from the *Cryphonectriaceae* based on their morphology. The book gives a very useful Host–fungus list.

The book provides plenty of information on taxonomy and ecology of the members of the *Cryphonectriaceae* family. A similar book has not been published. I think it will be very useful to mycologists and phytopathologists especially those working in tropic and subtropical countries.

David Novotný