

## Book Review

### Foliicolous lichens and their lichenicolous fungi in Macaronesia and Atlantic Europe

By Pieter PG van den Boom. 2021. *Bibliotheca Lichenologica* 111. Pp 197, 101 figures. Page size 14 × 21cm, weight 410 g. ISBN 978-3-443-58090-2. Paperback. Price: €89.00.

Foliicolous lichens have traditionally fascinated many lichenologists. A century ago, they were thought to be almost restricted to tropical regions. Subsequently, localities with some foliicolous lichens were reported from various places in Macaronesia and Atlantic Europe, the area covered by this book. This century, foliicolous lichens rapidly became a common occurrence, no doubt due to climate change, which made Western Europe warmer and wetter; this view is strangely not shared by the author, who cites the dispersed distribution of one species as a major argument against this explanation.

A good feature of the present book is that it not only treats the species that were traditionally thought to be obligately foliicolous, often even against better judgement in cases such as *Byssoloma subdiscordans*, but simply all species that were found or reported on leaves or needles, and species such as *Candelaria concolor*, *Physcia adscendens* and *Xanthoria parietina*.

The present book gives an overview of the pertinent records in published papers but is mainly based on the personal experience of the author. Many species are reported to occur as foliicolous for the first time; there are many new reports for species from individual countries, and eight species are newly described in the genera *Arthonia*, *Bacidina*, *Bryostigma*, *Fellhanera*, *Micarea*, *Nectriopsis* and *Opegrapha*. The author is to be congratulated for the many interesting reports. The listing of specimens can be rather long (3 pages for *Fellhanera bouteillei*), and the size and price of the book might have been reduced by about 25% if the specimens were given in a database as supplementary material, as is now common for such data.

Keys to all 150 reported species are presented, and for all species the nomenclator, a description and a citation of specimens seen is given, with previous published foliicolous reports. Almost 100 species are illustrated, usually with a habitus image, but also with a micrograph of ascospores for the new species. Unfortunately, the images are somewhat below standard: most of them are distinctly too yellow, and many are too far off or insufficiently sharp, so that it is difficult to see thallus details. This can make it difficult to judge the new species. For instance,

the new *Arthonia* is described as lichenized but the image suggests a non-lichenized lichenicolous fungus; the apothecia are said to have no algae below them, so they are not on a thallus. The new *Bryostigma* is said to differ from *B. muscigenum* mainly in the thallus, but the illustrations show no difference. Also, the new *Fellhanera* species are all said to be similar to another *Fellhanera*, but to differ in subtle thallus characters. Follicolous lichens are relatively easy to photograph because they are flat, and quality colour pictures are available online for most published species. The type specimens of the new species are cited to be in Berlin; maybe in the future, better quality images can be made there and put online, facilitating the recognition of these species.

The most recent literature (from 2017 onwards) was not consulted which means, for example, that the recent name changes of *Bryostigma muscigenum* to *B. lapidicola* and *Bacidina sulphurella* to *B. modesta* were not taken into account, and that all *Strigulaceae* are still under *Strigula*. In addition, the coverage of macrolichen species is not very complete, and species such as *Evernia prunastri*, *Punctelia jeckeri* and *Ramalina farinacea*, which in recent times are not rare on needles in the area, are not treated. All of the macrolichens (consistently called 'macro lichens' in the book) found on leaves have a very wide ecological amplitude anyway (the list of species known to grow on plastic is quite similar), and they could also have been left out.

New lichen books become rarer every year, and just a small number of issues of the *Bibliotheca Lichenologica* series have appeared this century. This is mostly a result of the shifting interest of universities, who want fast publication of the smallest possible amount of information that is publishable, preferably in high-ranking journals. The books that are still published however, often have beautiful colour illustrations. I would recommend this book to all who are interested in Atlantic microlichens; the descriptions and keys are useful, and the new species can be predicted to turn up elsewhere, and at least partly on other substrata. For example, this book includes all species known from *Vaccinium* stems.

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