

Book review

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VOLKMAR WIRTH, MARKUS HAUCK & MATTHIAS SCHULTZ (2013). *Die Flechten Deutschlands*. Eugen Ulmer KG, Stuttgart, 2 Band, 1244 pp.

Volkmar Wirth, together with George Clauzade, Brian Coppins, Peter James, Claude Roux, Rolf Santesson and the late Josef Poelt, belongs to the “giants” of the 20th and 21st Century lichenology. These giants are true field lichenologists who know almost every lichen species in the field, small to large, crustose to fruticose. Volkmar Wirth’s “Flechtenflora”, in pocket format, first published in 1980 was a major event for European lichenology as was the second edition published in 1995, quickly followed in the same year by the publication of the two volumes of the “Die Flechten von Baden-Württemberg”. These volumes had the same floristic content as the 1995 pocket edition but were completed with 996 distribution maps, introductions to each genus and above all with 555 colour pictures: 44% of the 1262 taxa were beautifully photographed and this was a revolution in lichenology. So that eighteen years later every lichenologist was waiting for a third edition of the “Flechtenflora”. Now it is here! A fantastic work extended this time to cover the whole of Germany: Die Flechten Deutschlands Band 1 & 2. One thousand two hundred and forty-four pages, 359 genera, 2027 species, 8 subspecies, 15 varieties and 2 forms, with 800 colour pictures: a Masterpiece! It should be stressed that it is a collaborative work between three authors, with V. Wirth remaining the main contributor: Cyanolichens (except the genus *Collema*) were worked out by the world specialist of the group, M. Schultz, and around 60 genera (among them *Acarospora*, *Aspicilia* and *Lecanora*) were treated by M. Hauck. In addition, a fairly high number of lichenologists, specialists of different genera, contributed to give to this work a very high taxonomic standard.

This flora is published at a time when lichen systematics is undergoing profound changes, especially at the generic level: large, artificial genera are being split into smaller, more natural units. Consequently, such a flora becomes quickly outdated.

For instance the authors could not take into consideration the recent generic reorganization of both *Collema* and *Leptogium* (OTÁLORA & AL. 2013). But the most important task of this flora is to help lichenologists to identify species and this is very completely fulfilled. Keys are well-organized and contain the most important diagnostic characters. The precise ecology and distribution of each species is given, together with phytosociological indications, when known. An interesting novelty is the indication of the type locality, when the type specimen was collected in Germany. Furthermore, a little more than two-thirds of the species are illustrated with a high quality colour photograph, which is exceptional.

A question of interest for Swiss, French, Italian or Austrian lichenologists is how well this flora covers the lichen alpine flora, since Germany contains only a very small portion of the alpine zone. To test this, the genus *Lecidea* s. str. (mostly alpine, saxicolous species of high altitude) should be a good indicator. For instance, of the 22 species mentioned by Hertel (1995) for Switzerland, 8 species (36%) are not treated by WIRTH & al., 6 species (29%), 13 species (48%) and 15 species (52%) for France, Italy and Austria respectively.

Concerning the pictures, the choice of the taxa might be questioned. For instance, some 60 species illustrated in 1995 are not illustrated in the new edition. For example, *Hypotrachyna revoluta* has been replaced by *H. afrorevoluta* in the new edition. This is good if one has both editions but it would have been nice to have these two critical taxa represented side by side in the new edition. For many species the picture from 1995 is better than the one from 2013 (*Lecanora intumescens*, *Melanelixia subargentifera*, *Parmotrema perlatum*, *Physconia enteroxantha*, *Ramalina farinacea*, etc.). Inversely, there are species for which the 2013 picture is better than the 1995 picture (*Bactrospora dryina*, *Chaenotheca cinerea*, *Gallowayella fulva*, *Opegrapha gyrocarpa*, *Parmelina pastillifera*, etc.). A few species (ca. 15) have two photographs, for instance *Bacidia rubella*, *Cladonia macroceras* (twice showing the

same morphology whereas the species is very variable), *Ramalina pollinaria* (almost the same morphotype side by side!), etc. Here I would have preferred more species to have been photographed instead. The picture of *Thelomma ocellatum* is in both editions of bad quality. In this last example we can see that the 1995 pictures are better contrasted than the 2013 pictures (this is the same for *Protothelenella corrossa* for instance).

Nevertheless, this is a first class flora, a “must-have” for every lichenologist and naturalist interested in lichens. The authors, and especially Volkmar Wirth, should be warmly thanked for providing such a masterful work for the community of lichenologists.

References

- HERTEL, H. (1995). Schlüssel für die Arten der Flechtenfamilie Lecideaceae in Europa. *Bibl. Lichenol.* 58: 137-180.
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