

Book review

HUGONNOT V. & CHAVOUTIER J. L. 2021. **Les Bryophytes de France. Volume I – Anthocérotes et Hépatiques.** – Biotope Editions. Hardcover, 651 pp., > 1800 color photographs, in French, ISBN 978-2-36662-258-4, 65.– €.

Identification literature for European mosses can already be found in great abundance and excellent quality. The Scandinavian “Nationalnyckeln” of mosses, published in four volumes so far, have set new standards for regional bryophyte floras, and the magnificent volumes “Mosses of Europe” by Michael LÜTH leave hardly anything to be desired. For the liverworts, however, there have been no comparable books so far.

All the greater is the merit of the authors Vincent HUGONNOT and Jeannette Laica CHAVOUTIER to present a modern liverwort flora for a large European country. Modern in this case means: a rich illustration based on modern color macro- and microphotography including digital techniques such as focus stacking. Illustrations are also included in the keys, so that most key steps are illustrated by one or two pictures. Each species is described and illustrated in detail.

The content of the book is structured like a classic identification flora: Introduction to the subject and the taxonomic group, a chapter on the ecology and habitat connection of the French hornworts and liverworts, and a glossary of the most important technical terms are part of the book, while the largest part is of course taken up by identification keys and species descriptions. In terms of systematics, it is also the first identification guide in Europe that deals with the many new genera and new combinations on genus level within the liverworts, which are predominantly established on a

molecular basis. As a result, many conventional combinations of characters employed for the delimitation of genera have dissolved, and the authors have done some pioneering work here to key out all those new genera. The species keys within the genera, however, often follow the familiar paths.

A look at the genus *Riccia* reveals that the liverworts in Europe are still far from being clarified and that there is still a lot of work to be done. Although, or perhaps because, the authors are renowned *Riccia* experts, they have not keyed out some taxa known from French literature because their delimitation and independence seemed doubtful, for instance *Riccia subbifurca* (a taxon even described from France), *R. papillosa*, *R. ligula* or *R. gougetiana*.

France is a large country, from the North Sea to the Mediterranean and from the Atlantic coast to the highest peaks of the Alps. The flora contains two thirds of the liverworts of Europe including Macaronesia. Thus, the book is a valuable contribution to the knowledge of the European liverworts, also beyond the borders of France. The book is highly recommended to all those interested in liverworts, and the excellent illustrations and favorable price will contribute to a quick spread in the scientific community. The French language is no longer an obstacle even for non-Francophone readers in the age of electronic translations with smartphones.

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