

Book Reviews

Wigginton, M.J. (ed.) E.W. Jones Liverwort and Hornwort Flora of West Africa. Meise (National Botanic Garden). 443 pp. Hardcover. Price: 42.— Euro plus 12.55.— postage.

The gaps in the knowledge of tropical bryology are being filled. With only few exceptions (such as the moss flora of Buitenzorg by Fleischer), the study of tropical mosses and liverworts was confined to the description of new species and the publication of local floras. During the last years, the number of tropical bryophyte floras covering larger areas is increasing. This is the only way to get students in the tropics interested in bryology. No student would start to get interested in a group of organisms, for which he has no literature, no access. Therefore bryophyte floras are crucial. The bryophyte floras consist, however, mostly of moss floras. The hepatic flora of the tropics is much less represented. So far, the liverwort flora of South Africa by Sigfrid Arnell published in 1963 was the only hepatic flora for Africa. Now we have a first hepatic flora for a tropical part of Africa, thanks to the efforts of the Tropical Bryology Working Group of the British Bryological Society. In contrast to all other bryological societies, who deal with „internal affairs“ of their home country, the BBS has developed enormous activities for the promotion of the tropical bryology, especially in tropical Africa. Besides of checklists, of publication series on Malawi and Uganda, planned moss floras of Uganda and a generic flora for whole tropical Africa, this publication is a first book. It is based on the posthumous works of Eustace Jones. Jones has worked for a long time as a forest botanist in West Africa and by that way collected liverworts. He published his bryological results in 70 contributions. At the end of his life, he started to prepare some kind of synopsis, which he could unfortunately not finish. He left a manuscript, which Martin Wigginton has completed and prepared for publication. The book provides in a classical way keys, descriptions and illustrations for all 297 hepatics in an area reaching from Mauretania to Niger and from Senegal to Cameroon. Interestingly, half of the number of species consists of Lejeuneaceae. Even if most bryologists will have no hepatics to identify from West Africa, it is a nice book to flick through. Thanks to the National Botanic Garden of Belgium, the book could be printed and even for a fair price (the reprint of the liverwort catalogue of Katanga and Zambia has only less than half the number of pages but costs more!).

(Jan-Peter Frahm)

De Sloover, J.L. 2003. Illustrations de mousses africains. Scripta Botanica Belgica 28: 233 pp. Price: 21 Euro plus postage.

In the Seventieths, Jean Louis de Sloover published a series of papers in the Bulletin du Jardin Botanique National de Belgique entitled „Note de bryologie africaine“. These publications gave descriptions, list of records of de Sloovers collections in Central Africa (Rwanda, Zaire and Burundi) and comments for 84 mosses from Central Africa. Due to the lack of any flora for that region, this series of papers was a useful help for the identification of at least part of the moss flora. The present book includes now illustrations of 188 species, more than double as much, however without

descriptions. It is therefore an iconotheque of the more common species of mosses from Central Africa. The quality of the illustrations is remarkable in several respects. They were prepared by artists (in fact two artists, who fortunately prepared the drawings in the same style), the plates consist of partially more than 20 single illustrations of all details, plants in dry and wet state, always several leaves, several capsules in different stages of development, single peristome teeth, and very accurate cell drawing. The nomenclature was adapted to the newest checklist of Sub-Saharan Africa, and the arrangement is in systematic order. The price is moderate. (*Jan-Peter Frahm*)

Grolle, R., Meister, K. 2004. The Liverworts in Baltic and Bitterfeld Amber. Weissdorn Verlag, Jena, 91 pp. incl. 23 colour plates. Price Euro 19.50. Available from Weissdorn-Verlag, Wöllnitzer Str. 53, 07749 Jena, weissdorn-verlag@t-online.de.

It seems to be strange to introduce a book on fossil hepatics in „Tropical Bryology“. We have, however, to keep in mind that the bryophyte flora of the Eocene consisted of subtropical elements, of which part of the species are still found today or their closest relatives, and the fossil species described in this book are the ancestral species of species found at present mainly in SE-Asia.

It is about 20 years ago, that I joined a meeting of the East European Bryologists in Prague, where Riclef Grolle gave a lecture on newly detected hepatics in Baltic amber. There was hardly any lecture which had fascinated me so much. Grolle showed slides of hepatics, which were 45 million years old but looked as if they were just imbedded in artificial resin. They gave a vivid impression of the hepatic flora of the amber forest, which covered present Scandinavia at that time. However, the fossil bryophytes in amber were largely ignored. There were just three larger publications from 1845, 1853 and 1907, which covered bryophytes in Baltic amber, until Grolle started to take up this topic again. And the even larger quantity of fossil mosses in amber were treated by nobody, that I decided to get involved in this field.

Within the years, Grolle published numerous publications in hepatics in Baltic and Saxon amber, which he summarized with the help of Kai Meister towards the end of the life. The book was almost completed when Grolle passed away.

The book includes all hepatics from Baltic and Saxon amber (which is called Bitterfeld amber here because of the only locality. The latter is supposedly a secondary deposit of Baltic amber and both belong to the same fossil flora). First of all, it gives an impression of the liverwort flora of the „amber forest“, which existed 45 million years ago in present Scandinavia. Secondly, the book provides hard data for the reconstruction of phylogeny. This is usually done by cladistic or molecular analyses, which result in hypothetical phylogenetic trees, because nobody knows whether the phylogeny went exactly the way how the algorithms postulated.

There are very few compilations of fossil bryophyte floras (such as by Jovet-Ast or Oosetndorp), but this book is set up in the same style as a recent flora: it starts with a main key, followed by descriptions of the single species, completed by colour photographs and drawings of every species in the appendix. The photographs are excellent, because Grolle polished the gem stones to flat slides, which was not always welcome to the owner. The fossil specimens were mostly provided by German amateur amber collectors (and not by scientific collections or museums), who delivered their liverworts always for a „scientific check“ to Grolle, understood this as a scientific duty of their hobby and rendered outstanding services to bryology by this way.

In total, 26 species are described by this way, completed by an evaluation according to the frequency of species, origin from Baltic and Saxon amber, presence of male and female plants etc. The discussion gives an interpretation of the liverworts of the „amber forest“, which consisted of

oaks and pinaes. All species belong to present genera, of which a large deal is extinct at present in Europe and only present in tropical mountains and subtropical regions, especially in SE-Asia. Only three species are still existing today: *Ptilidium pulcherrimum*, *Notoscyphus lutescens* and *Nippolejeunea subalpina*. Grolle had, however, a very narrow species concept. For example, the recently described *Plagiochila groehnii* shall be differentiated from the extant *P. sciophila* (one of the most polymorphous species of the genus) by somewhat coarser teeth and somewhat smaller laminal cells. The first character is surely not suitable to distinguish between species and the latter is definitely not correct as compared with the measurements indicated in SE-Asian floras. Therefore the number of extant species may in fact be higher (as it is in the mosses in Baltic and Saxon amber).

This book is worth to be purchased not only for specialists interested in fossil bryophytes but for every bryologists who likes to make a travel through the time, 45 mio years back and to enjoy the spectacular fossils. Sincere thanks are due also to the publisher, who printed this valuable book, which probably would never had a chance to be printed today by a large publishing house.
(*Jan-Peter Frahm*)

