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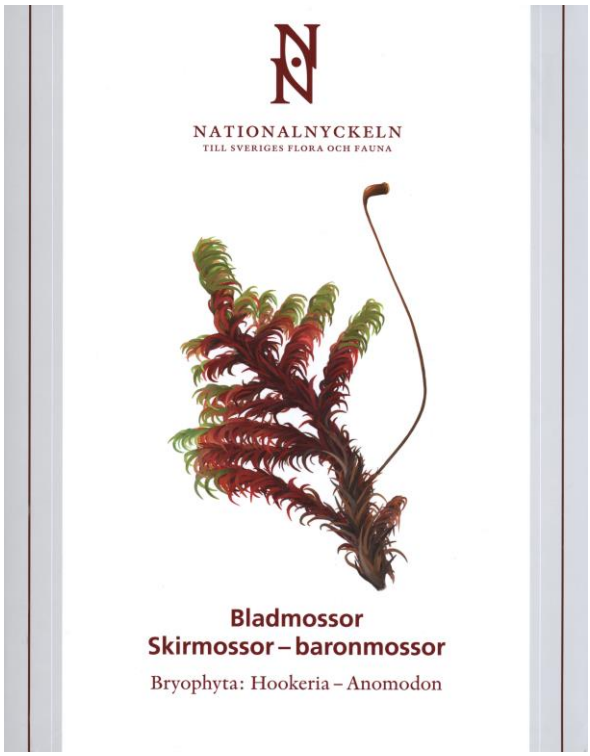
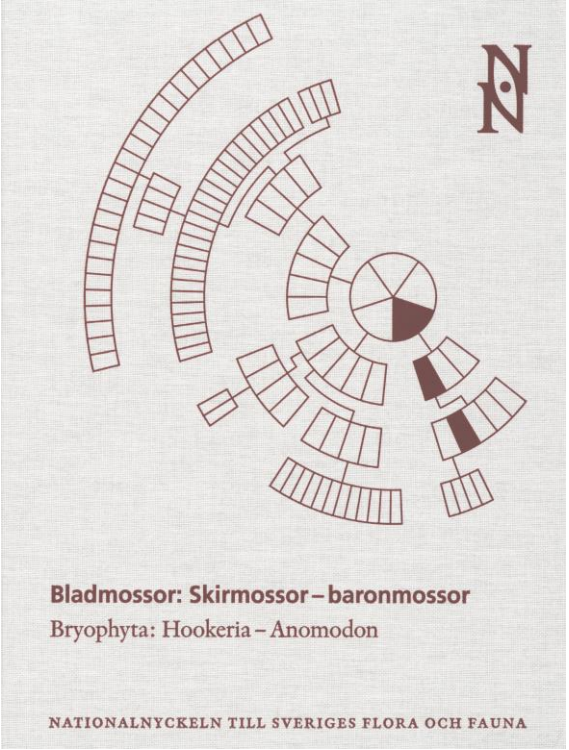
New Books

Hedenäs Lars, Hallingbäck Tomas (2014): ***Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Skirmossor – baronmossor. Bryophyta:*** **Hookeria – Anomodon.** ArtDatabanken, Sveriges landbruksuniversitet (SLU), Uppsala, Sweden, 366 pp., over 1090 colourful photographs and paintings in water-colours, 262 distribution maps, hardcover with jacket, size 28.8 × 22.7 cm. ISBN 978-91-88506-50-4 (the whole series, cloth binding); ISBN 978-91-88506-52-8 (the whole series, leather binding); ISBN 978-91-88506-84-9 (the present volume, cloth binding); ISBN 978-91-88506-85-6 (the present volume, leather binding). Price: 43€.





With the issuance of the volume dealing with butterflies in 2005, the Encyclopedia of the Swedish Flora and Fauna (*Nationalnyckeln till Sveriges flora och fauna*) was initiated. In this immense and exceptionally ambitious scientific project, which had hitherto been unprecedented in the world, it was intended to publish a series of guides to the determination of species of all groups of plants, animals and fungi in the Nordic countries, with special reference to Sweden. Contributions were to include descriptions, distribution maps and illustrations presented as photographs, paintings in water-colours and line drawings. All volumes of this monumental series were to be published exclusively in Swedish, except for the keys to determination which were to be translated into English.

This unique encyclopedia of natural sciences was initiated on a commission from the Swedish Parliament within the programme of the Swedish Taxonomy Initiative (STI), which was overseen by the Swedish Species Information Centre (*ArtDatabanken*) in the Swedish University of Agricultural Sciences in Uppsala, under the honorary auspices of the Crown Princess Victoria, the heiress to the Swedish throne. The project was intended to last for 20–25 years and in that period were to be published over one hundred volumes which were to include, as it was initially assessed, about 60,000 species of all living organisms occurring in Sweden, over half of which constituted insects alone.

Unfortunately, writing on this publication in the past tense is fully justified. In 2005–2014, that is in the middle of the period provided for the duration of this project, a mere 17 volumes were published, comprising altogether about 2740 species. The present volume dealing with mosses, which was released in August 2014, is sadly the last one in the series planned to include very many volumes. No fewer than 14 published volumes dealt with animals, mostly invertebrates (12 volumes) and the honour of the botanical sciences was successfully defended only by the work on mosses. The first volume devoted to these plants was published in 2006 (Hallingbäck et al., 2006), the second one appeared two years later (Hallingbäck et al., 2008) and the third and final volume, dealing with pleurocarpous mosses, appeared in 2014.

Since time immemorial, bryophytes were bestowed a special interest in the Nordic countries and they were considered in the Floras by the great Charles Linné himself, who recognised for the first time many new species of these plants. Nordic literature is very rich in various Floras, catalogues and handbooks of bryophytes and in that respect only German-language literature may compete with it. It is therefore not strange that one of the first volumes of the Encyclopedia of the Swedish Flora and Fauna was devoted to mosses and, additionally, this is the only group of plants which was treated in this series and, moreover, the only group of organisms of this taxonomic rank that was fully completed. At the present time there are several eminent bryologists active under the leadership of Lars Hedenäs, a scientific worker in the Natural History Museum in Stockholm and a specialist in pleurocarpous mosses. He is the main author of the present volume, for which he completed all families except for the Hookeriaceae and Neckeraceae which were contributed by Tomas Hallingbäck of Uppsala.

The third volume deals with 22 families of pleurocarpous mosses which represent two orders, Hookeriales and Hypnales, to which belong 220 species classified in 85 genera. One additional species is not considered in this treatment, namely *Haplocladium microphyllum* (Hedw.) Müll.Hal., which was collected in 1862 in the vicinity of Stockholm but it has not been rediscovered since. The richest family is the Brachytheciaceae, consisting of 44 species belonging to 15 genera. Only two species less, but the same number of genera, comprises the family Amblystegiaceae, although it should be stressed that 18 species and seven genera traditionally positioned in this family have recently been segregated into the separate, yet closely related, family Calliergonaceae. The next two positions in the ranking of familial species diversity are occupied by the Hypnaceae (25 species and seven genera) and Plagiotheciaceae (24 species and seven genera). At the opposite extreme are eight families conisting of a single species each. Of the remaining six families only the Hylocomiaceae, Neckeraceae and Leskeaceae contain, respectively, nine, ten and eleven species placed correspondingly in five, three and four genera.

The classification of pleurocarpous mosses adopted in this treatment follows currently accepted concepts which were presented by the principal author in his numerous publications. Surprisingly, the author accepted the broadly conceived genus *Hygrohypnum* Lindb. which, as shown by results of his own molecular studies, is a heterogeneous taxon that deserves spliting into some segregates. Acceptance of the traditional concept makes *Hygrohypnum* the largest pleurocarpous moss genus in Sweden consisitng of 14 species, larger from the genus *Hypnum* Hedw. by one species.

Some taxonomic concepts accepted in this work do not seem to be accurate. For example, *Drepanocladus longifolius* (Mitt.) Paris is a South American species which was erroneously considered to be conspecific with the mainly Holarctic *D. capillifolius* (Warnst.) Warnst. Some inaccuracies may be found in the characterisation of the global geographical distribution of some species, for instance no information is given on the occurrence of *Thamnobryum neckeroides* (Hook.) E.Lawton in Poland, *Entodon concinnus* (De Not.) Paris and *Hygrohypnum luridum* (Hedw.) Jenn. in New Guinea, *Neckera complanata* (Hedw.) Huebener and *Calliergonella cuspidata* (Hedw.) Loeske in tropical Africa, *Pseudotaxiphyllum elegans* (Hedw.) Z.Iwats. in South America and *Sciurohypnum glaciale* (Schimp.) Ignatov & Huttunen in the Antarctic.

The layout and presentation of data is almost exactly the same as in the two earlier bryophyte volumes. The only difference is in the distribution maps which present only the ranges of the species in Sweden, whilst in the former volumes they covered all Nordic countries. The book exhibits the highest scientific and editorial standard, and beautiful colourful drawings and photographs of each species showings habits and various morphological and anatomical details make the book exceptionally attractive. Although it is entirely written in Swedish, the illustrated keys to genera and species have parallel versions in English and therefore the book can be easily used by students of mosses in other countries. For bryogeographers this treatment is very useful and indispensable because it contains the distribution maps of all pleurocarpous moss species in Sweden. One may be entirely sure that this three-volume treatment of the Swedish mosses, despite the linguistic barrier, will be useful for bryologists and will take up a prominent position in the European bryological literature.

References

Hallingbäck T., Lönnell N., Weibull H., Hedenäs L. & Knorring P. von. (2006): Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Sköldmossor – blåmossor. Bryophyta: *Buxbaumia – Leucobryum*. ArtDatabanken, Sveriges landbruksuniversitet (SLU), Uppsala, 416 pp.

Hallingbäck T., Lönnell N. & Weibull H. (2008): Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Kompaktmossor – kapmossor. Bryophyta: *Anoectangium – Orthodontium.* ArtDatabanken, Sveriges landbruksuniversitet (SLU), Uppsala, 504 pp.

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