

Anmeldelse

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Flora Nordica, Vol. 1. Lycopodiaceae - Polygonaceae. 344 pp. Editor-in-Chief: Bengt Jonsell. Executive editor: Thomas Karlsson. Editorial staff: Magdalena Agestam, Nette Bygren, Ulla-Maj Hultgård, Eva Persson. The accounts have been written by 31 contributors, and the original illustrations by 14 illustrators. Published by The Bergius Foundation, The Royal Swedish Academy of Sciences, Stockholm, and distributed through Koeltz Scientific Books, P.O. Box 1360, Koenigstein, Germany. (Fax: (+49) 6174 937240; e-mail: koeltz@t-online.de). DM 110,- plus postage. For members of a number of botanical societies in the countries covered by the flora, e.g. Svenska Botaniska Föreningen, there will be special arrangements.

This new flora covers the Nordic countries, which are Denmark, Finland, Iceland, Norway and Sweden, within their current political boundaries. The Faroes Islands (part of the Danish Kingdom, but with home rule), and the Norwegian Arctic Islands (Svalbard, the Bear Island (Bjørnøya) and Jan Mayen) are also covered by the Flora. However, Greenland, which has exactly the same status in the Danish Kingdom as the Faroes Islands, has been excluded for the reason that it is covered by the Flora of North America.

The title of this Flora may be surprising to many botanists outside the Flora area. The use of the terms "Norden" or "nordisk" (Nordic) in the sense of the countries included in this Flora only began with the romantic and nationalistic movements in the first half of the 19th Century, movements also referred to as "Scandinaviavism". Before that time, the term "nordisk" (Nordic) most often referred to the conditions of Norway. The Latinized forms "nordicus" or "nordica" has a very short linguistic history, if it is not invented for this Flora. Latin dictionaries of Renaissance or post-Renaissance, botanical or geographical Latin do not have the word, and it is not mentioned in William T. Stearn's famous handbook "Botanical latin." Earlier, the most frequently used Latin adjective for these countries has been "septentrionalis", as in the well known work by Olaus Magnus, "Historia de gentibus septentrionalibus" (History of the Nordic people) from the 16th Century. However, one has to admit that the title Flora Nordica sounds more euphonious than Flora

of the Nordic Countries, or any other possible construction in Latin or English that the reviewer can think of.

In spite of its Latin title, the new flora is written in English! This should perhaps not surprise, for so are the *Flora Europaea*, the *Flora Zambeziaca*, and a number of other floras with Latin titles. The use of English has the double advantage that it is widely spoken and widely understood, but is not a native language of any ethnic group within the Flora area (and all are therefore on equal footing with regard to understanding the text), and the Flora is intelligible to the international community of botanists. However, vernacular names in current use in Danish, Faroese, Finnish, Icelandic, Norwegian (but only in what the Flora refers to as "Standard Norwegian") and Swedish are recorded for the species which have such names.

This ambitious project was agreed upon in 1987 by a representative assembly of Nordic botanists. The work was intended as a broadly collaborative project with participation of botanists from all the countries covered by the Flora. Apart from the people mentioned above, there is an editorial committee with 6 members, and there are 9 national advisors. The Bergius Foundation, a venerable institution of 18th Century origin under the Royal Swedish Academy of Sciences, took on the responsibility of for the organisation and financial management of the project, and is also sponsoring the project. About 50 specialists from all Nordic countries, most of them actively working at botanical museums or universities, are currently involved in researching and writing the Flora. Manuscripts are being reviewed by a large number of botanists throughout the Flora area, professionals as well as amateurs. Now, 13 years after the decision to initiate the project, we have the first volume. It covers c. 620 taxa, including c. 300 species, c. 150 subspecies and c. 170 hybrids. The total number of species expected to be covered by the entire Flora is 4,600. It is stated in the introduction that a long-term schedule for the work has not yet been decided upon, but it seems from a simple calculation that approximately 15 volumes of the same size as the one now published will be needed to cover all the species in the same depth as in the first volume. It is not yet possible to guess about the speed with which these volumes will appear, but even with a volume every year or every second, it seems probable that it will take between 15 and 30 years to finish publication.

The order of families is said closely to follow other recent floras of one or several Nordic countries, such as Krok & Almquist, *Svensk Flora*, but what is more interesting for international users, the sequence and delimitation of the families in Vol. 1 is also close to that of *Flora Europaea*. Vol. 1 includes ferns and lycopods, conifers and the angiosperm families

Salicaceae - Polygonaceae. Vol. 2 will contain the angiosperm families Chenopodiaceae - Papaveraceae. Final editing of volume 2 is said to be under way; the rest of the volumes are partly in manuscript form and partly only outlined. Publication will proceed as the parts are completed.

There is no key to families in the published volume. One apparently assumes that users of this flora either know the family straight away, or that they have a family key at hand. The descriptions of families vary from none at all, which is the case for most families, to fairly detailed descriptions of for example the family Polygonaceae. According to the introduction, family descriptions are included when important features are to be pointed out and special terminology explained. From these criteria, it is not quite clear why rather homogenous families like Betulaceae, Corylaceae and Fagaceae have descriptions of 3-6 lines while the Urticaceae, with equally small flowers and unusual morphological features, have none. Generic descriptions and keys to species are included for genera represented by more than one species in the Flora area, and this criterion has been adhered to where there is a single indigenous species. However, the presence of one indigenous species, *Taxus baccata*, one cultivated species (*Taxus cuspidata*), and a rarely escaped hybrid (*Taxus ×media*) has released a generic description, but no key to species. Sometimes, the descriptions of genera are extended with sections on biology, where several species have comparable biological features.

Hybrids are treated more carefully and critically than in most other floras, and indeed the reviewer has not seen such a long sequence of assumed or established hybrids in *Salix* in any other work. The genus *Salix* demonstrates both the degree of collaboration and the complicated system of full and shortened treatments which are applied in this work. 36 species or taxa of assumed hybrid origin are given full treatment, but some in small print only. Of these, 9 species are divided into subspecies. 8 species, of which some of assumed hybrid origin, are recorded as rare casuals. For some species even cultivars, referred to as “clones”, are keyed out and described. C. 105 hybrids are recorded in small print. Seven different authors and two editors have been at work on these taxa, and the account of *Salix* covers fully 72 pages.

The nomenclature has been studied carefully and the results are presented in a clear way that does not take up too much space. Sometimes great care has been taken in designating lecto- or neotypes for old taxa described from the Flora area. This is for example the case with the typification of *Rumex acetosa* L. (1753) where the formal conservation of a neotype was necessary, a decision that made it possible to firmly fix the identity of the typical infraspecific taxa in this very variable species, which in the Flora area is represented by three subspecies and four varieties. In

other cases, the situation is left as it is when there is no apparent doubt about the application of an old name, as for example (p. 22) with *Equisetum palustre* L. or (p. 23) *E. hyemale* L. Reference is always made to the place of publication of the basionym for the accepted name, but references to changes of rank are not made. This will make it complicated to trace the places where a lot of infraspecific combinations have been published, as such taxa were not recorded in the Index Kewensis before 1971.

The descriptions of taxa take up from c. 8 to c. 35 lines. It is sometimes difficult to see the reasons for this variation in treatment. Presumably the length of the description should be correlated to the complexity of the morphology, but species with complicated male and female flowers are sometimes given rather short descriptions. So presumably attention has been given to how necessary a long description is for the exact recognition of a taxon, rather than the complexity of the plants themselves. Detailed information on chromosome counts is given where available, and these count relate to material from the countries covered by the Flora.

After the descriptions there are sections with the titles “Distribution”, “Biology”, “Variation”, and sometimes combinations of these. In cases, where infraspecific taxa are recognised, some of these items are allocated under the infraspecific taxa only, but the treatment is not consistent and depends on what has been relevant in the particular case. The sequence of these sections, when present, is not always the same either.

In the section “Distribution” the geographical distribution of taxa is indicated by abbreviations in the sequence Denmark (D), Norway (N), Sweden (S), Finland (F), the Faroes (Fa), Iceland (I) and the Arctic Islands of Jan Mayn (JM), Bear Island (BI) and Svalbard (Sb). The selection of geographical names used to indicate distributions in the Flora has apparently not been without complications. The Nordic countries have not been very well described in literature in English, and Anglicised Nordic place names may therefore appear exotic to both the people who live there and the English-speaking community outside. The geographical names of the countries are in English, while the names of the provinces or lower administrative units have not been Anglicised. The units below country varies. For Sweden, the major administrative units are the old “Landscapes”, some of which are known from the journeys which Linnaeus made in them (Dalarna, Västergötland, Skåna, Gotland, Öland). For mainland Norway, the major administrative units are largely the traditional “Fylker.” For Finland, the units are also derived from old administrative divisions, but there are two sets of geographical names for them, one set in Finnish, and – rather surprising – one set of names in Latin. The floristic units of Denmark are mainly the larger Danish

islands with names in Danish, and Jylland (Jutland) is divided into Nordjylland (Northern Jutland), Vestjylland (Western Jutland), Østjylland (Eastern Jutland), and Sønderjylland (Southern Jutland) according to borders with little administrative meaning. Iceland is similarly divided according to the directions of the compass. The English readers will from this system have a chance to see how different or similar the words for North/Northern, West/Western, East/Eastern and South/Southern are in the Nordic languages! One geographical name will probably surprise both residents in the Nordic countries and foreigners alike. This is the collective term "The Scandes" for the long chain of mountains from southern to northern Norway, with the eastern slopes in Sweden from Dalarna to Torne lappmark.. Traditionally, this very important mountain chain, which forms the water shed of the Scandinavian peninsula, has had no commonly used name in both Norway and Sweden. The section on distribution concludes with a few lines that indicate the total distribution of the taxon.

Unusual great care for a flora has been given to the section "Habitats", which includes notes on the ecological range, sometimes described independently for the individual countries or phytogeographical zones, where the taxon is widespread. The section "Biology" usually contain information on sexual breeding or vegetative reproduction, but also other biological information may be given here. The section "Variation" is usually descriptive, but may sometimes have character of arguments in favour of the taxonomic treatment chosen. This section is more detailed than in almost any other flora. The section "Similar taxa" is usually short and lists taxa with which the particular taxon may be confused.

There are distribution maps for all indigenous and naturalised taxa. The distribution is indicated with the use of 11 different symbols placed in the middle of the flora regions, indicating the general status of the taxon in that region. One of these symbols indicate uncertain occurrence. The remaining 10 categories are divided into 2 x 5 parallel symbols, one series indicate that the taxon is still present, the other that the taxon is now extinct or no longer present. The category "resident" indicates that the taxon has maintained itself for at least 10 years (annuals and biennials) or two successive generations, the opposite category is "ephemeral.". The category "old" indicates that the taxon arrived before the year 1700, the opposite category is "new". The category "native" indicates that the taxon arrived without intervention by man, the opposite category is "alien." The symbols occur in two different sizes, large, indicating 10 localities or more, or small, indicating less than 10 localities. The system takes a long time to check, since each taxon has to be verified by specialists in each of the Nordic countries. Moreover, it is complicated for the casual user of the

flora, and it takes a long time to be able to read the maps with ease even for the dedicated user. But once the system is grasped, it is able to convey a lot of information.

The factual information in the text appears to be carefully checked, and it is difficult for a reviewer to pinpoint shortcomings. The English language appears to have been carefully reviewed. However, one morphological and one linguistic detail could be commented upon. It is strange (p. 197) to read about a cupula or cupule used for what is normally considered part of the perianth in the fruits of the genus *Juglans* (Juglandaceae). The term cupula or cupule is not normally used for a perianth but is a structure enclosing the female cyme or (by reduction) a single flowers in the Fagaceae, and it is also used in the sense in the Flora (p. 210-214). Even modern accounts of the Juglandaceae, e.g. Families and Genera of Vascular Plants, vol. 2 (19) only mention the perianth theory for the outer shell of the fruit of *Juglans*. With regard to language, it is probably a lapsus when the distribution of *Juniperus communis* subsp. *nana* in the Faroes (p. 114) is indicated as "rare, often single scrubs only" instead of "often single shrubs only." Otherwise, the reviewer has found very few errors to complain about.

One of the most praiseworthy features of the *Flora Nordica* is the attention and space given to taxonomic comments and discussions. Particularly valuable are the comments in the sections entitled "Variation", "Taxonomy" or "Nomenclature" under selected taxa, where the reasons for particular solutions are presented, or – even more relevant – attempts are made to highlight subjects that need further study. The design, printing and binding of the volume is generally well done, and the text is easy to read. *Flora Nordica* has as its clearly stated goal to provide a summary of today's knowledge. This is an ambitious task, as that knowledge has been built up with much effort during 250 years, since the time of Linnaeus, but a good beginning has been made with Vol. 1. To sum up, *Flora Nordica* it is a very important work which will be used and consulted for many years to come, also as a catalogue of problems which should be considered in future research.

Ib Friis