

Reviews

Pacific Northwest Ferns and Their Allies

By Thomas M. C. Taylor. Illustrated by Katherine Jones. 1970. University of Toronto Press, Toronto 181. 248 pp. 97 figs. 97 maps. \$15.00.

Dr. Taylor's book on the ferns and fern allies of western North America from Oregon north to the Yukon Territory and Alaska will be welcomed by amateur and professional pteridologists both in the area and around the world. The pteridophyte flora of this area is not large — only 97 species are known to occur — but it is a group of plants which attracts much attention and hence certainly warrants a special treatment such as this.

Keys and descriptions to families, genera and species are provided. For each species there are additional notes on habitat, overall range and special comments which include known chromosome numbers. A dot map which depicts the distribution of each species within the area, follows the descriptive text for that species. Line drawings, which are with one exception by Katherine Jones, are adjacent to the related text. They are for the most part very well executed and will be most useful as an aid to identification; that of *Botrychium virginianum*, however, does leave much to be desired.

The treatment is essentially conservative, and is an attempt "to bring together in convenient form the critical judgements of experts who have written about the pteridophyte flora of the Northwest." The order followed is alphabetical throughout. Thus it is rather disconcerting to find the filmy fern family, Hymenophyllaceae, with its single genus *Mecodium*, sandwiched between the fern allies, Equisetaceae and Isoetaceae. For ease of reference, the "true ferns" are all treated as members of the family Polypodiaceae, although the author says, "he is well aware that modern pteridologists divide this large family into a number of smaller ones."

Limited synonymy is provided for each species, a most helpful feature when comparing earlier treatments of ferns of the region to the present one. A list of references to those earlier texts is also given; these references would however be more useful if they were correlated to the synonymy.

Addenda include a list of excluded species, a list of chromosome numbers with source references, lists of species grouped by distribution

patterns, a glossary of descriptive terms, literature cited, and an index to botanical names. The list of chromosome numbers is most useful, but would be easier to consult if it was in strict alphabetical order rather than in the order of the text. It should be noted too that the chromosome counts published in Volume II of the Queen Charlotte Island Flora by R. L. Taylor and G. A. Mulligan were somehow missed, even though Volume I with which it appeared simultaneously, is cited throughout the book.

The easily read type, organization of the text, together with the drawings and maps, all on glossy paper make up a most presentable book. The price of \$15.00 is perhaps however a little high.

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The Flora of Nova Scotia

By A. E. Roland and E. C. Smith. Part II. The Dicotyledons. Proc. N.S. Inst. Sci. 26, part 4: 277-743. 1969.

This reviewer had the privilege of examining Part I of this flora (Can. Field-Nat. 83: 290. 1969). Most of the comments made concerning Part I apply equally well to part II.

The treatment of the Dicotyledons, of course, constitutes the larger portion of the flora, and this is revealed in the greater thickness of the manual (nearly 2 cm., 466 pages versus 1 cm., 238 pages in Part I). Because of its weight and light binding it will be subject to the same progressive deterioration as the first edition, such as loss of cover and separation of the signatures. Now that both parts have appeared perhaps a hard-covered printing uniting the two parts is in order. I have heard that such is the intent of the authors.

Following the 1½ page introduction is a lengthy and very interesting, completely rewritten account of the physical characteristics of Nova Scotia, an historical account of early collectors with the location of their collections, an account of each of the various floristic elements and a short section on introduced plants and weeds. In Part I a tabulation of the number of species, varieties and forms was given up to the end of the monocots. No such tabulation appears in Part II. Out of curiosity

I counted the species only. There are 982 numbered species of dicots (514 species of ferns to monocots in Part I).

A nine-page indented mixed key to families and some genera follows. Each family and most genera are given brief descriptions. Species identification, as in Part I, leans heavily on the keys, on comments given under the species, and to some degree on geography where significant. Maps to the species include David Erskine's P.E.I. localities and a few are given for that portion of New Brunswick visible on the outline map. Illustrations are selected. For example, in the Corylaceae, taxonomic characters are shown for *Betula populifolia*, *B. papyrifera* and *B. allegheniensis*, for *Alnus rugosa* and *A. crispa*, for *Ostrya virginiana* and *Corylus cornuta*, but *Betula pendula*, *B. alba*, *B. cordifolia*, *B. occidentalis*, *B. pumila*, *B. glandulosa*, *B. Michauxii* and *Alnus serrulata* are not illustrated. On the whole, illustrations are more successfully reproduced than those in Part I and although not works of art, are simple and sufficient to portray taxonomic points to the reader.

The Flora of Nova Scotia is printed on high quality glossy paper. The type is clear and the bold-face capitals for genera and bold-face lower case for species is eye-catching. Common names are capitalized. A glossary is given at the end (p. 719) and entries are in bold-face, but to head the entries commencing with P, for example, with the letter P seems somewhat superfluous.

Following the glossary are 5 pages of references reduced only to the authors and journal entries (personally I prefer the titles as well). Then follows an index to families (caps), genera and species, but as the flora is published in the Proceedings, there then follows the volume Index of Authors. Although I found this distracting, it is perhaps fortunate that it is given because the full reference to Part I does not appear in Part II at all.

This flora suffers somewhat from conservatism. Many treatments by various specialists are cited (the list is anything but exhaustive) but the tendency has been to leave well enough alone. However, in spite of these short-comings, I am personally very pleased to see this edition completed. The identification of local species is always that much easier with the aid of a good area flora than with one covering half a continent.

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Biology of Coregonid Fishes

Edited By C. C. LINDSEY and C. S. WOODS.

The University of Manitoba Press. 1970 560 pp. Price \$8.00

The whitefishes are the most widely distributed and speciose group of freshwater fishes in Canada and it was, therefore, most fitting that the first international gathering of biologists especially interested in coregonid fishes should occur in Canada. The International Symposium on Biology of Coregonid Fishes was held at the University of Manitoba in Winnipeg, Manitoba, August 25 to 29, 1969. The volume under review is a direct result of that gathering since the majority of the papers presented at the symposium are included. (Only two authors requested that their papers be omitted.)

This is an excellent and long overdue text, but it rather defies a reviewer since it is composed of 29 distinct and separate papers, each reporting on one or more aspects of coregonid biology. North American coregonids are the subject matter of 13 papers, Eurasian coregonids are treated in 12, while evolution and genetics are considered in four papers.

Classified on the basis of subject matter, the papers may be assigned to the following categories: systematics (6), evolution and genetics (4), zoogeography and distribution (4), general biology (14), populations (3), spawning and fecundity (5). One paper reviews commercial aspects of coregonid fisheries in Poland.

It is, perhaps unfair to suggest that some papers are more significant contributions than others, but such disparity is inevitable. The comprehensive nature of the papers by the following will make these reports of special interest to students of coregonid fishes: Cavender—A comparison of coregonines and other salmonids with the earliest known teleost fishes; Svardson—Significance of introgression in coregonid evolution; Norden—Evolution and distribution of the genus *Prosopium*, (but the map on page 70 is incorrect for northern Ontario); Maitland—The origin and present distribution of *Coregonus* in the British Isles; Himberg—A systematic and zoogeographic study of some North European coregonids; Nilkolsky and Reshetnikov—Systematics of coregonid fishes in the USSR.

As one would expect from the title, the overriding emphasis is upon systematics, evolution, genetics, and distribution. Life history and be-



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