

ing. Further, a few specimens are mixed with other species and this could be confusing such as the *Cetraria cucullata* which has some prominent *Alectoria ochroleuca* mixed in. The specimens are from the Danish collection and most specimens look representative although a few specimens like the generally angular, *Cladina arbuscula*, appear too rounded.

Each lichen is described using terminology that is partially supplemented by a brief glossary but again this is not for the beginner. The specimens are generally well described but need comparison. For example, if I had trouble sorting *Umbilicaria arctica* from *U. hyperborea* in the field, these descriptions would not clarify the situation. Each description of a species is accompanied by a brief discussion of the range that it is found within Greenland and throughout the circumpolar area including Russia.

This is not an introduction to lichenology in the field and in that context it should be thought of as a companion to other texts such as Hale (1979), Thomson (1984), or other regional guides. *Greenland Lichens* is an exciting publication for sev-

eral reasons. This is an inexpensive (approximately \$35 CDN) little book (21 x 14 cm) with a plastic coating, superb photographs, and good descriptions of lichens which makes it feasible and very tempting to accompany you in the field. It has been written with considerable economy to make it that way and it will be excellent for the experienced field scientist in Greenland. There is nothing like it currently available in North America either. With these photographs and descriptions of the species, this is the book that will confirm or refute your original identification of a specimen. It is a gem for anyone who is planning to spend time anywhere in the arctic and it will cost less than 12¢ a photograph.

References

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Bromus L. of North America

By Leon E. Pavlick. 1995. Royal British Columbia Museum, Victoria, British Columbia. 160 pp.

The grasses placed in the genus *Bromus* are referred to as Bromes or Bromegrasses. Collectively they are ecologically and economically a very important part of the Canadian flora. The genus is distributed throughout Canada below the tree-line, both altitudinally and latitudinally. Smooth Brome (*B. inermis*) is a very important forage species introduced from Eurasia. Its aggressive growth habit, which makes it an excellent forage grass, is also causing problems as it invades and degrades native habitats. Among the half dozen weedy annual species of significance in Canada, Downy Brome (*B. tectorum*) is one of the most serious weeds of arable fields and rangelands in the Prairie Provinces. It is even a legally regulated weed in Manitoba, Saskatchewan, and Alberta. Some of the perennial species are important as wildlife forage in forested regions and rangelands (e.g., *B. ciliatus*, *B. porteri*), while others are considered rare plants in certain jurisdictions (e.g., *B. kalmii*).

This book represents a rather classical monograph of the genus and provides a updated review of the group throughout North America. The author's style and approach is, however, useful and readable to a wider audience other than just the classical taxonomist. A brief introduction outlines the background, scope and *modus operandi* of the work. The species concepts (which differ among taxonomists)

adopted are briefly discussed. The approach is one of recognizing overlapping morphological variation when it can be largely (if not completely) correlated with ecological and/or geographic patterns. The author states that "No new species are proposed but a number of sometimes neglected taxa are resurrected [to the species level]". A description of the genus is followed by a brief discussion of the classification within the grass tribe and the infrageneric taxonomy of the Sections.

The identification aids begin with a key to the five Sections recognized. Each Section then has a separate key to the recognized species and varieties (sub-specific taxa). The species descriptions are consistent and highly readable considering the dry nature of such information. After the main description there is a discussion of variation and key or description of any recognized varieties. Extensive details of the distribution and habitat are frequently given. A list of "major references" concludes the species accounts and is of exceptional utility as it gives users access to a broad range of taxonomic literature including original descriptions, differing taxonomic opinions (and taxonomic problems) and further keys, drawings, descriptions and other biological information.

After the species accounts is a section, referred to as "Nomenclature", where the synonymy and complex nomenclature is given for each recognized taxon in tabular format. This is particularly useful

to those interested in studying *Bromus* as the sources of all published names applying to North American taxa and their synonyms are given. It is also very useful to those less ardent students as it allows easy comparison with the nomenclature and species concepts of other regional floristic and taxonomic works.

Of particular note is the glossary which admirably explains, in direct and unadorned language, the specific and often obscure terminology used to describe the anatomical, morphological and ecological conditions which are often specific to the grass family. The overall format of the book is pleasing and utilitarian. Species accounts begin on the top of a left-hand page with the illustrations on the right-hand page. Exceptions occur only when there is no illus-

tration available for the taxon. Distribution maps are generally on the lower left and are large enough to be easily readable. Some of the maps of species of limited distribution are hard to read because of the light shading and some illustrations have fared poorly during printing.

This book is the first comprehensive treatment of *Bromus* in North America since that of C. L. Shear in 1900. It is a welcome modern synthesis as well as a carefully and articulately constructed account of a major element in the flora of the Northwestern Hemisphere.

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Plants of Southern Interior of British Columbia

By R. Parish, R. Coupé, and D. Lloyd. 1996. Lone Star Publishing, Vancouver, British Columbia. 462 pp., illus. \$24.95, U.S. \$19.95.

Plants of southern interior of British Columbia is the third in a series of field guides of the flora of British Columbia. This book is divided into eight easy-to-find color-coded sections. Rather than adopting the traditional Englerian system of classification commonly used in most floras, the authors have opted to classify the plants into seven distinct life-form groupings that include: trees; shrubs; wildflowers; grasses and grass-like plants; ferns and their allies; mosses and liverworts; and lichens. Although their system of classification may at first seem unconventional, its simplicity has made this book very accessible to the non-professional.

The introduction includes a brief overview of the climate, vegetation zones, and habitats encountered within the province's southern interior and provides the reader with a sense of the region's climatic, ecological, and floral diversity. Useful maps depicting the geographic extent of the area covered in this book and vegetation zones one would encounter within its boundaries are provided on the inside front and back covers. The section on aboriginal plant use and knowledge provides an interesting ethnobotanical perspective.

The bulk of the book is comprised of species descriptions. Each of the seven life-form groupings begins with a general description of the plants included in each within group, followed by a dichotomous key and line drawings or photographs. The more than 1000 photographs and 700 line drawings are of good quality and illustrate the plant's general appearance, and often, one or more of the diagnostic characters. Dichotomous keys usually precede some of the larger, more complex plant families within each group (e.g., Compositae, Fabaceae).

Each species described includes: a common and scientific name; a description of its appearance and habitat; diagnostic features of the leaves, fruits, and flowers (these are commonly boldfaced); ecology; and notes on important taxonomic, ecological, and ethnobotanical features. However, I did notice that the names of the validating authors for the specific epithets were not included. Although this omission is not critical to the overall utility of the book, inclusion of these names would have made this volume a much more useful source of information for students of plant taxonomy and systematics. Nonetheless, the authors provide a reference list where such information can be obtained. While the authors have made a valiant attempt to reduce the often unnecessary terminology found in most floras, the inherent nature of floras is such that terminology cannot completely be avoided. They have therefore included an illustrated glossary for the terms that were deemed necessary.

It is immediately evident that the authors have put considerable time and effort into the research and preparation of this book. They have successfully woven elements of taxonomy, ethnobotany, and ecology into a beautifully illustrated and informative volume. The only error that I noticed was the inclusion of the Lycopodiaceae (club mosses) and Selaginellaceae (spike mosses) with the mosses rather than the ferns and their allies. Although most floras and field guides commonly neglect to include the mosses, liverworts, and lichens, their inclusion (at least those species common to the region) here provide the reader with a relatively comprehensive overview of the regional vegetation.

The publishers ought to be congratulated on producing a book that is handsomely bound, compact, and appears durable enough to withstand the rigors of field work. More importantly, they have kept its price low which makes it an attractive alternative to some



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