

Book Reviews

Book Review Editor's Note: *The Canadian Field Naturalist* is a peer-reviewed scientific journal publishing papers on ecology, behaviour, taxonomy, conservation, and other topics relevant to Canadian natural history. In line with this mandate, we review books with a Canadian connection, including those on any species (native or non-native) that inhabits Canada, as well as books covering topics of global relevance, including climate change, biodiversity, species extinction, habitat loss, evolution, and field research experiences.

Currency Codes – CAD Canadian Dollars, USD US Dollars, EUR Euros, AUD Australian Dollars, GBP British Pound.

BOTANY

Vascular Plants of Alberta, part 1: Ferns, Fern Allies, Gymnosperms, and Monocots

By John G. Packer and A. Joyce Gould. 2017. University of Calgary Press. 281 pages, 34.95 CAD, 34.95 USD, Cloth. Also available as a paperback, PDF, or E-book.

Alberta, including 660 000 km² and six major ecozones, is a diverse Canadian province. Almost 2000 species of vascular plants have been recorded (almost 1500 native). This book covers 524 species, roughly one-quarter of the vascular flora, including the ferns and their allies, evergreen or conifer trees and the monocots (which can be conveniently viewed as vascular plants with parallel leaf venation). The book is designed to assist with information about Alberta's flora by including keys and descriptions of new species added since the second edition (1959) of the *Flora of Alberta* by Ezra H. Moss, which was updated by John G. Packer and published in 1983. It is entirely alphabetical; the species are listed alphabetically within genera, genera alphabetically within families, and families alphabetically within major groups. Infrataxa (subspecies and varieties) are included in the text for species.

A vast amount of new and current information here has been made possible through the Flora of North America project (FNA), which was designed to create a complete set of 30 volumes including all the 21 000 species growing outside of cultivation in North America. With the completion of much of this project and the continuing work of Alberta botanists, it has been possible to distil the information on Alberta from the FNA and to provide an update to it.

The authors are well qualified to write about the Alberta flora. John Packer was curator of the herbarium at the University of Alberta from 1958 to 1988 and an author of articles and books on arctic and alpine regions as well as serving as an expert on the Alberta flora. Joyce Gould, an adjunct professor at the University of Alberta, has been responsible for the overall coordination of science in Alberta Parks and is well known for her work on species at risk. The keys to *Carex* were provided by Bruce Ford and Bill Crins, both internationally renowned experts on that difficult group. Peter Achuff, well-known botanist of the Waterton area of Alberta, helped in providing distributional data. Based on the skills of these and other people involved, the book is as good as one would expect it to be.

The following Albertan species are missing. Of the additions to the flora of Alberta since 1983 listed by Fabijan (2015a,b), only four are not included here: *Blysmopsis rufa* (Hudson) Oteng-Yeboah, *Botrychium boreale* J. Milde, *Cystopteris laurentiana* (Weath.) Bladsdell, and *Elodea canadensis* Michx. All are based on specimen vouchers and should presumably be added. *Allium geyeri* S. Watson var. *geyeri* was excluded from the flora of Alberta by Choi and Cota-Sanchez (2010) based on misidentification, but *Allium stellatum* should be added (Choi and Cota-Sanchez 2010). *Juncus interior* Wieg. was not included although it is indicated for Alberta in the text in FNA (Brooks and Clements 2000), but it is not shown on the FNA map, perhaps explaining its omission. A detailed map for this species in Alberta is available in Catling and Spicer (1987). *Phragmites australis* (Cav.) Trin. ex Steud. subsp. *australis* has been found in Alberta at Grande Prairie (S. Landhausser, determined by P.M. Catling, Agriculture and Agri-Food Canada, DAO). *Potamogeton amplifolius* Tuckerman was recently reported as new to Alberta (Crisfield 2016).

I was pleased to see hybrid *Botrychium*, *B. ×water-tonense* mentioned under *B. hesperium* (p. 44), but there is some question about its sterility (Ahrens-lager and Lesica 1998). Other hybrids are similarly mentioned in the text of one of the parental species. A recently reported orchid hybrid, Kostiuk's Hybrid Calypso (*Calypso ×kostiukiae*) is not included (Catling 2012).

The book is available as a free open access e-book (http://dSPACE.ucalgary.ca/bitstream/1880/51799/1/9781552386835_web.pdf) or can be ordered as a print version from the publisher (ucpress@ucalgary.ca). The PDF has the advantage of being searchable. This makes the PDF helpful because the print copy does not have an index. It would have been useful to have a list of species that have been reported but rejected and the reasons for rejection.

One of the great values of this publication lies in the fact that it is current, complete, and authoritative. It will be useful to botanists, landscape managers, researchers,

and anyone who needs reliable information. Congratulations to the authors.

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