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PLANTS OF THE WESTERN BOREAL FOREST AND ASPEN PARKLAND

DEREK JOHNSON, LINDA KERSHAW, ANDY MACKINNON and JIM POJAR, with contributions from TREVOR GOWLAND and DALE VITT. 1995. Lone Pine Publishing, Edmonton, AB. 392 pp., soft cover. \$24.95.

This book contains a comprehensive coverage of plants of the area. It has sections on trees, shrubs, wildflowers, eating for a living (sundew, pitcher plant, parasites etc.), aquatics, sedges, rushes, grasses, ferns and fern allies, mosses and liverworts, and lichens. The first section encompasses an excellent description of the book and how to use the guide. The region that the book pertains to and the relationships of plants and people is well prepared and written.

Each plant species is treated in a highly informative way, containing a general description, leaf characteristics, flower descriptions, fruits and seeds, where found in habitat types and additional notes. The additional notes contain information about the human/plant relationship if any, discussions about similar species not directly referred to in the book and other quality information. Line drawings are liberally used to detail finer points of identification that can't be effectively photographed. Keys are used sparsely and where used will definitely assist the novice as well as satisfying those who are more familiar with plant identification.

The last section of the guide contains an easy to understand glossary, photo credits, illustration credits and a very comprehensive section on references.

This guide shines in several areas. As an example, its section on willows is top notch. The extensive part dealing with grasses, sedges and rushes is one that is most often missing from other books of this kind. Though the contents are not arranged in taxonomic order in the strictest sense, the treatment of plant relationships is excellently portrayed with taxonomic order adhered to in each section.

There are aspects of the guide that may be wanting. One is in the size of picture. However, one must hasten to point out that the images used are of the highest photographic and reproductive quality, in some instances just a little small for detail. The line illustrations do fill the detail requirement very well. The only other aspect that may be of annoyance to some — there is no obvious statement of how many species descriptions are contained in this excellent piece of work.

- Reviewed by *Frank Switzer*, 1301 Shannon Road, Regina. SK S4S 5K9

ALBERTA BUTTERFLIES

C.D. BIRD, G.J. HILCHIE, N.G. KONDLA, E.M. PIKE and F.A.H. SPERLING. 1995. Technical photographs by SIMON POLLARD and JACK SCOTT. Ink illustrations by MILTON FREDLAND. Provincial Museum of Alberta, Edmonton, AB. 347 pp. 280 x 215 mm. \$45 + 3.00 postage and handling. (Order from the Federation of Alberta Naturalists, Box 1472, Edmonton, AB. T5J 2N5.)

This is a fantastic book! There are probably more coloured illustrations per species than in any other regional butterfly guide. It is unique, not in the fact that it uses keys to

identify butterflies, but in that it illustrates each of the alternatives of a couplet with colour photographs, further aided by arrows pointing to significant marks.

Separate chapters treat the history of the book and give brief biographies of 80 people who contributed to the wealth of knowledge about Alberta butterflies over the last 150 years. This is followed by sections on butterfly habitats, evolution/life history/ecology/behaviour, butterfly study, adult morphology, butterfly names, and a checklist. For the gardener, a table shows which of more than 160 plants serve as caterpillar food and/or adult nectar sources for which of more than 100 kinds of butterflies.

This volume covers not only the 161 species found in Alberta but gives equal treatment to 16 likely to occur. The keys for 177 species are illustrated by more than 400 mini-photos of appropriate segments of wings — each in the order of 15 x 20 mm. There are also four tables comparing particularly difficult species, 18 photos of living butterflies and 20 attractive shots of landscapes. The aesthetics of the book are considerably enhanced by more than 180 ink illustrations, mostly of food plants but also of caterpillars. The extensive bibliography includes some 600 titles.

For each species, the derivation of the scientific name is given (which makes interesting reading) and there are single paragraphs on identification, life history and range/habitat. Three-quarters of the species are each given a page; the remainder have two or three pages. Photographs of whole pinned specimens (more than 550) are life-size and show upper and lower surfaces. A monthly bar graph shows the entire

flight period and indicates when a species is most common. The provincial maps are attractively coloured and show every collecting locality for each species and, in some cases, for subspecies. A neat feature is the inclusion of a map showing North American ranges.

One learns that the most widespread butterflies in Alberta include Canadian Tiger Swallowtail, Clouded Sulphur, Greenish and Western Tailed Blues, Milbert's Tortoiseshell and White Admiral. Species confined to grasslands include Delaware Skipper, Olympia Marble, Alexandra Sulphur and Ruddy Copper; to the boreal forest, Eastern Pine Elfin and Pike's Swallowtail; to the mountains, Margined White and Lustrous Copper.

One should not be as naive as we were about ease of identification because of illustrated keys. For us, the wording in several couplets has not been clear, even with the arrows. However, the more you use them (with a magnifying glass), the more you appreciate them. The authors are to be particularly congratulated for this feature.

Every butterfly guide (and this is no exception) presents some new common (English) and scientific (sci) names, which makes it frustratingly difficult to compare the treatment of a species from one book to another. The North American Butterfly Association recently published a standardized list of common names for North American butterflies.¹ Hopefully, for the benefit of the "butterflier-on-the-street," future authors will follow this list both for common names and sequence of species.

For me, the major problem with this volume, produced to be "accessible to a wide range of readers," is

its emphasis on scientific names. Imagine your reaction if the third paragraph above had used sci names only. The checklist could have been designed to include common names but none are used; keys lead to identification by scientific names only; the identification, life history and range paragraphs for each species often refer to similar species by Latin/Greek names only; the first name in the species accounts is scientific, and the labels for photos of live butterflies are in the same foreign languages. The reason given is the universality of sci names. However, a comparison of this book with the North American Butterfly Association Checklist, also published in 1995, shows that 27 common names are different and 27 scientific names are different between the two, suggesting that a common name is just as “universal” for North Americans as a sci name.¹

At a time when butterflies need all the public support they can get to survive (eloquently expounded in the Foreword), it seems a shame to turn off potential “butterfliers” by making them think they have to learn “formal and ... ponderous Latin and latinized names” (Foreword) that are “intimidating” (p. 43). The Peterson, Audubon and Golden series of guides put the emphasis on common names in all fields of nature that they cover. Hardly any birders use, know, or care about sci names, even though the American Ornithologists’ Union periodically changes common names and splits or combines species, resulting in new common (and sci) names. Our solution is to print common names beside the other ones.

Because keys are the main source for identification, this book appears to encourage people to kill and make collections of butterflies.

However, many butterfliers who enjoy butterflies alive and are happy to identify them only to subfamily or genus or, sometimes, to species (using binoculars and a net) would have been better served if photos of pinned specimens had appeared together in one section with as many similar species as possible on facing pages for comparison. How valuable it would have been to have all the skippers on two sets of facing pages instead of spread through 35 pages!

The book would also have been more user-friendly and resulted in fewer errors for the reader if the photo for the “a” couplet had always been on the left and that for the “b” couplet on the right. Going down the left-hand column of photos on p. 151, for instance, one finds b, a, b, b, b, a, b, a, a, b. One wonders why the sequence of species differs between checklist and species accounts. The treatment of “Old World and Artemisia Swallowtails” does not specify which characteristics and scientific names apply to each, nor does it state that the names are synonyms. The Mormon Fritillary is described as “our smallest fritillary.” Not so. Under Hoary Comma and Zephyr appear statements such as “It is not possible to separate (the two) in Alberta.” However, in Step 2 of the key (p. 208), the two species are separated.

Features I would like to have seen: a map of Alberta on the inside front cover with all names mentioned in the text or, at least, major collecting areas. An outline of Alberta on the North American map. With each species, a listing of common names found in the Audubon, Peterson and Manitoba field guides that most prairie province butterfliers have been using for a long time.^{2,3,4}

Alberta Butterflies treats all but 19 of Saskatchewan's species and all but 45 of Manitoba's. For British Columbia, it covers all but five species within 150 km of Alberta and it deals with 157 of Montana's 189 species. It is a must for butterflyers in Alberta and Saskatchewan and a "best buy" (or best gift) for every butterflyer in western Canada and adjacent states.

1. NORTH AMERICAN BUTTERFLY ASSOCIATION. 1995. Checklist & English names of North American butterflies. NABA, Morristown, NJ. 43 pp.
2. Klassen, Paul, A.R. Westwood, W.B. Preston and W.B. McKillop. 1989. The butterflies of Manitoba. Manitoba Museum of Man and Nature, Winnipeg, MB. 290 pp.
3. PYLE, R.M. 1981. Audubon field guide to North American butterflies. Knopf, New York. 924 pp.
4. TILDEN, J.W. and A.C. SMITH. 1986. Field guide to western butterflies. Houghton Mifflin, Boston. 370 pp.

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GREAT NORTHERN FORESTS and PRAIRIE GRASSLANDS — WIND COUNTRY

Karvonen Films Ltd. and the National Film Board of Canada. 48 min. \$26.95. Phone 1-800-267-7710.

Great Northern Forests is an award-winning nature documentary created by Albert Karvonen. He explores the boreal forest of Western Canada, showing that the boreal forest, arguably the largest ecosystem in the world, is shaped by two forces — fire and winter. These forces determine the species occurring in this ecosystem. This video features very good footage and at times spectacular shots of various wildlife species.

The video concentrates on the common mammals and birds of the forest and to a lesser extent on the trees and herbs of the forest. The video is a good overview of this ecosystem, introducing common forest animals such as Moose, Black Bear, Red Fox, Common Loon, Bald Eagle and Great Gray Owl. Also, bogs are introduced and strategies for winter survival are explored including hibernation and scavenging. The video shows the ecosystem in its pristine condition. A short segment raising questions of ecosystem degradation from oil exploration and forestry operations occurs at the end posing the question how long will the boreal ecosystem continue to function with these pressures?

Prairie Grasslands — Wind Country portrays the grasslands of Canada. It has also won several awards. Highlighted are the forces that create the grasslands — lack of rainfall, fire and winter. Over 40 species of mammals, birds and plants of the plains are shown including: Mule Deer, Coyote, Sage Grouse, Bison, Golden Eagle, Swift Fox, Prairie Dog, Badger, Sage Grouse and Sharp-tailed Grouse. The footage is very good, at times spectacular and an accurate portrayal of Canadian prairie. However by showing footage of Swift Fox, Bison, and Prairie Dogs, the video is more of a historical account of the prairies than a current view as these species are now atypical of Canadian prairies. Karvonen points out that two-thirds of the prairies have been lost to agriculture and that this ecosystem is a shadow of its former glory.

These award-winning videos are good quality and portray western Canada's boreal forest and grasslands. The visual images and sounds would be enjoyed by all age groups at all



Grease River (upper) and Straight River (lower) confluence

Chris Adam

levels of expertise of our natural environment. The commentary deals with the basic characteristics of these ecosystems and is suitable for students from grade six to high school studying ecosystems. The videos would also serve as a good

introduction for anyone who is not familiar with the boreal forest or grassland ecosystems. I thoroughly enjoyed watching both videos.

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I was intrigued by the circumstance that social insects, the group on which I have spent most of my life, are among the most abundant of all organisms. And among the social insects, the dominant subgroup is the ants. They range 20,000 or more species strong from the Arctic Circle to the tip of South America. In the Amazon rain forest they compose more than 10 percent of the biomass of all animals. This means that if you were to collect, dry out, and weigh every animal in a piece of forest, from monkeys and birds down to mites and roundworms, at least 10 percent would consist of these insects alone. Ants make up almost half of the insect biomass overall and 70 percent of the individual insects found in the treetops. They are only slightly less abundant in grasslands, deserts, and temperate forests throughout the rest of the world. *E.O. Wilson, E.O. 1992. The diversity of life. W.W. Norton and Company, New York.*