
NATURE LIBRARY



Killdeer area, Saskatchewan

F. Bellamy

MARRIED TO THE WIND A STUDY OF THE PRAIRIE GRASSLANDS

WAYNE LYNCH. 1984. 30 x 24 cm. Whitecap Books, North Vancouver. hard-cover. 116 pp. illus. \$39.95 (available at *Blue Jay Bookshop*).

This is a beautiful coffee-table book with 124 excellent colour photographs by the author. Its size and shape allow these photos to be very effectively presented, and more than half of them occupy a full page. One stretches across two pages to show a late evening prairie horizon with a full moon in a typical autumn sky. There are fewer pages of text than of photos, but these pages include a forward by Elizabeth Cruickshank, six chapters describing the origins of the prairie landscape and its present character, an epilogue,

acknowledgements, and suggestions for additional reading.

Though not a trained ecologist nor even a native of the prairie, Dr. Lynch proves that he has a real interest in and understanding of the Canadian mixed-grass prairie. He invites the reader to discover with him its excitement, diversity, intricacy and beauty, and he is concerned that we are allowing the destruction of grassland ecosystems without knowing what we lose.

The first chapter "The Land — Its Face and Its Temperant" traces the geological steps leading up to the present-day climates and microclimates and stresses the importance of soil and climate and the diversity of plants and animals on the prairies.

The second chapter deals with the flora and fauna of "The Level Plains." In it we find the explanation of the title when Lynch says "Grasses are married to the wind, for they all have wind-pollinated flowers". Actually, this is not strictly true, for many species are self-pollinated, or have given up pollination in favour of apomixis or vegetative reproduction. Unfortunately, there are other inaccuracies, for example, see the caption for the goatsbeard inflorescence shown on page 84. The caption implies that the open flowers are male but the pollen is really above the dark stamens and is on the style of the pistils. The structures in the centre of the picture are not pistils but are completely unopened flowers with both male and female parts.

"Windscaapes," the third chapter, considers sandhill areas like the Great Sand Hills and "Layers of Time" (chapter four) deals with the badlands which erosion is continually

threatening. Lynch speculates on the extinction of the dinosaurs, airing the recently-proposed theory that such periods of extinction may have been caused by asteroids from outer space. This chapter also mentions prairie outlaws, snake pits and the mating behaviour of black widow spiders.

Chapter five, "Coulees," discusses our two kinds of ticks, bison bones, animal behaviour, pheromones and creatures of the night. "Water and Wings", the final chapter, describes the gradual succession of plants and animals in prairie sloughs, up to the time that the area becomes dry and is occupied by the climax grassland of the region.

At the end of this book, the author tells how he retired in 1979 from his medical career to "broaden and diversify" his life experience. He also makes a plea for greater understanding of the environment on the part of his readers, and for support for the Grasslands National Park, the establishment of which was agreed to in 1981 "to preserve and protect the integrity of the mixed grassland ecosystem of southwest Saskatchewan".

In this beautiful description of the grasslands, I regret the absence of the scientific names of the inhabitants. I am particularly critical of the naming and identification of the grasses. Those shown on pages 35 to 59, for example, should have scientific names or at least more generally accepted common names. Nevertheless, loving the native grasslands as do, I am grateful to Wayne Lynch for his text and excellent photographs which revive fond memories and bring new insights. The book rekindles our resolve to work for the preservation of our prairie grasslands. I recommend it, and urge its wide distribution and use. — Reviewed by *G.F. Ledingham*, 2335 Athol Street, Regina, Saskatchewan. S4T 3G4

CRANES OF THE WORLD

PAUL A. JOHNSGARD. 1983. Indiana University Press, Bloomington Indiana. 257 pp. Hardcover \$37.50

As a child I admired the haunting call of the "wild turkey." Later I was astonished to discover that I was actually listening to the Sandhill Crane.

As I read between the covers of this monograph I could step outside and once again hear sandhills returning from their northern breeding grounds in spiraling flocks as they progressed southward on yet another migration.

Cranes date back some 60 million years to the Eocene. Man on the other hand has a history of less than 2 million years. In that short time cranes have found their way into myth, rituals, dancing and art forms from Australia through Asia, Europe, Africa and North America. Owing to a few of man's activities in and around suitable crane habitat some populations have dwindled to the brink of extinction. The plight of the Whooping Crane, for example, has led to it being used as the symbol of wildlife conservation in North America. Of the 14 species of cranes world wide, 5 (35%) are listed as endangered or vulnerable and a 6th is of indeterminate status. It is with this in mind that Paul Johnsgard has written this fine and up-to-date text on crane biology.

The book is divided into two parts. Section one, the comparative biology of cranes, includes chapters on classification and evolution, individualistic and social behavior, vocalizations, ecology and population dynamics, comparative reproductive biology, aviculture and hybridization, endangered species and conservation, and cranes in myth and legend. The second section deals entirely with the natural histories of individual species. Subject material covered in this section for each species includes other

vernacular names, range, subspecies, measurements, weights, description, identification, distribution and habits, foods and foraging behaviour, migrations and movements, general biology, breeding biology, recruitment rates, population status and conservation, and evolutionary relationships.

The book concludes with information on origins of scientific and vernacular names of cranes, a key to the species and subspecies of cranes of the world, references, and index. The reference list also includes a few titles not cited in the text.

There are 15 figures, 34 tables, 14 range maps, 23 color and 24 black-and-white photographs, and 27 line drawings. Most photos are sharp with good color or contrast, 4 color and 3 black-and-white photographs, however, are apparently out of focus. Few typographical errors were found. The Whooping Crane map mentions Gray's Lake N.W.T. as being an inset, however, the inset is of Wood Buffalo National Park.

Setting these trivialities aside, I would recommend for anyone remotely interested in the family Gruidae that they read this comprehensive account of current scientific knowledge on the world's cranes. — Reviewed by *Brian W. Johns*, 51 Beurling Crescent, Saskatoon, Saskatchewan. S7H 4V6



Sandhill Crane *Larry Morgotch*

WOOD WARBLER'S WORLD

HAL H. HARRISON. Technical assistance and range maps by Mada Harrison. Simon and Schuster, New York. September, 1984. Cloth. \$29.95 Cdn. 335 pp.

Readers will be familiar with Hal Harrison's two Peterson field guides on nests. *A Field Guide to Birds' Nests* (1975) and *A Field Guide to Western Birds' Nests* (1979). This book is basically an expansion of the warbler write-ups in these field guides, with more detail.

The book starts with an introduction to the warblers, written in layman's language. The author makes the point that warblers are not "our" birds by virtue of the fact that they only spend about three months on the breeding grounds. The rest of the year is spent in migration (two to three months), and on the wintering grounds (six to seven months).

The remainder of the book is concerned with species write-ups, 53 in all. There is also a glossary, an index, a bibliography (quite extensive), and picture credits (for the few photos not taken by the author). There are two inserts of colour photos illustrating most of the species.

Each write-up follows the same pattern, differing only in the extent of material available for that species. Taxonomic changes are described, and some background material is given to explain the changes. Each scientific name is translated and pronunciations are given. Behaviour is then briefly described, sometimes accompanied by some of Harrison's personal experiences. Typical nests and their placement are then described. The incidence of cowbird parasitism for

each species is also reported.

Rounding out the species accounts are brief descriptions of winter and breeding habitats, and photographs of typical nests, typical habitat, birds at the nest, and a map depicting the breeding range of each species.

Some of the species accounts are fairly extensive (Yellow-rumped Warbler), while others (Virginia's Warbler) contain barely two pages of written text.

This book is enjoyable to read; my main criticism is that the content is rather sketchy. The habitat photos are valuable, but the write-ups are done using large print with large spaces between lines. Although the book is well referenced, this is basically one for the layman, and one that is heavily oriented towards nests. The author mentions in the introduction that this book does not concentrate on field marks and exhaustive nest descriptions. Rather, it serves to fill in background for the author's field guides, using personal experiences and opinions.

Potential buyers should keep the above in mind. This is not the book for you if you are seeking hard data on warblers. The Canadian price is also rather steep. However, I did enjoy the book, and I do recommend it. Borrow it if you can. — Reviewed by *Christopher I.G. Adam*, 2636 Argyle Street, Regina, Saskatchewan. S4S 0K1



Yellow-rumped Warbler

F.W. Lahrman

HANDBOOK OF CANADIAN MAMMALS. 1. MARSUPIALS AND INSECTIVORES.

C.G. VAN ZYLL DE JONG. National Museums of Canada. 1983. 210 pages, 4 colour plates. 16.5 x 24 cm \$19.95.

Since 1974, many naturalists and wildlife biologists have used A.W.F. Banfield's *The Mammals of Canada* (University of Toronto Press, 1974) as a reference source when identifying mammals and determining their ranges. Now, the first volume has been published of a proposed seven volume series intending to cover all Canadian mammals. The author, van Zyll de Jong, is Curator of Mammals at the National Museum of Natural Sciences in Ottawa.

This first volume presents the current knowledge of the ranges and biology of our shrews and moles, plus van Zyll de Jong's own "tentative" taxonomic arrangement, which differs slightly from that of Banfield and other more recent classifications. The author points out that the genus *Sorex* is a difficult group to classify and that the number of species has still not been finally determined.

Changes from Banfield's taxonomy and names for the Insectivores (shrews and moles) occurring in Saskatchewan are as follows: *Sorex arcticus*, the Artic Shrew, has been renamed the Black-backed Shrew. *S. cinereus*, the Masked Shrew, has been provisionally split into three species, two of which occur in Saskatchewan: *S. cinereus*, the Common Shrew (parkland and forest regions), and *S. haydeni*, the Prairie Shrew (prairie region). The Dusky Shrew, *S. obscurus*, becomes *S. monticolus*, while the designation "American" has been dropped from the American Water Shrew, *S. palustris*.

Microsorex hoyi, the Pigmy Shrew becomes *Sorex hoyi*, the Pigmy Shrew. The name of the only remaining Saskatchewan insectivore, *Blarina brevicauda*, the Short-tailed Shrew, remains unchanged.

The book also contains an illustrated key to the Insectivores which, according to the author, will identify prepared specimens as well as live animals. The use of external as well as internal features should make the key of great use to field biologists and naturalists.

Subspecies are not mapped as they are in Banfield, but are covered in the text. The biology of each species is well described, and the write-ups also contain some behaviour descriptions. Skull drawings for each species are provided.

Another excellent feature of the book is the series of range maps, many of which show significant range changes from those in Banfield. An inset shows the Holarctic Region, which gives a useful indication of range outside of Canada, but in the case of those species with a restricted distribution, the range becomes hard to see since the area on such a map is so small (i.e. *Sorex gaspensis*).

Another useful feature of the range maps, one which is not used by Banfield, is the positioning of numbered localities along the peripheries of each range. For example, the distribution of the Short-tailed Shrew in Saskatchewan shows three numbers which correspond to three locations given in the distribution section: Keatley, Bittern Lake and Regina. This pinpoints the edge of the range and makes it easier to locate in reference to a specific study area.

This book should prove to be valuable for field studies and as a basic reference source. The addition of an

identification key and numbered range maps make it superior to Banfield's for these purposes. This series should become the standard source of reference for Canadian mammals, although *The Mammals of Canada* is still recommended as an excellent one-volume reference. I look forward to the rest of the series. No serious naturalist or wildlife biologist should be without this book. — Reviewed by *Christopher I.G. Adam*, 2636 Argyle Street, Regina, Saskatchewan. S4S 0K1

Arctic Ordeal



THE JOURNAL OF JOHN RICHARDSON
Surgeon-Naturalist with Franklin, 1820-1822

Edited by C. STUART HOUSTON

Illustrated by H. ALBERT HOCHBAUM

McGill-Queen's University Press

October 1984. 356 pp. 18.5 x 27 cm illus. & maps. Cloth \$29.95 (SNHS members \$26.95 from the Blue Jay Bookshop). A review will appear in the next issue.

TAXONOMIC REMINDER FOR RECOGNIZING SASKATCHEWAN PLANTS

John Hudson's reputation as botanist par excellence needs no elaboration. He is widely known both for his comprehensive knowledge of botanical species and for his willingness to share that expertise. In this spirit he has prepared his *Taxonomic Reminder*, designed especially for "those in the field who can pretty well tell what genus a plant ... belongs to, but cannot always remember the distinguishing marks of the species therein."

The 63-page *Reminder* is a list — by genus and species — of all native and established introduced plants in Saskatchewan. Each entry, one or two lines long, consists of a descriptive statement, and often a sketch of the key part(s), providing the details observers will need to separate and correctly identify similar species within a genus. Since these distinguishing features are often related to flowers or fruit, the work will be most useful from roughly May to September.





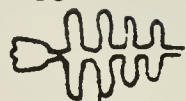








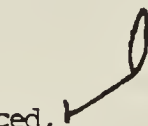








Hudson's plant list is accompanied by four regional checklists: Southwest, Southeast, Centre and North. Each checklist includes a map showing the area treated and approximately 700 species names. The *Reminder* is 8-½ x 11 in.; each checklist is a single 11 x 17 sheet, with species on both sides, designed for folding to pocket size.

Both checklists and *Reminder* consist of scientific names only and will appeal most to those who already have some knowledge of botany. The

Reminder assumes a grasp of botanical terminology. However, by supplementing Hudson's work with any of the several botanical volumes suggested in the introduction, an amateur botanist may discover much of interest. English species names can be added as desired. While designed specifically for Saskatchewan, these materials will be of use throughout the prairies. Roughly 70% of Alberta's plants (no Rocky Mountain species) and 80% of Manitoba's (no tundra or eastern hardwood species) are present in the lists.

The *Reminder* and its checklists are of sufficiently specialized nature that the Saskatchewan Natural History Society does not intend to issue them as a regular Special Publication. However, both will be made available in photocopied form on request. Readers who wish to obtain either *Reminder* or checklists or both may write to the Blue Jay Bookshop. The first 50 sets of text and checklists have been subsidized by a Society member and are available for \$7.00 each. The *Reminder* alone is \$3.00 and checklists are \$1.50 each or a set of four for \$5.00. Prices thereafter will be higher. — *Mary D. Gilliland*, Special Publications Director, 902 University Drive, Saskatoon, Saskatchewan. S7N 0K1

Opposite: a page of the reminder showing the type of information included

- CAMELINA MICROCARPA: Stem-lvs  , pod 
- CAPSELLA BURSA-PASTORIS: Pods 
- CARDAMINE PARVIFLORA: Lvs  ; fls ~ 3 mm ϕ , white.
- CARDAMINE PENNSYLVANICA: Fls ~ 3 mm ϕ , white; lvs 
- CARDAMINE PRATENSIS: Lvs  ; fls white ~ 1 cm ϕ
- CARDARIA DRABA: ④ ; pod  , not opening, glabrous.
- CARDARIA PUBESCENS: ④ , same pod but hairy.
- CONRINGIA ORIENTALIS: Lvs  , cabbagey; pod 1 dm long,  in section .
- DESCURAINIA PINNATA: Pod 
- DESCURAINIA RICHARDSONII: ② ; grey; pod 
- DESCURAINIA SOPHIA: ① ; cat-dung smell; pod 
- DRABA AUREA: ④ , stems leafy; fls yellow.
- DRABA CINEREA: Scapose ④ ; fls white.
- DRABA LANCEOLATA/CANA: ④ \bar{w} stem lvs; fls white.
- DRABA NEMOROSA: ① , fls yellow; stem lvs some; pods well spaced, 
- DRABA REPTANS: ① , fls white; stem lvs 0 or 1; pods bunched, 
- ERUCASTRUM GALLICUM: Racemes \pm bracted \bar{w} small lvs.
- ERYSIMUM ASPERUM: ④ , fls 2 cm ϕ , pods ~ 1 dm.
- ERYSIMUM CHEIRANTHOIDES: ① , fls 3-4 mm ϕ ; pods 1-2 cm.
- ERYSIMUM INCONSPICUUM: ① or ② , fls 6-8 mm ϕ ; pod 2-5 cm.
- HALIMOLOBOS VIRGATA: As ARABIS, but pods  & \pm terete.
- HUTCHINSIA PROCUMBENS: Pods  in section; tiny spring ① , < 1 dm high.
- LEPIDIUM DENSIFLORUM: Pod  , glabrous; racemes spreading.
- LEPIDIUM PERFOLIATUM: Basal lvs 2-3 pinnatifid, stem lvs clasping, entire.
- LEPIDIUM RAMOSISSIMUM: Pod  , faintly hairy; racemes strict.
- LEPIDIUM RUDERALE: ② , 1st year lvs 2-fid.
- LESQUERELLA ALPINA/SPATHULATA: Fls \pm corymbose, pods 
- LESQUERELLA ARENOSA: Pods  ; fls racemose.
- NESLIA PANICULATA: ① fls yellow; fruit not opening, .