

The Blue Jay Bookshelf

THE BIRDS OF CANADA. By W. Earl Godfrey. 1966. National Museum of Canada Bulletin No. 203, Biological Series No. 73. Queen's Printer, Ottawa. 428 pp., 69 color plates (by John A. Crosby), 71 line drawings (by Stewart D. MacDonald). 2 maps. \$12.50.

This book begins with a colorful Arctic Tern poised against a deep, blue sky. This photograph, which appears on the dust jacket only, was taken by Richard W. Fyfe. The book covers are an undecorated, sedate black, an effective contrast for the fresh, brightly colored plates which are a major feature of the book. Indeed, with 69 color plates of large size (8½" x 11"), plus the high quality of reproduction, the low price of the book is surprising. Most readers will turn first to the bird pictures, as I did, to measure the success of this latest effort to capture the spirit and form of these active animals. Mr. Crosby succeeds well, in my opinion, with most of the 431 species which he has painted for this book. Adequate details of plumage are combined with an admirable sense of proportion and character, and are rendered with the subtle and effective techniques of the perceptive artist. Some are less convincing than others; I found the male Baltimore Oriole a trifle awkward, and the Common Grackle, for some reason of form or posture, unsatisfactory. Bird watchers will find it easy to identify birds from these new illustrations, for they are large and clear, the smaller birds having been done in larger dimensions than, for example, the ducks.

Although the color plates are inserted throughout the text where they are relatively close to the appropriate species accounts, it would have been helpful to have had page numbers given in the species accounts and on the plates for quick cross-reference.

As it is, one has to turn to the nearest plate, check the plate number, and then turn to one or more additional plates to locate the subject. The Green-winged Teal account, for example, is on page 59, while the color plate with this species is four plates ahead, opposite page 77. (Impatient owners of the book will probably remedy this by adding the page numbers.) Neither species nor illustrations are listed by page number in the table of contents. A quick reference is provided, however, by the *index*. The alphabetical listing of common names in the index includes a page number for the species account and for the legend of the plate on which the species appears (the legend for each plate is on the facing page). Hence the index of this book will receive more use than is perhaps customary. Incidentally, a second index of French common names is provided, though without the plate legend page numbers. The French version of the common name also appears at the beginning of each species account.

A second feature of this book, possibly the most useful of all, is the provision of 380 range maps. Breeding distribution is shown by a red overlay on a simple and clear outline map of Canada (about three inches square). Territorial and provincial boundaries are shown, so that a quick glance at a map reveals the area in which a species may be expected to occur in the appropriate season. These maps appear to be as accurate as the available information permits, and they are far superior to anything previously available. Ornithologists with an interest in Canadian bird distribution will find these maps enlightening and in some cases surprising, for many of these ranges differ considerably from ranges shown in previous publications. These detailed maps, plus the accompanying information, will undoubtedly be a source of incentive for more field work and for

publication of more records by workers throughout Canada. This is the basic information that many have long been awaiting. It must have taken a vast amount of work to search the literature and to sort through various records in order to delineate ranges for so many species over so large an area. One can imagine, too, the difficulties in assessing and relating records of 50 years past with more recent observations, for ranges of birds are not necessarily permanent. Additional information in this respect is provided in the text; for example, for the Dickcissel "breeding is sporadic", the Red Crossbill is "highly nomadic", and the breeding range of the Lark Bunting has a tendency to "expand temporarily during periods of dry summers."

In using the range maps one needs to bear in mind that the range as shown is limited to Canada. The unwary may overlook the fact that the range for many species extends south of the border. In several instances the distribution pattern in the United States helps to explain the Canadian occurrence. It would thus have been an advantage to have an indication of a limited portion of the U.S. range, say for the northern tier of States. Doubtless this would have meant a great amount of additional work on top of a project already of large magnitude. Although subspecies (or geographic races) are given and their range is discussed, some indication on the range maps of their approximate distribution would have been useful.

Two detailed maps of Canada are available for reference and study inside the front and back covers. One which shows the major vegetative regions, from grassland through forests to tundra, can be put to good use by comparing it with the individual range maps. Many correlations between bird distribution and these general vegetative zones will become apparent. The other map includes major lakes and rivers, railways, and place names, with special emphasis being given to localities frequently mentioned in the text. Unfortunately,

one of these, Hasbala Lake, in extreme northeastern Saskatchewan, is shown about 50 miles southwest of where it should be.

There is no doubt that this book will be of considerable use to beginning as well as to advanced birders, for at least half of the textual material is concerned with species identification, habitat, and nesting information. For many species, description of plumages is more complete than I have yet seen in a book of this kind. This is especially useful for some of the raptorial birds. Although too bulky to be carried in the field, this book should be in the library of everyone professing to have an interest in birds in Canada and adjacent regions. Frequent use and study of the information in this book should enable all of us to become more proficient in field identification of birds.

The constant ornithological service provided by Earl Godfrey over many years has earned him the respect and admiration of numerous ornithologists and birders across Canada and elsewhere. *The Birds of Canada* is a splendid evidence of his dedication to ornithology. The National Museum of Canada, the artists, and the author deserve congratulations for this publication. The spirit of service to a broad group of readers embodied by P. A. Taverner in the several preceding "Birds of Canada" has effectively been carried forward by this latest Museum bulletin. This book will provide a further impetus to ornithology in Canada and will stimulate young and old to participate in the study, enjoyment and conservation of birds. In the words of the author: "Birds add immeasurably to the enjoyment of everyday life and contribute to a sense of well-being. Although one cannot put a price tag on the sight of the first spring Robin, the plunge of an Osprey, or the vesper carillon of a Hermit Thrush, these and countless other aesthetic aspects of our birds are as real as the economic ones and fully as great."—*Robert W. Nero.*—Manitoba Museum of Man and Nature, Winnipeg.

BIRDS OF ALBERTA, REVISED

THE BIRDS OF ALBERTA. By W. Jay Salt and A. L. Wilk. Revised Edition, 1966. The Queen's Printer, Edmonton. 511 pp., 315 color photographs, color drawings and sketches, maps. \$5.00.

The second edition of *The Birds of Alberta* is even more attractive than the first, and the book is certain to fulfill the stated objective of being an aid primarily to those who are not too well acquainted with the birds of Alberta and who would like to know them better." Eight years have elapsed since the publication of the first edition. In a substantial review in the March, 1959 issue of the *Blue Jay* (Vol. 17:43-44), Dr. C. Stuart Houston wrote that this was "a major event for all prairie naturalists." It still is, I believe, for there is as yet no comparable publication for Saskatchewan or Manitoba (or Montana or North Dakota). Dr. Houston's review of the first edition is still worth reading, for much of what he said then, favorable and unfavorable, applies to the second edition as well.

Although the second edition (revised by Salt) should undoubtedly be purchased by new Alberta birders, one hesitates to recommend it to those who already have the first edition, for it is not much different. What makes the present version more attractive is the many color photographs which have been added. Some of these replace color photos which appeared in the first edition, but there are about 100 more color photos in this edition. By my count, there are 162 color photographs, 117 painted illustrations or "color drawings" (almost unchanged from the first edition), and 66 line drawings (as compared to 85 in the first edition). A color photograph is a convincing portrait of a species, almost regardless of how disarranged or obscure the plumage may appear. Much of the pleasure of looking at a good photograph results from the marvelous sense of life which it conveys. The mystical quality of light

and shadow that clothes a bird in its outdoor environment gives an impression of the wholeness of a bird, and wings, tail, flank feathers are no longer separate units as in so many drawings. Professor Salt has selected some beautiful photographs, and he and the photographers are to be commended for making these available. I think that these photos will be influential in arousing interest in the birds of Alberta. For this reason alone the book should be in every school library in the province.

The extent to which these color photos will help new birders learn to identify birds is questionable. In many cases details of plumage, outline of body form, and even color are so obscured by shadows or concealed by posture as to make the identification of the bird difficult, and so it is hard to see how these photographs would help a beginner. Photos of the Black-crowned Night Heron, Oldsquaw, Broad-winged Hawk, Gray Partridge, Dunlin, Stilt Sandpiper, Western Wood Pewee, Cliff Swallow and Tree Sparrow, for example, will mean little to persons not familiar with these species. Some of the color photos which show birds in unusual poses or situations will be equally puzzling: the spectacular display posture of the Buff-breasted Sandpiper is worth seeing, but this portrait will not be of much use to someone trying to identify the bird; the Common Grackle at its nest in a cattail marsh will puzzle many; the Saw-whet Owl peering out of a nest cavity, and the Sanderling on its nest (badly off-color compared to the first edition) will not be easily identified. Some of the color photos are less useful because distinctive features, such as long legs or bill, are concealed or cropped, e.g., the Marbled Godwit and Stilt Sandpiper. A number of photos were apparently out of focus and present rather indistinct images; the Ruddy Turnstone, Long-billed Curlew, Wilson's Phalarope and Glaucous Gull

are examples. A few plates in my copy are printed out of register—the Surf Scoter, Semipalmated Plover, Piping Plover, Stilt Sandpiper, Mew Gull, and Franklin's Gull are particularly faulty. A few of the fuzzy color photos are useful in one way, for they emphasize the characteristic pattern by which the species may be identified even at a great distance: in this respect see the Shoveler, Surf Scoter and Ruddy Turnstone.

On the whole, while the color photos are often exciting, they do not all present a good impression of the character or spirit of the species. This is a job for the artist, and nearly all of the color paintings and line drawings in the book are better in this respect. In addition, the latter often include a suggestion of habitat as well as emphasizing characteristic features by which the species may be identified. All art work is interpretive and distorts or abstracts life—but this is a necessary and useful aspect of bird art. I believe that there still remains a great challenge for artists (yes, and photographers, too) to help us to understand nature through their works. *The Birds of Alberta* will not replace existing bird books as a guide to field identification of birds.

The first major aim of the book was to "assist the observer to identify any birds which he might see in Alberta"; the second aim was "to help him find in the province those species which he wishes to observe." With this in mind, many of the range maps have been revised in the light of new information, much of it undoubtedly submitted as a consequence of the appearance of the maps in the first edition. Though rather general and probably based at times on very few substantiating records, these maps have presented a case for argument, as it were, and one presumes that the new maps will provide an additional incentive for study. They are certainly a great help in learning what to expect to find in different parts of the province. The remarks on distribution in the text have also been revised where necessary. Documentation of records is

again, as in the first edition, sacrificed for more general information. Hence, the basis for the range picture and status is not usually given. In this respect, more than in any other, the book will be disappointing to those who are interested in these details. Observers can correspond with Professor Salt regarding particular records or problems, but it would have greatly increased the value of the book to working ornithologists if citations for critical matters had been added to the text, or if at least a bibliography of Alberta ornithology had been included. I don't think enough is said in the book regarding the need for further records of the occurrence of species within the areas of known or presumed range. The heavy black range map looks solid and reassuring, but we know in many cases that this is based on a good guess, and guesses for the distribution of species in remote areas have often proved to be in error. The person for whom this book is primarily intended, "the layman rather than . . . the scientist", may be misled into thinking that the range picture is as definite as is indicated.

The check-list of the birds of Alberta in the revised edition includes the following additions: Cattle Egret (specimen, 1964), Black-crowned Night Heron (recorded in the Introduction of the first edition), Brant (specimen, 1957?), Black Brant (hypothetical in first ed.; specimen, 1960?), European Widgeon (hypothetical in first ed.; specimen, 1959), Turkey (from 16 introduced in 1962, there were in 1965 "at least two hundred [sic] spread throughout the Cypress Hills in Alberta and Saskatchewan"), European Common Crane (photographed, 1957, 1958), Parula Warbler (recorded in Introduction, first ed.), Scarlet Tanager (hypothetical, first ed.; specimen, 1964). One species, the Blue-gray Gnatcatcher, has been added to the hypothetical list without any comment. I was sorry to see that there was no mention of the Garganey, a duck reported seen in Alberta in 1961 (*Blue Jay*,

col. 21:4-5); although possibly an escape, it seems worth recording. Accounts of the Parula Warbler and scarlet Tanager are unaccountably (no pun intended) inserted between chestnut-collared Longspur and Snow bunting; that of the European Common Crane, after the hypothetical list. Presumably this was done in order to have rearrangement of the species accounts. Still, it would have been worthwhile to have had a full page with map for these interesting species. A full page account for the Kingbird (one record, 1894) has been carried over from the first edition.

Considering the emphasis given to the use of this book by the layman and beginning birder, a surprising amount of information regarding subspecies or geographic races is given in the check-list. In addition to scientific names for all Alberta subspecies, common names are given, the use of the latter being a practice which has been dropped by most workers, following recommendations by the American Ornithologists' Union. Albertans can look for the "Eastern Nighthawk", "Sennet's Nighthawk", and the "Pacific Nighthawk" as well as the Common Nighthawk, but all four bear the name Common Nighthawk in the A.O.U. list. One notes too, a "Northern Downy Woodpecker", "Nelson's Downy Woodpecker", and "Batchelder's Downy Woodpecker", again all simply subspecies of the Downy Woodpecker. Fortunately, the black-backed Three-toed Woodpecker has no known subspecies!

The species accounts are pleasing to read and include some interesting information. A good amount of space is allotted to pertinent reminders of conservation needs, wildlife management practices, and natural history. Like particularly the following paragraph which is an addition to the species account for the Sharp-shinned hawk, and an indication of Professor Salt's continuing efforts to bring birds to the attention of the people of Alberta: "Bird lovers often find it difficult to reconcile themselves to the fact that predators are an essential

part of any faunal environment. A full appreciation of this fact brings recognition that the sharp-shinned hawk is a thing of beauty admirably fitted to its role in nature. Piercing eyes to follow every movement, short wings for pursuit among the branches, long legs and claws to reach out and grasp and kill, all combine to form an efficient woodland hunter. The hunt is neither wanton nor sporting; it is deadly serious. Upon its success depends the existence of the individual and, indeed, of the species."—*Robert W. Nero*, Manitoba Museum of Man and Nature, Winnipeg.

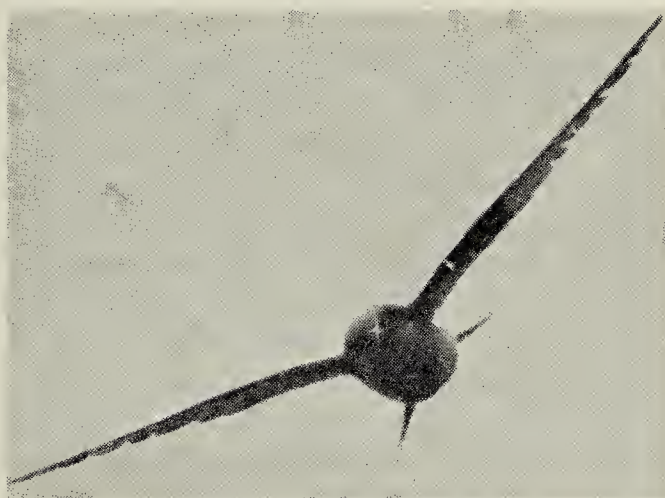


Photo by Richard W. Fyfe

Tree Swallow

THE FATAL IMPACT. By Alan Moorhead. 1966. Hamish Hamilton, London. 230 pp. Illus. 30s.

In the mid-eighteenth century Europe was exhausted by wars, and in the weariness that developed, the first descriptions of life in the previously unknown Pacific seemed to offer relief from the disillusionment of life in civilized Europe. The first stories from Tahiti made it appear to be a paradise on earth, where man lived in complete harmony with nature. From this background, Captain Cook sailed on several voyages of exploration to the Pacific, including in his party A. Brown, one of the most eminent natural historians of the time.

Mr. Moorhead has taken three places where Cook called—Tahiti with its large native population and established customs, Australia with its comparatively primitive society, and the Antarctic where there were

no human occupants. In each of these markedly different areas he has described how European incursion has largely destroyed the status quo.

There had been several ships in Tahiti before Cook arrived, and it was from these voyages that the paradise-upon-earth stories originated. Cook and his party spent a longer time there, and, whilst finding much to enjoy and admire in the islands, they also began to discover that there were a number of drawbacks to the supposedly perfect life. Savage tribal wars, human sacrifices, infanticide to control the population, a rigid class system, widespread thieving, were all factors which brought into question how much of a paradise Tahiti was. The effect of the arrival of sailors, and particularly of the whaling ships which followed, was disastrous for the native population as the natives forsook many of their handicrafts and customs and were decimated by diseases which were introduced.

Australia was not known to be an island when Cook landed his party in the vicinity of Botany Bay. The aborigines were so primitive that they seemed unable to comprehend anything as large as a sailing ship, and thought the sailors were dead spirits returning, owing to their pale skin. The book includes descriptions of some of the first sightings of kangaroos and other marsupials. Mr. Moorhead then traces the destruction of the pure aborigines and much of the fauna of Australia in the following century to the publication of Daisy Bates' research into the culture of the last pure aborigines.

The Antarctic was difficult to approach but was found to be an enormous reservoir of wildlife, with great schools of whales, as well as an abundance of seals, fish and birds. In the following century, the whaling industry developed, which largely destroyed itself by the wholesale slaughter of the animals for which it existed. The extent of the whaling industry and its effect on the wildlife and islands are interesting aspects of this story.

Mr. Moorhead is well known for the high literary standard and interest of his books and *The fatal impact* is no exception. The description of natural history in the Pacific by the natural historians who accompanied the expedition is interesting both generally and historically. The destruction of so much of the original flora and fauna is a powerful argument for conservation and makes this a very interesting book.—*Tom White, Regina.*

THE WILD MAMMALS OF MISSOURI. By C. W. Schwartz and E. R. Schwartz, 1959. Univ. of Missouri Press and Missouri Conservation Comm. 341 pp., illus. \$6.45 (Can.)

The main body of the text is devoted to accounts of the 62 species of mammals known to occur in Missouri (33 of which also occur in Saskatchewan). Each species account is divided into sections dealing with its name, description, distribution and abundance, habitat and home, habits, foods, reproduction, importance, and management and control. The outstanding feature of the book is the beautiful illustrations, which number almost 400. The most valuable are the full page (8" x 11") plates that accompany each species account. In addition sketches of tracks, nests, young, ecological factors, and of the animals in various postures bring the subject matter alive. The book merits wide reading among naturalists and is a beautiful as well as authoritative addition to any library.—*W. Harvey Beck, University of Saskatchewan, Regina Campus, Regina.*



A Guide to Saskatchewan Mammals by W. H. Beck, available Box 1121 Regina. 50c.

ENDANGERED WHOOPING CRANE

THE WHOOPING CRANE. By Faith McNulty. 1966. Clarke, Irwin and Co., Toronto and Vancouver. 190 pp. \$5.95.

People in Saskatchewan are especially interested in Whooping Cranes since these great white birds move through the province on their migration from the Canadian North to their wintering grounds in the Aransas Refuge in Texas. I myself have seen these cranes in Saskatchewan on four separate occasions: once in the spring of 1956 at Pasqua near Moose Jaw; once in mid-summer when a single bird was observed on a sand bar at the north end of Last Mountain Lake; once in late October (1965) in the stubble fields north of Moose Jaw; and most recently on August 30, 1966, when two cranes spent several days resting and feeding in fields near Methuen.

Publicity about the Whooping Cranes and a vigorous campaign for their protection carried on by the Saskatchewan Museum of Natural History have made people on the prairies increasingly conscious of these birds and their fight for survival. To a degree, of course, this concern is shared by the whole North American continent, for the cranes' story has been much publicized in both Canada and the United States; and the Whooping Crane has become, to use Faith McNulty's words, "a symbol both of this country's new-found conscience in dealing with wildlife and of its opportunity to atone for its destructiveness in the past."

Because of her own interest in the small remnant population of Whooping Cranes and her sensitiveness to the public's concern about them, Faith McNulty has put together their history, following their story up to November, 1965. Chief among the numerous sources used by Mrs. McNulty are the books and papers of Robert P. Allen who devoted himself whole-heartedly to finding out all he could about the cranes in order to help save them from extinction, until he died suddenly in 1963. Unfor-

tunately the title of Mrs. McNulty's book is the same as that of Allen's monograph published by the National Audubon Society in 1952. A substantial portion of the contents of *The Whooping Crane* appeared originally in the *New Yorker* in somewhat different form, and some *Blue Jay* readers may have read this account in the August 6, 1966 number of the magazine.

Mrs. McNulty's first meeting with a Whooping Crane took place at the Smithsonian Institution where she saw a mounted specimen in a display case of extinct or nearly extinct birds. This introduction to the precarious position of the cranes sparked her interest in the species and her later impulse "to document the crucial and possibly final years on earth of a small band of white birds."

Although Mrs. McNulty herself uses the word "document", and did indeed seek out all the accounts in the literature of the history of this bird, her book is not intended as a research report. Stewart Udall, Secretary of the Interior for the U.S. Government, introduces us to her book as "the story of a love affair—between a civilized sophisticated Nation and an enormous, elusive bird." It is primarily as a narrative that the book is written. As most of us know who have followed the chequered career of the Whooping Crane in recent years, the story is one of adventure and suspense, and sometimes of bad luck and frustration.

The story of the cranes as Mrs. McNulty tells it goes back many thousands of years to the time when they "ranged a continent as yet untroubled by the advent of human beings." Within historical times, contrary to general opinion, Whooping Cranes seem never to have been very abundant, and it is typical of their bad luck that the myth of their abundance should have taken so long to die. Robert Allen's reconstruction of their history indicates that there were possibly 80 or 100 Whooping Cranes in

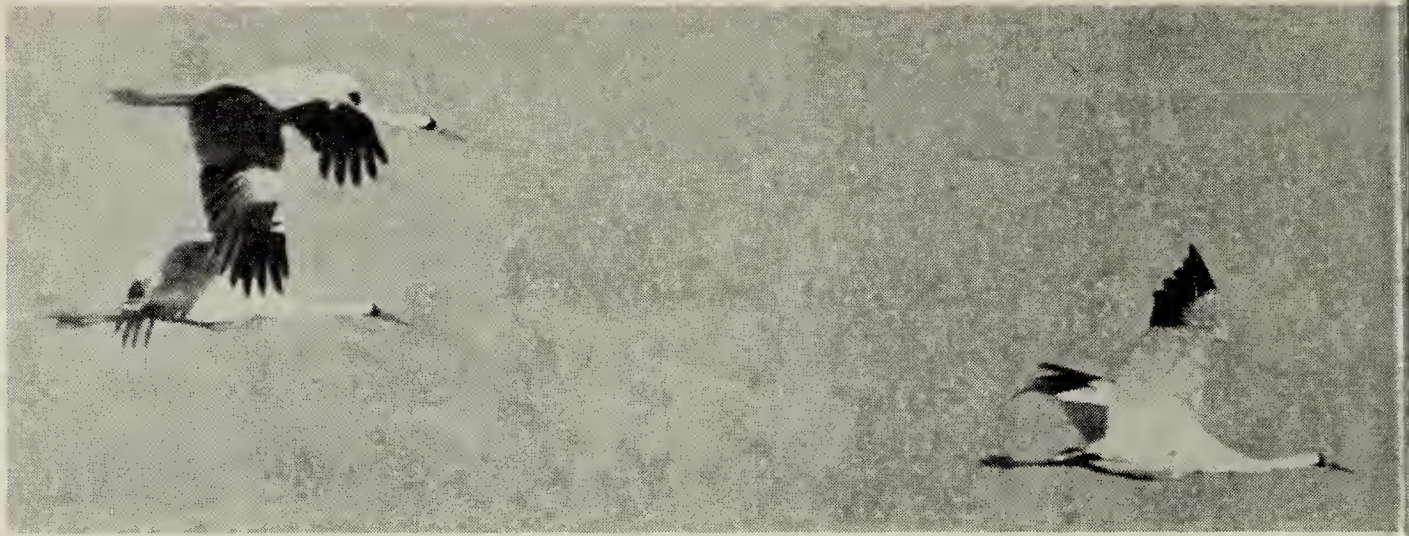


Photo by Fred W. Lahrman

1912, and yet reports of large numbers clouded the truth during the critical decades from 1912 to 1934. The first move to save the Whooping Crane was therefore not made until 1937 when the United States Biological Survey, forerunner of the Fish and Wildlife Service, bought the 74-square-mile Blackjack Peninsula on the Gulf coast that later became the Aransas National Wildlife Refuge.

The establishment of the refuge did not protect the wintering grounds of the cranes from the arrival of Army engineers to dredge a Waterway channel along the edge of their precious salt marshes, nor from the drilling of oil companies, nor from the use of Matagorda Island as a bombing and machine gun range by the Army Air Corps (an activity stepped up during the war). Few refuges, indeed, are immune from such pressures. In the years following the setting up of the Aransas Refuge ornithologists became increasingly aware of the cranes' desperate situation, and in 1945 the National Audubon Society decided to devote funds and energy to their cause. With the U.S. Fish and Wildlife Service, it formed an alliance called the "Co-operative Whooping Crane Project" and engaged biologist Robert Allen to study the problem and search for the cranes' breeding grounds. Three years and three months of devoted study and adventurous travel produced Allen's monograph on the cranes (1952) but did not locate their nesting site. Then unexpectedly in July 1952

Robert Smith of the U.S. Fish and Wildlife Service spotted two Whooping Cranes near Great Slave Lake; this clue was followed up in 1953 when cranes, but no nests, were again seen in the area. In 1954 a young bird was seen with adults from the air, and in 1955 Allen's arduous ground expedition brought him to the nesting site near the Sass River in the Wood Buffalo National Park. At this exciting moment, Allen wrote in his notes: "It has taken us 31 days and a lot of grief, but let it be known that at 2 p.m. on this 23rd day of June, we are on the ground with the whooping cranes."

The story of summers spent in searching for the nesting cranes (including the flights made by Fred Bard of the Saskatchewan Museum of Natural History in the first fruitless search over central Saskatchewan) is paralleled by the story of winters at Aransas and of the attempt to breed Whooping Cranes in captivity. Captive cranes, identified in the mind of the public by names like Josephine and Crip, became the stars of many a newspaper story, and headlines announcing "WHOOPIING CRANE IS BORN" took precedence over the birth of European royalty! On to the stage at this time comes the figure of George Douglass of the New Orleans Zoo, in the eyes of some observers the "villain" of the play. Mrs. McNulty has tried to give an objective picture of this controversial layman, and to review the pros and cons in the con-

oversy that raged over management the crane population.

When Mrs. McNulty concludes her story of the cranes with the census

November, 1965, which counted a high population of 44 in the slow recovery from the all-time low of 14 in 1939, she recognizes that this is not necessarily the hoped-for happy ending of the conventional romance.

With breeding potential, the wild Whooping Crane population is still precariously low, and even so certain dangers continue to threaten it. One of these is the failure to recognize what constitutes a really effective refuge—the Bureau of Sport Fisheries and Wildlife has just been refused its request to purchase additional acres at Aransas. Then in Saskatchewan, where Whooping cranes sometimes are seen in migration with Sandhills, the Canadian Wildlife Service has yielded to pressure and has since 1964 permitted an open hunting season on the latter.

Against the catalogue of dangers, however, can be weighed up some encouraging “counterpressures”, such as the trend toward conservation as a popular cause. Since she has shown herself so much aware of this delicate balance, I should have expected Mrs. McNulty to end her story simply with an expression of hope for their survival “if the fates are kind to the cranes.” This is, quite logically I think, the way her article in the *New Yorker* ended. In the book, on the other hand, Mrs. McNulty at the last minute espouses a new cause—the recent plan proposed by the Bureau, to take eggs from the breeding grounds in years unfavourable to nesting success in the wild and raise them in incubators, thereby building up a captive flock from which in the future young could be released into the wild. This plan she sees as the “real hope of saving *Grus americana*.” Considering the ill-starred story of previous attempts to raise cranes, as Mrs. McNulty tells it, her new confidence in the Bureau’s plan seems to me to strike a note of inconsistency at the end of her book.—Margaret Belcher, Regina.

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March, 1967

WHOOPING CRANE POPULATION DYNAMICS ON THE NESTING GROUNDS, WOOD BUFFALO NATIONAL PARK, NORTHWEST TERRITORIES, CANADA. 1966. By N. S. Novakowski. CWS Report Series No. 1, Can. Dept. of Indian Affairs and Northern Development. Queen’s Printer, Ottawa. 20 pp., 14 figs. 50 cents.

This report introduces a new series of CWS publications, replacing the former series known as “Wildlife Management Bulletins” and “Occasional Papers”.

As the title indicates, this is the report of a study of the seasonal status of the Whooping Crane population in its only known breeding grounds, the Sass River area of Wood Buffalo National Park, first located in 1954. It is shown that the Sass River birds have produced 32 young between 1954 and 1965 and that the production from other breeding areas in this period was 29 young, yet the adult population has increased by only 11 birds. To quote the abstract, “It is postulated that the juvenile birds are more subject to mortality than the adults, and as a result the total population remains fairly static. This high mortality seems to occur the year following a successful breeding season, and so long as this mortality cannot be reduced the whooping crane has little hope of reaching population levels at which it would be out of danger.”

Maps and photographs (including four colour photos on the front cover) occupy as much space in the 20-page bulletin as the printed report. Obviously, the format of this new CWS series is designed to catch the public eye. In some cases, of course, the picture tells more than words can. This is true of the photographic studies of behaviour (taken, however, at the Aransas Refuge and not on the breeding grounds which form the subject of this report). I found especially revealing Walkinshaw’s fine aerial photo of the nesting area, which told so much more about the habitat than the description of it.—Margaret Belcher, Regina.

UNITED STATES WILDLIFE REFUGES

THE SIGN OF THE FLYING GOOSE. By George Laycock. 1965. Published for The American Museum of Natural History. The Natural History Press, Garden City, New York. 299 pp. 25 black and white photographs. 17 maps. \$5.95.

George Laycock describes some of the United States National Wildlife Refuges telling how each was established for the protection of particular species of birds or mammals. Since 1903 more than 17 million acres have been set aside in over 280 refuges—places where wildlife may live in a natural environment more or less protected from the advance of civilization. This great wildlife resource program is expanding at such a rate that these figures are out-of-date, but the book still has real value and interest for all naturalists. A recent news release from the U.S. Department of the Interior states that there are now 304 refuges encompassing 28.5 million acres. Fourteen new refuges will be activated in 1967.

Blue Jay readers will be interested in the fact that the first refuge was established to protect the pelican. These birds were frequently slaughtered for sport or because fishermen felt that they were depleting human food supply. At Sebastian, 135 miles north of Miami, Paul Kroegel tried to give them protection and on March 14, 1903 the President set aside Pelican Island as "a preserve and breeding ground for native birds" with Kroegel as its first manager. The area continues to remain one of the country's outstanding wildlife spectacles. Before 1903 it had been visited by Ernest Thompson Seton, Louis Agassiz Fuertes, Frank M. Chapman and others who came to paint and photograph the birds.

The second chapter tells of the extermination of the bison; in 1903 there were only 21 wild bison in all the United States. It tells of Dr. W. T. Hornaday's efforts on behalf of these animals which resulted in the

setting aside of the Wichita Refuge in Oklahoma in 1905. Fifteen bison were selected from the New York Zoological Park and were released on October 18, 1907 while aging Comanches sat beside the corral fence with tears running down their wrinkled faces. This 59,000-acre refuge has more than a million visitors each year who come to see the west as it was. The author asked the refuge manager, Julian A. Howard, "What do people most want to see — the buffalo the longhorn cattle or the elk?" The answer was, "The prairie dogs."

One chapter is about the beautiful and mysterious Okefenokee swamp birthplace of two rivers and home of many alligators, bobcats, racoons and water birds. Another section describes the Aleutian Islands Refuge established in 1913 with 2,720,235 acres for the native birds, reindeer, fur bearing animals and fish. This refuge protects the world's greatest nesting colonies of sea birds. When formed it was generally thought to be too late to save the sea otter, but in 1936 a small but flourishing colony was seen in the kelp beds around Amchitka Islands. Today there may be 25,000 of them, but polluted water will prevent their survival close to centres of human population, since small amounts of oil spoil the insulating properties of their fur and they soon chill and die.

The history of the Agassiz Refuge (82,344 acres of wildlife habitat in Minnesota) is interesting. This area more suited to wildlife than to agriculture, was ditched. Enthusiastic people raised \$475,000 to pay for drainage, but since they could not pay taxes they went hopelessly into debt; finally, some of the area has been restored at great cost for wildlife. Ducks have come back and 15 species now produce more than 30,000 ducklings in the refuge each year; at the peak of migration a quarter of a million ducks drop in on their way south to feed and rest. There are also

iving populations of grouse, moose, black bear and whitetail deer in the fuge.

Brigantine Refuge (13,442 acres of salt marsh and sand hills on the coast of New Jersey close to large cities) says host to 60,000 bird watchers per year. Eighty thousand Brant may be seen in the refuge at once. Other chapters tell of the National Elk Range near Jackson Hole, Wyoming; the Pea Island Refuge off the coast of North Carolina where Snow Geese winter; Horicon Refuge, 50 miles northeast of Madison, Wisconsin, one of the main overwintering areas for the Canada Geese that nest along the southwest edge of Hudson Bay; Aransas Refuge along the coast of Texas which has helped save the Whooping Crane from extinction; the Upper Mississippi River Refuge which stretches 284 miles along the river and includes parts of four states; Red Rock Lakes Refuge which was essential to the survival of the Trumpeter Swan; the Key Deer National Wildlife

Refuge and others. All the refuges, by state, are listed at the end of the book.

The second last chapter describes the despoilers who by various means try to gain rights to some part of one or more of the refuges for their own gain. Although there has been some reduction in size of a few of the refuges, many are still being established so the area of water and land for wildlife is constantly being increased. The situation in Saskatchewan is not as good for here sanctuaries, according to Dr. Murray (*Blue Jay*, pp. 110-120, 1966), had in 1965 shrunk to a third of what they were in 1925. When will Canadians appreciate their responsibilities to their native plants and animals?

In the last chapter Laycock speaks of Tomorrow's Refuges. "Almost certainly, the nation's wildlife faces more hazards in the future than it has ever faced in the past . . . with space at a growing premium, who will defend the wood duck and the bald eagle?"—*G. F. Ledingham, Regina.*

SASKATCHEWAN NATURAL HISTORY SOCIETY AWARDS

The Gordon Lund Memorial Trophy

This year the Saskatchewan Natural History Society will participate in the selection of the first winner of the Gordon Lund Memorial Trophy, to be awarded "to the person who, by thought, effort or deed is considered to have contributed the most towards the conservation of Saskatchewan's renewable resources during the current year." The idea of presenting a trophy in memory of Gordon Lund of Prince Albert, well-known for his conservation activities and his natural history museum there, originated with the Saskatchewan Fish and Game League. Other organizations interested in conservation were then invited to join the Fish and Game League in sponsoring the award.

The first trophy was presented to Morris Ferrie by the Saskatchewan

Fish and Game League at its annual meeting in Prince Albert, February 18, 1967.

The Saskatchewan Natural History Society Conservation Award

Although co-sponsoring the Gordon Lund Memorial Trophy, the Saskatchewan Natural History Society does not intend to discontinue its own annual Conservation Award. The two awards are thought of as being complementary, rather than as duplicating each other. The SNHS Conservation Award is made to an individual or an organization whose total contribution to conservation is outstanding, whether in relation to a particular project, or in many roles over a number of years; it is not based on the greatest contribution made in any given year. The terms of reference have not been defined further than by