

BIRDS OF NAHANNI NATIONAL PARK, NORTHWEST TERRITORIES

GEORGE W. SCOTTER, LUDWIG N. CARBYN, WAYNE P. NEILY and J. DAVID HENRY 1985 Special Publication No. 15 of the Saskatchewan Natural History Society, Box 1121, Regina, Saskatchewan S4P 3B4 74 pp. Paper \$7.00

Canadians have long associated the Nahanni region of the Northwest Territories with adventure, remoteness and mystery. Legends of the Headless Valley, tropical forests and strange goings-on continue to draw visitors to this area now protected as a National Park. Sinister names like Deadmen Valley, Headless Creek and Funeral Range remind us of its legendary reputation, yet others such as Prairie Creek, Rabbitkettle Hotsprings and Caribou Range offer hints of an area rich in natural history.

Nahanni National Park is a long, relatively narrow strip of land along the Flat and Lower South Nahanni rivers in the southwestern part of the Northwest Territories near the Yukon border. It totals some 4760 km² of spectacularly rugged mountains, canyons and valleys. Deciduous vegetation in the flat fertile river valleys, coniferous forests on the mountain slopes, alpine tundra and barren glaciated rock peaks occur within the park. Extensive marsh lands, several hotsprings, hoodoos, sand blow outs and limestone karst formations add to the wide diversity of habitats. It is perhaps not surprising that the park's bird life is correspondingly varied.

This special publication of the SNHS, the 15th in the series, presents accounts of all

species of birds recorded in Nahanni National Park. A total of 170 species has been found and it is expected that this could easily rise to about 200. This compares favourably with Canada's more southern parks in the boreal forest and Rocky Mountain regions: Prince Albert (227), Riding Mountain (233), Waterton Lakes (249), Banff and Jasper combined (281), Yoho (206) and Kootenay (179).

The authors conducted field investigations in the park for several years as part of overall resource inventory studies after the park was established in 1972. Results of these studies and other published and unpublished observations are presented. An interesting and useful description of the study area begins the publication; vegetation found in the six main study sites is described in detail. Several black-and-white photographs and a key map included in this and later sections are most helpful in assisting the reader to become familiar with the habitats found in the park. Unfortunately, one photo (Fig. 5) was cropped excessively at the bottom. Short sections on climate and the history of bird observation in and adjacent to the park, follow. A methods section describes the two types of bird surveys conducted in selected areas (one to determine relative abundance, another to determine habitat preference) and the treatment and terminology used in the annotated bird list. Readers will find that the terms for frequency of occurrence (common, uncommon, rare) are defined differently for the abundance surveys and the annotated list.

The examination of bird-habitat relationships is a very valuable part of this book. The relative abundance of 83 species at two valley sites shows a high diversity of species with few (only 5) considered common.

Notable is the variety and density of thrushes - six species including Townsend's Solitaire, Gray-cheeked and Varied thrushes occurred at one valley site. The report of the occurrence of 37 species in nine habitat types at one site in 1976, and 23 species in five habitat types at a second site in 1977 will be of use in many ways to the amateur and professional bird student alike. Similar information is rarely available to the public except in more technical publications which are often inaccessible. The authors have used bird sightings (presence or absence) rather than the actual number of birds observed to determine these habitat use values so true densities cannot be calculated for a species. The importance of flocking species like siskins and crossbills in the park's avian community is de-emphasised with this treatment. The group, Empidonax flycatchers, is referred to in error as 'Empidonax flycatcher' in Table 2 and the text on page 22, but correctly in Table 3.

The annotated list makes up the largest section of the book (31 pp.) and gives details on the seasonal status, breeding status and frequency of occurrence of all 170 species. The most complete details are provided for those species which are of special interest, including those observed four or fewer times in the park. That this publication is a major contribution to our knowledge of birds in this region is evidenced by the large amount of new information on breeding status: confirmed range extensions for 10 species and strongly suggested extensions for another 6 species. Future visitors to the park can add to this work by looking for nests of another 25 species recorded in the breeding season, and still others expected to occur. The drawings by A.R. Smith, particularly the White-winged Crossbill on the cover, are an attractive addition to the book.

Following a literature cited section is a list of articles, books, films and maps which can be used as further sources of information on Nahanni Park. Comments on how to get to the park are given on page 16.

A thoughtful inclusion at the end of the book is the checklist of birds. Each species has a three part status code which is a summary of the material in the annotated list - a handy feature for quick reference in the field. On the inside front cover is a map of the park and surrounding area. This is the ideal spot for such a map.

Few of our national parks are fortunate enough to have such a comprehensive, up to date, error-free and readily available book on the local bird life. The authors and all those who contributed to the knowledge of the birds of Nahanni National Park should be congratulated on a most useful and attractive publication. Every birder visiting Nahanni should bring along a copy of this book together with binoculars and a large bottle of insect repellent. — Reviewed by *Philip S. Taylor*, 1714 Prince of Wales Avenue, Saskatoon, Saskatchewan. S7K 3E5

THE BALD EAGLE IN CANADA

Proceedings of Bald Eagle Days, 1983.

Edited by JON M. GERRARD and TERRANCE N. INGRAM 1985 White Horse Plains Publishers, Headingley, Manitoba. 272 pp. illus. \$20.00.

Since Charles Broley was the first to suggest that DDT might be implicated in the drastic reduction in Bald Eagle nesting success throughout eastern North America in the 1950s, and since he banded 1200 nestling Bald Eagles, this volume is dedicated to him. There are delightful vignettes about Broley's days in Manitoba, Florida and Ontario, by Ardythe McMaster, Doris Mager and Gerry McKeating, respectively.

Nine of the papers are status reports for various parts of Canada. Gerrard estimates

that there are over 10,000 Bald Eagles in Saskatchewan each summer and that they raise about 2500 young each year.

Eight of the remaining 24 papers concern Saskatchewan. Bortolotti, the Gerrards and Whitfield report that regular climbs of eagle nest trees at Besnard Lake had no detrimental effect on nesting success. They use permanent spikes, 25 to 30 cm long, hammered into each tree to form a ladder to allow quick visits. Barber, Stelfox and Brewster tell how important rapids are to the unusually high density of nesting Bald Eagles along the Churchill River; 36% of nests are within 0.8 km of rapids. Bald Eagles commonly nest near the lake or river shore and a boat census will ascertain most nesting sites. In Saskatchewan there is a strong correlation between the number of eagles nesting at a given lake and the commercial fish catch there, perhaps because fish left on the ice in spring provide food for the nesting eagles long before the lake ice thaws. Adult eagles moult throughout the nesting season and into the autumn.

Nijssen tells how an adult female Bald Eagle was trapped on its breeding territory at Besnard Lake in September 1982, and a radio transmitter attached to the tail feathers. It remained near its nesting area until 11 November when the lake was nearly completely frozen and a cold front passed through. It flew south for just over an hour that day and for over 2 hours the next day, reaching Pear Lake, 100 km south of its nest area. On 13 November it travelled to the Smoothstone River where there was still some open water. On 15 November it moved to the north end of Delaronde Lake. Another cold front passed through 16 November and the eagle started flying at 11:30 a.m., eluding further aerial searches.

At Besnard Lake, after the building of an access road and the construction of four tourist access sites, there was a drastic decrease in Bald Eagle breeding within 4 km of these sites. For management, it is recommended that no disturbance of any kind be allowed within 200 m of a Bald Eagle or

Osprey nest, with a further 800 m protected area between 1 March and 1 September. Such an area in Ontario is termed a Modified Management Area. — Reviewed by *C. Stuart Houston*, 863 University Drive, Saskatoon, Saskatchewan. S7N 0J8

BIOLOGY AND MANAGEMENT OF BALD EAGLES

Edited by DAVID M. BIRD, NORMAN R. SEYMOUR and J.M. GERRARD 1983 Harpell Press, Ste. Anne de Bellevue, Quebec. 325 pp. \$18.00.

This volume, with 42 papers and 10 abstracts, reports the results of an International Conference held in Montreal in late October 1981, in conjunction with the annual meeting of the Raptor Research Foundation.

The Bald Eagle and the Osprey began to receive attention rather belatedly, after their numbers had decreased drastically throughout Eastern North America. Together with the Peregrine Falcon, these species offered conclusive evidence that DDT and its derivatives caused egg-shell thinning and greatly reduced breeding success. More important, the world began to look at these birds as sensitive indicators of the health of our environment.

It seems we have turned the ecological corner, at least temporarily, for most of these papers describe healthy and increasing numbers of both Ospreys and Bald Eagles, and promising methods of reintroducing them into former breeding areas. In central and western regions of interior North America, Bald Eagles have probably doubled in the last 25 years. Jon Gerrard estimates that there are now 48,000 Bald Eagles in British Columbia and Alaska and another 22,000 in the remainder of the continent. Wintering populations in places like Ontario bottomed out about 1970, but have increased dramatically since.

The construction of locks, dams and reservoirs and the creation of wildlife refuges have been beneficial to wintering Bald Eagles, and introduced Kokanee Salmon have provided a new food source in North-western Montana.

Gerrard, Gerrard, Bortolotti and Whitfield present a 14-year study of the eagles at Besnard Lake, Saskatchewan. The average success of occupied breeding areas was 73% and the average number of young per occupied breeding area was 1.7. Approximately 10% of the nests were lost each year.

Veterinarians at the University of Minnesota have been quite successful in rehabilitating injured and diseased Bald Eagles. Of 52 Eagles caught in steel-jawed animal traps, 21 were rehabilitated and released (44%), while of 47 brought in with less severe problems, 37% were released into the wild. The cost of such care was several thousand dollars per eagle.

Technology plays a large role in modern studies. Some Bald Eagles carry radio transmitters. An investigator at Woods Hole, Massachusetts has an ingenious scale whereby adult Ospreys are weighed whenever they perch above their nest.

There are now about 8000 pairs of nesting Ospreys in the mainland United States. They have shown a consistent pattern of improved productivity since about 1970, except in southern Florida where there now may be insufficient food for them.

In Nova Scotia, Ospreys were 20% more successful when they nested on utility poles than when they nested in natural trees. In Florida there was less egg loss at artificial platforms, resulting in about twice as many young per active nest when platforms were used. This was felt to be due to less susceptibility to wind damage and also to greater security from ground predators.

The book also provides articles on

population trends and management of the White-tailed Eagle and of the Osprey in Europe.

This volume demonstrates the intense interest in eagles and ospreys. It also demonstrates that, through application of biological principles, coupled with increased public awareness, we are winning some conservation battles. — Reviewed by *C. Stuart Houston*, 863 University Drive, Saskatoon, Saskatchewan. S7N 0J8

THE ATLAS OF BREEDING BIRDS OF VERMONT

Editors SARAH B. LAUGHLIN and DOUGLAS P. KIBBE 1985 Published for Vermont Institute of Natural Science by University Press of New England, Hanover, New Hampshire. 478 pp. \$45.00 U.S..

This breeding bird atlas covers 195 species reported as breeding in the state of Vermont. There are 179 two-page species accounts accompanied by a distribution map and a pen-and-ink drawing of each bird. Vinyl overlays accompany the description of the area. The text contains details on habitat, foods, migratory patterns, breeding biology and other bits of bird lore. This type of book provides a baseline from which changes in bird populations can be studied.