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## THE PEREGRINE FALCON

DEREK RATCLIFFE. 1980. Buteo Books, Box 481, Vermillion, South Dakota, U.S.A. 57069. \$42.50 U.S. funds plus \$1.00 per order for shipping.

Derek Ratcliffe is presently chief scientist of the Nature Council in England and has been a keen student of the peregrine in the U.K. since his boyhood years. During 1961-62 he acted as organizer of the British Trust for Ornithology's national enquiry into the alarming decline of the peregrine in that country.

This handsome and remarkable book consists of 416 pages divided into sixteen chapters, preamble, 23 tables, various appendices, comprehensive bibliography and index. It is well illustrated with sixteen pages of black-and-white photos, plus color paintings and line drawings by artist Donald Watson, which accurately convey the habits and habitat of the species.

Although at first glance the book appears somewhat esoteric in scope, the reader is soon captivated by Mr. Ratcliffe's ability to present his research as a direct and highly informative narrative. It stands as the most comprehensive publication on the species since Hickey's "Peregrine Falcon Populations: Their Biology and Decline".

The peregrine falcon is found throughout the world and in recent times several regional populations have experienced significant decline. Numerous investigations into this global

phenomenon have been conducted by many researchers. But because of the history of intense interest in this predator by the British, nowhere has the story pertaining to this decline been more completely reconstructed.

The author first establishes the propensity of the British peregrine to remain relatively stable through the ages despite relentless persecution from game keepers, bounty hunters, egg collectors and even the government during World War II. It seemed nothing could deter this resilient sub-species from returning eventually to its nesting cliffs until the final blow was dealt in the mid 1940's with the introduction of persistent organochlorine insecticides into the environment. These lethal chemicals quickly affected the peregrine's ability to produce sufficient offspring and the population began to diminish. Productivity prior to 1945 is dealt with district by district throughout Britain, thereby establishing a solid foundation on which to establish that a true decline was in process.

Basic breeding biology of the species is dealt with in great detail. Ratcliffe draws heavily on many other studies to describe fully virtually every aspect of the entire breeding cycle. Such topics include feeding habits, nesting habitat, pairing and courtship, incubation and production of young, breeding density and territory, population dynamics, migration and geographical variation.

Probably the most significant point these studies have documented is the peregrine's ability to recover from the toxic chemical problem. Ratcliffe and his many co-workers demonstrate that a major reduction in the use of various

pesticides in Great Britain is clearly correlated with a gradual resurgence of their non-migratory peregrines. In most of the districts they once again occupy their traditional nesting cliffs.

In North America the *anatum* subspecies has experienced a decline much more severe than that of the British race. Once scattered throughout the eastern half of the continent, the *anatum* can now only return with the aid of captive breeding and release programs.

In his final chapter Ratcliffe emphasizes the need to continue monitoring predator populations due to their value as barometers of environmental stability. He conclusively demonstrates that if the world-wide pesticide problem can be overcome, the peregrine and subsequent variety of life forms it represents will face a much brighter future. — Reviewed by Tom Donald, Box 99, Eastend, Saskatchewan S0N 0T0.

## THE HUMAN CONDITION. AN ECOLOGICAL AND HISTORICAL VIEW

WILLIAM H. McNEILL. Princeton Univ. Press, Princeton, N.J. viii + 81. pages. Index.

This little book is worthy of serious reading by the thoughtful naturalist, and by all persons concerned about man's present place in the natural world and how he should live in the next few decades. It is a capsule history of man's life on this planet. The author, William H. McNeill, examines the course of man's existence from prehistoric time up to the present in the light of two restrictions on his existence — microparasitism and

macroparasitism. *Microparasitism* is defined as the metabolic activities of bacteria, protozoans (and also viruses which either compete with man for food or invade the human body. This type of parasitism is "a sort of nether millstone perpetually abrading human efforts to assure individual and collective survival". *Macroparasitism*, in McNeill's definition, accepts the fact that from the earliest stages of the life of our ancestors on this planet, "no other species has been capable of feeding regularly on human bodies by killing and eating them". What McNeill considers as *macroparasitism* however, includes the acts involved "when one man or group of men seize goods or compel services from other human beings", i.e. the serfs of old slaves, and in fact any exploited classes or individuals are all victims of macroparasitism. The two chapters in which the author examines man's history on earth in the light of these two types of parasitism are revisions of two lectures which he delivered in the Bland-Lee Lecture Series at Clark University in September 1979. The first chapter follows the development of man up to about 1000 A.D., particularly in reference to trade between groups (tribes, nations, states). This interaction of groups of human beings which had hitherto existed as separate isolated populations rendered them vulnerable to microparasites. The development of disease resistance and checks on human population are handled concisely, giving us a sweeping view of the development of man relative to microparasitism. His treatment of macroparasitism includes an analysis of control by sovereigns and their bureaucracies, with further reference to the influence of religions on ethical systems.

In the second chapter (A.D. 1000 to the present) he reviews the development of control of disease. However, it is in his analysis of macroparasitism, o



the influence of trade developments, the invention of gunpowder, the Dark Ages, the Industrial Revolution, and the rise of European great powers that McNeill is outstanding, at once in his description and analysis. Probably his most discerning analysis is that of the rise of thought among Europeans, — "First of all, in intellectual matters, they could afford to be curious about the newly apparent diversity of earth — felt no immediate threat from the new contacts their seamanship opened up. Instead any useful novelty that came to their attention could be considered, wondered at, and, if it seemed worthwhile, appropriated to their use." "A systematic openness to new thoughts resulted, whereas in other civilized regions of the earth, when the alien presence seemed menacing to any aspect of inherited values — as happened sooner or later in each case of cultural encounter — a defensive mentality asserted itself that sought to close out everything unfamiliar and dangerous to established verities."

McNeill's lectures will not provide ready answers, but they do provide a basis on which to examine and ponder how man should strive to exist in the ecosystems of this planet, and how his sociological and religious perceptions may aid him in a sane and extended life in harmony with the natural world.

William McNeill is the Robert A. Millikan Distinguished Service Professor of History at the University of Chicago. Given by the nature of this chair he personifies a current in scientific persistence. His book, along with other such recent contributions to the study of man in the natural world as Barbara Ward's *Only One Earth*, John Platt's *The Step to Man* and Reuben Bellin's *The Mission of Urban Man*, should receive thoughtful consideration by all persons with a natural history interest as they look to the events of which we are a part which will have important consequences for the future. —

Reviewed by J. R. Jowsey, 2635 - 19th Avenue, Regina, Saskatchewan S4T 1X2.

## AUTOBIOGRAPHY OF JOHN MACOUN, CANADIAN EXPLORER AND NATURALIST, 1831-1920.

Ottawa Field Naturalists Club, Ottawa, Canada, 1979. Special Publication No. 1. xvii + 361 pages. Maps and illustrations. \$12.50 plus \$2.00 postage and handling.

Originally published as a memorial volume in 1922, the *Autobiography of John Macoun* has been re-published with a new introduction by Richard Glover and updated editorial notes and a biographical essay by W. A. Waiser. As presented, it is at once a brief history of Canadian development 1870 to 1920, a brief natural history of Western Canada with particular emphasis on botany and a collection of scattered natural history observations for Canada as a whole. It is well worth reading by any Canadian and is worthy of consideration as supplementary reading or reference for interested students in the prairie provinces (from about Grade X level) who would gain a wider perception of Western Canada from reading it.

At the first glance this work might seem to be a dry, ponderous chronicle of events, but Macoun's style, the contributions of the editors Glover and Waiser, and the urgency of the events of the years it spans, will soon dispel such an impression for those interested in

either the natural history or the social and political history of Canada.

John Macoun's autobiography is edited and arranged in such a fashion that it gives the reader a series of sweeping glances of the plains of Western Canada as the first explorers and early settlers found them. Although there are a few maps and black and white photographs, the main picture is painted in words by Macoun; this vivid description is his legacy to Canadians.

Since Macoun's travels were extensive in both distance and time (1872-1885), the book doesn't allow space for much detail of any plant or animal life, and the pace seems rushed in places. Macoun's eye for detail, steadfastness of purpose, and his organizing ability both as a reporter of facts and as a leader of field expeditions is evident throughout. There are, as the biographer (Waiser) notes certain inaccuracies and approximations in descriptions of plants. Considering the time the book was written and the number of plants described, such inaccuracies are understandable; refinements in taxonomy came later with the works of A. C. Budd and his later associates E. H. Moss and H. J. Scoggan.

Reference to two passages from the book may spark the reader's curiosity. The first is a description of the meadows of flowers on the slopes of Mt. Selwyn (p. 105).

"Where the heaviest drifts of snow had lain, and where much of it still remained one or two anemones and Boreal Buttercup (*Ranunculus hyperboreus*) were blooming and in fine condition. . . . A number of drabas and arenarias literally plastered the ground with multitudes of flowers. Five hundred feet below the summit, Mt. Selwyn stands first, in my imagination, as the highest type of nature's flower garden. None of the plants, except the pedicularis, rose above the general

level, which was about two inches or probably less, and all was a flat surface of expended purple, yellow, white and pinkish flowers."

The second example is a historical passage close to the interests of the S.N.H.S. and many others (p. 192). "After being at (Fort) Livingstone for a few days and examining the country, I made arrangements to cross the fourteen miles that lay between Livingstone and Fort Pelly. I hired a wagon which took over the two boats and the men walked. At Fort Pelly we were now on the Assiniboine and, from it, we intended to go down to Winnipeg. After a few days at Pelly we made our arrangements and obtained some provisions and started on our way to Fort Ellice, three hundred miles to the east."

The major events in this book took place within the last 110 years. For a man who was largely self taught, Macoun has an amazing judgement of the developing Canadian scene, which he looks at from the geographical, biological and political points of view. Waiser's editorial notes expand the reader's contact with the scene but would be more useful to the average reader if they had appeared at the ends of the chapters.

Macoun's family, and particularly his wife, obviously shared the cost (in time and isolation, and in low salaries) of his dedicated travels. It is interesting to note that once the railway was complete Mrs. Macoun could for the first time share some of his travels and experience some of the scenes he saw. His children and his near relatives particularly his son and his nephew (p. 192) on the 1881 expedition to what is now Manitoba and Saskatchewan, were also able to share his experiences as an explorer. The family sharing of these experiences and the involvement of his daughters (p. 196) in preparation of his early book *Manitoba and the Great*



North West add further interest to this remarkable autobiography. — reviewed by J. R. Jowsey, 2635 - 19th Avenue, Regina, Saskatchewan S4T 1X2.

## STRICTLY FOR THE CHICKENS

FRANCES HAMMERSTROM. 1980. Iowa State University Press, South State Avenue, Ames, Iowa. 50010. 136 pp., 6 x 9, cloth \$11.95.

During the 1930's a young husband and wife team, Frederick and Frances Hammerstrom, embarked on a project to study and save the seriously endangered Greater Prairie Chicken in central Wisconsin. Perhaps unknown to them then, this fascinating project was to become a lifetime career. Because of the knowledge gained over the years and their unflagging dedication the Greater Prairie Chicken has been brought back from the brink of extinction. Although scarcely mentioned in her book, for this is a story of the chickens, Fran has also contributed greatly to the study of raptors.

One of the earliest woman biologists, Fran received a B.S. degree from Iowa State College under Paul Errington, an M.S. from the University of Wisconsin under Aldo Leopold and an honorary doctorate from Carroll College.

During their pioneering studies the Hammerstroms shared a common love of wildlife and of roughing it in the Wisconsin wilds. To learn the ways of the prairie chicken, they had to work for long hours in the cold of winter, capturing and banding the prairie chickens and building blinds, and during the spring booming season of the prairie chicken it meant getting up at about 3:00

a.m. every morning to enter the blinds before the chicken left their roosts.

I don't doubt but that it was Fran's irrepressible sense of humour that enabled them to persevere despite the hardships and inevitable disappointments they must have experienced at times.

This warm sense of humour comes to the fore in the lighthearted account of their study. The author has chosen, as she says, to reveal "what lies back of scientific work", what "seldom shows in a technical paper or book: the viewpoints of the public, the adventures of the investigators and the fascinating struggle to find out more."

In my own experience with this bird, I recall my father telling me that when he came to the Mortlach district in 1912 he found both Sharp-tailed Grouse and the more abundant Greater Prairie Chicken. But when I grew up on my parent's farm there during the 1930's the prairie chickens were gone. My dad pointed out the chickens' dancing grounds on the old homestead (on a piece of still virgin prairie) where they used to dance year after year. He noted that their dancing grounds were separate from those of the sharptails. As I recall, during the winter of 1944-45 I was fortunate to see a few. I came upon a flock of about 20 sharptails feeding on a great patch of snowberries and rose briar which was exposed over the deep snow. Then I noticed prairie chickens within the group, their barred breasts and the pinnated feathers of the neck clearly visible. Then they flew and I could see the fanned black tails of four or five chickens in the flock as they quickly faded away.

I did not see any prairie chickens again until March 1957 when I had the thrill of observing and photographing these birds from one of the Hammerstrom's blinds. *Strictly for the Chickens* has brought back many happy memories of my brief visit with the Hammerstroms and will provide very



enjoyable reading and inspiration to all.

The photographs and the delightful illustrations by the Hammerstrom's daughter Elva, add a touch of presence

to the book which words alone cannot convey. — Reviewed by *Fred W. Lahrman*, Saskatchewan Museum of Natural History, Regina, Saskatchewan. S4P 3V7.



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