

Peregrine Falcon Populations: Their Management and Recovery

Edited by Tom J. Cade, James H. Enderson, Carl G. Thelander, and Clayton M. White. Foreword by Roger Tory Peterson. 1988. The Peregrine Fund, 1988. 949 pp. Hardcover, \$54.95.

By William L. Murphy



The story of the peregrine falcon never has been told more thoroughly or by so many people as it is in this book. Biologists watched with concern as peregrine falcon populations began to diminish during the 1950s. Never common, their numbers plummeted in the early 1960s, with most nesting scrapes eventually left unoccupied. Alarmed by the possible extinction of the species, biologists met in 1965 in Madison, Wisconsin, to examine the phenomenon and to share their findings and concerns. *Peregrine Falcon Populations: Their Biology and Decline* (Joseph J. Hickey, ed., 1969), contains the results of that international conference. The present volume is a highly readable compilation of papers presented at a more joyous symposium held in 1985 in Sacramento, California. Its optimistic tone would have been beyond the wildest dreams of the scientists at the 1969 meeting.

The arrangement of the book is logical: keynote addresses; status of peregrine populations since 1965 in North America, Europe, and other parts of the world; DDT and other chemical problems; migration and banding studies; captive propagation, reintroduction, and management; dynamics and ecology of peregrine populations; geographic variations in peregrine populations; humanity and the peregrine; and summary and conclusion. Included as appendices are abstracts of papers not submitted, scientific names of bird species mentioned in the text, common names of peregrine subspecies, abbreviations of states and provinces, a list of contributors with affiliations and addresses, and a 48-page consolidated bibliography.

The main questions posed in the book are: What devastated peregrine populations? What does the future hold for this species? Investigations into causes of the population crash concentrated on egg collecting, poisoning, shooting, and capturing of adult birds for falconry. Analysis of 20 years' worth of data from all over the world clearly showed that the principal cause was exposure of breeding-age peregrines to organochlorine pesticides, principally DDE (a metabolite of DDT), which thinned eggshells and led to poor nesting success. Little influence on overall populations was exerted by poisoning of adults by pesticides, egg collecting, shooting, or other factors.

One might ask who would read nearly 1,000 pages of text concerning a single species. I was daunted by the sheer mass of this book but found that each chapter served as a story in itself and that each section provided a complete overview of one aspect in the peregrine story. I eventually read nearly the entire book, although I admit skimming the papers on cladistics, DNA polymorphism, and hard-core biochemistry.

What a storehouse of information is contained therein! This book presents a portrait of the species as a natural heritage on six continents and on numberless islands.

Depicted in a kaleidoscope of habitats and behaviors are subspecies of peregrines that nest on the ground in bogs in Finland, on bleak desert cliffs in Chile, on remote lighthouses in the Baltic, and on limestone bluffs in Australia's outback. The peregrine is presented here as much more than the dashing Cape May fly-by with which many of us are most familiar.

Of particular interest to birders in this area is the paper "Autumn migrations of peregrine falcons at Assateague Island, Maryland/Virginia, 1970-1984," by F. P. Ward *et al.* How heart-lifting it is to note that from a low of 39 peregrines observed in 1972, the yearly total climbed to 483 in 1985 and to an unprecedented 830 in 1986. Ward pegs October 5 as the average peak date for peregrines at Assateague and graphs the hourly number of peregrines migrating throughout the day as a nearly flat line.

Individual summaries of the papers are quite clear. For example, the summary of the study of peregrines at Assateague notes that 1) migrants decreased substantially from 1956 to 1978; 2) migrants increased to 1939-1944 (pre DDT) levels by 1979; 3) about 20 percent of the migrants remain one or more days and about 20 percent of those stay more than four days; 4) more than 6 percent of those captured the first time during a season have been banded previously; and 5) long-term counts conducted systematically at key migration foci reveal long-term population trends. The other summaries likewise convey complex scientific data in lucid terms.

It is noted that peregrine populations are monitored more carefully in North America and Europe than in other regions. The editors report that populations are relatively unstudied from northern India to the Arctic Ocean and across the Far East, and that those in China are the greatest enigma of all. Data from Russia is scant; although ornithologists from the Soviet Union were invited, none attended either conference.

What does this book say about the future of peregrines? Scientists at the Sacramento conference were optimistic about the total recovery of peregrine populations. Reintroduction programs have achieved their goals rapidly, as demonstrated in eastern North America, where current peregrine populations equal or even exceed historical (pre-DDT) levels. Moreover, peregrines have begun nesting in sites that never were used before, such as platforms in coastal salt marshes.

Cade, Enderson, Thelander, and White are to be commended for their excellence in editing and producing this benchmark publication. Increased public awareness of the peregrine will play a great part in maintaining an environment conducive to the continued growth of peregrine populations. Anyone who wishes to understand fully the complexities of managing a single species, such as the peregrine falcon, would do well to acquire this book

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