

PREFACE

SCIENTISTS STUDY what intrigues them most, and diurnal birds of prey—those predatory birds active during daylight hours—also known as raptors, have attracted my interest for as long as I can remember. Some of my colleagues have been drawn to study raptors—the hawks, eagles, and falcons of the world—by falconry, others by the more spectacular attributes of the birds themselves, including their ability to successfully capture, subdue, and kill large prey; to migrate long distances; to soar seemingly effortlessly for hours; to see movement much better than we; and to see colors that we can only imagine. As a scientist, my own interest in diurnal birds of prey has focused on their behavioral development and their movement ecology, along with their predatory abilities and social behavior.

Over the years, many other scientists have been equally intrigued by raptors. As a result of the work of my contemporaries and predecessors, we know more about raptor biology than we do about that of many other types of birds. And this, of course, is good, particularly when we are trying to protect them in our modern world. What is not good is that much of our knowledge about them lies hidden in a largely impenetrable morass of writings that we scientists call the technical literature. Consequently, raptors, although fascinating to many, remain an enigma to many more. The sizes of raptors and their ability to carry off large prey, for example, are frequently misjudged. Their predatory lifestyles are frequently misconstrued by people in ways that often make them more likely to be targeted for human persecution.

This book is an attempt to reveal highlights of the closely held technical literature about raptors so that lay naturalists, birders, hawk-watchers, science educators, school children, and the general public, along with new students in the field of raptor biology, can begin to understand and appreciate these birds. Written for those who want to know more about raptors as ecological entities, the book is intended to create a biological overview of this captivating group.

My journey through the technical literature has been a personal one, and in this book I have covered best what I know the most about. I have attempted to be rich in detail but not overwhelmingly so, as well as authoritative and instructive. I must admit, however, that I have not been encyclopedic. The growing raptor literature is simply far too vast and expansive for that. Many of the details described in these pages are answers to questions that I have been asked in my work as Sarkis Acopian Director of Conservation Science at Hawk Mountain Sanctuary, a place at which more than seventy thousand people a year come to see to see raptors in the wild and to learn more about them. Others are answers I've found in the literature to questions I myself have raised. Still others are answers to questions my own fieldwork helped me discover.

I have spent much of my scientific career studying raptors to better understand how these birds "work" biologically, how they affect the ecosystems in which they live, and, in turn, how humans and other aspects of their environments affect them. In some instances what I have learned has helped better protect birds of prey. Watching and studying raptors on five continents has instilled in me a firm belief in their importance, not only as ecological entities, but also as inspirational tokens of our natural and human-dominated landscapes. My hope is that this book and the answers it provides will infect readers with a similar enthusiasm for raptors, and that some will pursue careers that will help increase our understanding of these ecological actors.

What follows summarizes the institutional knowledge about raptors resulting from the careful studies of hundreds of scientists and raptor aficionados, without whose help I could not have written this book. Dean Amadon, David Barber, Marc Bechard, Jim Bednarz, David Bird, Gill Bohrer, Andre Botha, David Brandes, Leslie Brown, Tom Cade, Bill Clark, Michael Collopy, Miguel Ferrer, Laurie Goodrich, Frances Hamerstrom, Todd Katzner, Roland Kays, Robert Kenward, Lloyd Kiff, Sergio Lamberucci, Yossi Leshem, Mike McGrady, Bernd Meyburg, Ara Monadjem,

Peter Mundy, Juan José Negro, Ian Newton, Rob Simmons, Jean François Therrien, Jean-Marc Thiollay, Simon Thomsett, Munir Virani, Rick Watson, Martin Wikelski, and Reuven Yosef, esteemed respected colleagues and mentors all, immediately come to mind. There are many others as well, including many former students that I have had the opportunity to teach and learn from, and I thank them all. Numerous classes of international trainees at Hawk Mountain Sanctuary have heard or read most if not all of the book, and several have offered ideas for additional content. The board of directors of Hawk Mountain Sanctuary Association, together with my education and conservation science colleagues at the sanctuary, provided the intellectual environment necessary for me to complete this book, and I thank them for their support. I also thank all of the many fine people I have worked with at Cornell University Press, including my editor, Kitty Liu, and my production editor, Susan Specter.

I end with three disclaimers. First, *Raptors* focuses on diurnal birds of prey. Their nocturnal ecological equivalents, the owls, although mentioned throughout, are introduced largely in comparisons to demonstrate significant similarities and differences between these two wonderful groups of birds; they are sometimes noted but are not treated in equal detail. I have done so because my knowledge of the technical literature covering diurnal birds of prey is far more comprehensive than is my knowledge of the technical literature covering owls, and I have decided to go with my strength. It would be unfair to the owls to do otherwise. Second, this book does not offer “in one work all of the available knowledge on diurnal birds of prey of the world,” a claim that Leslie Brown and Dean Amadon—the two great mid-twentieth-century pillars of raptor biology—justifiably made in their monumental *Eagles, Hawks and Falcons of the World* in 1968. The world of raptor biology was considerably smaller then than it is today, and what follows is best viewed as an introduction that briefly summarizes much of the current knowledge in the field, and not as a vast compendium of all that is now known. Third, I have written previously on the migration biology and conservation ecology of diurnal birds of prey, particularly in *Migrating Raptors of the World* (Cornell University Press, 2006). Chapters 7 and 8 of *Raptors* draw heavily on those writings, functioning as essential updates of those now-outdated efforts.