

The Harris's Hawk Revolution

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BOOK REVIEW

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The Harris's Hawk Revolution. By Jennifer and Tom Coulson. Parabuteo Publishing, LLC, Pearl River, LA U.S.A. 2012. 661 pages. Approx. 452 color photos, 5 black-and-white photos, 22 illustrations. ISBN 978-0-9858247-0-9. Cloth, \$85.00. www.harris-hawkrevolution.com.—Raptor research and conservation have often drawn from the sport of falconry. Falconry has provided trapping tools, husbandry, breeding, rearing, and reintroduction methods, and even behavioral observations. This new falconry book devoted to the Harris's Hawk (*Parabuteo unicinctus*) provides raptor biologists with a wealth of information from natural history to captive breeding techniques, and it is bound to rekindle research interest in this social raptor. Jennifer and Tom Coulson have probably bred and trained more Harris's Hawks for falconry than anyone. They started a captive breeding program in 1981 that has now produced nearly a thousand offspring. Their new book, *The Harris's Hawk Revolution*, is the result of their past three decades of experience. A textbook-sized compendium of information on all aspects of the captive Harris's Hawk, the book is infused with such thorough knowledge—and such obvious passion—that it will delight any raptor enthusiast.

The Harris's Hawk Revolution covers the natural history of wild Harris's Hawks (chapters 1–2), husbandry of captive birds (chapters 3–4), falconry (chapters 5–14), captive breeding (chapters 15–17), and mortality and medical treatment (chapters 18–19). Students of raptor ecology will be most interested in Chapter 2, a long natural history review that was clearly designed to complement rather than replicate the species account in the *Birds of North America* series (Dwyer and Bednarz 2011). Although the Coulsons do summarize the classic literature on ecology and cooperative breeding in Harris's Hawks, they pay special attention to previously neglected aspects of their natural history. These include additional information on diet and behavior, an extensive summary of parasites documented in free-living birds, detailed descriptions of the timing

of molt, and the conservation status of Harris's Hawks throughout their range.

Their discussion of the South American subspecies of the Harris's Hawk, *P. u. unicinctus*, is the most detailed review available of this little-known subspecies. It offers a great deal of previously unpublished information that will surely be of interest to those studying wild Harris's Hawks, including measurements and plumage descriptions from museum specimens. To my knowledge, the Coulsons are the first to report that whereas the northern subspecies (*P. u. harrisi*) typically molts directly from the juvenile to the adult plumage, the southern subspecies exhibits two or even three distinct subadult plumages, requiring up to 5 yr to achieve adult plumage. They also revisit historical and specimen records of Harris's Hawks from South America, finding little support for the claim that the range of the northern subspecies extends into South America along the western slope of the Andes.

The Coulsons have an intuitive understanding for the ways in which social living has shaped the Harris's Hawk's behavior, and for the role that learning plays in a young hawk's development. One fascinating section describes the social lessons that young hawks learn from their parents while still in the nest, complete with a series of photographs of adult hawks disciplining their young with threat postures, alarm calling, and physical punishment. This is the first report of these parenting behaviors in Harris's Hawks. Another series of photographs illustrates the "body language" involved in threat posturing.

The Coulsons' decades of careful record-keeping illuminate the sections on captive breeding and rehabilitation (Chapters 15–19). Chapter 15 focuses on selective breeding for traits useful in falconry, heritable variation, and the importance of maintaining a central, pedigree database. The remaining chapters are relevant to anyone raising raptors in captivity. The authors give detailed, clear recommendations for incubating and hatching eggs in incubators, based on their own data on egg weight loss, nestling growth rates, and other developmental parameters. The section on medical issues (Chapter 19) contains not only well-organized summaries of the most common ailments of captive Harris's Hawks, but also tables providing specific dosages

of medications and reference values for electrolytes and blood cell counts. Finally, Chapter 18 is a review of the causes of mortality in captive raptors drawn from nearly six hundred reports that the authors received from colleagues. Like many of the sections in this book, this chapter could easily be published as a stand-alone paper.

The Harris's Hawk Revolution is beautifully produced and lavishly illustrated. It contains several hundred color photographs of Harris's Hawks in every possible plumage and from every potential angle, including some stunning action shots of hawks hunting jackrabbits and other prey. Many photographs capture intriguing behaviors that occur both in the wild and in captivity, such as backstanding (a group hunting behavior unique to the Harris's Hawk). Others illustrate techniques that are useful to captive breeders, such as how to determine an egg's fertility by candling. In addition to the 400-plus color photos, the book also contains several original works of art that range from professional (a gorgeous pencil drawing of *P. u. unicinctus* by Alex Teixeira da Silva) to downright whimsical (a Tolkien-like hand-drawn map on parchment illustrating "the kingdom of no worries hawking"). I also enjoyed the black-and-white photos of nineteenth-century Comanche fans and shields decorated with Harris's Hawk feathers, and of a Dust Bowl-era jackrabbit drive. Although this abundance of high-quality images doubtless contributed to the book's relatively high price of \$85.00, the photographs and artwork alone are well worth the cost. The book is also well indexed, greatly increasing its effectiveness as a reference volume.

If *The Harris's Hawk Revolution* has a flaw, it is that it suffers from a split personality. Both the authors are

experienced scientists and many sections of the book are written in the style of a journal article. The chapter on mortality, for example, is extensively referenced and researched, and even includes an abstract. By contrast, other sections are written in much more familiar language, weaving in personal stories and hunting anecdotes about friends, individual hawks, and, of course, plenty of tales about the one that got away. As the Coulsons write, "A group hunting cooperatively is truly exhilarating to witness ... The hawks are so in tune with one another that it seems they are connected by a neural network: each hawk continually scrutinizes the others' every move ... Their reactions to one another are nearly simultaneous when prey is spied." At their best, these anecdotes bring the reader right into the action, conveying the thrill of hunting with a pack of social predators.

Few of us, even among those who devote a lifetime to studying wild raptors, will ever get to know our study animals as well as the Coulsons know the Harris's Hawk. Theirs is a kind of deep understanding that can only come from years of feeding hawks, raising their young, listening to their calls, watching them hunt, and recording their behaviors. And although *The Harris's Hawk Revolution* is over six hundred pages long, one gets the sense that it's only the tip of the iceberg. The authors summarize the state of affairs in the first sentence of the preface: "We live and breathe Harris's Hawks 365 days a year." After reading this attractive, eccentric book, with its tremendous wealth of information, you might just agree that it's a pretty good way to live.—**Christina Riehl** (criehl@fas.harvard.edu), **Harvard Museum of Comparative Zoology, 26 Oxford St., Cambridge, MA 02138 U.S.A.**