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Books and Other Resources on Hawk Identification, Hawkwatching, and Migration

Paul M. Roberts

Hawks can present unusual problems for field identification. How often have you tried to identify a silent, backlit warbler half-a-mile away? Let's compromise. How often have you tried to identify a sparrow when it's a thousand feet away from you and flying south? How many thrushes have you seen perched or flying across the highway while you're driving down Interstates 95 or 495 at more than seventy-plus miles an hour? How many of them have you tried to identify? People regularly try this with hawks.

Which is, in part, why most people find the standard birding guides of little help when trying to identify hawks. These basic guides really help you only if you see the bird close enough to appreciate color. However, most hawk sightings in the field and especially in migration entail seeing only dark gray blobs moving quickly against a light background. If you're lucky, you may see the silhouette of a bird soaring, and possibly pick up patterns of light and dark contrast on the bird. These challenges have prompted the need for special hawk identification field guides.

Hawk Identification

To the best of my knowledge, the first real silhouette guide to hawks was done by Roger Tory Peterson in his first field guide (1947), which was limited to North America. Peterson used black-and-white drawings of hawks almost as they would be seen when flying overhead. This was a major innovation, although the birds were not depicted as they would appear if soaring, so the silhouettes could be misleading. Peterson also showed major dark or light field marks of what people were most likely to see.

The next major step came with the development of *A Field Guide for Hawks Seen in the North East* (1972), now published by Hawk Mountain Sanctuary. The first popular inexpensive silhouette guide, it describes the flight identification of sixteen species seen in the northeast, with side-on as well as ventral views of the birds in flight. The drawings convey more field marks than Peterson's, but again are not realistic images of the birds in powered flight or soaring.

The first and only broad-based field guide to hawks is appropriately named *Field Guide to Hawks*, by William S. Clark and Brian K. Wheeler (1987). The text, by Bill Clark, is comprehensive in terms of identifying specific field marks. The species

account for Golden Eagle reveals the basic format, divided into sections on Description, Immature, Subadult, Adult, Similar Species, Flight, Behavior, Status and Distribution, Fine Points, Unusual Plumages, Subspecies, Etymology, and Measurements. The book covers 39 species, including Alaskan accidentals, and offers a special page of flight silhouettes of flying dark raptors. The finely detailed color plates by Brian Wheeler depict birds *perched and in flight* by age set and gender where appropriate, and by race where possible. The plates are gathered in the center of the book for easy comparison; a plate faces a page of text highlighting the key field marks of each bird in the plate. For example, the Golden Eagle images are on three pages next to illustrations of Bald Eagle in similar postures. These show a complete, perched immature bird, the tail of a subadult, and the tail of an adult, followed by two pages of immatures and adults in flight as seen from below and above.

The book closes with 42 pages of black-and-white photographs of hawks perched and in flight, using callouts to highlight special characters. The photo section was a great idea, but is not very helpful because the photographs are too small: six photographs to an approximately 4 x 7-inch page. There is also a superb list of references, which are somewhat dated almost fifteen years later.

Clark and Wheeler is a true milestone in raptor publications. The second edition of this book is expected to be in print by the time this review is published. Some new field marks will be identified (check out Bald and Golden eagle), and I expect a significantly improved photo section. Buy the original guide as a classic, and then, sight unseen, I'd recommend buying the new edition and comparing the two. You'll learn more quickly.

Hawks in Flight, by Pete Dunne, David Sibley, and Clay Sutton (1988), is a whole different kettle of fish. This classic employs Pete Dunne's evocative prose to conjure up vivid mental images of hawks as you usually see them in flight in the field, as dark objects in motion. It is of virtually no help in identifying hawks perched along the highway or near your feeders. Dunne talks about "jizz," or impressions of what you can see, something that Clark generally eschews. *Hawks in Flight* covers twenty-three species, basically those seen east of the Rockies. Excellent line drawings by David Sibley of each species (and age or gender as appropriate) from above and below are complemented by short summaries of key field marks. The book concludes with seventy-six pages of black-and-white photographs, most of which are apparently Sutton's. These photos are much larger than those in the Clark and Wheeler guide, better reproduced, and much more helpful. A second edition of this book is also in preparation. Look for it to expand its scope and add even more little nuances that help identify backlit blobs at a quarter mile.

Clark and Wheeler show you what the birds look like, in fine detail, when you see the birds well. The authors focus on often subtle field marks to help age the bird, such as the shape or color of the secondaries on an eagle. Dunne, Sibley, and Sutton show you what you are likely to actually see when hawks are in flight. Dunne helps you to make a reasonable guess as to what the hawk is when you don't see it well. If you could buy only one book, Clark and Wheeler should be it, but anyone really interested in hawk identification really needs both.

Did I say both? I meant to say all three. In 1995 Brian Wheeler and Bill Clark published *A Photographic Guide to North American Raptors*. This spectacular book contains several hundred gorgeous full-color photographs of 43 species of North American hawks, including various plumages of each species. There are 46 photographs of Red-tailed Hawk alone! The relatively brief text complements the earlier guide, introducing more advanced identification guidelines for a number of species, including Red-tailed Hawk and Golden Eagle. The book closes with a special photo section on 14 raptor identification problems, such as Pale Primary Panels on Back-lighted Underwings of Flying Buteos. One could buy this book for the photography alone.

Each species account includes one half to one page of summary text on field marks, and comparisons with similar species. (The assumption is that you've already read the *Field Guide to Hawks*) There are one to four gorgeous full-color photos per 6.5 x 9.75-inch page.

Quite simply, anyone interested in hawks should have all three guides. Each established a new standard for American guides when it was introduced, and each has an updated edition in the pipeline.

The most recently published field guide to hawks, *The Raptors of Europe and the Middle East: A Handbook of Field Identification*, by Dick Forsman (1999), sets a new, higher standard for all field guides. The book covers forty-three species of raptors, including at least eleven that have been reported in North America. Fourteen pages are devoted to the Golden Eagle alone. Each species section begins with a one-page overview on subspecies, distribution, habitat, population, movements, and hunting and prey. The identification portion starts with a summary, followed by in flight (distant), in flight (closer), perched, bare parts, variation, and confusing species. That is followed by a major section on molt, and three pages on ageing and sexing. The species account concludes with twenty-one outstanding color photographs, no more than four to an essentially 6 x 9-inch page. Captions focus on the distinctive field marks evident.

Published by Poyser, one of the truly great publishers of ornithological literature, this guide is a work of art, from concept, to design, to photography, to printing. I am not sufficiently well acquainted with European raptors to note possible subtle errors in text, but Forsman's book has established, in my mind, a new paradigm for any field identification guide. This book merits inclusion in the library of any serious hawkwatcher. Last November, when one or more Gyrfalcons (*Falco rusticolus*) was reported from Plum Island over several weeks, this book was a constant reference with its twelve-page species account and eighteen spectacular photographs of Gyrfalcons.

There are two other basic types of sources that can be of help in the field identification of hawks. There are a number of hawk videos on the market, incorporating some spectacular photography. The best for field identification purposes is *Hawk Watch: A Video Guide to Eastern Raptors*, by Dick Walton and Greg Dodge (1998). This 45-minute video includes field footage of nineteen species of hawks

likely to be seen from Eastern hawkwatches, with narration by Dick Walton. The images are the typical dark blobs, seen at some distance, so the field characters cited are based on many of the principles of hawk identification espoused in *Hawks in Flight*. The video comes with a brief booklet, and a humbling video quiz on flying hawks at the end of the tape. It provides excellent training for real-world identification.

The third basic source of information is the Internet. Surfing can lead to a number of interesting sites, but one of special merit is TheVirtualBirder.com, edited by Don Crockett. Taking a page from Wheeler and Clark, Crockett offers two superb photo galleries of hawks in flight, with nineteen images by Arthur Morris and twenty-five by Brian Wheeler, two of the best hawk photographers in the world. Then you can visit the OnLocation Directory to take the Virtual HawkWatch Tour, challenging you with thirty photos of fifteen species seen at Hawk Mountain and Cape May.

Hawkwatching and Migration

The best basic introduction to hawkwatching and migration is *Hawk Watch: A Guide for Beginners*, by Pete Dunne, Debbie Keller, and Rene Kochenberger (1984). *Hawk Watch* is an outstanding guide for beginners, with chapters on hawkwatching, diurnal raptors, equipment, how to observe hawks, interpreting data, and submitting reports on your observations. Sixteen species are covered, with excellent flight silhouettes by David Sibley and clear text describing the key field marks of each species. The book is not widely available commercially, but can be obtained at some Audubon shops or ordered directly from Cape May Bird Observatory and online booksellers. This book was the precursor to *Hawks in Flight*, and was developed to teach high school students. Get this downright cheap masterpiece before it goes out of print.

Raptor Migration Watch-site Manual, edited by Keith Bildstein and J. I. Zalles (1995), is almost an extension of *Hawk Watch*. This all-prose guide to establishing a hawkwatch site was developed to help biologists and hawk enthusiasts, particularly outside the United States, to study hawk migration. The guide includes chapters on raptor migration and conservation biology, monitoring the abundance and distribution of migrating raptors, managing data, establishing membership programs, and managing volunteer resources.

Raptor Watch: A Global Directory of Raptor Migration Sites (Zalles and Bildstein 2000) is the first guide to the major documented hawk migration observation sites around the world. The book provides overviews of what is known about hawk migration, country by country, for six continents, even where no regular watches are maintained. Three hundred eighty-eight known migration sites around the world are then presented in terms of biogeography, description, land tenure, and protected status, with information on the migration periods, raptor species seen (with peak counts and dates), and other migrants seen. Ten sites are described in detail for Massachusetts. Our own Wachusett Mountain is one of only 106 sites described worldwide – only three in New England – that average in excess of 10,000 hawks

annually. Information is included on the migratory status of all hawks and the threats they face.

In essence, *Raptor Watch* is a detailed description of what is known about hawk migration sites that is vital to understanding what is happening to raptor populations worldwide. This book is not directed to the beginning hawkwatcher, but to those who regularly hawkwatch, individuals who would like to hawkwatch in other states or foreign lands, or who have an interest in bird migration and conservation.

The most recent book on hawkwatching is *Hawkwatching in the Americas*, edited by Keith Bildstein and Daniel Klem Jr. (2001). This book consists of peer-reviewed papers presented at the twenty-fifth anniversary meeting of the Hawk Migration Association North America (HMANA) in June 2000. Intended primarily for the experienced hawkwatcher, anyone with an interest in bird migration per se will find important papers on full-season hawkwatches in coastal Texas, raptor migration through Meso-america (Veracruz), ageing eagles at hawk watches, and using Doppler weather radar to study hawk migration, along with many more narrowly defined papers.

Raptor Migration in Israel and the Middle East, by H. Shirihai, R. Yosef, D. Alon, G.M. Kiwan, and R. Spaar (2000), documents what can be learned from hawk migration counts. This ground-breaking, well-produced book includes a history of the raptor counting efforts in the Middle East, with chapters on migration routes and numbers, monitoring palearctic raptor populations, conservation, flight behavior of migrating raptors in Israel, and more. The core of the book is species accounts of forty-three species of palearctic raptors. Since only five Golden Eagles have been recorded as migrants in the Middle East, that species account is only a page-and-a-half long, with data on the European population. Seven pages are devoted to the much more abundant Steppe Eagle (*Aquila nipalensis*), which include peak seasonal counts and locations for autumn and spring, migration phenology at Eilat, and population trends. This book, which includes fifty-one excellent color photographs, will be of interest primarily to serious students of hawk migration and conservation, or those thinking of traveling to Israel, one of the premier birding spots in the world during migration. The book demonstrates clearly the value of long-term hawk migration counts.

Two books focus on hawk flight in migration. Bill Welch's *Hawks at My Wingtip* (1987) is a nontechnical description of innovative work that Welch performed with the New England Hawk Watch, using powered gliders to study hawk migration. The book is loaded with small pearls of information on such topics as the distance at which one can see hawks, the altitude at which hawks migrate throughout New England, and the general speed and direction of their flight. This inexpensive, unpretentious book is still available through some online booksellers, and may be available in select stores.

For a more thorough, technical analysis of hawk flight in migration, it is essential to turn to *Flight Strategies of Migrating Hawks* by Paul Kerlinger (1989). Not written for the beginning hawkwatcher, *Flight Strategies* is an advanced analysis of specific aspects of migration, supported with formulas, statistics, and graphs. Topics include


ecology and geography of hawk migration; methods of studying migrating hawks; structure of the atmosphere; flight mechanics: theory; flight mechanics: empirical research; flight direction; altitude and visibility of migrants; selection of flight speed; and daily flight distance. It is a motherlode of information. I have read this book more times than any other book I've ever owned, and am still gaining new insights from it year after year. Technically out of print, this classic is still available. I would put it in the mandatory category for anyone seriously interested in the migration of hawks or any other birds. (I should advise you that I reviewed this manuscript at different stages of development.) At times the book is very dense reading, leaving one to yearn for a *Cliff's Notes* version for the beginning hawkwatcher, but it is more than worth the effort that at times is required of the reader. It is an intellectual artichoke for the hawkwatcher, to be peeled piece by piece and carefully savored.

Natural Histories

There are an increasing number of books on individual species of raptors, one of which, *Return of the Osprey: A Season of Flight and Wonder*, is reviewed elsewhere in this issue. Two broad-based works are worthy of special note. *Birds of Prey*, edited by Ian Newton and Penny Olsen (1990), is an impressive introduction to birds of prey, excluding owls. It includes chapters on What is a Raptor, Kinds of Raptors, How Raptors are Studied, Habitats and Populations, Feeding Habits, Social Behavior, Reproduction, Mortality, and an excellent overview of migration and movement by Bill Clark. The book closes with three essays on hawks' relations with humans. Each chapter and numerous fascinating sidebars are written in very readable prose by top experts. Laid out like a coffee-table book, it is filled with spectacular color photographs and is easy to read. In my opinion, no other book does a better job of conveying a better understanding or appreciation of hawks.

A much more detailed natural history of hawks is available in *Handbook of North American Birds, Volumes 4 & 5, Diurnal Raptors, Parts 1 & 2*, edited by Ralph Palmer (1988). If you want to learn more about the life history of a particular species, this is the place to start. These encyclopedic volumes, which include only a few black-and-white illustrations, provide the best, most complete, and most recent natural histories or species accounts of North America's hawks generally available.

The final major source of information on our hawks is *The Birds of North America* (ongoing). This series of individual life history accounts for all North American avian species is not yet complete. Excellent accounts of Broad-winged Hawk, Red-shouldered Hawk, Red-tailed Hawk, Northern Harrier, Cooper's Hawk, and Merlin are currently available, along with some primarily western species. Written to a standard format, the accounts cover distinguishing characteristics, distribution, systematics, migration, habitat, food habits, sounds, behavior, breeding, demography and populations, conservation and management, appearance, and measurements. These individual species accounts can be ordered through Buteo Books (see <<http://www.buteobooks.com>>). Many raptor species accounts are still in development.

With the aid of at least several of these resources, you should be able to add considerable knowledge and enjoyment to your hawkwatching, as well as to your regular birding. 

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Note: All materials referenced are currently available for purchase. Classic works no longer generally available are not cited. Anyone seeking information on books that are out of print is invited to contact the author directly.

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