



EDITED BY ROBERT M. ZINK

*The Auk* 111(1):241-242, 1994

**Birds, Discovery and Conservation. 100 years of the British Ornithologists' Club.**—David Snow, Editor. 1992. Helms Information Ltd., East Sussex, United Kingdom. ix + 198 pp., Color frontispiece. ISBN 1-873403-15-1. £19.95.—One of the genuinely pleasing tasks associated with being Editor of the *Auk* was choosing the "100 Years Ago" topic. It afforded an opportunity to browse through the analog issue of a century ago. The relatively informal way in which much of the content was presented, especially news of meetings and members, allowed me to reconstruct in my mind some of the personalities involved in the early days of our trade. The nature of the reports gave some insight into the work people did, how they did it, and the conditions under which they worked. Ornithology was very different 100 years ago. David Snow has made a similar discovery in the history of the *Bulletin of the British Ornithologists' Club* (BOC). This volume contains his selections, with comments by others, from the pages of the *Bulletin*.

Snow has organized the main portion of the book by topics. The subjects covered are: geographical ornithology (including reports of BOU expeditions to New Guinea prior to World War I); discovery of new species and subspecies; migration, ecology and behavior; the cuckoo controversy; taxonomy, systematics and evolution; the British list; and conservation. There is also a brief history of the *Bulletin*. The final section, Ornithologists, is of special interest as the *Bulletin* does not regularly publish obituaries. The exceptions here are those of F. C. Selous, R. B. Sharp (a club founder, age 62), and P. L. Sclater (chair for 21 years, age 84). Two additional excerpts from remarks of the chair (in 1915 and 1917) are lists of ornithologists killed or wounded "in the throes of the greatest war and, incidentally, the greatest and most tragic catastrophe the world has ever known."

The substantive sections are a fascinating read. Accounts of the expeditions to Sikkim (H. Stevens, 1930-1931) and Sudan (J. D. Macdonald, 1939) are written in the first person. Perfect. The discovery of a new species (*Astrapia mayeri*) based on "Feathers taken by a missionary from the head-dress of a native on Mt. Hagen" is charming. Reports of new species at meetings were often accompanied by a mounted specimen or other displays. There is even mention of Lord Rothchild arriving at a Club meeting with a 9-foot life-

size model of a Moa which stuck through the open roof of his taxi cab! Remember, these meetings were usually accompanied by a dinner and were social, as well as scientific gatherings.

The section on ecology and behavior includes Goodfellow (1908) on birds of paradise and P. H. Bahr (1912) on displays of the snipe and woodcock. Stuart Baker (1916) anticipates David Lack's later work on clutch size (a topic still written about today!). Col. Meinertzhagen (1920) described a gale on the Outer Hebrides with winds exceeding 90 mph, by reporting that "Such a wind prevented one standing upright to shoot. . . ." That was his apparent goal, but he settled for reporting the behavior of common species during the storm. The ecological aspect of ornithology is extended in a heated exchange regarding precisely how cuckoos deposit eggs in hosts nests. Ultimately, a committee was established to settle the matter which probably began prior to 1915 and was "settled by Edgar Chance in 1940."

The selections in taxonomy, systematics and evolution reflect the then current thinking on subspecies (or varieties) and taxonomic revisions. The British list includes reprints of the first breeding records of the Slavoian and Black-necked grebes in England. Alan Knox adds material on "The Hastings Rarities," a series of reports of rare birds in Kent and Sussex. Most of these, subsequently, were proven to be fraudulent and were removed from the list. Clearly, an early case of scientific misconduct! There are also a series of excerpts on "assisted passages" and how birds that arrive by ship are to be listed.

The section on conservation treats the laudable efforts of the BOC to protect the Red Kite in Wales (brought up to date in a contribution by R. Lovegrove), and the treatment of the over-zealous egg collector P. F. Bunyard. The emotional debates over the scientific value of egg collecting lasted over several seasons. Eventually (1922), the BOC decided not to publish the proceedings of the Oological Club, although some individuals were members of both. Snow balances this exchange with a selection of articles discussing the exploitation of birds both in the United Kingdom and abroad. The final word here is presented as "A Controversial Evening" (1 January 1959). The topic was birds and ornithologists. Wonderful.

The BOC has contributed a century of work and a body of literature to ornithology. This account is fresh and interesting. If you are interested in the history

of ornithology or in ornithologists themselves, read this book. It's fun.—ALAN H. BRUSH, *Mystic, Connecticut, USA*.

---

*The Auk* 111(1):242-243, 1994

**The Ancient Murrelet. A Natural History in the Queen Charlotte Islands.**—Anthony J. Gaston. 1992. T & AD Poyser Ltd., London, and Academic Press, San Diego, California. xviii + 249 pp., 22 black-and-white plates, 69 text figures, 22 tables, 2 appendices. ISBN 0-85661-070-4. \$34.95.—Leadership in ecological research on north-temperate-zone seabirds has long been associated mainly with the region of the northeastern Atlantic, which enjoys a tradition of detailed, innovative work spanning several decades. Although the temperate North Pacific is home to several of the same species that figure prominently in the Atlantic, and also has a host of interesting species found nowhere else, Pacific birds had until recently received comparatively little attention. Few important advances in seabird biology had come from the northern North Pacific, which tended to leave those of us who work in the region harboring a slight inferiority complex. Happily, this situation is beginning to change. First, we are learning that in some instances the population dynamics of shared species differ greatly between the North Pacific and North Atlantic. The Pacific work, therefore, is more than just a rehash of that which was already known. It takes an important step toward understanding geographic variation in demography—variation that would not have been anticipated from any casual comparison of the environments, which appear superficially similar. Second, we are starting to see the results of in-depth work on species unique to the region. Tony Gaston's book, the first monographic treatment of any North Pacific alcid, is one encouraging sign that seabird research in the temperate North Pacific is coming of age.

This piece is based on six seasons of fieldwork conducted on Reef Island in the Queen Charlotte Islands of British Columbia. Recognizing the value of long-term studies in dealing with long-lived birds, the author is mildly apologetic for the duration of the project, but he need not be. Against considerable odds, Gaston and his coworkers obtained a wealth of information on the breeding biology of Ancient Murrelets, which not only are nocturnal at land and nest underground, but also are extremely intolerant of disturbance during incubation. To top it off, they rear their chicks entirely at sea. Any shortcomings in the results of this work can be fairly attributed to those special traits of the study animal. Gaston learned that reaching into an occupied nest chamber once, even

without removing the attending adult, caused 10% of the murrelets to desert. Consequently, he reports only two yearly estimates of hatching success, those obtained after the team began to use temperature probes for detecting the presence and absence of incubating adults. One has to concur with Gaston's wry assessment of the typical working conditions: "average slope about 45°, considerably steeper in places, often slick with rain, and cut by ravines filled with unstable scree . . . not ideal conditions for wandering about in the dark." Largely deprived of the visual sense, the observers proved admirably adaptable: "With practice, it was possible to tell from the sound of the landing whether or not an arriving bird was carrying an egg. Females carrying eggs generally hit the ground with a much louder thump." In the end, this work achieves a pleasing blend of solid quantitative science and descriptive natural history.

The book has two parts, the first being a collection of four chapters that compile and review what is known about the Ancient Murrelet throughout its range, including comparative notes on three congeneric species. This material (about 100 pages) is followed by an account of original research on Reef Island. The author uses two chapters to introduce the Queen Charlotte Islands and methods employed in the study, then organizes the diverse results of the study in a suite of seven chapters. Some of the latter material is already available in a dozen papers by Gaston and his associates, but I was impressed by how much of it is new. Basically, most of chapter 8 (on attendance and behavior at the colony) and chapter 14 (population dynamics) are reviews of published work, whereas other chapters (on nesting habitat and phenology, eggs and chicks, the behavior of non-breeders at the colony and of murrelets offshore) give information that is mostly unavailable except by reading this book. Original or derived, previously published or not, it is a welcome development to have everything known about this curious little seabird neatly compiled in one place. In that respect, readers will also appreciate the substantial bibliography that accompanies the text.

If there is a unifying theme to the book, it is the question of why the Ancient Murrelet (and others of the genus *Synthliboramphus*), alone among seabirds, evolved a highly precocial mode of early development. Chicks leave their burrows and make their hazardous way to the sea about two days after hatching. Gaston highlights the issue at the outset (p. 2) and revisits it occasionally throughout the book. In a closing chapter devoted to the topic, he reviews several previous hypotheses to explain precocity in murrelets, finds them all unsatisfactory, and offers his own explanation.

I have a small problem with the terminology. Gaston is not the first to apply the term "precocial" to murrelets, but because the young are not capable of self-feeding until they attain approximately adult size

and plumage, perhaps a more appropriate term is "nidifugous." Semantics aside, I question whether Gaston's proposed explanation of precocity in murrelets can stand up to scrutiny. Although duly noting the possible role of predator avoidance, his hypothesis (p. 218–219) stresses the relationship between mortality and reproductive output as follows:

The estimated annual survival of breeding Ancient Murrelets, at 75%, is lower than has been observed for any other alcid or any other pelagic seabird. . . . In order to survive in the face of this high mortality, a high reproductive rate is needed . . . the Ancient Murrelet can only achieve this reproductive output by taking the chicks to the feeding area. . . . Hence, I propose that the need to maintain a high reproductive rate and to reduce the vulnerability of breeders to mortality while visiting the colony, contributed to the evolution of precocity in *Synthliboramphus*.

I am surprised to see Gaston, an alumnus of Oxford and the Edward Grey Institute, espouse such a non-Lackian view of the relation between birth and death rates. In essence, he is saying that in murrelets the reproductive rate is adjusted to compensate for high mortality, whereas Lack said that would never occur. All organisms, according to Lack, strive to reproduce as rapidly as possible, and mortality varies as a density-dependent response to the reproductive rates they achieve. Because the usual clutch of murrelets is two eggs, and the average family going to sea has 1.5 chicks, there is in fact a greater addition to the population each year of extra mouths to feed than is typical of seabirds generally. The high rate of adult mortality observed may be partly a result of this seasonally increased population density.

If, as Gaston suggests, the ancestral condition in alcids was a clutch of more than one egg, and if it was possible for the murrelets to achieve a high reproductive rate by retaining the larger clutch size and leading their young chicks to sea, then the relevant question may not be why the murrelets went this route, but why the other alcids did not. It is not difficult to envision the incremental evolution of early nest-leaving. The murres and razorbill, in fact, provide examples of the intermediate case. The generally southern (warm-water) distribution of murrelets and their nocturnality may have predisposed these species to early nest-leaving, just as Gaston suggests.

On the level of copy editing and presentation, the book is well produced. I noticed only two typographical errors and one consistent misspelling (euphausiids has two i's). A statement on page 39 mistakenly refers to the Japanese Murrelet where the Ancient Murrelet was intended, and on page 89 the author refers to the Queen Charlottes' only amphibian, a toad, as a reptile. Less nitpicky is the fact that numbers in the first column of Table 4.1 do not refer to any figure, although the legend says they do. Small tri-

angular symbols are a prominent feature of the map in figure 5.3, but an explanation of what they mean is lacking.

The book contains a one-page appendix offering "Census Details for Reef Island, 1989." Included are counts of burrows along 30 transects. Scant explanation is provided, however, and neither of two seemingly related graphics that appear earlier (figs. 7.1 and 11.5) seems to correspond with the labelling system in the appendix. The latter might as well have been omitted. This is in contrast to Gaston's earlier book (with D. N. Nettleship) on Thick-billed Murres in the Canadian Arctic. There, the reader finds extensive appended information, including maps, photographs, raw data, and notes on methods. I favor that approach in the publication of seabird population studies, because it gives future observers a realistic chance of replicating the work 50 or 75 years hence, when there may be a great need and interest in doing so. I assume that publishers' preferences had something to do with this difference.

None of these few criticisms alters my opinion that Gaston has produced a fine work of lasting value. *The Ancient Murrelet* is highly readable, written as it is in a clear, engaging, and unaffected style. The book is attractively illustrated throughout with artwork by Ian Jones and also makes effective use of black-and-white photography to convey a vivid sense of what it is like on Reef Island. Although the intended audience clearly includes interested nonscientists, this book will remain for many years the definitive source of scientific information on this previously little-known bird.—SCOTT A. HATCH, *Alaska Fish and Wildlife Research Center, National Biological Survey, 1011 East Tudor Road, Anchorage, Alaska 99503, USA.*

---

*The Auk* 111(1):243–245, 1994

**The Birds of the Philippines.**—Edward C. Dickinson, Robert S. Kennedy, and Kenneth C. Parkes. 1991. B.O.U. Check-list No. 12. British Ornithologists' Union, Tring, Herts, United Kingdom. 507 pp., 14 maps, 7 color plates. ISBN 0-907446-12-4. Cloth, £39.00.—The series of distributional checklists published by the British Ornithologists' Union has treated the birdlife of a diverse assortment of nations, from Libya and Cyprus to Wallacea and Sumatra. These works have been excellent, overall, and this latest contribution, treating the Philippine avifauna is perhaps the best and most comprehensive of their regional treatments to date. I say this in spite of my particular fondness for the BOU works on Wallacea and Sumatra.

This Philippine ornithology is much more than a "checklist." It includes nine introductory chapters detailing geography, climate, vegetation, biogeography, geographic variation and speciation, breeding, migration, bird conservation, and history of ornithological exploration. These are followed by the annotated taxonomic list, which forms the bulk of the book. Finally, a useful series of appendices provides supplementary information of various sorts, including an ornithological gazetteer and an annotated list of fieldworkers who have collected birds in the Philippines. There is also a comprehensive list of references and an index both to English and scientific names. In most respects, this work appears to be based rather closely on the excellent model provided by White and Bruce's *The Birds of Wallacea*.

Because the heart of this work is its taxonomic/distributional checklist, it is useful to mention that each account includes the following: a species code number; an English name; a scientific name; world range and habitat; treatments of each subspecies (including original citation, brief synonymy, holotype, and its geographic distribution as elucidated by McGregor [1909–1910] and subsequent workers); breeding data; taxonomic notes; seasonality of migrants; and account endnotes. Thus, each species is treated in a meticulous fashion. There is no lack of detail here and, yet, things are presented concisely and in an orderly fashion.

The chapter on bird conservation in the Philippines is excellent, especially so because it provides data to support its major contention—that loss of forest habitat is probably the main threat to the future of native birds in the Philippines. Plate 4 shows that the remaining lowland forests are dissected, scattered, and largely degraded. A mere 24% of the Philippine land area currently supports forest of any type. As Kennedy rightly states, immediate action is needed if we are to foster the long-term survival of virtually all of the endemic forest-dwelling bird species of the Philippines.

The color photographs of Philippine habitats are highly evocative, and greatly help the office-bound reader to gain an appreciation of the range of bird habitats in the physiographically and ecologically diverse insular nation.

I should not give the impression this book is perfect. Below, I comment on a number of lapses that caught my eye. This might give the reader a feel for some of the book's weaknesses in a minor counterpoint to the abundant strengths I have already highlighted.

The use of "virgin forest" on page 15 and elsewhere is quaint but perhaps not botanically precise in the 1990s. Much of this tectonically active part of the globe suffers from repeated, episodic environmental disturbances that rarely permit the formation of ancient forests. Droughts, large-scale forest fires, land movement, earthquakes, and vulcanism form just a

short list of the nonhuman effects that keep tropical forests of the Asia-Pacific region in a state of flux.

The book notes that trees of the family Dipterocarpaceae form an important component of the forests of the Philippines. Here I point out that dipterocarp means "two-winged seed" not "winged seed" as indicated on page 18 of the text.

Floristic statements and generalizations refer back to Merrill (1909) and omit reference to Whitmore (1975, 1981) and his general review of the forests of the Malesia.

Discussion of allochthonous terranes and their importance in the formation of the Philippine archipelago is important, but too much is made of its potential impact on the flora and fauna. The history of the concatenation of these continental fragments usually far predates that of all modern birds and most angiosperms. It would be important if it could be shown that significant relict biotas evolved and survived on these terranes and that a certain component of the Philippine biota is composed of these ancient relicts. This is not done. Certainly, the relative homogeneity of the flora across the Philippine archipelago indicates clearly that recent ecological events are most important to the current distribution of the flora.

I find the discussion of the historical biogeographies of *Prioniturus*, *Gallicolumba*, *Trichoglossus* and *Basilornis* obscure. The argument that plate tectonics has been important to the evolution of the "old" groups is not argued convincingly. It is here that an attempt to properly wed phylogenies with an area cladogram might have produced a valuable test of the methodology that was demonstrated by Cracraft for a select subset of the Australian avifauna.

I remain confused about the source authorities for the taxonomy, species sequences, and systematics employed in constructing the checklist. I wish the authors had mimicked the documentary treatment used by White and Bruce (1986) for Wallacea, wherein each family account provides a source citation of the authority followed. It appears that the main weight of taxonomic discourse in the Philippine work focuses on the lower taxonomic levels (primarily subspecies and allospecies).

The English and scientific nomenclature employed in the list is quite straightforward, but I wish there was a nomenclatural synonymy (of English and scientific names) for each account. This is particularly critical considering the divergent usages found in published treatments for India, Burma, Thailand, and New Guinea.

An annoying structural oddity of the species accounts is the way the geographic ranges of monotypic endemic species are described, whereby determining on what island a bird lives is not straightforward. For example, the account for the Apo Myna begins with a description of its habitat and elevational distribution, and notes that it is a Philippine endemic. It does

not state what island (or islands) the species inhabits. Looking further down in the account one finds a discussion of the type locality, and a list of where McGregor (1909-1910) reported it, and only then are subsequent localities listed, one by one. I would have preferred to see, somewhere in the account, a simple summary statement giving the Philippine geographic range.

In spite of the (minor) criticisms listed above, I think this is an excellent effort. It is particularly valuable because it brings together for the first time a remarkable data set that includes scattered collecting and banding records, detailed subspecific analyses, and important and hard-to-find minutia about the history of Philippine ornithology. This is a major contribution to Asian ornithology, and will serve as the distributional and nomenclatural "source" for Philippine birds for years to come. It is a reference that will be required by university libraries and researchers studying birds of Southeast Asia.—**BRUCE M. BEEHLER**, *Conservation International, 1015 18th Street, N.W., Washington, D.C. 20036, USA.*

---

*The Auk* 111(1):245-246, 1994

**Audubon to Xantus: The Lives of Those Commemorated in North American Bird Names.**—Barbara and Richard Mearns. 1992. Academic Press Harcourt Brace Johanovich, San Diego, California. xix + 588 pp. 126 figures, 82 portraits, 16 maps. ISBN 0-12-4874253-1. \$45.00.—This fascinating book follows the proven format of the widely praised sister volume, *Biographies For Birdwatchers: The Lives of Those Commemorated in Western Palearctic Bird Names*, published in 1988. With a more catchy title, it does for 101 men and women, discoverers and describers of North American birds, what the first volume did for Europeans.

With care and affection, Barbara and Richard Mearns have dug deeply into widely scattered historical records, providing tidbits of fascinating information about each scientist's life inside and outside of ornithological collecting: their birds, friends, relations, lovers, and missed opportunities. The list of libraries consulted fills almost a page. As Dean Amadon says in the Foreword, their accounts "are not superficial thumb-nail sketches, but scholarly set-pieces, sometimes running to a thousand words. They are written in an engaging, at times sprightly, style." To their credit, portraits of all but 21 of their subjects were located.

John Kirk Townsend is quoted, telling of a naturalist's "delight amounting to ecstasy—when a specimen such as he has never before seen, meets his

eye. . . ." Occasionally, two people get listed because of a single bird specimen, one for the common name and one for the Latin name. An example is MacGillivray's Warbler (*Oporornis tolmiei*), resulting in biographies of both MacGillivray and Tolmie.

Most ornithologists today know that Clark's Nutcracker was named for William Clark, co-leader of the Lewis and Clark expedition. But how many know anything about John H. Clark, a surveyor with the U.S. and Mexican Boundary Commission in 1851-1855, for whom the Clark's Grebe was named? How many know that Cooper's Hawk was named, not for the famous ornithologist, James Graham Cooper, but for his father, William Cooper? That Joseph Sabine named the Sabine's Gull in honor of his younger brother, Edward? That Isaac Sprague found the first nest and eggs of the pipit that carries his name, only three days after Audubon and Bell had collected the first-ever specimen? That the Hawaiian Duck (*Anas wyvilliana*) carries only the first name of Charles Wyville Thomson, who became Professor of Natural History at Queen's College, Cork, at the tender age of 23, and was later knighted by the Queen for his research achievements?

In 1849, when James Clark Ross returned from an unsuccessful eastern Arctic search for the missing third Franklin expedition, his surgeon, Edward Adams, returned with three skins of the Yellow-billed Loon. Adams and Ross were convinced that this was a new species, but Edward Sabine persuaded them, against Ross's better judgement, that they were very old males of the similar Common Loon. In 1850-1851, on a second Franklin search expedition to the other extremity of the arctic wastes in the Bering Straits, Adams again collected and this time sketched, a Yellow-billed Loon. In 1859, from his series of sketches and a collection of 88 specimens, G. R. Gray named the Yellow-billed Loon in Adams' honor, three years after Adams died of typhus in Sierra Leone at the age of 32. His brother finally published an account of his Alaska specimens in 1878. Such were the vicissitudes encountered by a number of early ornithological explorers.

Numerous characters appear in these pages. Consider the complicated story of Janos Xantus, who entered the U.S. Army under the assumed name of Louis de Vesey. He first described the Cassin's Vireo, Hammond's Flycatcher, Spotted Owl, Gray Thrasher, Xantus's Hummingbird, and Xantus's Murrelet. An inveterate liar and plagiarizer, Xantus was caught up in a web of deceit when he returned to his native Hungary as a hero, serenaded by the academic choral union, claiming to have been an American naval officer who had led surveying parties and done impressive marine research, all of which was fictitious.

Shortcomings are minor indeed. The Hoary Redpoll is listed as the Arctic Redpoll. Roderick Ross MacFarlane collected 38, not 30, clutches of Eskimo Curlew eggs. The Mearnses fail to mention that Xantus also collected for Baird three still accepted subspecies—of

Purple Finch, Song Sparrow and Rufous-sided Towhee. I would have preferred cross-references between accounts—the account of William MacGillivray fails to tell how he “stole” the priority for Ross’ Gull from John Richardson; this is found in the account of James Clark Ross. However, the reader can enter his or her own cross-references in the margins, with the use of the excellent index. The authors have coined “retiral” and use this new word several times in place of “retirement.” Roderick Ross MacFarlane is mentioned under Robert Kennicott and again under Bernard Rogan Ross, yet MacFarlane does not rate an entry in the Appendix, in spite of *Otus asio macfarlanei*.

The book is not only carefully researched and well written, but is attractively produced, with appealing sketches of 126 species in their natural habitat by Dana Gardner and 16 helpful maps. It deals with the art, the history and the science of ornithology in North America. I found only two typographic errors.

What a treat to have a necessary reference book that is fun to read! Like its predecessor, I recommend that it be read at bedtime, one chapter each night—for 101 pleasurable nights.—C. STUART HOUSTON, 863 University Drive, Saskatoon, Saskatchewan S7N 0J8, Canada.

---

*The Auk* 111(1):246-247, 1994

**Dunnock Behaviour and Social Evolution.**—N. B. Davies. 1992. Oxford University Press, Oxford. xiv + 272 pp., 97 text figures, including 21 black-and-white photographs. ISBN 0-19-854674-2. \$70.00 (cloth), \$28.00 (paper).—Unfamiliar to most North American avian biologists prior to the last decade, Dunnocks (or Hedge Sparrows, *Prunella modularis*) and their intriguing behavior have now become very well known. I would venture the claim that the Dunnock tale has, in fact, become one of the most frequently included stories in university lectures on animal social behavior and male-female interactions. Dunnock notoriety is due to the work of Nick Davies and his colleagues on a population of Dunnocks inhabiting the Botanic Garden at Cambridge University, and this book is about the behavior of those birds.

Quite simply, the extraordinary variation in mating “arrangements” within the confines of the botanic garden has forced us to think carefully about our conventional view of pair relations in birds. Davies recognized early on the advantages of studying such intrapopulational variation for testing general hypotheses for interpopulational and interspecific diversity in mating arrangements. Dunnocks remain one of our best-documented examples of such variability within a single population.

In this well-written monograph, Davies brings together information from a variety of papers written in the past decade. Although almost all of these data have been published previously, it certainly is beneficial to have the pieces of the story here together. As such, Davies’ book is almost perfect as a focus of, say, graduate seminars in behavioral ecology (my forum of use). One of the strengths of this monograph is that it shows just what can be accomplished in behavioral ecology working with a population of wild, banded birds. For this reason alone, Davies’ book should be exceedingly useful for students planning research projects. I know that I am not unique in this assessment; when the Dunnock monograph went on sale at the International Behavioral Ecology Conference at Princeton in August 1992, it sold out almost immediately!

Davies describes all major aspects of the reproductive and social behavior of Dunnocks, including population structure, territorial behavior, correlates of fitness, and parental effort, in addition to good and interesting natural history. In doing so, he frames his data within the context of inter- and intrasexual conflict. Female Dunnocks appear to compete for access to territories or space prior to males competing for control of females. As Davies notes, this is quite a different view from that of female birds assessing potential mates (and, perhaps, male-defended territories), then settling with particular males.

Indeed, female Dunnocks frequently copulate with more than one male. Thus, two (or rarely three) males compete for sexual access to a single female (or even two or three females) and form a dominance hierarchy. Territories of males and females overlap but usually do not coincide. The results of these spatial patterns include a bewildering array of mating arrangements from monogamy, polyandry, and polygynandry (within each sex roughly a quarter to a third of all birds are involved in each arrangement) to polygyny and the unfortunate unmated males (together accounting for the remaining 5–10%). Females have their greatest reproductive success in polyandrous relationships, whereas males do best under polygyny, and there is the rub.

Mate sharing by Dunnocks also apparently favored the evolution of the bizarre behavior of males pecking females’ cloacas (an illustration of this graces the cover of Davies’ book). Why do males do this? Davies discovered that when pecked, females expel a minute drop of rival male’s sperm. (I told you the Dunnock story was a fascinating one.)

What does all of this mad sexual behavior lead to once the eggs hatch? Davies and his colleagues determined that males feed chicks at rates in proportion to the duration of their previous sexual monopolization of the female, and this proposed behavioral rule for male Dunnocks (“duration of monopolization of female during the critical fertilizable period is pro-

portional to % of brood fathered") usually yields a surprisingly good fit to the actual proportion of the brood fathered by each male as revealed by DNA fingerprinting. Of course, even better from the viewpoint of "selfish" Dunnocks would be paternity markers on chicks, so that a male could feed only his own offspring. Davies offers an explanation for the absence of such markers, suggesting why it may be in the interest of chicks to hide their paternity.

My only disappointment with Davies' book is his proposed explanation of *why* Dunnocks display the extreme variability in mating arrangements. After so carefully describing patterns of behavior throughout his text, Davies' proposition is, to me, ad hoc and unconvincing in its sufficiency. Davies argues that, first, Dunnock specialization on small food items makes male provisioning of young especially useful. Second, the species' preference for thick vegetational cover makes it difficult for a male to monopolize a female. Females, in turn, can benefit selfishly from copulating with more than one male because males help females care for nestlings. Surely, there is a variety of other species of birds that display these same characteristics: why are they not as variable as Dunnocks in their mating arrangements? But, then, maybe the accumulating data on extrapair copulations in birds suggests they are. I will leave it to readers of Davies' book to decide for themselves whether his proposal is general and valuable.

An interesting and useful inclusion is the listing as chapter end notes the statistical tests used to analyze data discussed in each chapter. These are succinct statements of the type of analysis, test result, and significance, and are duly noted at the end of textual statements about results. For those of us who have been extolling for years the virtues of nonparametric analyses, it is gratifying to see so many of these analyses cited.

Finally, David Quinn's engaging illustrations are praiseworthy. They do a fine job of enlivening the text by capturing the essence of the quick lives of these small, brown (but hardly dull) birds.

In summary, I highly recommend Nick Davies' book for all students of bird behavior. Davies makes clear the tremendous advantages of combining descriptive fieldwork, simple experiments in the field, and techniques offered by molecular biology for testing important hypotheses in behavioral ecology. Certainly, every university library should have this title in their collection, and behavioral ecologists will want their own copies.

I thank K. Eckerle, T. Filliater, S. Linville, P. Nealen, T. Selander, and P. Somohano for our semester of weekly discussions of Dunnocks.—RANDALL BREITWISCH, *Department of Biology, University of Dayton, 300 College Park, Dayton, Ohio 45469, USA.*

*The Auk* 111(1):247-249, 1994

**The Birds of the Western Palearctic. Vol. VI. Warblers.**—Stanley Cramp. 1992. Oxford University Press, Oxford. 728 pp., 31 color plates. ISBN: 0-19-857509-2. \$130.00.—**The Birds of the Western Palearctic. Vol. VII. Flycatchers to Shrikes.** Stanley Cramp and C. M. Perrins. 1993. Oxford University Press, Oxford. 577 pp., 30 color plates. ISBN: 0-19-857510-6. \$130.00.—European ornithology has suffered from a very strong provincial tendency where leading ornithological nations have published handbooks covering restricted areas reflecting national boundaries. *The Handbook of British Birds* by Witherby et al. (1938-1941) was for several decades an important reference for ornithological research in northwestern Europe, whereas the eastern part of Europe was covered by *Piitsy Sovetskogo Soyuza* (Birds of the Soviet Union) by Dementiev and Gladkov (1951-1954). Recently, central Europe was enriched by *Handbuch der Vögel Mitteleuropas* by Bauer and Glutz (1966-in progress). Beside these valuable reference works, most European countries have their own national handbooks, mostly written in the native language. A handbook covering the whole region, like the *Handbook of North American Birds* by Palmer (1962, 1976), has for a long time been highly desired.

In 1977 European ornithology took a great step forward with the introduction of *The Birds of the Western Palearctic* by Stanley Cramp and coauthors. This reference work was planned to contain seven volumes, and cover over 770 species of birds occurring in the western Palearctic. The production of the series unfortunately was delayed after volume V (1988) by the death of the chief editor Stanley Cramp. Completing the magnificent work Cramp started, D. J. Brooks now continues the series with the recent release of two new volumes. Volume VI was originally intended to cover the families from warblers (Sylviidae) to shrikes (Laniidae). The amount of information available today about western Palearctic passerines would have made such a volume too large. Therefore, it was split into volume VI covering only the warblers and volume VII covering flycatchers to shrikes (thus increasing the series to eight volumes instead of the planned seven).

The intention of *The Birds of the Western Palearctic* is to review the advances that have been made in ornithological knowledge since the pioneering efforts of Witherby's *Handbook of British Birds*, to whom the whole series is dedicated. Fortunately, the editors decided not only to update *Handbook of British Birds*, but also to extend the covered area to include the whole of Europe, Northern Africa, the Middle East excluding Iran, and the European part of the former USSR. *The Birds of the Western Palearctic*, therefore, becomes not just an English version of *Handbuch der Vögel Mitteleuropas*, but rather the most important ref-

erence handbook for Europe and surrounding regions. Cramp and coauthors also applied a new strategy when gathering the huge amount of information that is available for the western Palearctic avifauna. Traditionally, the authors of handbooks use their own experience together with some professional colleagues to detail the knowledge of a regional avifauna. Cramp, the chief editors, and an editorial board engaged specialists to extract, review and organize the available information. Each species and each topic have their own responsible editor. The number of specialists engaged in the preparation of this series, therefore, is enormous, and the results are highly detailed and up to date. The amount of information that exists on every species is impressive, especially when compared to the knowledge of avifaunas from other parts of the world. Incidentally, the discrepancy in knowledge between different regions makes me concerned about how much the theory in modern ornithology is based on Palearctic and Nearctic species. Hopefully, more avian research can be directed towards the subtropics and tropic regions to provide a more balanced picture of the life of birds.

The presentation of the 60 species of warblers in volume VI and the 45 species of passerines from the families of Old World flycatchers to shrikes in volume VII follows the high quality of earlier volumes. The detailed maps of distributions, drawings to illustrate behaviors and postures and sonograms of both song and calls are excellent. Also, the color plates are outstanding. Every species has sections concerning field characters, habitat, distribution, mortality, migration, food, social pattern and behavior, breeding, voice, plumage, moults, measurements, weights (mass), structure, and geographic variation, thus covering most aspects of the appearance and life of the species.

Each family is introduced by a short section presenting general and common features of the group, their systematics and affinity with other groups. Each species is presented in seven languages (English, Dutch, French, German, Russian, Spanish and Swedish), which is of great value for the European non-professional and traveling ornithologists. Also the races or subspecies are given for polytypic species. Each species presentation starts with Field Characters, which is a summary of important characters for field identification, including morphology, behavior and song. After an extensive habitat description the distribution is presented both in text and by two maps, one showing the world distribution and the other the detailed distribution in the western Palearctic. Distributions are always a problem for any ornithological book, as the geographic distribution for most species is under continuous change. Here, however, the authors have done excellent work, and the maps supersede the older and less detailed *An Atlas of the Birds of the Western Palearctic* by C. Harrison (1982). Like distributions, estimates of population sizes are also soon outdated, but are still of some value for

long-term trends. Although detailed migratory information is missing for many species, especially about African wintering quarters, information from extensive banding programs in Europe is summarized. Social pattern and behavior make up the major part of the text and are complemented with excellent illustrations of postures, in many cases redrawn from photographs. Vocalizations received the attention they deserve, with an extensive description of both songs and calls, illustrated with sonograms. Vocalizations are important in communication between birds and in species identification. This supports the increased focus on bioacoustics in ornithological research. Details on using and interpreting sonograms are given in volume V. One drawback with sonograms is that they give a static impression of the sound. For vocalizations that vary to a great extent, like the songs of most passerines, one sonogram will not suffice. For example, only two sonograms from one individual Pied Flycatcher (*Ficedula hypoleuca*) song were shown. Songs in this species vary within individuals, between individuals, and probably also geographically, and two sonograms cannot adequately represent the song of the species. At least in a reference work of this importance, individual and geographical variation should have been considered.

Excellent color plates accompany species descriptions. Different illustrators were chosen for different species groups, which gives a pleasant variation to the illustrations, but some plates in volume VI are below the average quality in this series. Birds are always difficult to represent in a "characteristic" appearance as their shape and colors can vary depending on the posture and how the feathers are erected. Fortunately, today's illustrators put much effort into representing birds in natural postures, but lack of space still restricts the illustrations for a given species to a single posture and one flight position. A reference work of this importance would have profited by more illustrations. In some cases the contrast between the colors of the birds and the background could have been better. The egg plates (in color) are high quality, but unfortunately not every species is represented.

The systematics in *The Birds of the Western Palearctic* follows Voous (1977). Although avian biology to a great extent has accepted the biological species concept, in reality avian taxonomy depends on the nominalistic species concept because in most cases only morphological characters are used for species classification. Thus, classification, especially higher-level classification will be problematic even in a well-studied group such as birds, and the number of species included in a family varies between authors. In discussing the systematic affinities of families, Cramp et al. cite information from molecular data of egg-white proteins (Sibley 1970) and DNA-DNA hybridization (Sibley and Ahlquist 1985). Citing molecular data is a new and positive approach because molecular data will revolutionize systematics. Both techniques cited,



however, are controversial and the latter has attracted much criticism. For example, the family Sylviidae with 353 to 391 species in two subfamilies, Sylviinae (Old World warblers) and Polioptilinae (gnatcatchers), has traditionally been considered to be phylogenetically most closely related to the Turdidae (thrushes) and Muscicapidae (Old World flycatchers) followed by the Timaliidae (babblers). However, DNA-DNA hybridization indicates that the "Sylviidae" is polyphyletic, with the Old World warblers related to the babblers, whereas the gnatcatchers seem to be more closely related to wrens (Troglodytidae) and treecreepers (Certhiidae). Turdidae and Muscicapidae are placed in Turdoidea whereas the Sylviidae are placed in Sylviodea. Although molecular data promise to enhance phylogenetic reconstruction and classification, DNA sequences are needed to verify findings suggested by DNA-DNA hybridization.

In general the text is very compact, crowded with references and data. This is excellent for extracting information, but makes it difficult to read and I cannot recommend this book for long reading sessions. The amount of information included in each section is astonishing, and the many references make this series an excellent starting point for research. Although this series is most valuable for European ornithologists, it is of great value for ornithologists in other parts of the world. This series belongs in every university and museum library as well as in libraries of professional ornithologists and serious amateurs.—HANS P. GELTER, *Department of Genetics, Uppsala University, Box 7003, S-750 07 Uppsala, Sweden.*

---

*The Auk* 111(1):249–250, 1994

**Great Auk Islands.**—Tim Birkhead. 1993. T & AD Poyser, London. viii + 275 pp., 25 text figures (+ 2 additional maps), 13 color and 86 black-and-white photographs, and 35 drawings by David Quinn. ISBN 0-85661-077-1. \$33.00.—This book begins with a drawing of Great Auks (*Pinguinis impennis*) on the dust cover and a few paragraphs recounting the day on which the species was last seen alive, yet the content of the book covers Great Auks to only a small degree. A better indication of the contents of the book would be given by the title, "great AUK islands."

The book is mostly about murre, both Thick-billed and Common (*Uria lomvia* and *U. aalge*), and mostly about the places where the author has conducted research on these birds for the past 20 or so years. Some aspects of alcid biology are covered but not in a scientifically rigorous manner; the volume is not intended to be a primary source nor a summary of natural-history information. Birkhead, who is unquestionably the leading authority on murre ecol-

ogy and biology, attempts to give a feel for the day-to-day trials and triumphs of conducting field research on alcids in remote locations. Many of the study sites treated, with at least one, but often more chapters each, are in the Canadian Arctic: Cape Hay and Coburg Island in Lancaster Sound, Funk Island (one of the last refuges of the Great Auk), Great and Green islands in Witless Bay, and the Gannet Islands near Goose Bay. Included is some of the historical background of exploration in the region of each site. Birkhead also tries to provide a sense of how field research evolves as a researcher confronts unexpected twists in logistics and the way in which study species are supposed to react, but do not, to certain circumstances. He uses the development of his thoughts regarding sperm competition, which ultimately led to the book (with A. P. Møller), *Sperm Competition in Birds: Evolutionary Causes and Consequences* (Academic Press, 1992), as the main example of how a concept develops over time. Birkhead was initially led to this area of research by the apparent promiscuity among murre. Although Birkhead does not so state, *Great Auk Islands* must have resulted from his field diaries, or he has an extraordinary memory, because included are many minute details that enrich the stories and places that he shares with us.

I, too, have always wanted to write a book about the nature of field research, but more the way in which creative thought and logistical reality mold such a project from the very beginning: what was the initial concept in attempting to secure funding and logistical support and what was the ultimate result? The trouble is I have a terrible record for keeping field diaries. The only major piece lacking from Birkhead's stories are the initial stages, events and thoughts, etc., that brought him to the various field camps. Certainly, much more creativity and effort was involved than just an invitation from so and so (e.g. the Canadian Wildlife Service). The best account I have read about life as a field researcher and the way of science from its beginnings in the marine field is Alister Hardy's *Great Waters* (Harper and Row, 1967), winner of the 1968 Phi Beta Kappa Award for Science—an anatomy of the *Discovery* expeditions of the 1920s. Another book that made an impression on me is R. C. Murphy's *Logbook for Grace* (Macmillan, 1947), an account of his experiences on the last wind-powered whaling ship to the Southern Ocean, how it came about that he found himself on that expedition, and certainly the basis for much of his writings about seabirds in South American waters. Finally, making an impression on Birkhead, and myself, was the series of books written by R. M. Lockley and his life and investigations of shearwaters, puffins and other wild creatures on the Island of Skokholm [e.g. *Shearwaters* (Dent, 1942), *I Know an Island* (Harrap, 1938), *Letters from Skokholm* (Dent, 1947)]. *Great Auk Islands* is a book in the tradition of these fine contributions.

More and more people—ornithologists, ecologists,

industrial workers, tourists and the like—are finding their way to an increasing number of sites in the Arctic. They would do well to read this book before starting out, if only to appreciate what events might comprise an “adventure” in that region. The central principle around which Amundsen, the famous polar explorer, organized his expeditions was that adventures are the result of poor planning. Birkhead quotes Oscar Wilde as saying “only the careless have adventures,” but then one might not expect an Englishman to quote Amundsen. Birkhead does tell of a few of his own adventures with unforgiving fog, impersonal pack ice, unexpected polar bears and other cold re-

alities. The field of marine ornithology is fortunate that he made it through unscathed.

The drawings of David Quinn are very nice. I recommend this book to marine ornithologists, scientific historians and persons contemplating trips to the North American Arctic. Birkhead’s thoughts on how various land mammals found their way to some of the islands, and the effects of their presence on the resident seabirds, should be of interest to those studying the plight of island ecosystems in modern times.—  
DAVID G. AINLEY, PRBO, 4990 Shoreline Hwy., Stinson Beach, California 94970, USA.