

he loved to see the shorebirds at the water's edge, bird students still meet to watch the migrating flocks swing in to rest and feed.

Educated in New York and Europe, Donald Cohen returned to Alameda to find a business career distasteful. In 1926 he bought a ten-acre ranch, "Mystery Farm," just outside of the town of Hayward, and here he devoted his spare time to increasing his already large collection of study skins, nests, and eggs of birds, presided over by a mounted Condor, with out-stretched wings, which he had bought, freshly-killed, as a boy and had carried down Market Street in San Francisco, slung over the handle bars of his bicycle.

In the 'nineties Donald Cohen's part in Californian ornithology was an active one. His portrait appears on page fourteen, volume one, number one, of "The Osprey," as editor of the "California Department," a section modestly intended to include contributions from all ornithologists living "west of the Rocky Mountains."

When the "Nidiologist" ceased publication, minutes of Cooper Club meetings were officially transferred to the California Department of the Osprey. For a time this was a satisfactory arrangement, but with the migration of the Osprey from New York to Washington, under the management of Elliott Coues, the space allotted to the Cooper Club was sharply cut. This spurred members of the young organization to venture upon the establishment of a magazine of their own—the "Bulletin of the Cooper Ornithological Club," later renamed "The Condor." Donald Cohen served as Northern Division business manager from January, 1899, through January, 1901. His contribution to California ornithology includes some fifty-three titles, the first appearing in 1893, the last, an article on the nesting of Prairie Falcons in the Mount Diablo region, in the Condor for September, 1903.—HILDA W. GRINNELL.

PUBLICATIONS REVIEWED

With the appearance of the second part of Mrs. Nice's life history study on the Song Sparrow (Nice, Margaret Morse. 1943. *Studies in the Life History of the Song Sparrow II: The Behavior of the Song Sparrow and Other Passerines*. Trans. Linn. Soc. N.Y., VI: viii + 328 pp., frontis. + 6 figs.), students of bird behavior are provided with a guide and source of outstanding breadth and significance. Although it is stated in the foreword that this work is "primarily a treatise on the behavior of passerine birds with the Song Sparrow as the chief example," there are numerous references to birds of other orders, some to reptiles, fish, and mammals, and a few even to invertebrates. Seven years' field work on the Song Sparrow, field studies of other pas-

serines, observations of a series of hand-raised birds, and an extensive survey of the literature constitute the background of this book. Mrs. Nice presents many new data, elaborates certain parts of her first volume on the Song Sparrow, and brings together many examples and bits of information of unsuspected value from scattered sources in the abundant ornithological literature. This material is analyzed and interpreted in the light of basic biological principles and fundamental concepts of bird behavior to a degree unmatched by any earlier American avian life history study. Those concepts of behavior developed by Lorenz provide much of the theoretical framework about which the data are organized.

There are twenty-two chapters, each highly organized and divided into numerous parts following a detailed outline in the table of contents. The first introduces basic concepts and viewpoints in the field of bird behavior; important, chiefly contemporary, contributors and their subjects of study are mentioned. The next five chapters take up development of the Song Sparrow in terms of five different stages applicable to passerines at least; activities which make their appearance in the course of these stages are described. There follow discussions of each specific activity, innate and learned behavior, age of fledging and independence, and the young bird after dependence. It is in these chapters that the greater part of the original data is presented; it is here that the greatest contribution of this volume to biology is made. Succeeding chapters dealing chiefly with the Song Sparrow take up society in fall and winter, song, intraspecific relations, and enemy recognition. The remaining chapters are compilations of literature with original data on the Song Sparrow entering more or less secondarily; subjects discussed are awakening and roosting, territory, song in female birds, pair formation, nests and eggs, and care and defense of young. The last chapter on innate and learned behavior in the adult presents interestingly, but too briefly, certain basic implications of this and other correlated studies. There are five appendixes including tables of call-notes and dominance reactions, selected case histories on dominance, mating, and pre-mating behavior of females, and a list of species in which "injury feigning," better termed "distraction display," has been reported. The bibliography, including over 700 titles, provides for students and researchers a fairly comprehensive working list of published papers. Two indexes, one to subjects, the other to species, augment appreciably the usefulness of this book.

The highly organized topical outline mentioned above is carried over into the text, and pages with three or four centered topic headings are not uncommon. This together with an evident effort to economize space and words makes at

times for a disconnected style. The impression of choppiness is unjustly strengthened by frequent shifts in size of type and variations in spacing of lines, many of them without any change in the nature of the text. This volume is not as neatly printed as is the preceding volume. These, however, are points of mechanics that do not alter the significance of the contents. Each chapter closes with an itemized, comprehensive summary.

Throughout the discussions, there are numerous thought-provoking and suggestive comments. Occasionally the literature pertaining to certain questions is not treated beyond a mere summation; at other times conclusions are confined to quotations from other workers; usually, however, the author adds her own interpretation and opinion. Numerous opportunities for the active field observer are revealed. For instance, song in the Brown Towhee (p. 147) bears further investigation. There is some doubt that "permanently mated males do not sing"; moreover, the fact of a second, soft, finch-like song in this species has gone unnoticed. In the treatment of nest sanitation (p. 237), no mention is made of such species as the Green-backed Goldfinch which does not remove fecal sacs and allows excrement to accumulate on the rim of the nest. Without doubt, the suggested hormonal explanation of territorial behavior (p. 97) was not intended to apply generally. Among thrushes, for instance, the Robin is unaggressive in winter, or at the time of reduced levels of sex hormones, and flocking is generally the rule; the Hermit Thrush is aggressive in winter, individuals remaining solitary and even performing a warning display when intrusion on feeding areas by other thrushes takes place. Numerous questions are brought up by the table of learned and innate elements in adult Song Sparrows (p. 267); if, for instance, *quality* of song in this species is learned and not innate, to what extent is it so in other species? The matter of primitive culture among birds (p. 268), or the transmission of knowledge from generation to generation through unconscious teaching, is an intriguing field almost unexplored.

The impetus offered to students of bird behavior by this work will, I hope, carry to all ornithologists who have any occasion to write concerning matters of life history. When Mrs. Nice states (p. 69) that she was "impressed with the unreliability of much of" the American data on weights of adults, length of incubation, part taken by each sex, and length of fledgling period, we are reminded that the quantity of ornithological literature in this country is quite out of proportion to its scientific worth. There is room for improvement of published, "factual" data. Moreover, papers and books by Lack, Tinbergen, Hux-

ley, Fisher, and Armstrong, as well as Mrs. Nice's two volumes, are generally available; the treatment of any avian subject antedating these in theoretical aspects is inexcusable.

As time passes by, it is, of course, the original data in Mrs. Nice's work which will become increasingly valuable; the survey of literature, important and valuable as it is now, will be less so in the future. After a study of this and other modern behavior studies now in print, one may ask to what extent does the vast literature need to be re-organized and re-assimilated when a major life history study is prepared for publication. Some contemporary leaders in this field feel that a thorough summary of the literature is indispensable to a scholarly written treatise of one species. Certainly the student of avian life history will want to read widely; he will want to know the numerous questions which may be answered at least partially by his data. He may want to review the available information on closely related species and support his stands by citing pertinent examples perhaps from a variety of species. Published, original data, if handled according to recent methods and concepts, are no less valuable without a long series of cited references. Specific problems, such as pair formation, can be reviewed whenever the need for re-examining the accumulated evidence arises; here the author is obligated to organize the literature comprehensively.

Because so much material is included and condensed in Mrs. Nice's book, the beginner may be left with the erroneous impression that the citations from literature offer established facts when actually many of them are open to further study. Her "view point is fundamentally that of Lorenz, Heinroth, and Tinbergen" (p. 4), and her interpretations in terms of this viewpoint do not confirm necessarily the validity and adequacy of the concepts of these men. Further researches in the fields of animal behavior and psychobiology will undoubtedly offer concepts that may alter, elaborate, or even supersede those of Lorenz and others. Mrs. Nice offers significant critical comment when, for instance, she discusses Lorenz's classification of pair relationships (p. 204) and when she points out (p. 93) that despite the extensive laboratory studies of social and peck-order relations in the domestic hen, "it is a question as to how social a bird *Gallus domesticus* really is." It is surprising to see Dawson's and Pearson's anthropomorphic explanations of the function of song (p. 146) accorded the honor of "early theories." A lengthier discussion of the basic psychobiologic concepts in the first chapter would have been useful; does the author, for instance, really regard "imprinting" as a "kind of conditioning" (p. 9)? "Conditioning" and "learning" are used inter-

changeably (for example, page 60). Is a young bird being *conditioned* when it is making initial associations?

Leading the reader repeatedly to fundamental questions is one of the best features of Mrs. Nice's work. Many times it is the brevity with which these questions are treated that is responsible for this effect. From any point of view, the values and aids offered by Mrs. Nice's work to active students of birds are innumerable. Taken as a whole, the two volumes on the Song Sparrow are an accomplishment of far-reaching significance and constitute an important contribution to several fields of biology.—FRANK A. PITELKA.

A valuable, critical appraisal of Armstrong's book, "Bird Display: an Introduction to Bird Psychology," which may be overlooked by ornithologists has been written by F. A. Beach of the American Museum of Natural History and published in the October, 1943, issue of Ecology, pp. 503-505.—F. A. P.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

AUGUST.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held on Thursday, August 26, 1943, at 8:00 p.m., in Room 2503, Life Sciences Building, University of California, Berkeley, with Vice-president Lewis Taylor in the chair.

Professor Vorhies of the University of Arizona was introduced and reviewed the recent highlights of bird study in the Tucson Region. Species found included Black-bellied Tree Duck, Northern Flicker, and Boat-tailed Grackle.

Mr. Harwell reported hearing a Great Gray Owl at the lower end of Tuolumne Meadows, and Mr. King reported the Virginia Rail and the American Egret in Yosemite Valley.

Following a short discussion of the destruction of rice by ducks in the Sacramento Valley, Dr. Taylor introduced the speaker of the evening, Mr. Telford Work, of the Stanford Medical School. Mr. Work's subject, "Golden Eagle—King of the Air," was illustrated by colored motion pictures which depicted not only the nesting activities of the eagles, but also the techniques used in making the study and the difficulties encountered in the course of the field work.

Adjourned.—ROBERT W. STORER, *Acting Secretary*.

SEPTEMBER.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held on Thursday, September 23, 1943, at 8:00 p.m., in Room 2503, Life Sciences Building, University of California, Berkeley, with President Robert C. Miller in the chair and about 65 members and guests present.

Dr. A. H. Miller reported finding a Western Kingbird, Pine Grosbeaks, and a Lewis Woodpecker in meadows bordered by lodgepole pines at 8000 feet in Alpine County. Mrs. Kelly reported a Yellow Warbler on September 22 on the University campus, and a Russet-backed Thrush on September 21 and Warbling Vireo on September 23, both in Alameda. Mrs. Allen saw a Townsend Warbler in Berkeley on September 15, and Dr. R. C. Miller observed a party of Bush-tits in a cornfield on September 19.

The meeting was then turned over to Mrs. Junea W. Kelly who spoke on the shorebirds of the San Francisco Bay region. The speaker began by discussing the field marks and characteristic habits of the common species found in the region and went on to describe daily and annual rhythms of the birds. Mrs. Kelly concluded by telling the best seasons, tides, and places to observe shorebirds and outlined several interesting problems which remain to be worked out with respect to the local Limicolae.

Adjourned.—ROBERT W. STORER, *Acting Secretary*.

SOUTHERN DIVISION

OCTOBER.—The regular monthly meeting of the Southern Division of the Cooper Ornithological Club was held Tuesday, October 26, 1943, at 8:00 p.m., in Room 145, Allan Hancock Foundation, Los Angeles, with President I. D. Nokes in the chair.

Applications for membership were read from Richard M. Griffith, Jr., 1201 Virginia Road, San Marino, California, proposed by Stuart O'Melveny; T. L. Quay, Ensign, H*V(s), U.S.N.R., U. S. Naval Air Station, Glynco, Georgia, proposed by John McB. Robertson; and from Earl Junior Larrison, 1420 North 48th Street, Seattle 3, Washington, proposed by W. Lee Chambers.

Mr. H. L. Cogswell reported that a Black-chinned Hummingbird had three nests in his yard during the past season. From the first it raised two young; the second it abandoned after laying eggs; the first nest was used again for the third nesting from which young were successfully raised. Young from the first nest were being fed while incubation of eggs of the second set was proceeding. Dr. Nokes stated he had seen Vermillion Flycatchers likewise feed young and immediately afterward go to a nest and incubate eggs. Mr. Ed Harrison reported a recent observation of a large flock of shearwaters near Long Beach, Oregon.

An interesting talk was given by Mrs. Mary V. Hood, in charge of Nature Study among Boy Scouts of the Los Angeles area; this was illustrated by beautiful slides in color of birds, mammals, wild flowers and scenery.

Adjourned.—WALTER W. BENNETT, *Secretary*.