

Large Flocks of the Golden Plover and White Pelican Near Sioux City, Iowa.—On October 20 and 21, 1931, the writer had the pleasure of watching the activities of a good many Golden Plovers (*Pluvialis dominica dominica*). On the first day I counted flocks of twenty-six, forty-seven, and twenty-five birds, and estimated two other flocks at forty and two hundred birds. The plovers were feeding on fields that had been planted with winter wheat and the sprouts were about two inches high. One field of wheat which was four or five inches high was frequented by one small flock of birds, but in every other case the birds were found on the more open fields. The second visit to these bottoms, about fifteen miles below Sioux City, found most of the birds gone, and only about one hundred birds were seen.

The first fall migrant White Pelicans (*Pelecanus erythrorhynchos*) were seen on October 1, when a flock of fifteen birds were seen on the Missouri River. The afternoon of October 4 furnished an inspiring sight, when a flock, carefully estimated at from 2,000 to 2,500 pelicans, was seen over the Missouri River about twelve miles south of Sioux City. The great mass of birds circled and milled around for a long time, and gradually passed to the south. I was just ready to start for home, when I happened to look toward the river and saw another cloud of white appearing from the north. The second flock contained between 1,000 and 1,500 birds and was executing the same aerial maneuvers as the first group. These two flocks of pelicans must have constituted a considerable portion of all of the White Pelicans that still nest in the prairie provinces of Canada.—
WILLIAM YOUNG WORTH, *Sioux City, Iowa.*

ORNITHOLOGICAL LITERATURE

LES OISEAUX DE FRANCE. By A. Menegaux. Published by Paul Lechevalier & Sons, 12 Rue de Tournon, Paris, VI. Pp. 1-290, figs. 1-107, col. pls. 1-64, 1932. Price, 50 fr.

In this pocket handbook in the French language we find just the book that many of us need to use in brushing up in our reading of French. The information will be sufficient to hold the interest and the exercise will carry its own reward. "The Birds of France" is projected as a series of three volumes, of which this one is the first. It contains an introduction to the study of ornithology and descriptive treatment of the birds of prey, the gallinaceous birds, the doves, and the woodpeckers. The second volume will contain the water birds, and the third volume will contain the passerine birds, "qui font le charme des campagnes francaises".

The first part of this volume, consisting of the Introduction and covering the first 197 pages, includes brief discussions of zoological nomenclature, zoogeographical regions, structure of the bird, banding and migration, methods of collecting and caring for skins and eggs, insect pests of collections, and insect parasites of living birds. The second part of the volume, called the Atlas, is illustrated with sixty-four colored plates, one species to each plate. We judge that these portraits are produced by coloring the photographs of mounted birds. There is also an accompanying description of each species.—T. C. S.

A DISTRIBUTIONAL LIST OF THE BIRDS OF TENNESSEE. By Albert F. Ganier. Tenn. Avifauna No. 1. Pub. by Tenn. Ornith. Soc. Nashville, 1933. Pp. 1-64. Price, 50 cents.

The author has produced a very serviceable bird list for his state. The total number of birds included in the list is 302, nine of which are, however, extinct, introduced, or accidental. The State of Tennessee is naturally divided into three regions, known as East, Middle, and West Tennessee, presumably ecological regions; the status of each species is given for these three regions. In order to contain all the data to be presented the format has been very much modified from that of the usual list—almost approaching tabular form; but it is a very systematic arrangement of facts, and should facilitate the finding of information. The preparation of so complete a catalogue of information represents a great amount of work, and requires a detailed knowledge of an area which is possessed by few amateur ornithologists. Such a carefully prepared list establishes a new basis upon which to begin research.—T. C. S.

GAME MANAGEMENT. By Aldo Leopold. Published by Charles Scribner's Sons, 597 Fifth Ave., New York. 1933. Pp. i-xxi+1-481, figs. 1-35, tables 1-53. Price, \$5.00.

This is a new book in a relatively new field. The author draws a distinction between conservation and management in the following way: "The conservation movement has sought to restore wild life by the control of guns alone, with little visible success. Management seeks the same end, but by more versatile means. We seem to have two choices: try it, or hunt rabbits." We did not know that the two terms were in contra-distinction. We had looked upon management as a new factor, or method, in the conservation program—a means, not an end. However we may regard this matter, the management of game and wild life seems to be a progressive step. It is a positive, or constructive, program. Even with this new and constructive practice we will hardly be able to discard the regulatory effects of law, though we need not depend wholly upon the latter.

Just what is game management? This is what the book attempts to answer. The author calls game management the "art of making land produce sustained annual crops of wild game for recreational use". The reviewer, who has done at least desultory reading during the past twenty years on many of the problems of wild life, is nevertheless surprised at the mass of organized material, fact, and theory, brought together in this first comprehensive survey of the subject. Population density, cycles, radius of mobility, environmental and race tolerances, sex ratios, flock organizations—these are just a few of the topics in the theoretical discussion. Under the general heading "Management Technique" we find chapters on such matters as, measurement of game populations and census, life equations, game refuges, control of hunting, predator control, control of food and water, control of cover, control of disease, accidents, etc.

This is all very interesting and readable, even to the ornithologist. It is a scientific analysis and presentation of facts. The one thing that is not entirely clear to us is, what is the ultimate aim and goal of game management? In so far as it is simply restoration of native game many would find little fault, even though it is understood that excess populations will be used for hunting purposes. To what extent importation, introduction of exotic species, meddling with natural ranges, artificial breeding, etc., go along with the concept of

game management remains yet to be seen. These are probably the controversial topics, which possibly may dissipate as knowledge and understanding of facts and viewpoints develop. Every lover of nature is a conservationist at heart. He is an optimist, a philanthropist, an altruist, and hence he desires that some of this old world may be handed on to posterity as God made it, not altogether as man has improved it. And it is most reassuring to observe that such sentiments are now being held by an increasing proportion of game hunters. Apparently this book is written for, and undoubtedly reflects, the highest type of American sportsmanship. And it can not be other than fascinating reading for the bird lover.—T. C. S.

WATER BIRDS OF REELFOOT LAKE. By Albert F. Ganier. Tenn. Avifauna No. 2. Revised and reprinted from Jr. Tenn. Acad. Sci., VIII, No. 1, Jan., 1933, pp. 65-83.

Fifty-nine forms of water birds are listed and annotated; a few species of land birds are mentioned in the introduction.—T. C. S.

POSTJUVENAL MOLT AND THE APPEARANCE OF SEXUAL CHARACTERS OF PLUMAGE IN PHAINOPEPLA NITENS. By Alden H. Miller. Univ. Calif. Pub. Zool., Vol. 38, No. 13, pp. 425-446, 1933.

It is interesting to note that the observations of Dr. Miller on the relation between gonadal development and feather pattern in the wild form, *Phainopepla*, tend to confirm the findings of Dr. Lillie and his colleagues on domesticated species. There is also the bare suggestion that variation in gonadal development, and hence in feather pattern, may be correlated with geographical distribution and climatic factors.—T. C. S.

A STATISTICAL STUDY OF OHIO BIRD LIFE. By Lawrence E. Hicks and Floyd B. Chapman. Ohio Jr. Sci., XXXIII, No. 2, March, 1933, pp. 135-150, 2 figs., 2 tables.

A very interesting and useful study of accumulated data on winter bird life in Ohio.—T. C. S.

ABUNDANCE AND CONSERVATION OF THE BOB-WHITE IN OHIO. By S. Charles Kendeigh. Ohio Jr. Sci., XXXIII, Jan., 1933, p. 18.

The figures presented show that the population of Bob-white in Ohio has roughly trebled since the species was placed on a non-game basis in 1913; for a period of years it had more than quadrupled. The author repudiates the old argument that hunting improves the stock by scattering the covey and preventing inbreeding. The paper takes up a number of other very practical problems for consideration in the light of recent scientific theory. The conclusion is that it would be inadvisable to have a general open hunting season in Ohio; at most hunting should be confined to local areas where the species is sufficiently abundant, but the author does not say that he favors this.—T. C. S.

BIRDS OF THE REGION OF POINT BARROW, ALASKA. By Alfred M. Bailey, Charles D. Brower, and Louis B. Bishop. Program of Activities Chicago Acad. Sci., IV, No. 2, April, 1933, pp. 15-40. Price, 25 cents.

This paper gives a history of the ornithological work in the region of Point Barrow, covering an area of approximately one hundred and fifty miles inland. The list includes material collected by the authors, and summarizes the records in the literature. The list is, therefore, probably a comprehensive one. A bibliography is appended.—T. C. S.

METHODS OF COLLECTING AND PRESERVING VERTEBRATE ANIMALS. By R. M. Anderson. Bull. No. 69, Nat. Mus. Canada. 1932. Pp. i-v+1-141, figs. 1-46. Price, 25 cents in paper, 50 cents in cloth, and obtainable from the Director, National Museum of Canada, Ottawa.

This handbook is dated 1932, though distributed early in 1933. In it Dr. Anderson has prepared a vade mecum which will be most useful to all field collectors of vertebrates. The introductory chapter treats of the general principles of zoological collecting; other chapters deal with collecting mammals, skinning mammals, collecting and skinning birds, collecting cold-blooded vertebrates, and preparing skeletons. The mammals have received the greatest attention, but the chapter on making a bird skin is, we judge, quite complete. Directions are not given for mounting the specimens. The instructions for cleaning bones will be as useful to teachers as they are to museum workers. This is, by all means, the most practical and useful aid to the preparator which we have seen.—T. C. S.

FAUNA OF THE NATIONAL PARKS OF THE UNITED STATES. By George M. Wright, Joseph S. Dixon, and Ben H. Thompson. Fauna Series No. 1, Wild Life Survey, National Park Service, Washington, D. C., 1932, pp. 1-157, figs. 1-56. (Distributed, April, 1933). Price, 20 cents.

This report is the result of work by the Preliminary Wild Life Survey of the National Parks, with headquarters at Berkeley, California. We understand that this survey originated as a private enterprise, supported by private funds, but that in 1931 public appropriations were obtained which helped to finance the work and give it official status. The purposes of the Survey are stated to be 1) the establishment of a rational wild life policy for the National Parks; 2) to assist in the solution of wild life problems of immediate urgency; 3) to study the existing status of wild life in the Parks.

The present paper deals chiefly with the third of these objectives, and takes account only of the vertebrate life, chiefly the mammals; birds are very lightly touched. Perhaps we might say that the report deals mainly with the analysis of the problems and procedure. One very interesting point brought out is that the horses used for the pleasure of tourists are pastured in the Parks. These horses use food which should be left for the wild game. Since in many cases the public buys hay for the game during the winter the matter becomes also one of economy. The report also calls attention to the fact that removal of dead trees from the roadsides eliminates many nesting sites of certain birds, and reduces the chances of visitors seeing such species. Whether in practice these trees are removed except in the interest of safety is not shown.

In certain of the Parks oil has, apparently, been spread upon the lake waters for the benefit of human inhabitants, and to the harm of wild life, especially birds. These are examples of the many wild life problems arising in the administration of the Parks, and which this report aims to gather up for analysis and solution.

Numerous references to the literature are given in the foot-notes; nevertheless we believe the usefulness of the report would have been considerably increased by a bibliography of literature relating to the wild life of the Parks.—T. C. S.

TEMPERATURE AND RELATIVE HUMIDITY IN RELATION TO THE ENDING OF THE EVENING SONG OF BIRDS. By Paul R. Elliott. Journ. Tenn. Acad. Sci., VII, No. 3, 1932, pp. 204-213.

This rather technical paper is especially instructive in showing the method of studying the problem indicated in the title. Ten of the more common birds were studied. The Mockingbird seemed to show a temperature correlation, but in the other cases it did not seem to be evident. The analysis of the external physical factors regulating song seems to be still a very wide and open field for study, and deserves more attention from field workers.—T. C. S.

1. BLOOD MONEY FOR THE AUDUBON ASSOCIATION. By Mrs. Edward Breck. Published by the Anti-Steel-Trap League, Inc., 1731 K St., N. W., Washington, D. C.
2. CONSERVATION TO-DAY. By Rosalie Edge. Emergency Conservation Committee.
3. HANDS OFF YELLOWSTONE LAKE. Emergency Conservation Committee.
4. BLACKER THAN THE CROW. Emergency Conservation Committee, 113 East 72d St., New York, N. Y.

These are all militant leaflets in behalf of wild life, and should be read by everybody whether they agree or disagree. It would not seem that there is any chance to impute selfish motives to this propaganda.—T. C. S.

SCIENTIFIC STUDIES OF NATURAL FLIGHT. By Maurice Boel. Aeronautical Engineering, Vol. I, No. 4, Oct.-Dec., 1929, pp. 217-242.

The author discusses flight under four headings, viz., gliding, soaring, flapping, and propulsive flight. He defines gliding flight as the descent of a body at constant speed following a trajectory somewhat inclined to the horizontal. Soaring flight is a passive form which depends upon vertical air currents for motive power. Flapping flight "appears to be the most ingenious and perhaps the most efficient process of aerial locomotion known . . . it can be represented as a succession of short descents in gliding flight". Propulsive flight, the author says, is a special type of flight utilizing the primary wing feathers for horizontal translational motion. "To this class of fliers belong certain birds of prey such as the condor, the vulture, and the eagle". In experiments with a vulture the removal of the forward barbs of the primaries resulted in inability to fly.—L. W. Wing.

1. THE PROTECTION OF HAWKS AND OWLS IN OHIO. By S. Prentiss Baldwin, S. Charles Kendeigh, and Roscoe W. Franks. Ohio Journ. Sci., XXXII, No. 5, Sept., 1932, pp. 403-424.
2. THE BIRDS OF PREY. By George E. Hix. Pp. 1-32. 1933. Privately published. Price, 25 cents. Order from the author, 337 72d St., New York, N. Y.
3. FOOD HABITS OF SOUTHERN WISCONSIN RAPTORES. Part II, Hawks. By Paul L. Errington. Condor, XXXV, Jan.-Feb., 1933, pp. 19-29.
4. HAWKS AND OWLS OF ONTARIO. By L. L. Snyder. Toronto, 1932. (Previously cited in these pages, *antea* page 126).

The numerous papers on the economic aspect of hawks and owls, which have appeared recently, indicate a considerable interest in the subject; and it is possible that officials and the public may yet be stimulated into a correct attitude towards the birds of prey. The paper by Dr. Baldwin and colleagues (No. 1 above) contains important data on the numbers of hawks and owls in Ohio at

present. It also presents a helpful summary of the arguments against the continued devastation of these birds. A valuable bibliography is included.

The paper by Mr. Hix (No. 2 above) is written especially for the instruction of Boy Scouts. The species treated are those which "are more or less generally distributed over North America", and hence the pamphlet will be useful as a Scout guide on hawks and owls in most parts of the country, giving, as it does, descriptions of structure and habits.

The paper by Dr. Errington (No. 3 above) presents numerous original facts upon the food habits of certain hawks. The studies are especially full on the Marsh Hawk, the Red-tailed Hawk, and two or three of the injurious species, as the Goshawk, the Cooper's Hawk, and the Duck Hawk.

Mr. Snyder's pamphlet (No. 4 above) is also a good general guide in identification and on the habits of these birds. All of them are probably still available. No. 1 may probably still be obtained as a reprint from Dr. S. P. Baldwin, Gates Mills, Ohio. No. 2 is obtainable as mentioned above. No. 3 may not have been issued separately. No. 4 may be secured from the Royal Ontario Museum of Zoology, Toronto, Canada, for 35 cents. Reprints of Mr. Gloyd's paper on the diurnal raptures (published in the WILSON BULLETIN for September, 1925) may be obtained from the Editor for eight cents in stamps.—T. C. S.

UNINTELLIGENT NEST BUILDING. By Paul Amos Moody. Vermont Botanical and Bird Club—Joint Bulletin, No. 15, May, 1932, pp. 18-22.

Dr. Moody discusses an interesting case of interruption of the mechanism of chain reflexes in nest building. Wind blew away the nest materials as fast as the bird brought them, but she kept on until many times the necessary amount of material had been wasted; and finally she laid three eggs on the bare surface where the nest should have been—and the eggs were blown off too. At this stage efforts at this location ceased. What is the psychological explanation? The study of bird behavior is in its infancy, but it offers a fascinating and promising field.—T. C. S.

BIRDS OF KEWEENAW POINT, MICHIGAN. By Norman A. Wood. Reprinted from Papers of the Mich. Acad. Sci. Arts, Letters, Vol. XVII, 1932, pp. 713-733.

The area considered in this paper is the largest promontory of Michigan projecting into Lake Superior, and is noted as a copper mine region. The observations were made in the spring of 1931. The list includes 121 forms. The author refers to Kneeland's observations in the same region in 1856-57 and his list of 147 species (Proc. Boston Soc. Nat. Hist., VI, pp. 231-241). The long period of time between the two studies should offer an opportunity for an interesting comparison, especially if significant changes could be found. Considerable attention has been given to Isle Royal, and it is rather surprising to find that no more attention has been given to the area treated in this paper.—T. C. S.

The Annual Bulletin for 1933 of the Illinois Audubon Society was distributed during the spring. Mr. Tappan Gregory presents a narrative of some field work in northern Michigan, showing two very unusual flashlight photographs, one of a Bald Eagle and one of a Ruffed Grouse. Dr. Lewy and E. R. Ford recount their field experiences in northern Minnesota. A. M. Bailey presents some excellent photographs of a female American Eider Duck on her nest. Clayton H. Tanner describes the flocking behavior of the Purple Martin, and

mentions their habit of daytime roosting on the roofs of buildings. Many other interesting items are included. The Annual is published by the Society, with headquarters at the Chicago Academy of Sciences, Lincoln Park, Chicago.

Since our last survey of the ornithological literature which has reached us, a new printed serial has appeared, the *Nebraska Bird Review*. It is the official organ of the Nebraska Ornithologists' Union, is published quarterly, and the two numbers thus far received have had 24 and 32 pages respectively. Prof. M. H. Swenk is the Editor. Since he is also the Secretary-Treasurer of the Union, all subscriptions should be addressed to him at 1410 N. 37th St., Lincoln. The rate is \$1 per year in the United States, and \$1.25 elsewhere. The January number contains a census of the birds along a five-mile strip of highway in central Nebraska, thirty years ago, by the late J. M. Bates. Eleven pages of interesting general notes make up the bulk of this issue. The April number is equally readable, and the Society and its Editor are entitled to praise for the quality of material and the neatness of format. This organization has now passed its thirty-first annual meeting.

The *Raven* has appeared at regular monthly intervals since our last account. The February, 1933, number contains the minutes of the fourth annual meeting. The March number is taken up entirely with "A brief history of Virginia Ornithology", by James J. Murray. This paper seems to be an excellent example of the type of a preliminary survey of ornithological literature which many states now need. It probably should not be qualified as "preliminary", since it is a complete survey in every respect.

The *St. Louis Bird Club Bulletin* is being issued monthly in mimeographed form. The March, 1933, number gives special attention to the European Tree Sparrow, which was imported and established in the St. Louis region in 1870. The status of this species in our country is a matter of interest to all ornithologists. A feature of each number is the "Widmann Column", presenting a timely communication from Mr. Otto Widmann.

The *Chickadee* is the organ of the Forbush Bird Club at Worcester, Mass. The frequency of issue and the number of pages (mimeographed) of material indicate the activity of this eastern bird club. In an article on plumage changes in the most recent number, Mr. Thomas F. Power, Jr. has some interesting remarks on the variation in iris color in individual birds, and the apparent seasonal change in such pigment. Mrs. K. B. Wetherbee observes that the Bluebird family remains grouped until at least late fall. Mrs. W. Gray Harris gives important facts on the feeding habits of the Catbird as a winter sojourner in the north.

The *Flicker* begins its Volume Five with the issue of February, 1933. We find in it a very interesting article by Stanley Stein about the numerous and unusual difficulties he has had in operating his traps for banding birds.

News from the Bird Banders (published quarterly by the Western Bird-Banding Association) for November, 1932, contains a splendid review of the literature on territory in bird life, together with a useful, though incomplete, bibliography. It is unfortunate that so excellent a summary should be presented anonymously. The January, 1933, issue contains instructive discussion of the use of colored celluloid bands for identifying birds out of hand, and also a

splendid anonymous review of Schüz and Weigold's Atlas of Bird Migration. In the April issue there is more discussion of colored bands, and a summary of the banding work for 1932 in the fourteen western states and provinces of the Association. The question is raised concerning the availability and utility of the increasing mass of data in the archives of the Biological Survey at Washington. The whole work becomes useless if the data are merely to be stored.

Inland Bird Banding News (published quarterly by the Inland Bird Banding Association) for December, 1932, contains a report of the last annual meeting, at Chicago. Mr. M. J. Magee writes on the cat problem. He does not believe that the cat license idea will work as expected, and thinks that in no case should cats be protected off their owner's premises. The March, 1933, issue contains papers on banding activities by Professors Louis A. and Frederick H. Test, in Indiana; by Harold C. Wilson, in Wisconsin; by F. E. Ludwig, in Michigan, and by F. W. Robl, Kansas.

The Bulletin to the Schools, of the University of the State of New York, for March 15, 1933, is a Bird Day number. It contains articles by E. H. Eaton, on "Our birds of prey"; by Dayton Stoner, on "Superstitions and facts about Kingfishers"; by Chas. J. Spiker, on "Some fall and winter birds of a farm dooryard"; by Dr. George S. Britten, on "Nesting warblers of central New York"; by C. Huber Watson, on "Early nesting of the Great Horned Owl"; and three papers on bird banding, by Allan C. Fraser, Daniel Smiley, Jr., and Geoffrey Gill.

Bulletin No. 12 of the International Cat Society was distributed in April. All of these bulletins carry information of interest to bird lovers. It occurs to us that this organization should be called a cat abatement society, to indicate which side of the cat question it is on. This Bulletin No. 12 gives information concerning the rats on Rikers Island, a refuse dump for New York city. It is estimated that there are a million rats on the island (not at all hard to believe). When cats were placed there to destroy the rats, the rats chased the cats, so they say. Dogs had no better success.

We have previously given the business addresses of the periodicals here noticed, and will do so again from time to time. The Editor will always be glad to give any address to those who may have missed the earlier notices. The number of local publications in ornithology is on the increase. Only a few are, at present, printed. Some are quarterly, others are monthly. Those which are mimeographed are all printed on letter-size paper, and some are printed in single column, while others are in double column. Some have covers, others do not. They exhibit much variation in quality of paper and legibility of printing.

There has been some discussion lately as to whether a mimeographed journal provides true publication. So long as the facts are authentic it is difficult to see how future workers can ignore mimeograph publication. Restricted distribution will, of course, be a handicap; but the information will be there recorded, for those who can find it. Some authors may hesitate about citing mimeographed publications in bibliography, but we are inclined to think that this will have to be done for complete accuracy. For these reasons we believe that those who are responsible for these publications should use the utmost care to make the printing clear and legible, and also to see that a file of their serial is preserved permanently in a selected list of libraries.