ORNITHOLOGICAL LITERATURE

WILD BIRDS AT HOME. By Francis Hobart Herrick. D. Appleton-Century Co., New York. 1935. Pp. i-xxii+1-345. Figs. 1-137, and frontispiece. Price, $4.00.

Those who were interested in bird study thirty years ago will remember Dr. Herrick's book, "The Home Life of Wild Birds". In some ways this book marked the beginning of a new period in ornithology. It taught the growing hosts of bird students how to use the bird-blind. The reviewer has never been quite certain who is entitled to the credit for the introduction of the tent-blind or umbrella-blind. But there is glory enough for all, and Dr. Herrick's practical demonstration of the method must have stimulated many other workers in the same direction. The three decades since have witnessed more careful and more critical study of the bird as a living animal than in all previous time.

Dr. Herrick's present work is perhaps not so much an exposition of a method, as a summary of the results of the method developed thirty-odd years ago. It is a book which discusses the most profound problems in bird behavior, and yet one which may be taken to an easy chair and read for hours without mental fatigue or monotony. Practically all phases of the bird's home life are discussed, and with more than ordinary understanding of the psychological principles involved. The numerous illustrations are new and original. Literature citations are given in foot-notes, rather than in a terminal bibliographic list. Dr. Herrick has made another contribution to ornithological literature.—T. C. S.

ZUR BIOLOGIE DES REPHUHNS (Biology of the Hungarian Partridge). By Dr. W. Nolte. Published under the auspices of the Reichbundes Deutsche Jägerschaft (National German Hunters' Association). Publisher, J. Neumann, Neudamm, Berlin, 1934. Pp. 105.

This new booklet on the biology of the Hungarian Partridge (*Perdix perdix*) in Germany should be of particular interest to American ornithologists and sportsmen for two reasons.

First, it parallels the University of Michigan's recently published study of this bird by Yeatter,[1] and the Oxford University study now under way by Middleton,[2] without any awareness of similar work under way in the English-speaking countries, or vice versa.

Secondly, it illustrates certain basic differences in game management research, organization, and methods, from which mutually profitable deductions may possibly be drawn.

Dr. Nolte's study was undertaken because the 1932 partridge crop was bad, and the 1933 crop spotty. (This illustrates an important point: game research in Germany is a matter of finding the cause of specific difficulties encountered in actual practice; with us it is an attempt to build comprehensive biological foundations for a practice which is hoped for, but does not yet exist).

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[1]Yeatter, Ralph E. The Hungarian Partridge in the Great Lakes Region. Bul. No. 5, School of Forestry and Conservation, Univ. of Michigan, Ann Arbor. December, 1934.

[2]Middleton, A. D. The Population of Partridges (*Perdix perdix*) in 1933 and 1934 in Great Britain. Jour. Animal Ecology, Vol. 4, No. 1, May, 1935, pp. 137-145.

The project was sponsored and financed, not by universities or by bureaus, as with us, but by the national sportsmen's association (Deutsche Jägerschaft). Membership in this is now universal, being paid for as part of the hunting license fee (which, by the way, is the substantial sum of $12). There is now only one national association, and it is strongly affiliated not only with the Reichsjagdamt (Biological Survey), but with its official mouthpiece, "Die Deutsche Jagd", published by the publisher of this booklet.

The technique of the study follows from these premises: funds were limited and an answer needed quickly, so the technique consisted not (as with us) of a field study in a limited locality to decipher the basic ecology of the partridge, but rather of a compilation and analysis of hunters' reports and weather data for all Germany. The technique, in short, is an attempted correlation starting with an inferred premise (that weather governed the crop). This is the method of my "Game Survey", not the method of Stoddard, Errington, Schmidt, Wight, Yeatter, et al.

Dr. Nolte's findings are in many respects startlingly similar to Yeatter's. I here give his own summary, supported by interpolated explanations from the text, and from the American and English studies in so far as published:

1. The partridge is a prairie bird (Steppentier), which finds its optimum range on loessial soils, which are "warm" soils.

2. On "cold" soils heavy populations are attainable only by drainage.

3. Heaths and moors are "cold". They delay the nesting.

(Maxwell, Page, and other English authors point out the unsuitability of heavy soils. Yeatter found fair populations on heavy lake-bottom in Michigan and Ohio, but these are all tiled and drained, as is much of the northeast Illinois and Iowa-Minnesota range. The outstanding confirmation of Nolte's assertion, however, lies in the superior density of partridge in the Canadian wheat prairies, and in the semi-arid regions of eastern Washington and northern Montana).

4. Small management units are not favorable.

5. Breaking new land damages the partridge stand. (I think he means the breaking up of the remnants of grass cover).

6. Feral dogs and cats are bad. The worst predator is the free-ranging sheep dog and his progeny.

7. Weasel, iltis, and fox have no effect on the partridge crop.

8. Raptorial predators have virtually no effect. The goshawk and perhaps the female sharpshin, are definitely damaging, and in winter the migrant roughleg.

9. The horned owl kills partridge, but *because of its rarity such depredation is to be endured* (see American Game Policy on rare predators!). Whether swamp owls, when abundant, influence the crop remains undetermined.

10. All these predatory birds were too scarce in 1932 and 1933 to produce appreciable damage.

11. The raven is too scarce to influence the crop.

(It is interesting to note that all these conclusions on predation are drawn from geographic correlations, not from food habits research. Thus, if a good partridge crop occurred where these predators were present, and also where absent, the conclusion is that they have no effect. I see here also the influence of the strong German movement for "Naturschutz" (nature protection), one of whose tenets is, of course, moderation in predator control).

12. Mouse years are partridge years (an interesting side-light on the wild life cycle).

13. Food shortage during the vegetative period can occur only during drouths.

14. It is improbable that the partridge needs drinking water when there is enough dew.

15. Poisoned wheat, properly put out, may not be dangerous, but arsenicals are probably (always) dangerous.

16. The influence of pheasants on the partridge is still controversial.

(Dense mixed populations are alleged to occur in Bohemia, but in many other localities increase in pheasants shows decrease in partridge. Nolte thinks the competition may occur only during nesting, and only when both species are dense. He pleads for special research on this question).

17. The existence of contagious diseases is not proved.

18. Dangerous fighting between cocks during mating is doubted.

19. "Peepers" (immature young) should be shot off. The question of whether they in turn breed "peepers" (because of immaturity and consequent late nesting) is unsolved.

20. Small coveys of well-grown birds are perfectly good breeding stock.

21. Albinos should be preserved for their research value (i. e. as marked birds whose behavior and longevity can be observed).

22. Old and young hens are equally valuable as breeders. The latter may lay more eggs, but the former are safer mothers.

23. Longevity is unknown. One white hen is known to have raised a large normal brood for four successive years.

24. Migration in partridge is not proved.

(But in October, 1911, partridges appeared in the mountains at a point thirty-nine air-line miles from an inhabited range. Partridges are known regularly to evacuate southwestern Memel. Drowned partridges have been found far from land. In 1932 drifting flocks appeared on the shores of the Main in Bavaria, and later disappeared. Some localities have partridges in winter only. I am reminded forcibly of Audubon's descriptions of the fall shuffle in quail, and the endless subsequent discussions on "migration").

25. The alleged migration is a "shuffle".

26. The spread of "technical"[1] agriculture is injurious to partridge only where it affects environment (a truism!).

27. Grazing is always injurious to partridge.

(This I think is an unscientific assertion. It might, in too-heavy cover, be beneficial).

28. Vineyards and nurseries of large size can serve as refuges.

29. The partridge crop depends on which field crops start growing first. If grain springs up before clover and alfalfa, they nest in grain and are safe. If, however, the clover or hay springs up before the grain, there is heavy loss (of nests) in mowing. (This is precisely Yeatter's conclusion).

30. Partridges are not adaptable to climatic fluctuations.

31. Planting stock is best obtained from less favorable climates.

32. Every range has an optimum breeding density determinable by experience. It is useless to hold over more stock than this optimum. (This fails to assert that the optimum can often be raised by environmental control, and coincides with the rarity of actual range-improvement measures in Germany).

33. Plantings on empty range are best made in dry years, and have no great effect until the second of a succession of good years. In wet seasons the birds evacuate "cold" soils.

34. On bare agricultural areas the partridge must be winter-fed.

35. Satisfactory dog-hunting is possible only in good cover. Without cover the birds "pack" and are wild.

36. The welfare of partridge is directly proportional to sunshine, warmth, and dew, and inversely proportional to rainfall.

(Nolte elaborates this in the form of a mathematical formula:

$$A=\frac{wt}{n} \cdot C$$

where A is population or yield, w is solar energy as expressed in sun and warmth, t is dew, n is rainfall during the breeding season, and C is a constant representing the optimum breeding density for the particular range).

Taken all together, this piece of work exhibits a keen insight into ecological fundamentals. One can not help but wish that such a man might have the benefit of the inductive method initiated in America by Stoddard, as well as financial support for a trial of this method in Germany. This otherwise over-long review is to give American game managers at least a bird's-eye view of his conclusions. —ALDO LEOPOLD, *Berlin*, October 12, 1935.

FAMILIAR BIRDS OF THE PACIFIC SOUTHWEST. By Florence Van Vechten Dickey. Pub. by the Stanford University Press, Palo Alto, California, 1935. Pp. i-lviii +1-241. Col'd plates, 102. Price, $3.75.

One of the most pleasing bird books we have seen is presented under the above title. It may be regarded either as a pocket field guide or as a delightful desk book. The large number of beautiful, colored plates is the most important feature of the book. These are described as "full color reproductions from photographs chiefly by Donald R. Dickey", to whose memory the book is dedicated. We judge that most of these photographs were made from life, though we do not find such a statement. Their coloring brings out the field marks very clearly, and they serve well for the purpose of identification.

The text is presented in two parts, first a key, then descriptions of the various species included. In the key the first division is based on size, the second on color, and the third on various physical characters. The descriptions are designed wholly for the student in the field, with technical anatomical phraseology omitted. It is just the kind of a popular field guide which we wish might be prepared for the middle west, now that both coasts have one. We observe that about sixty-three species (not necessarily the same subspecies) of the 163 species considered are also found in the middle west. So, the book will not be without practical value in this region. As a pleasant avenue of extending our acquaintance with western birds the little book is at present without a peer.—T. C. S.

THE AMERICAN EAGLE. A STUDY IN NATURAL AND CIVIL HISTORY. By Francis Hobart Herrick. D. Appleton-Century Company, New York. 1934. Pp. i-xx +1-266. Figs. 1-94 and frontispiece. Price, $3.50.

Professor Herrick's studies on the American Bald Eagle are pretty well known from his occasional reports in the current literature. This book is a summary of these studies, which, apparently, began as long ago as 1900. Probably

no other intensive bird study ever attempted covers the life history of a species as completely as does this one on the eagle. Not only have the studies been carried on throughout a very long period of time, but the enormous towers erected for the purpose of the study are unique in the history of bird study methods.

The story of the method of studying the eagles from high steel towers is fully told. This, in itself, is interesting enough. The catastophic endings of certain great nests bring tragedy into the picture. We do not like to use the word romance in this connection, but results came, nevertheless, and Professor Herrick goes into the psychological analysis about as far as any author has gone. The daily routine, the life-history story, is told in detail.

Several extra-ornithological chapters are offered at the end of the book, viz., "The Eagle as Emblem", "The Eagle in Apotheosis", "The Eagle with Two Heads", "America's National Emblem", "The Numismatic Eagle", all of which make an interesting climax to the eagle story.

Since the question of what subspecies of Bald Eagle is the breeding form along Lake Erie has been frequently raised, we expected that this matter would be disposed of by Dr. Herrick. But, so far as we can discover, he has not committed himself in this book. Of course, the matter of subspecies is of very little consequence in life-history studies—it is more a matter of curiosity rather than of scientific importance. If Dr. Herrick does not know what subspecies he has been working on for thirty-five years, so much the worse for the subspecies. If he thinks the matter is of too little importance to treat in his book on these eagles the rest of us can breathe easier when thinking about it. This is another book for the easy chair, and will dispel the worries of any ornithologist on a long winter evening.—T. C. S.

THE PASSENGER PIGEON IN ONTARIO. By Margaret H. Mitchell. Published under the Reuben Wells Leonard Bequest as Contribution No. 7 of the Royal Ontario Museum of Zoology. 1935. Univ. Toronto Press. Pp. 1-181. Price, $1.00 in paper, $1.50 in cloth.

While this paper deals primarily with the nesting and migration of the Passenger Pigeon in Ontario, yet the entire life-history is discussed in more or less detail, thus making the paper one of general interest. The author makes free use of the literature on many points, but the original material was derived from replies to a widely distributed questionnaire, which was circulated in 1926 from the Royal Ontario Museum of Zoology. While perhaps the best contributions relate to local nesting colonies, distribution, and migration, yet the features of most interest to the reviewer are those of the general life-history.

Thus, the author presents a very full discussion of the food habits of the Passenger Pigeon—about the most complete account we have seen. The question of the number of eggs in the clutch is raised again, but the answer is no more conclusive than in previous accounts. Under the heading, "Economic Status", the birds are considered as destructive agents and as a source of food supply or income for the pioneers; methods of trapping and marketing are fully treated.

The author thinks that the extermination of the Passenger Pigeon was a gradual process—not as sudden an event as many have affirmed—and that no one cause is to be credited alone for the outcome. Among the most important factors which combined to reduce the birds below an "optimum population density" are considered the "clearing of the land", "disease", "market hunting", etc. A

"psychological effect" of diminished numbers as a contributing cause of extinction is suggested, but without sufficient discussion of its probable nature and mode of operation on a population. The suggestion merits further investigation.

The report is splendidly embellished by a reproduction in color of a painting of the Passenger Pigeon made in 1835 by William Pope. This portrait is one which was not included in Shufeldt's catalogue of Passenger Pigeon portraits in the *Scientific Monthly* (XII, May, 1921).

A bibliography of 196 titles, many of which are obscure, adds much to the general value of this work, which we may regard as an excellent contribution on the subject.—T. C. S.

BIRDS OF JEHOL. By Prince N. Taka-Tsukasa, Marquis M. Hachisuka, N. Kuroda, D. Sc., Marquis Y. Yamashina, S. Uchida, D. Agr. Sect. V, Div. II, Pt. III, of the Report of the First Scientific Expedition to Manchoukuo. Pp. 1-91, pls. 1-28. April, 1935. Waseda University, Tokyo, Japan.

The Report is printed in both Japanese and English, and is based upon material collected in 1933 by Messrs. Mori and Kishida. The authors, as enumerated above, were commissioned by the Ornithological Society of Japan to make the identifications and prepare the report. The seventy species listed belong to twenty-seven families and thirteen orders. The report contains twenty-eight colored plates, which illustrate forty of the forms listed. Many of the species have a much wider range throughout Asia, only two of which are found in the A. O. U. Check-List. The plates are excellent, and make the bird the outstanding feature; the background is a color wash which strengthens the bird portrait.—T. C. S.

MICHIGAN WATERFOWL MANAGEMENT. By Miles David Pirnie, Ph. D. Michigan Department of Conservation. Lansing, 1935. Pp. i-xxii+1-328. Figs. 1-212. Price, $1.50.

The literature on the subject of game management is growing very rapidly, and is of all sorts—propaganda, technical papers, and digested summaries. The title just listed comes under the last classification. It deals, of course, only with the ducks and geese. And while the emphasis is placed on conditions in Michigan, yet the amount of general material is great, and we know of no other available work that comes no near being a textbook on the subject covered.

Chapter I (57 pp.) gives a non-technical description of all the ducks and geese which occur in Michigan, and this includes all the common species of the interior. This is followed by chapters on the numerical status of waterfowl, on natural enemies (including predators and disease), and on methods of hunting waterfowl. The greater part of the book deals with "management", and this includes chapters which discuss the legal regulation of hunting, refuges and sanctuaries, the problem of food and food planting programs, propagation, predator control, restoration of breeding grounds, etc. An appendix includes a very useful key to the more common pond and marsh vegetation, which, together with the nearly fifty photographic illustrations of such plants, presents the student with a most helpful means of becoming acquainted with that phase of the birds' environment. This outline will give the reader some conception of the ground covered in the book, but it can not show how readable the book is. We must add, therefore, that the book is well written, and makes interesting reading whether the reader be a hunter, an ornithologist, or a nature lover.

An incidental thought brought up by this book is its relation to a developing profession. As our country is becoming conscious of the importance of its wild life, steps are being taken slowly, but perhaps surely, to preserve what is left. To thus save the wild life of the continent will require the services of many trained experts. This means a new profession, and a new problem for educational institutions. Some few colleges and universities will have to prepare young men for this field. It is interesting to observe that trained minds are at work collecting, sorting, systematizing the facts which are to form the foundation of this new science. It means that young men who are so inclined may take up the subject of ornithology seriously, with the thought of making it a life work in its applied aspects. The trend of the times is in this direction.—T. C. S.

Systematic Status of Some Northwestern Birds. By H. S. Swarth. Condor, XXXVII, 1935, pp. 199-204.

Swarth presents an argument to show that there is not good ground for distinguishing the two subspecies of *Tringa solitaria*, viz., *solitaria* and *cinnamomea*. Likewise, the validity of *Falco columbarius bendirei* is questioned. We suspect that the future will witness a questioning of many present-day subspecies, and the elimination of many of them from official check-lists. The chief difficulty has been a lack of a sound criterion of subspecies. Another difficulty has been the ease with which a proposed subspecies can be foisted upon the ornithological literature. The burden of proof has been placed upon the scientific public rather than upon the describer of the proposed subspecies. The pernicious custom among systematists of naming new forms after each other has bred a class of polite gastons instead of a class of rigorous scientific critics.—T. C. S.

A Popular Account of the Bird Life of the Finger Lakes Section of New York, with Main References to the Summer Season. By Chas. J. Spiker. Roosevelt Wild Life Bull., Vol. 6, No. 3, 1935. Pp. 391-551. Figs. 228-284.

Another splendid bulletin from the pen of Mr. Spiker. The many excellent photographs are by the author and the late C. F. Stone. These photographs illustrate the various bird habitats, and should be a welcome aid to the student of birds in this region. An enlarged map of the entire Finger Lakes region is also included.

The introduction presents a description of the topography and habitat areas of the region, as well as of the topography of the various State Parks of the Finger Lakes area. The bulk of the text consists of descriptions of the distribution, habits, and migration of the common birds; the style is non-technical, and suitable alike to the younger and the more advanced student. These notes are based on the author's personal observations during his several years of connection with the Roosevelt Wild Life Forest Experiment Station.—Wm. Youngworth.

A Contribution to a Bibliography of the Described Immature Stages of North American Coleoptera. By J. S. Wade, U. S. Bureau of Entomology. 1935.

This paper consists of 114 mimeographed pages. It does not deal with birds in any way, but is an unusual and valuable piece of work for entomologists. We do not know where it is published, nor how it may be obtained, except through the author.—T. C. S.

WHITE HERONS IN INDIANA. By Amos Butler. Reprinted from Proc. Ind. Acad. Sci., Vol. 44, 1935, pp. 228-230.

Dr. Butler presents here a brief account of what is known concerning the three species of white herons as breeding birds in Indiana.—T. C. S.

A STUDY OF THE SHARP-TAILED GROUSE. By L. L. Snyder. Univ. Toronto Studies, Biol. Series, No. 40. 1935. Pp. 1-66.

The study deals with population cycles, seasonal distribution, food, migration, and taxonomy of the various forms of the species named. Much new material is introduced.—T. C. S.

The *Migrant* for September, 1935, is an exceptionally interesting number. It contains too much good material for the reviewer to handle properly. Several authors jointly present a "History of the Tennessee Ornithological Society". "Early Reminiscences", by Dixon Merritt, "Biographical Sketches of Founder Members", by George R. Mayfield, "Among Our Contributors", are articles which continue the account of the activities and the leaders of one of the older state ornithological societies. Four pages of portraits and snap-shots complete a record which will be received with satisfaction by all who are engaged in similar work. Our attention is taken especially by an article entitled, "A T. O. S. Annual Field Day", by John Craig. The author is a stranger to us, but we salute him as a master of descriptive writing. Besides furnishing the bird lover with a very entertaining account of his favorite pastime, we consider this article to present the best single bit of propaganda for the study of birds (without a gun), extant. It would be fine if this article could be reprinted in quantity for public use. A reprint sent to a hunter friend might make many a convert to the use of a field glass.

The *Redstart* continues to appear regularly at monthly intervals. The September number contains a very well thought out statement by Mr. J. W. Handlan on the two opposing views of wildlife conservation. We find ourselves in agreement with it. With this number Mr. T. E. Shields relinquishes the editorship. Mr. Shields is entitled to a hearty "Well Done" for his services in conducting the *Redstart* through two complete volumes. Much ornithological material of local importance has been preserved, and no doubt much good has been accomplished in uniting the efforts of bird lovers in West Virginia. The October number begins a new volume (III, No. 1, 1935) under the editorship of Mr. J. W. Handlan, whom we welcome into the fold.

The *Prothonotary* is a new mimeographed publication issued by the Buffalo Ornithological Society, and is being issued monthly. Anyone may subscribe at fifty cents per year. Each number contains a record of the month's weather conditions, noteworthy records of birds, and news of the activities of the members. It is edited by Mr. Harold D. Mitchell, 378 Crescent Ave., Buffalo, N. Y.

The *Snowy Egret* for Autumn, 1935, (Vol. X, No. 1), appears in a smaller and more attractive format. Articles are by Mr. H. A. Olsen, Mr. R. E. Olsen, and Mr. O. M. Bryens; and notes are reprinted from Audubon and Thoreau. Publication is now dated at Pippapass, Ky., and the paper continues to be directed by the Messrs. Olsen.