

ORNITHOLOGICAL LITERATURE

CHECK-LIST OF THE BIRDS OF MISSOURI. By Rudolf Bennitt. The University of Missouri Studies, VII, Number 3, July 1, 1932, pp. 1-81, one map. (Distributed September, 1933; reviewer's copy received September 18). Price, \$1.25.

The reviewer recalls the pleasure with which, more than a quarter of a century ago when state bird lists were all much less ostentatious than many have been in more recent years, he first examined his copy of Mr. Otto Widmann's "A Preliminary Catalogue of the Birds of Missouri", published in the *Transactions of the Academy of Science of St. Louis*, XVII, pp. 1-288, in which the status of the 353 species and subspecies then known or believed to occur in that state was set forth, along with that of thirty additional forms of possible occurrence there, in a much more detailed and complete manner than was indicated by the adjective "preliminary" in the title. Mr. Widmann's excellent effort then seemed so comprehensive that it promised to be an adequate treatment of the subject for many years to come; but during the period intervening between then and now additional bird forms have been reported from Missouri and changes in the recorded status of the previously reported species have become necessary, while there has also been published an extensive revised classification of North American birds (*A. O. U. Check-List*, fourth edition, 1931), so that Mr. Widmann's list of 1907 has come no longer adequately to reflect the existing knowledge of the Missouri avifauna. This deficiency Dr. Bennitt, who is Associate Professor of Zoology in the University of Missouri, aims to supply in his new "Check-List", here under review.

In his "Check-List" Dr. Bennitt lists all of the 396 species and subspecies of birds now attributed to Missouri, and by means of letter symbols endeavors tersely to set forth the "general distribution, relative abundance and seasonal status" of each of these bird forms. He does not give the usual segregated "hypothetical list", but interpolates in brackets, in their proper systematic position in the main list of definitely admitted forms, fifty-seven additional forms "whose presence in the state is probable but not yet certain", with an indication of the basis for such hypothetical inclusion. There is a map (p. 10), a summary (pp. 67-71), a bibliography (pp. 72-75), and a good index (pp. 76-81).

Dr. Bennitt, we infer, does not intend that his "Check-List" shall be regarded as a highly critical review of the status of each form now or previously included in Missouri's bird list; at least it is not such. More it is a useful piece of ornithological record book-keeping. Published records, being such, seem to have been largely quite freely accepted at their face value, except of course in the cases of the more patent or egregious errors, when Dr. Bennitt quite properly disposes of them, usually in footnotes. To do otherwise than this of course involves an enormous amount of painstaking and time-consuming research. Experience in a number of states has indicated that in that final revision of its state list which every state should ultimately have, every individual record of every bird form must be challenged and thoroughly re-examined, and, unless the direct or clear circumstantial evidence reasonably demonstrates its validity and justifies its retention, should be eliminated. From a careful evaluation of the retained residue of records the general statement of the status of each form should be constructed. This is a tremendous task, of course, but some day it must be done for every

state. Meanwhile bird students should be and are grateful for the real help afforded them through the more superficially compiled state lists.

A common problem shared by every author of a state bird list is what to do with the "sight-records" of birds new to the list or so rare that only a few previous records exist. The reviewer does not stand with those who take the rather extreme position that, without exception, only such bird forms as have been collected, preserved, and authoritatively identified may validly be included in a state list, though admittedly this ultra-conservative course is the only wholly safe criterion that can be universally applied. But the reviewer does feel that in admitting such "sight-records" the very utmost of care and good judgment is necessary. As Dr. Bennitt states (p. 7), when "a sight-record is vouched for by an observer of known competence, dealing with a bird whose field marks are distinct and which was seen under favorable conditions, there is no good reason why it should not be accepted at face value." For examples, it is hard to see how there could be any reasonable doubt of the new "sight-records" of the Eastern Brown Pelican and the Man-o'-war Bird, under the circumstances described, to mention only the first two of such cases in Dr. Bennitt's "Check-List". But in a few cases one is compelled to question whether Dr. Bennitt has been quite conservative enough in the application of his rule. This is especially true in the accepted record of "three" American Hawk Owls allegedly seen by a "graduate student" of the University of Missouri in Howard County, northern Missouri, on January 3, 1932. Considering the great rarity of this species in states even farther north than Missouri this record is extremely questionable, and to those well experienced with many of even the most conscientious identifications of less experienced bird observers, the possibility of a misidentification of the Short-eared Owl immediately suggests itself.

In a number of instances a lack of adequate material and field work in parts of Missouri and (or) a lack of sufficiently careful identifications of closely related bird forms seems evident in the conclusions regarding the relative abundance of forms reached by Dr. Bennitt in the new "Check-List". To the present reviewer, familiar for the past thirty or more years with the birds of southeastern Nebraska, just across the Missouri River from northwestern Missouri or only a few miles removed, it is difficult to regard such birds as the Western Sandpiper, Arkansas Kingbird, or Shufeldt's Junco as "casual" in the sister state, or the Stilt Sandpiper, Red-shafted Flicker, Gambel's Sparrow, or Dakota Song Sparrow as "rare" there, or the Eared Grebe and Thick-billed Red-wing as even "uncommon" there, during migrations, to mention just a few of the cases. The lack above mentioned probably causes Dr. Bennitt to record, for example, the Lesser Loon as a "casual" addition to the Missouri list, on the basis of two specimens identified, while all previous records are referred to the Common Loon, which is given as an "uncommon transient visitant throughout the state", interpreting Dr. Bennitt's symbols, thus giving the impression that in Missouri the larger form is much more common than the smaller one, a highly improbable status in view of the determined relative abundance of the two forms in Nebraska (see *Nebraska Bird Review*, I, p. 89). Again, the Bendire's Crossbill, which Dr. Bennitt includes only hypothetically in his list, is the form to which many, probably most, of the red crossbills wintering in southeastern Nebraska, and undoubtedly also northwestern Missouri, belong.

But if Dr. Bennett did not have adequate material and time to reach conclusions that bid fair to remain reasonably permanent on the status of a number of Missouri birds, he is still to be thanked and congratulated upon the generally excellent results that he obtained with the data and opportunities available to him. The new Missouri "Check-List" is a very helpful piece of work, and should be available to every serious bird student in Missouri and surrounding states. Widmann's basic 1907 list, with the transitional new "Check-List" of Dr. Bennett's, form a very good basis for the encouragement of such additional accurate field and museum studies on Missouri birds as will pave the way for that more critical, complete, and semi-final exposition of the avifauna of that state which Dr. Bennett at some later time or some other worker will present to interior ornithology in the future.—M. H. S.

A REVISED LIST OF THE BIRDS OF IOWA. By Philip A. DuMont. University of Iowa Studies in Natural History, Vol XV, No. 5, pp. 1-171. Iowa City, 1933. Price, \$1.00. (Order from the Department of Publications, Iowa City).

This paper is a revised list of the birds of the state. It deals with the status of the birds in as condensed a manner as feasible. Thus, the author has omitted all "popular" matter and illustrations (though a rather inadequate map of Iowa is included). The status of the Chimney Swift is presented in one concise sentence, "A common summer resident, breeds in all parts of the state." But the author enters into detail in order to straighten out more perplexing cases, and in the case of the chickadees he uses two pages. In general the amount of discussion varies inversely as to the rarity or confusion of the forms.

In comparison with the previous list by R. M. Anderson, published in 1907, the DuMont list records 364 forms while Anderson listed 354. The present author deletes a number of Anderson's birds and includes thirty-five not previously included.

The list is a splendid and, in most cases, a careful summation of the birds of Iowa, and the author is to be congratulated upon his results. Mr. DuMont is a capable ornithologist and has critically examined the available material. He has thus revised many of the subspecific standings formerly confused. Our pleasure is marred somewhat when we discover a few subspecific identifications without specimens. The subspecies of ravens and paroquets have been determined through neither has occurred in Iowa in years nor have any specimens been preserved! The author has followed the A. O. U. Check-List, but this is not a proper scientific method. We firmly believe that *no subspecific determination should ever be made except upon critical examination of adequate specimens.*

The author says, "It is a generally accepted rule among ornithologists that no species of bird be admitted to a state list unless a specimen has been captured within the state and preserved or examined by a competent bird student." Using this as a criterion, we find that the following appear to be included in the list without the collecting *and preservation* of a specimen. We believe that they should be considered as hypothetical until such time as evidence fulfilling the author's rule be obtained:

- Western Grebe, *Aechmophorus occidentalis*.
- Water Turkey, *Anhinga anhinga*.
- Snowy Egret, *Egretta thula thula*.
- Wood Ibis, *Mycteria americana*.

Cinnamon Teal, *Querquedula cyanoptera*.
 American Scoter, *Oidemia americana*.
 Harris's Hawk, *Parabuteo unicinctus harrisi*.
 Black Rail, *Creciscus jamaicensis stoddardi*.
 Hudsonian Curlew, *Phaeopus hudsonicus*.
 Black-necked Stilt, *Himantopus mexicanus*.
 Louisiana Paroquet, *Conuropsis carolinensis ludovicianus*.
 Great Gray Owl, *Scotiaptex nebulosa nebulosa*.
 Nuttall's Poor-will, *Phalaenoptilus nuttalli nuttalli*.
 Lewis's Woodpecker, *Asyndesmus lewis*.
 Arctic Three-toed Woodpecker, *Picoides arcticus*.
 Say's Phoebe, *Sayornis saya saya*.
 American Raven, *Corvus corax sinuatus*.
 Common Rock Wren, *Salpinctus obsoletus obsoletus*.
 Eastern Mockingbird, *Mimus polyglottos polyglottos*.
 Northern Prairie Warbler, *Dendroica discolor discolor*.
 Western Blue Grosbeak, *Guiraca caerulea interfusa*.
 Lazuli Bunting, *Passerina amoena*.
 Gray-crowned Rosy Finch, *Leucosticte tephrocotis tephrocotis*.
 McCown's Longspur, *Rhynchophanes mccowni*.

It would also seem that the Red-throated Loon, *Gavia stellata*; Man-o'-war Bird, *Fregata magnificens*; and the Chestnut-collared Longspur, *Calcarius ornatus*, should be checked up before being definitely given a place in the list.

We hope that pointing out these doubtful birds will stimulate the Iowa bird students to obtain the proper evidence before another season passes. As the state list now stands, 337 species may be definitely assigned to Iowa.—L. W. W.

EDITOR'S NOTE.—The reader will hardly fail to note the conflicting points of view concerning sight records in the two preceding reviews. There is probably no way of escaping this clash of opinion, not only among reviewers, but among ornithologists in general. On the one hand there is demanded as a basis for belief the capture and preservation (for verification) of a specimen. Verification is one of the corner-stones of science. Too often we are satisfied with merely the report of a captured specimen, and forget to verify the identification. Mr. DuMont's painstaking examination of all known existing specimens of the rarer Iowa species has revealed a number of erroneous identifications with the bird in hand. The truth is not established, therefore, by the mere possession of the specimen. One person's identification of a species in hand may not be as trustworthy as another's identification at a distance of fifty yards. As we have previously claimed, the personal equation is a very strong factor in the problem of credibility. Yet, in all cases science demands the right of verification; and without this a specimen in hand is no better than a sight record. Examples of the failure of the specimen criterion for admissibility will be found in the Appendix of DuMont's list.

On the other hand, let us consider the case of Lewis's Woodpecker in north-western Iowa during the winter of 1928-29. This single bird was under observation for hours at a time by various observers at different times from November to March. Since there are no complicating subspecies in this case the problem of identification is a simple one. To those who experienced the demonstration

there is no possibility of doubt that this species occurred within the geographical boundaries of Iowa. The only problem is to convince the astute scientist, who is by nature and profession a skeptic. And this will depend upon the credibility of our testimony. Yet, whether the doubter is convinced and believes does not alter the fact. The requirement of a specimen may be safe as a general and arbitrary criterion, but it may fail and fall short of the truth in a great many cases. Much the same discussion might be offered relative to the mockingbird as an inhabitant of Iowa, for it has been repeatedly observed by competent students. The question of subspecies may be raised in this case, however, though *probability* would favor the decision made by the author.

If we are to attempt to generalize on this discussion, it will be to the effect that species can be identified in the field, while subspecies can not be; that sight records on species are admissible in proportion to the credibility of the witness (just as are laboratory determinations, except that verification is possible in the latter), while sight records of subspecies should be wholly inadmissible.—T. C. S.

AUTOBIOGRAPHY OF A BIRD-LOVER. By Frank M. Chapman. D. Appleton-Century Co., New York. 1933. Pp. 1-420, 87 figures. Price, \$3.75.

The reading of this book has been a pleasure. The reading of biography is usually interesting. Biography of ornithologists is especially interesting to us. The present biography is of one of America's foremost contemporary ornithologists, one who is acknowledged as a great leader in popularizing bird study in this country. Dr. Chapman must have been a "born" ornithologist; nevertheless he had a narrow escape from the drudgery of another profession. The book treats quite fully of Chapman's work in tropical America, where he was concerned chiefly with faunal phylogeny. While he has contributed his share to systematic ornithology, yet we gather the impression from his autobiography that he has derived the greatest pleasure from his work as a field ornithologist—distributional studies, etc. On page 209 the following interesting statement is made: ". . . the work of the collector in securing specimens must be supplemented by that of the systematist in identifying them. I have found that in 'working up' a collection representing a fauna with which I am fairly familiar, I average about a species a day." No snap judgment here, evidently! A bibliography of Dr. Chapman's writings and an index conclude the book.—T. C. S.

TRAVELING WITH THE BIRDS. A BOOK ON BIRD MIGRATION. By Rudyerd Boulton. Illustrations by Walter Alois Weber. M. A. Donohue and Company, Chicago, Ill. 1933. Pp. 1-64. Colored pls. I-XII. Price, \$1.50.

Mr. Boulton here presents an excellent discussion of bird migration for younger readers. Any young person who is interested in birds will find pleasure and instruction in the text. And, indeed, the adult reader, if not already acquainted with the facts, will be able to read with interest. Not less important are the twelve colored plates, depicting twenty-four species of typical migrants, by Mr. Weber. A book of this kind will make a splendid gift, and will be valued much beyond the very reasonable cost. We are repeatedly astonished at the volume of choice literature now available to students of nature, and especially relating to birds. This book may be expected to make its contribution to ornithology by informing and inspiring the youth.—T. C. S.

BIRDS OF THE ATLANTA, GEORGIA, AREA. By Earle R. Greene. Bull. No. 2, Georgia Soc. Naturalists. Pp. 1-46. 1933. Published by the Society. Price, \$1.00 (P. W. Fattig, Curator-Librarian, Emory University, Ga.).

This list comprises 208 kinds of birds which have been found by the author within the area treated. No comprehensive report has been issued on the birds of this state; consequently such local lists as this one will be useful, not only to present local students but also, doubtless, at some time when a state-wide report is contemplated. In addition to the author's list an appendix includes annotations on twenty-four other species which have been observed by other students. The proof-reading seems to have been carefully done, and the mechanical work is good. There is no index, but it is not especially needed in this case. A bibliography would have been of service, however.—T. C. S.

HISTORY OF THE PRESENT STATUS OF THE BREEDING COLONIES OF THE WHITE PELICAN IN THE UNITED STATES. By Ben H. Thompson. Occasional Paper No. 1, Wild Life Division, U. S. Nat. Park Service (213 Hilgard Hall, Berkeley, Calif.), pp. 1-85.

This excellent summary gives an account of the present known distribution of the White Pelican during the breeding season, based upon a very complete review of recent literature. The question of the relationship between the White Pelican and fish is examined. Several reasons are given why the pelican should not be outlawed because of his fish-eating habits. While a colony of pelicans consumes great quantities of fish, yet it is a fact of observation that under wild conditions the great bulk of such food consists of non-game fish. In only one or two instances are pelican colonies located near enough to artificial fish rearing ponds to be a menace. One of these is probably the famous Yellowstone Park colony, near which man has chosen to locate a fish hatchery. Furthermore, it seems to be evident that pelicans consume only the excess fish population—that nature has adjusted the problem by over-production of fish; that were the pelican check removed the surplus of fish might be self-destructive. The census shows that the White Pelican now breeds in seven important colonies in North America (about twenty-six large and small colonies are listed), with an estimated population of about 30,000 individuals. An excellent bibliography is included.—T.C.S.

THE MICROSCOPIC ANATOMY OF THE DIGESTIVE TRACT OF GALLUS DOMESTICUS. By M. Lois Calhoun. Ia. State Coll. Journ. Sci., VII, No. 3, 1933, pp. 261-382, pls. I-XXXIX.

This paper gives a very complete review of the literature of the subject, the great bulk of which seems to be in the German language. The very extensive bibliography together with the review of literature will be a welcome aid to American anatomists. The author examined microscopically all portions of the digestive tract of the domestic chick at various ages after hatching. Descriptions and micro-photographs show the results.—T. C. S.

THE AUDUBON YEAR BOOK (Indiana) 1933. Published by the Indiana Audubon Society. Pp. 1-108. Numerous figures. Price, \$1.00 (Address Miss Margaret R. Knox, 4030 Park Ave., Indianapolis).

Dr. Earl Brooks gives a history of the numerous names for the Robin, but the article contains a great many typographical errors. Mr. Perkins presents a report on returns of Bronzed Grackles banded in Indiana, showing migratory

movements. Another article by Dr. Test gives results of banding Mourning Doves in Indiana. Still another article on banded Song Sparrows is by S. W. Witmer. W. L. McAtee has a list of Indiana trees and shrubs which bear food for birds. And there are other interesting papers.—T. C. S.

CAVE LIFE OF KENTUCKY, MAINLY IN THE MAMMOTH CAVE REGION. By Vernon Bailey. Published by the University Press, Notre Dame, Ind. 1933. Pp. 1-256. Price, \$1.25.

This book deals interestingly with the animal life of the Mammoth Cave and vicinity. The mammals, fishes, reptiles, and amphibians are described by Mr. Bailey. The chapter on birds is by Mrs. Florence Merriam Bailey. The invertebrates are treated by Leonard Giovannoli. Since there are no birds which actually inhabit the caves, the birds treated are those which live in the region surrounding the caves. The book is intended to be a help to the tourist who visits this region. Mrs. Bailey has drawn on the current ornithological literature to secure interesting new facts concerning the species of which she writes. Approximately half of the book is devoted to the bird life. Ample descriptions are given of the other vertebrates, but they are less numerous than the birds. The invertebrates are considered, but much less completely. An index and a very full bibliography are furnished. We have noted elsewhere in the reviews reference to a publication entitled "Caverns of Virginia" (\$1.00) issued by the Virginia Geological Survey. Another newly described cave is known as Longhorn Cave, located twelve miles south of the town of Burnet, Texas. The region including this cavern has recently been set aside as a state park. The cavern is described geologically and mapped in the April, 1933, number of *Field and Laboratory* (Vol. I, No. 2, Southern Methodist University, Dallas, Texas).—T. C. S.

SUGGESTIONS FOR PHEASANT MANAGEMENT IN SOUTHERN MICHIGAN. By Howard M. Wight. Published by the Department of Conservation, Lansing, Mich. 1933. Pp. 1-25.

Much information about the habits of this bird is presented herein, as well as suggestion on management.—T. C. S.

BULLETIN OF THE ESSEX COUNTY ORNITHOLOGICAL CLUB OF MASSACHUSETTS. Salem, 1932. Pp. 1-54. Price, 50 cents. (S. Gilbert Emilio, Treasurer, 7 Winter St., Salem, Mass.).

Mr. Griscom presents an interesting comparison of the Western and Yellow-bellied Flycatchers, stimulated by a late fall record of a specimen taken in Massachusetts. Dr. C. W. Townsend records the birds seen on four trans-Atlantic trips. A composite local list for 1933 is reported by S. G. Emilio. There are also other short papers.—T. C. S.

MORE GAME BIRDS BY CONTROLLING THEIR NATURAL ENEMIES. Published by More Game Birds in America, A Foundation, 500 Fifth Ave., New York, N. Y. Pp. 1-62. 1933.

We find here a popular manual on "Vermin". Under this heading are classified seven owls, nine hawks, and five other birds; also about thirteen mammals, various snakes and turtles. Control in various degrees is recommended for these predators, and methods of control are explained. Much information is given, and we have looked carefully for misinformation without positive success. For instance, it is said that the Sparrow Hawk "will take small birds". This is true.

according to most authorities, but whether this hawk will take them in sufficient numbers to justify control by the "gun and pole trap" is another matter. We intend to make no quarrel with these people who wish to control "vermin", for we realize that our viewpoint may be just as prejudiced as we think theirs is. But we think they are actuated by selfish motives in desiring to preserve only game for hunting. However, an argument is useless.—T. C. S.

A LIST OF VERMONT BIRDS. By H. C. Fortner, Wendell P. Smith, and E. J. Dole. Bull. No. 41, State Dept. Agric. (Probably obtainable at the State Capital).

The list includes a statement on the status of each species. A second, shortened, list gives descriptions.—T. C. S.

A DECADE OF BIRD BANDING IN AMERICA. A REVIEW. By Frederick C. Lincoln. Smithsonian Report for 1932, pp. 327-261. Washington, 1933.

As suggested by the title this paper is a review of the scientific results of bird banding during the past ten years. Three maps and seven halftones illustrate phases of the work.—T. C. S.

We have received copies of the *Florida Naturalist* for January and October, 1933. The earlier number contains an article by Mary Frances Baker on "June on the Florida Keys", and one by Lucien Harris, Jr., "A Trip to the Brevard Reserve". Articles in the October number report on the newly organized state conservation department, and on a collecting trip into Florida by biology students from Hanover College.

The National Association of Audubon Societies has issued a leaflet entitled "The Problem of the Vagrant Cat", by T. Gilbert Pearson. (Circular No. 18, pp. 1-4, Nat. Ass'n Aud. Soc., 1775 Broadway, N. Y.). It reprints the cat licensing ordinance proposed by the International Cat Society, and also offers a control method free from the license idea. Our readers are familiar with the license plan, which is practically the same as for dogs. The new plan recommended, and for which a model ordinance is presented, provides that no cat be allowed to run at large unless it bears an identifying tag, tags to be furnished at cost (about five cents) by the town clerk. Cats found at large without identifying tags may be impounded for forty-eight hours, and if not claimed are to be humanely killed. Many people, the vast majority, little realize what a nuisance the domestic cat has become in this country. The new plan seems to be workable, and is free from certain objections to the license plan.

Crevecoeur's Notes on Birds in Pottawatomie County, Kansas, by Arthur L. Goodrich, in *Trans. Kans. Acad. Sci.*, XXXV, 1932, pp. 85-92, in one table shows the earliest and latest arrival dates for many common birds. A second table shows the time in minutes before and after sunrise when birds begin to sing, and figures are given for nearly fifty species.

The Proceedings of the South Dakota Academy of Science (Vol. XIII, 1929-1930) contains a brief sketch by W. H. Over of Gabriel Smith Agersborg, together with a re-publication of Agersborg's list of "The Birds of Southeastern Dakota", which was originally published in the *Auk*, Vol. II, 1885.

The Journal of the Tennessee Academy of Science (Vol. VII, No. 4, October, 1932) contains a list of "The Water Birds of Radnor Lake" (which is close to Nashville) by Harry C. Monk.

News from the Bird Banders for August (VIII. No. 3, August, 1933) contains a leading article on "Cooperative Ornithology" which is a summarized review of the major coöperative undertakings in the development of ornithological knowledge. Like a previous one on "Territory" this one is a valuable review of recent work and literature.

Inland Bird Banding News for March (V, No. 1) contains a report by Dr. Louis A. and Frederick H. Test on recent banding work in Indiana, giving the special problems worked on by the banders in that state. Miss Arch Cochran discusses (V, No. 2, June) the construction and use of nets in trapping birds. Mr. M. J. Magee gives an interesting account of the White-throated Sparrow. In the September number (V, No. 3) Mr. W. I. Lyon makes a full report of his annual banding trip to the islands in Lake Michigan, showing a total of 4,644 banded birds and something over 3,000 miles travelled by automobile and boat. Full directions are given for building the circular water trap.

The following mimeographed publications have been received in recent months:

The *Raven*, Bulletin of the Virginia Society of Ornithology, is edited and published at Lynchburg, Virginia, by Dr. J. J. Murray.

The *Saint Louis Bird Club Bulletin* is published monthly (except in July, August, September) at \$1.00 per year. Address Mrs. Elizabeth Allen Satterthwait, 118 Waverly Place, Webster Groves, Mo.

The *Chickadee* is published by the Forbush Bird Club, 12 State St., Worcester, Mass. The September number gives a list of wild fruits and artificial foods and the birds known to feed on each kind.

The *Snowy Egret*, which we have not seen for some time, comes now as the Summer Number (Vol. VIII, No. 1). It is published by H. A. Olsen and R. E. Olsen, 172 Manchester St., Battle Creek, Michigan, and is issued irregularly.

The *Flicker* is published quarterly by the Minnesota Bird Club, at \$1.00 per year, and may be ordered through the Secretary-Treasurer, Marius Morse, 4031 Fortieth Ave., Robbinsdale, Minn. The number for October, 1933, contains a beautiful tribute to a deceased member, Donald Fischer. A list of breeding birds in Minnesota during the season of 1933 includes 133 species, with the nests observed for 120 species. The mimeograph work is worthy of note—the type is large and the printing is clear.

The *Cornell Rural School Leaflet* is a quarterly magazine dealing with the facts of natural history, and perhaps occasionally with general science. It presents the material in a form intended to be especially helpful to teachers in the schools below the college. Heretofore this publication has not been available to teachers in the city schools of New York, nor to any outside of that state. Now, anyone in the United States may subscribe beginning with Volume XXVII (September, 1933) at fifty cents for the four annual numbers. The number of pages in each number is variable, but the smallest number in the last year or two has been 32, while the maximum number has been 124. The material in this series will be very helpful to nature study teachers, and, doubtless, many will be glad to learn that it is to be made available to everyone.