

Recent Literature.

MEMORIAL VOLUME OF GARROD'S SCIENTIFIC PAPERS.* Garrod's work is apparently not so well known in this country as it must eventually become, forming as it does a permanent way-mark in the progress of the science, and contributing indispensable material for the solving of the most vexed problem in ornithology — we mean a sound, rational classification of birds, based on morphological data according to the theory of genetic relationship, and as such one which any considerable number of ornithologists can agree to adopt and stand by. As is well understood, those of us who have no classification of our own to advance, fall back upon some convention as make-shift, practically waiving the points at issue. As far as taxonomy is concerned, the present attitude of ornithology is thoroughly iconoclastic; but, while we agree that much of what has been set up must be upset, few claim to know what ought to replace the broken images, and fewer still agree on that point. There is nevertheless a large amount of material at hand, the soundness and utility of which no one questions; and of late years Garrod has been both indefatigable and successful in setting bricks and mortar. Of the anatomical papers in the present volume, some 73 in number, more than half relate to birds, describing conditions of the osseous, muscular, respiratory, vascular, digestive and nervous systems which appear to promise most of value in taxonomy, and discussing in candid and scientific spirit, from a vantage-ground of long experience, the bearing of the anatomical points upon classification. Of the accuracy and high rate of reliability of these papers there can be no question; they are sufficiently lucid to shine with their own light, and there is a certain "finish" about them which is truly admirable. This is seen when the author is drawing the comparisons which his extensive knowledge enables him to adduce, and summing his conclusions. These are always clean-cut and luminous, so that we know exactly where to find Garrod, whether we like him and agree with him or not. It is scarcely possible that he has been exempt from the all but inevitable tendency of the mind's eye to magnify the particular subjects there focussed for the time, and so get them more or less out of perspective of the whole range of vision; but he seems to have known and guarded against this most scrupulously, unless, perhaps the "ambiens" muscle proved too much for him. On the whole, we do not think that even the warm praise of the editor, his personal friend and admirer, is too much to say, and we quote with pleasure:

* In Memoriam. The Collected Scientific Papers of the late Alfred Henry Garrod, M. D., F. R. S., etc. Edited, with a biographical memoir of the author, by W. A. Forbes, B. A., etc. London: R. H. Porter: 6 Tenterden Street. 1881. 1 vol. 8vo. pp. xxvi, 538, pll. 33, frontisp. (portrait), and many cuts in text.

“Of his zoological papers indeed, the ornithological ones must probably, on account of their more novel character, and as affording entirely new data for the solution of the various problems connected with the classification of Birds, which he revolutionized, be considered of the greater importance. No future worker in that group can neglect the facts or ideas concerning it that we owe to Garrod, and they alone suffice to put his name in the very first rank of those who have ever studied these creatures, and to stamp his work on Birds as truly ‘Epochmachende.’”

Garrod's numerous papers, covering the period of 1871-79, are scattered through various periodicals; and it is a subject for congratulation that they have been collected in one convenient volume, under careful editorship. At a meeting of the Zoölogical Club to consider the wish of friends to possess some permanent memorial of Garrod, it was decided, with wisdom and good taste which none can impugn, “that the most appropriate and desirable one would be the publication, in a collected form, of all the papers published by Garrod in various scientific journals and periodicals, with a portrait and memoir of the author.” This decision has been ably carried into effect by Mr. Forbes, whose own contributions to the same subject already prove him to be one on whom the mantle may fittingly descend. We wish there were more work of this kind, even if not of the same highest quality, done by our own countrymen; but at present no one of them seems especially interested excepting Dr. Shufeldt, whose studies thus far possess much value and give still more promise. Noticing only two or three American names on the list of subscribers, we venture to hint that the work may be procured by others in the usual way.

We cannot of course go into any examination of these papers in an editorial notice like the present, or even adduce the leading results of the author. It must suffice to say that among them is an entirely new classification of birds, primarily based upon the ambiens. Among the more important papers we may mention those on the carotid arteries; on certain muscles of the leg (Garrod's *pièce de résistance*); on the anatomy of Pigeons, of Parrots, and of Passerine Birds; and on the trachea in *Galina*. All these are of general import, bearing on broad questions of taxonomy, as distinguished from minor papers, however valuable, in which special points are examined. The editor has done well to preserve the original pagination of the text and numeration of the illustrations for facility of citation, and the plates are said to be faithfully reproduced.—E.C.

SHUFELDT'S OSTEOLOGY OF THE NORTH AMERICAN TETRAONIDÆ.*

This osteological memoir is, so far as we know, the most complete of any on American birds of one group. In general the descriptions, with the aid of the numerous plates, can be easily understood. In treating of the skull Dr. Shufeldt adopts the old theory that it is nothing but the modified end of the back bone, and gives a diagrammatic figure of the skull of *Centrocercus* much like that given by Owen of the Ostrich. This view will

* Osteology of the North American Tetraonidæ. By Dr. R. W. Shufeldt, U. S. A. Bull. U. S. Geol. and Geog. Surv. Territories, Vol. VI, No. 2, pp. 309-350, pl. V-XIII.

of course be rejected by all who do not consider the membrane and cartilage bones of the skull to be from the same source. The use of "hyoid arch" when speaking of all the tongue bones is, we think, liable to lead many young students astray; we would suggest "hyobranchial arches," or "hyoid arches."

A point of considerable interest is a small ossicle which occurs at the inner side of the II metacarpal — III metacarpal of Dr. Shufeldt's homologies of the hand — near its base. This bone is compared to the pisiform bone of the Mammalia by the author. Besides this, two proximal and two distal carpal bones are found, just as in the chick. Thus the chick and the young *Centrocercus* have the same structure of the hand except the presence of a IV metacarpus in the first and a "pisiform" in the second. We notice that the "index" is described as being composed of only one phalanx; this we believe to be an oversight of the author; at all events most of the European Gallinæ have two phalanges, the last one bearing a claw. On reference to fig. 57 it will be seen that the distal end of the first phalanx in *Centrocercus* is very large and looks as if there should be another joint. As regards the tarsus, Dr. Shufeldt has been able to demonstrate the existence of a fibulare, tibiale, and intermedium, which ultimately become ankylosed with the tibia. Dr. Shufeldt also states that as a whole the different parts of this skeleton in *Centrocercus* are slow to ankylose, thus rendering the bird an extremely favorable one for the study of the separate elements of the skeleton.

The description of the osteology of *Lanius ludovicianus excubitorides*,* by the same author, is short, concise, and may be summed up in the statement that the skeleton of this bird is strictly Passerine. — J. AMORY JEFFRIES.

ILLUSTRATIONS OF OHIO NESTS AND EGGS.†—We are glad to record the progress of this great work, of which we have had former occasions to speak so highly. The ninth fascicle is the last which has reached us, carrying the number of plates to twenty-seven, each with its sheet or so of letter-press. The high standard of the work is on the whole maintained, although, to our eye at least, the plates lack somewhat of the peculiar attractiveness that the earlier ones had for us. It may, however, be only the charm of novelty that we miss; and there is certainly no falling off in the conscientious endeavor to unite fidelity to nature with artistic excellence in depicting these beautiful objects. Should the project be carried to completion, the work will certainly become a standard of reference. It deserves to be better known and more widely circulated than it appears thus far to have become, and we trust that time will serve to make its merit fully appreciated.

* Osteology of *Lanius ludovicianus excubitorides*. By Dr. R. W. Shufeldt, U. S. A. Bull. U. S. Geol. and Geog. Surv. Territories, Vol. VI, No. 2, pp. 351-359, pl. XIV.

† Illustrations of the Nests and Eggs of the Birds of Ohio. Part VIII, April, 1881. Part IX, July, 1881. Pl. xxii-xxvii. fol.

The following are the plates of the two parts before us. (In No. 8) Pl. 22, *Cardinalis virginianus* (the eggs shown in their remarkable extremes of size and coloring); Pl. 23, fig. 1, *Vireo gilvus* and fig. 2, *V. olivaceus*; Pl. 24, *Zenaidura carolinensis*; (in No. 9) Pl. 25, fig. 1, *Trochilus colubris*, fig. 2, *Polioptila cærulea* (and one is interested to see that these nests are of identical orders of architecture and ornamentation, however different in materials); Pl. 26, *Spizella socialis*; Pl. 27, *Butorides virescens*.

The text continues as heretofore to consider the subjects under the formal heads of — Locality — Position — Materials — Eggs — Differential Points — Remarks; the latter head usually covering the most matter. We are glad to see that the authors now fill, as a rule, their sheets of letterpress — there is certainly enough to be said on the subject for that! The pagination of the letter press reaches p. 104 with the end of No. 9.

It is never untimely to suggest that when works published in this manner come to be bound, especially if the parts are made up in any other order than sequence of publication, the original cover-titles should be preserved; there being no intrinsic evidence, either in the text or on the plates, of dates of publication or of contents of Parts; and it may not be too early to suggest to the authors that explicit indication of these points should be given with the permanent title, contents, etc., of the finished work.—E. C.

SHUFELDT'S "THE CLAW ON THE INDEX DIGIT OF THE CATHARTIDÆ."*—We regret being obliged to make unfavorable criticisms, but this paper contains such important errors, both in regard to the structure of birds and the literature of the subject, that some rectification seems necessary. Dr. Shufeldt describes the claw at the end of the first finger of *Catharista atrata* as a new discovery, considering that claws outside the Ostrich groups have not hitherto been described, and also states that it is a point of distinction between the Old and New World Vultures. Unfortunately Nitzsch† long ago described the claw on the first finger of birds in the following words: "Die Analogie, welche die Flügel der Vögel mit den Vorderfüßen der Säugthiere und Reptilien haben, zeigt sich auch in den Spuren von Nagel- oder Klauenbildung, welche an den Finger jener Glieder oftmals gefunden werden. Dieser Bildung macht es zugleich wahrscheinlich, dass die Urform der Flügel in der Fussform, oder doch in einer, dieser sehr ähnlichen, bestand; denn die Nägel gehören den Füßen an, sie haben im Kreise der Flügelfunkzion keine Bedeutung, und sind da wohl nur durch zweckloses Nachahmen und Ueberbleiben der Fussform." Farther on he describes the skeleton of the hand as follows: "Die Hand der Vögel hat drei Finger, 1) den Daumen, welcher (ohne das Nagelglied) aus einem Stücke, 2) den grossen Finger, der (ohne das Nagelglied) aus

* American Naturalist, Nov., 1881, pp. 906-908.

† Osteografische Beiträge zur Naturgeschichte der Vögel. Ueber das Nagelglieder der Flügelfinger, besonders der Daumen. Leipzig, 1811, S. 89.

zwei Stücken oder Gliedern, und 3) den kleinen Finger, der stets nur aus einem Stücke besteht." Since Nitzsch's memoir was written his observations have been extended, and mentioned by many anatomists, as Meckel, in his Anatomy, by Blainville, by Selenka in Bronn's "Thiereichs," by myself in this Bulletin for 1881, by Professor Morse in the "Anniversary Memoirs" of the Boston Society of Natural History. Accordingly the claw on the first finger is anything but an unknown object. It is constantly demonstrating its existence to practical ornithologists by pricking their fingers while measuring bird's wings. That the claw is absent in the Old World Vultures is also an error if we may trust the high authority of Nitzsch, who wrote as follows: "Unter den Raubvögeln einiges Geier, Adler, Falken; aber nicht die Eulen—Am *Vultur percnopterus* ist sie ziemlich stark, ungefähr einen halb Zoll long zugespitzt und bräunlich vom Horne." In fact, a claw on the first finger is of very common occurrence, and is found, according to the authorities given above, in the *Accipitres*, *Herodiones*, *Palamedæ*, *Anseres*, *Gallinæ*, *Fulicariæ*, *Alectorides*, *Limicolæ*, *Gaviæ*, *Pygopodes*, *Crypturi*, and *Struthiones*.

Here it may not be out of place to add that a claw has also been found on the end of the second finger, by myself and Professor Morse, in certain of the Water Birds, and perhaps in some embryo Hawks: and that as a rule the claws are much more conspicuous in young than in adult birds.

—J. AMORY JEFFRIES.

PAPERS ON MINNESOTA BIRDS.*—Although the report containing these papers was not generally circulated in 1881, a copy reached us in December of that year. Dr. Hatch contributes a list of 281 species briefly annotated—usually with only a line or two to each species respecting the manner and character of its appearance in the State. In explanation of its cursory style the author states that, as we regret to learn, the original copy was destroyed by fire, "and it has been impossible to give its re-writing the measure of carefulness which the first manuscript received." The most interesting entry is that of *Querquedula cyanoptera*, which thus appears far from its recognized range.

Mr. Roberts' article treats much more fully of 52 species known to occur in the State in winter, divided into the categories of "permanent residents" (23), "winter visitants" (14), "half hardy" species (9), and "accidental" ones (6), the information given conveying a good idea of the bird-fauna at that season of the year. Doubtless owing to circumstances for which neither author is responsible, each paper bristles with typographical errors, few of which are corrected in the accompanying erratum slip. We understand that a full list will accompany the volumes as finally published.—E.C.

* A List of the Birds of Minnesota. By Dr. P. L. Hatch. Ninth Ann. Rep. Geol. and Nat. Hist Surv. Minn., for 1880, 1881, pp. 361-372.
The Water Birds of Minnesota. By Thomas S. Roberts. *Op. cit.*, pp. 373-383.

FREKE ON THE BIRDS OF AMELIA COUNTY, VIRGINIA.*—Our knowledge of the birds of Eastern Virginia is so largely inferential that Mr. Freke has done good service in publishing the results of six years' observations in Amelia County, at a point "about thirty miles south of Richmond." His list, which is freely annotated, includes 112 species. The Barn Swallow is catalogued as a spring and fall migrant; the Tree Sparrow (*Spizella montana*), as a rather uncommon winter visitor; the Field Sparrow, as resident but most common in winter; the Chipping Sparrow as arriving from the south late in March and as leaving during November; the Song Sparrow as wintering but not breeding; the Blue Grosbeak as not uncommon during the latter part of April and early in May, but, rather unaccountably, as not being found in summer; the Ruffed Grouse as plentiful in the mountains but not common in the low country, although a few regularly nest there in thick pine woods.

The author has evidently fallen into some confusion regarding the spotted-breasted Thrushes of the genus *Turdus*. Thus *T. "pallasi"* is characterized as a "resident species, apparently not migrating even in the most partial manner." In view of our very definite knowledge of the Hermit's distribution, such a statement by itself would be open to the gravest suspicion, but when we add that Mr. Freke does not mention the Wilson's, Olive-backed, or Wood Thrushes as occurring at *any season*, it is quite plain that the Hermit (*verus*) did duty as the winter bird, the Olive-backed or Wilson's Thrush filled the gap during the migrations, and the Wood Thrush was the species that "builds its clay-lined nest in the fork of some cedar or dogwood bush, at the height of eight or ten feet from the ground, and there lays its blue eggs." The statement that *Dendrocæa coronata* "is one of the commonest warblers in the district, and spends [a] great part of the year there," is not so easily explained; but despite the still more explicit assurance that "they come about the end of April, or the beginning of May, and remain until very late in the autumn," we cannot help thinking that some mistake was made in the identification of the individuals seen in summer.

Save in the last named instances, however, there is no reason to doubt that the author's commendable practise of "verifying my observations, as far as possible, by securing specimens and preserving skins," was conscientiously carried out, and his paper will be read with interest, not only as an exponent of the ornithology of a previously unworked section, but also as embodying a foreigner's pleasantly told impressions of many of our familiar birds.—W. B.

LANGDON'S FIELD NOTES ON LOUISIANA BIRDS.†—These notes comprise "a record of ornithological observations and collections made by

* On birds observed in Amelia County, Virginia. By Percy E. Freke. Scientific Proceedings of the Royal Dublin Society, Vol. III, Part III. [Read Feb. 21st, 1881.]

† Field Notes on Louisiana Birds. By Dr. F. W. Langdon. Journ. Cincinnati Soc. Nat. Hist., July, 1881, pp. 145-155.

the writer during the month ending April 17th, 1881, at 'Cinclair' plantation, situated in the parish of West Baton Rouge, Louisiana, on the right bank of the Mississippi, one hundred and twenty-seven miles by river above New Orleans."

The locality is described as "flat and uninteresting . . . The cultivated grounds are mainly comprised in a strip ranging from one to three miles in width, along the rivers and principal bayous, the remainder of the state being chiefly occupied by extensive forests and swamp lands."

The author considers the list "of quite as much interest for what it does *not* include, as for what it *does*," and comments on the apparent absence of the Catbird, Long-billed Marsh Wren, Black-and-white Creeper, Yellow-rumped, White-browed, Black-throated Green, Yellow Red-poll, and Kentucky Warblers, Large-billed Water Thrush, Redstart, Song Sparrow, and Common Pewee; to which he might with equal propriety have added the Prothonotary and Blue-winged Yellow Warblers and the Acadian Flycatcher. But we cannot believe with him that the non-occurrence, on the present occasion, of most of these species has any special significance, either as affecting their general distribution in, or usual migration through, the region of which the paper treats. The country about "Cinclair" may have been unsuited to the habits of some of them, while the early date of Dr. Langdon's departure, taken in connection with the exceptional lateness of the season, will sufficiently explain his failure to detect a number of the migratory ones which have been found near the mouth of the Mississippi by Mr. Henshaw, and which are well known to extend over the Mississippi valley at large only a few hundred miles further to the northward.

Dr. Langdon's thoroughness and energy as a field collector are, however, so well known through the medium of his valuable papers on Ohio birds, that we may rest assured that his work at "Cinclair" was well done, and the paper will be welcomed as an acceptable contribution to our knowledge of a region which has been nearly a *terra incognita* to ornithologists since the days of Audubon.—W. B.

KRIDER'S FIELD NOTES.*—In an unpretending little pamphlet of some eighty odd pages Mr. Krider has "endeavored to describe and give the history of only those species of birds of the United States" which he has "collected and mounted," and whose nests have come under his personal observation. Had this plan been carried out with only ordinary forethought and intelligence it could scarcely have failed to result in a valuable contribution to our knowledge of North American birds, for Mr. Krider's long experience as a field collector must have afforded unusual opportunities for original investigation and observation. But a casual glance through

* Forty Years' Notes of a Field Ornithologist, by John Krider, Member of the Philadelphia Academy of Natural Sciences and author of Krider's Sporting Anecdotes, Philadelphia. Giving a description of all birds killed and prepared by him. Philadelphia, 1879, 8vo. pp. i-xi, 1-84.

the pages of his work is enough to show that these opportunities have been sadly neglected. Important records are given without dates and often with only a vague or inferential assignment of locality, while improbable statements and palpable errors are of frequent occurrence. In short, it is only too evident that Mr. Krider's "Notes" are the offspring of a fading memory rather than the carefully kept data of a systematic worker. Moreover, the author writes from a standpoint at least twenty-five years behind the times, and consequently ignores all the various developments affecting classification and the relationship of allied species and races. From all this chaff it is of course possible to separate some sound grain, but most of the really important records were published long ago by Turnbull, Cassin, and other writers. Of the literary execution of the present work we can say nothing favorable. It is to be regretted that the author could not have recognized his unfitness in this respect, and, as on a former occasion, have secured the services of a competent editor.—W. B.

LANGDON'S ZOOLOGICAL MISCELLANY.*—In the last issue of its well-known "Journal," the Cincinnati Society of Natural History publishes the first of a series of articles entitled "Zoölogical Miscellany," the aim and scope of which are thus tersely defined by the editor, Dr. F. W. Langdon:—

"Under the above caption it is proposed to bring together from time to time such facts as may be deemed worthy of record, respecting the structure, the life history, or the geographical distribution of the various species of animals constituting the Ohio Valley Fauna."

The part before us includes sections on mammalogy, ornithology, herpetology, ichthyology, conchology, and entomology. In general terms, it may be said that all of these are well sustained, but in the present connection we have to do only with the one relating to birds. This contains a number of interesting notes, a large proportion of which are from the editor's pen, although a few are signed by Mr. E. R. Quick, Mr. A. W. Butler, Dr. Howard E. Jones, and other more or less well-known names. Most of these notes relate chiefly to the local presence or distribution of certain birds within the Ohio Valley, but one or two possess a wider interest. Among the latter we notice an announcement by Dr. Langdon of the detection of the Oak-woods Sparrow (*Peucaea aestivalis illinoensis*, Ridgway) near Bardstown, Nelson County, Kentucky, "about one hundred miles southwest of Cincinnati." The specimen was taken April 28, 1877, by Mr. C. W. Beckham, who referred it to Dr. Langdon for identification.

In addition to his numerous notes, the editor contributes a short but useful paper on the "Introduction of European Birds." From this it appears that "during the years 1872, '73 and '74, about nine thousand dollars were expended in the purchase and importation of European birds, their average cost to import being about four dollars and fifty cents a pair.

* Zoölogical Miscellany, edited by Dr. F. W. Langdon. Jour. Cincinnati Soc. Nat. Hist., Vol. IV, Dec., 1881, pp. 336-346.

According to this estimate some four thousand individuals were introduced." This great outlay was borne by the "Acclimation Society of Cincinnati" and we believe that most of the birds were turned out in the neighborhood of that city; but, according to Dr. Langdon, the experiment has practically proved a failure.

If the present instalment of "Zoölogical Miscellany" may be taken as a fair criterion of future issues, its favorable reception by naturalists is a matter of no uncertainty, and under Dr. Langdon's able editing we look to see its popularity widely extended, even though its field be restricted to the Ohio Valley.—W. B.

HOFFMAN ON THE BIRDS OF NEVADA.*—In the present paper Dr. Hoffman has done good service to ornithology by tabulating the two hundred and fifty species and varieties of birds which he considers are entitled to a place in the avi-fauna of Nevada. The list is based partly upon the writer's personal experience in the field during the season of 1871, but mainly upon the previously published reports of Mr. Ridgway, Mr. Henshaw and Dr. Yarrow, and Dr. J. G. Cooper. It hence partakes largely of the nature of a compilation, although the author's original notes are by no means few or uninteresting.

The paper begins with a pertinent chapter entitled "Remarks on the distribution of vegetation in Nevada as affecting that of the avi-fauna" and closes with a bibliographical list of the chief publications relating to the region considered, and an excellent map of the state.

The list proper is freely annotated and the numerous and often extended quotations are always apt and interesting. The work, generally, has been so well done that we find few points open to adverse criticism. There is however an evident tendency on the author's part to swell the number of species and varieties by the enrollment of many which have been taken or observed near the borders of the state but not as yet actually within its limits. We are aware that Dr. Hoffman has some high authority for adopting this course but we are none the less inclined to deprecate it, believing that it is time enough to catalogue a species when it has actually been found within the limits treated. In the present case, however, it must be admitted that there are good grounds for supposing that most of these extra-limitals will eventually turn up in Nevada.

Dr. Hoffman's paper ranks easily among the higher class of publications to which it belongs and should find a place in the hands of every working ornithologist.—W. B.

* Annotated List of the Birds of Nevada. By W. J. Hoffman, M. D. Bull. U. S. Geol. and Geogr. Survey of the Territories, Vol. VI, No. 2, Sept. 19, 1881, pp. 203-256, and map.