

than usually numerous in Cambridge, Belmont, and other inland towns. This fact may have no real significance, but if we assume that *Æ. holboelli* is chiefly a littoral form, there is less difficulty in understanding why it has so generally escaped notice, for, until very recently, our sea-coast has been rarely visited by collectors during the winter months. Still the bird does occur far inland, for Dr. Merriam writes me that it visits Lewis County, New York, and Mr. Maynard has some typical examples from Minnesota. Perhaps, as with the Lapland Longspur, there is a case of partially interrupted distribution to be made out; at all events it must now be formally entered in the books as an irregular but sometimes abundant winter visitor to New England, as far south at least as Massachusetts. We fear such notoriety will scarcely be to the little stranger's advantage in these days of active collecting.

Recent Literature.

THE BRITISH MUSEUM CATALOGUE OF BIRDS.—Since our last notice of this work (see this Bulletin, Vol. III, April, 1878, pp. 77-79) three additional volumes* have appeared, namely, Volumes IV, V, and VI. Volume IV, like the previous volumes, is by Mr. Sharpe, as is also volume VI, while volume V is the work of Mr. Seebohm. Volume IV is devoted to the two families *Campophagidæ* and *Muscicapidæ*, both composed exclusively of Old World forms. Of the *Campophagidæ* 148 species are described, of the *Muscicapidæ*, 391. In style of treatment and general character this volume is similar to the earlier ones, already noticed at some length in this Bulletin.

Volume V, by Mr. Seebohm, is devoted to the *Turdidæ*, as this group is defined in Mr. Sharpe's scheme of classification, with limits rather dif-

* Catalogue of the Birds in the British Museum. Vol. IV. Catalogue of the Passeriformes, or Perching Birds, in the British Museum. Cichlomorphæ: Part I, containing the families *Campophagidæ* and *Muscicapidæ*. By R. Bowdler Sharpe, London, 1879. 8vo, pp. xvi+494, pl. xiv. Vol. V. Catalogue of the Passeriformes, or Perching Birds in the British Museum. Cichlomorphæ: Part II, containing the family *Turdidæ*, (Warblers and Thrushes). By Henry Seebohm, London, 1881. 8vo, pp. xvi+426, pl. xviii. Vol. VI. Catalogue of the Passeriformes, or Perching Birds, in the collection of the British Museum. Cichlomorphæ: Part III, containing the first portion of the family *Timeliidæ* (Babbling Thrushes). By R. Bowdler Sharpe. London, 1881. 8vo, pp. xiii+420, pl. xviii.

forms, on which more later when we come to consider our author's peculiar method of using "the trinomial name."

On the subject of nomenclature Mr. Seebohm has a page or two of pertinent remarks which we would gladly quote in full did space permit. In respect to his treatment of specific and subspecific forms, he believes that he "may be considered an ornithological revolutionist by those who have not yet accepted the modern theories of evolution," but at the same time claims to have "adopted conservative principles" upon questions of nomenclature. "The modern attempt," he says, "to carry out the law of priority regardless of consequences, which has introduced so many unknown names into our nomenclature to the detriment of the study of ornithology, has generally been in direct violation of the equally important law of clear definition, which, if it were in its turn carried out in the same unrelenting manner, would further complicate our nomenclature to a perhaps still greater degree. . . . It appears to me to be a great mistake to rake up old and little-used names, and to adopt them because the balance of collateral evidence that they were intended by their authors to be applied to certain species is in their favour. I venture to hope that future ornithologists will retain the old familiar names, even if the law of priority has to be modified to countenance their retention. I have accordingly adopted the law of priority with the following modifications — that names which have been extensively misapplied must be rejected, and names otherwise unobjectionable must be retained, if a majority of ornithological writers have used them, even though they may not be the oldest. . . . Like many other conservative practices, this may not be very logical, but I take it to be an eminently practical solution of the difficulties that surround ornithological nomenclature" (p. xi). These sentiments will doubtless meet with hearty approval on this side of the water from the many who lament the violent upheaval that has, during the last few years, so deeply affected the stability of many long-familiar names in North American ornithology.

Passing now to the body of the work, it may be said in general to be very satisfactorily done. It is modeled on the plan of the previous volumes of the series; there being no formal diagnoses of either the genera or the higher groups, and the distinctive points of specific dissimilarity are generally presented only in the artificial "keys" to the species. Sexual and other phases of plumage are described in detail, followed by a short paragraph on the geographical distribution of the forms in question, with special reference also to the breeding and winter range. The bibliographical citations are reasonably full, and, as we are pleased to see, the date of publication of each work cited is given, as is not the case in most of the other volumes of this invaluable series.

In conclusion we must notice the various ways in which admittedly subspecific forms are treated in respect to nomenclature, and in so doing can but express regret and disappointment, considering the position on the matter of subspecies the author takes in his introductory remarks (in part quoted above), at his, as it seems to us, illogical mode of designating such

forms. On page 14, in speaking of *Sylvia orpheus* and *Sylvia jerdoni*, after referring to the points of difference between the two, and the occurrence of intermediate examples, he says: "We must therefore admit that the difference between the two forms is only a subspecific one, being completely bridged over by examples from intermediate localities." The two forms are then described, and are numbered and stand in the work itself and in the "systematic index" as species in regular standing, the text alone—not the nomenclature or the numeration employed—showing that they are viewed otherwise. They stand "5. *Sylvia orpheus*"; "6. *Sylvia jerdoni*," followed by tables of references and detailed descriptions in the same manner as species of unquestioned standing. Mr. Sharpe's method of treating subspecies is far more reasonable, they being formally recognized as such in his nomenclature, by which method the two forms would stand as follows: "5. *Sylvia orpheus*"; "subspecies *a* *Sylvia jerdoni*" in the body of the work and as "5. *Sylvia orpheus*" and "*a jerdoni*" in the systematic index. To take another example from the many scattered through the volume, at page 16 we have, as a subheading "*Sylvia curruca*, *Sylvia affinis*, and *Sylvia althea*," followed by a paragraph from which we quote the following: "This is an excellent example of a species in the process of breaking up into three species. . . . I prefer to treat them as subspecies, adopting the provisional hypothesis that the intermediate forms are the result of the interbreeding of the different races." Each subspecies is then (very properly) treated separately, but with the status, to all appearances, of accepted species, although in the text they are spoken of respectively as the "European form," the "Siberian form," and the "Himalayan form" of the Lesser Whitethroat. To specify another example, the Rock Thrush (p. 316) is said to have "two extreme forms, between which every possible intermediate form occurs"; yet these two forms stand, so far as regards nomenclature and numeration, on the same footing as fully admitted species. In further illustration of this point we may cite the cases of the *Turdus* "*pallasi*" and *Turdus* "*swainsoni*" groups. The three forms composing each appear to him "to be deserving of subspecific rank," or as "imperfectly segregated species," but each has nomenclaturally the same status in his book as the "fully segregated" species. The Mexican and Central American intergrading forms of *Turdus*, even in some cases where Salvin and Godman have united them as one species, are similarly treated. This seems to be a "hard and tight" adhesion to the binomial system little to be expected from one who goes so far as to admit and even seemingly to advocate a better system.

Toward the close of the volume, however, are a few instances of a peculiar or modified use of trinomial names, as at pages 379 and 380, where we find "*Saxicola leucomelæna-monticola*" and *Saxicola monticola-leucomelæna*," in addition to *Saxicola leucomelæna* and *Saxicola monticola*, to express the relationship of two forms intermediate between the two latter, between which, however, he believes "a large enough series will show not two intermediate forms only, but an infinite series." The intent of this method of designation is explained in the passage from the introduction

already quoted. On page 318, in "*Monticola cyanus solitaria*," is an example of trinomial nomenclature pure and simple, but we fear only by the accidental omission of the hyphen between the second and third names.

We are glad, however, to see even any progressive steps on the part of our English friends to meet the difficulties cast in their way by large series of specimens from wide areas, but fear they do not as yet fully realize their extent, or perceive the simplest and most logical way of giving "a handle to their facts" by means of nomenclature. Wide-ranging species will be found to present, in most cases at least, well-marked local forms, connected insensibly by forms less differentiated from the intermediate areas, as soon as large series of specimens shall be brought together from over a wide area—in other words, that many forms which have for a long time passed current as species will be found to insensibly intergrade. In view of this it seems best to let the earliest name applied to any form of a given species stand for the whole group, and indicate such local races as seem entitled to recognition in nomenclature by a third term. Species would thus be distinguished by a binomial title and subspecies by a trinomial one, simply by dropping, by common consent, and for the sake of simplicity and conciseness, the understood connective, "subsp." or "var."

By these remarks on the nomenclature of the volume we by no means intend any serious disparagement of Mr. Seebohm's work, or to set ourselves up as a lawgiver in such matters; on the contrary we admire most heartily his thorough treatment of the subject in hand and the philosophic spirit in which he has approached his task. The general student of ornithology, we are sure, cannot be too grateful for the excellent monograph he has placed at their service.

In volume VI Mr. Sharpe treats of the "first portion of the large family *Timeliidæ* or Babbling Thrushes, a group which is largely represented in the Old World, but contains only a few members in the American continents. Five subfamilies have been described in the present volume, viz: the Bulbuls, the Wrens, the Mocking Thrushes, the Solitaires, and the Bower-birds. The total number of species enumerated is 407; and of these the Museum possesses 315" (p. vi). In style of treatment the volume agrees closely with the first four volumes of the series by the same author. The Bulbuls (subfamily *Brachypodinæ*), all Old World types, number 175 species, arranged in 27 genera, the largest genus, *Pycnonotus*, including 36 species. The subfamily *Troglodytinæ* next follows, and contains 18 genera and 155 species, 113 of which are American. *Thryothorus* has 32 species, *Thryophilus* 17, and *Campylorhynchus* 22. Of true Wrens only one genus, *Anorthura*, is common to both the Old and the New World. The Dippers (genus *Cinclus*), however, are associated with the Wrens as the last genus of the subfamily. The New World subfamily *Miminæ*, or Mocking Thrushes, numbers 12 genera and 47 species. The small American subfamily *Myiadectinæ*, or Solitaires, numbers 3 genera and 14 species. The small subfamily *Ptilonorhynchinæ* (Bower-birds) contains 6 genera and 15 species, confined to Australia and the Papuan group of islands.

In a few instances Mr. Sharpe admits subspecies, as under *Troglodytes domestica*, where *parkmani*, *aztecus*, and *insularis* are thus treated, but such cases are exceptional; the local races of *Thryothorus ludovicianus* and *T. bewicki* are each accorded full specific rank, although spoken of as "forms" of the species to which they are referred as races by American writers. His criterion for subspecies is therefore, to say the least, obscure. *Harporhynchus rufus longirostris* is not only raised to the rank of a species, but is separated from *rufus* by two intervening species, and is not even spoken of as having a near relationship to *H. rufus*. Finally on this point it may be sufficient to state that in the "subfamilies" *Troglodytina* and *Mimina* no subspecies are admitted outside of the genus *Troglodytes*, with the single exception of a West Indian form of *Mimus*. As in former volumes, there is, as a rule, no direct comparison between closely allied species further than that very inadequately furnished by the "key" to the species standing at the head of each genus. We note a few changes of names, among them *Campylorhynchus conesi* for what has commonly been called *C. brunneicapillus*, the latter name belonging properly to *C. affinis* auct., for which it is here substituted.

In respect to the classification followed in these volumes, Mr. Sharpe states that it is based on that of the late Professor Sundevall. While he adopts his higher divisions ("cohorts") of the Passeres, the arrangement of the lesser groups bears little resemblance to the confessedly artificial arrangement devised by Sundevall. While in the main Mr. Sharpe brings the minor groups into more natural relationship, his relegation of the Dippers (family *Cinclidae* auct.) to the position of a genus in the subfamily of Wrens is, to say the least, novel if not unwarranted, while the *Ptilorhynchina* and some other groups find themselves among decidedly new associates.

The preface to volume VI (dated December, 1881) states: "It is hoped that the succeeding volume (which will conclude the *Timeliada*, and which has made considerable progress) will appear within the space of a twelve-month, as also that, with additional extraneous help, the work generally will make more rapid progress than has hitherto been possible." That such will be the case is earnestly to be hoped, so great is the value of the work to all general students of ornithology.—J. A. A.

BIRDS AND INSECTS.*—Our best authority upon the insect food of birds has continued his observations upon the subject. Professor Forbes set himself to answer the three following questions: 1. Do birds originate any oscillations among the species of insects upon which they feed? 2. Do they prevent or restrain any oscillations of insects now noxious, or capable of becoming so if permitted to increase more freely? 3. Do they do anything to reduce existing oscillations of injurious insects? 4. Do they sometimes vary their food habits so far as to neglect their more usual food

* The Regulative Action of Birds upon Insect Oscillations. By S. A. Forbes. Bull. No. 6, Illinois State Laboratory of Nat. Hist., Dec. 1882, pp. 1-31.

and take extraordinary numbers of those species which, for any reason, become superabundant for awhile? The present paper deals with the last of these questions, showing to what extent birds depart from their usual practices when confronted with an uprising of some insect species, and how they concentrate for its suppression. The paper is very carefully worked up to show how effectively birds may restore a disturbed balance of life.

An orchard of forty-five acres was selected as the field of operations. It had been infested with canker worms for about six years. "As a result of their depredations, a considerable part of the orchard had the appearance, from a little distance, of having been ruined by fire. Closer examination of the trees most affected showed that the branches, stripped of almost every vestige of green, were festooned with the webbing left by the worms. To the webs the withered remnants of the leaves adhered as they fell, the very petioles having been gnawed off at the twigs. Not one per cent of the trees were uninjured, and these were invariably on the outer part of the orchard. Those which had been attacked several years in succession were killed; and there was a large area in the midst of the orchard from which such trees had been removed. One did not need to enter the enclosure to learn that the birds were present in extraordinary numbers and variety. From every part of it arose a chorus of song more varied than I had ever heard in any similar area at that season of the year." In this place, May 24, 1881, 54 birds of 24 species were taken, and 7 other species were noted. At a second visit, May 20, 1882, 92 birds of 31 species were shot, and 4 other species were seen.

This was the material upon which Professor Forbes worked, the exact examination of the stomachs being the basis of the paper. The whole subject is carefully discussed, three facts standing out very clearly as the results of these investigations.

"1. Birds of the most varied character and habits, migrant and resident, from the tiny wren to the blue-jay, birds of the forest, garden and meadow, those of arboreal and those of terrestrial habit, were certainly either attracted or detained here by the bountiful supply of insect food, and were feeding freely upon the species most abundant. That 35 per cent of the food of all the birds congregated in this orchard should have consisted of a single species of insect, is a fact so extraordinary that its meaning cannot be mistaken. Whatever power the birds of this vicinity possessed as checks upon destructive eruptions of insect life, was being largely exerted here to restore the broken balance of organic nature. And while looking for their influence over one insect outbreak we stumbled upon two others, less marked, perhaps incipient, but evident enough to express themselves clearly in the changed food ratios of the birds.

"2. The comparisons made show plainly that the reflex effect of this concentration on two or three unusually numerous insects was so widely distributed over the ordinary elements of their food that no special chance was given for the rise of new fluctuations among the species commonly eaten. That is to say, the abnormal pressure put upon the canker worm

and vine chafer was compensated by a general diminution of the ratios of all the other elements, and not by the neglect of one or two alone. If the latter had been the case, the criticism might easily have been made that the birds, in helping to reduce one oscillation, were setting others on foot.

"3. The fact that, with the exception of the indigo bird, the species whose records in the orchard were compared with those made elsewhere, had eaten in the former situation as many caterpillars other than canker worms as usual, simply adding their canker worm ratios to those of other caterpillars, goes to show that these insects are favorites with a majority of birds."

We notice the unexpected fact respecting *Fringillidæ*, that only 7 per cent of the food of 47 individuals of this "seed-eating" family, consisted of seeds, insects making up all but 2 per cent of the remainder. The canker worms alone made 40 per cent. But in this case it must be remembered that the circumstances were highly exceptional.

We trust Professor Forbes will not desist from his good work. Such exact data as these are just what is required for the solution of the general problem which is offered by the relations of the bird-world to agriculture. — E. C.

ECONOMIC RELATIONS OF BIRDS AGAIN.*— Upon the heels of Prof. Forbes's paper, but since the foregoing notice was penned (else the two contributions to the same subject might have been profitably considered together), comes the very elaborate result of Prof. King's examinations of the food of birds in its bearing upon our agricultural interests. The question, — one of great economic importance, — seems to be only of late brought forward with sufficient prominence; and it is evident from what these two investigators have accomplished, that our ornithologists have hitherto taken it up, if at all, only after methods entirely inadequate to its solution. Observations have usually been no more than incidental to our study of the habits of birds, instead of being sufficiently prolonged, exact and systematic to yield sound results. Prof. King's field-work, we are informed, was commenced in 1873, and is apparently only just concluded — his attention during this long period being steadily and rigidly directed to discovering what and how much food Wisconsin birds eat, with the view of classifying these birds in certain categories — primarily those beneficial to or injurious to, man in economic relations. This is certainly a worthy devotion, undertaken in truly scientific spirit, and carried out with an earnest purpose. It should go far toward accomplishing the desired result, — though we fear the problem is too intricate, involving too many unknown quantities, to be solved perfectly by never so many tabular statements of contents of birds' stomachs. We suspect that the general equation reduced to its simplest practical terms will prove in the end to be, that the fewer birds of all kinds killed the better for us.

* Economic Relations of Wisconsin Birds. By F. H. King. Wisconsin Geological Survey, Vol. I, chap. xi, pp. 441-610, figg. 103-144. Roy. 8vo.

"The facts recorded in this report were obtained from an examination of the contents of the stomachs of over 1800 birds, 1608 of which contributed results which have been incorporated in the report." The contents of one-half these stomachs were examined fresh, with the hand-lens, the rest more leisurely and in greater detail after transference to alcohol. "But had it been possible," says the author very truly, "to identify specifically the 7663 insects, etc., taken from the stomachs of these 1608 birds, this would have been by far the smallest part of the task set, for then it would be required to command a full and broad knowledge of the economic relations of the insects eaten. But with the difficulty solved, we must recognize still another, of greater magnitude and higher degree. Because of these great difficulties inherent in the task itself, and the ample grounds they present for difference of opinion in regard to final conclusions, it has seemed very desirable that there should be presented some of those general considerations which have served as guides to the classification adopted."

These considerations are therefore presented, and very elaborately, in the Introduction, which occupies some 30 pages. Bird-food, considered in its two broad categories of vegetal and animal, is farther ranged under the two leading classes of that, the consumption of which is on the whole (1) a service, or (2) an injury, to man. Beneficial services of birds are stated and discussed under the following propositions: A bird is beneficial when it feeds upon injurious (1) plants, (2) mammals, (3) birds, (4) reptiles, (5) insects [the real *crux* of the problem], (6) mollusks, (7) crustaceans and worms, (8) carrion. (We state it very broadly and tersely—the author's own propositions are elaborated and qualified in various ways.) On the other hand, a bird is injurious under nearly the same number of contrary conditions; as when (1) it destroys or injures useful plants; (2) preys on shrews, moles, and bats; (3) upon beneficial birds; (4) upon lizards and small snakes; (5) upon frogs, toads, and salamanders; (6) upon the parasites of noxious animals, especially noxious insects; (7) upon beneficial predaceous insects, spiders, and myriapods; (8) upon carrion insects; (9) upon beneficial worms. These numerous points receive due attention.

"When it is proposed to utilize birds as insect destroyers, to increase the abundance of certain species and to exterminate or hold in check others, to encourage the breeding of certain birds in given places and to prevent others from doing so; or, when it is proposed to introduce into a country a foreign species, other questions than those of food simply must be considered." Some of the more important of these are given by the author as: (1) The relations held by the bird to different industries; (2) its food and habits in different localities; (3) during different seasons; (4) when young and mature; (5) when and how long the bird is in a given locality; (6) its nesting place; (7) its other haunts; (8) its hours of feeding; (9) methods of obtaining food; (10) situations in which its food is obtained; (11) whether or not the bird does an important work which other birds are not fitted to do; (12) size and activity of the bird; (13) its gregariousness or the reverse; (14) its dexterity upon the wing; (15) its

general disposition; (16) its value as food to man; (17) its furnishing or not a habitat for troublesome parasitic entozoa; (18) its fecundity. The discussion of these various points leaves one in no doubt whatever that, whether or not the author has solved the problem, he has certainly sketched many of its factors, and mapped out a proper course of study.

Among "other considerations" with which the introduction continues are: (1) the changing habits of birds; (2) can they ever become abundant in thickly settled districts? (3) what birds, if left to themselves, are likely to become most abundant as the country grows older? (4) some birds may be injurious to a locality which they seldom or never visit (a curious fact — *e. g.*, destruction, during the migration, of useful birds of prey); (5) do birds of prey perform a necessary work by holding in check certain birds and noxious animals? (6) parasitism among birds; (7) the scientific, educational and æsthetic value of birds.

The Introduction closes with "a Temporary Classification of Wisconsin Birds on an economic basis," as follows:—

Group I. Birds whose habits, so far as they are known, render them, on the whole, beneficial.

(a) Birds whose known habits render them beneficial at all times.

(b) Birds which are known to be to some extent injurious, but whose known services exceed their known injuries.

(c) Birds whose flesh is valuable for food, and whose present abundance and slight usefulness as insect destroyers make it proper to permit their destruction as game.

Group II. Birds whose habits, so far as they are known, make it doubtful whether they are, on the whole, beneficial or injurious. (With three categories, *a, b, c.*)

Group III. Birds whose habits, so far as they are known, render them, on the whole, injurious.

(a) Birds whose known habits render them injurious at all times.

(b) Birds which are known to be to some extent beneficial, but whose known injuries exceed their known services.

It would certainly appear that most birds fall in group I, category (*a*) or (*b*) — happily for us and them!

A curious question is raised, How shall a bird's food be expressed numerically in terms of debit and credit? because neither relative volumes nor relative weights of beneficial or detrimental food-elements can express the true economic relations of the bird, any more than a peck of plums can be compared with a peck of curculios — any more than the destruction of 3000 phylloxera can be set against that of one coral-winged grass-hopper, as it would be if bulk for bulk were gauged. The author's method of meeting this difficulty, arising from the fact that we have no standard of insect values, is novel and ingenious, to say the least. It consists essentially in the use of heavy black *lines* of different lengths, showing graphically, not numerically, the ratios of animal or vegetal foods, of the several items of each, and particularly the ratios of "beneficial" and "detrimental" food-elements, and those undetermined in these respects.

The body of the report is primarily of the nature of an ordinary "local list" for the State of Wisconsin, giving in systematic order 295 species; nor must the claims of the paper in this regard be entirely overshadowed by the importance of its main object. Every bird is referred to one or another of the several "Groups" and subgroups above mentioned. The "tabular summaries of economic relations," expressed in the peculiar manner above noted, are given for such species in sets, according to families. The report is well-written, giving in many cases extended biographies, aside from those points which in each case of course engage the author's special attention. Besides detailed results of his own observations, statements of many other authors respecting the food of our birds is condensed and summarized. The numerous woodcuts are chiefly taken from Baird, Brewer, and Ridgway. The flavor of the author's personality is appreciable, as we were sure we should find it to be, after reading in the preface what Prof. King has to say of his "sojourn for six months in the sunshine of a warm heart;" and if we had the heart to pass any ungracious criticism upon so laborious, meritorious and interesting a report, the printer rather than the author would be our victim.—E. C.

REPORT ON THE BIRDS OF OHIO.*—This long-deferred work reaches us at length in the form of a treatise on the ornithology of the State so extensive and so systematic that the time its preparation has occupied seems justified if not absolutely required. The inside history of the publication repeats that of most scientific work which struggles for existence in the meshes of official red-tape. It was begun in 1873, the author being given a year in which to complete it. In 1874, he was ready with an annotated and descriptive catalogue of his birds, which might have made perhaps pp. 100 of print. This was rewritten and extended in 1875; and again, in 1877-'8, with addition of the synonymic and bibliographical matter, and the appendix. As appears by the date of the letter of transmittal, printing began in November, 1879, and continued to p. 352, January, 1880, when it was stopped till December, 1880, when it was resumed, with more or less prolonged interruptions until completed in the summer of 1881. Then the sheets appear to have been stored for a year or more before actual publication, which was late in 1882. The bird-matter appears in two forms — as a part of the whole volume, and as a small edition of separate extras — the latter, however, fortunately without repagination or any alteration whatever.

Though about a year and a half behindhand, and consequently without the finishing touches which the author's careful attention to the progress of the science during that period would doubtless have led him to give had circumstances permitted, Dr. Wheaton's report must at once take place at the head of State Faunas, so far as ornithology is concerned. It repre-

* Report on the Birds of Ohio. By J. M. Wheaton, M. D. Report of the Geological Survey of Ohio, Vol. IV, pt. 1, pp. 188-628. Columbus, O. Nevins & Myers, State Printers. 8vo. 1882.

sents a large amount of original research, extending over nearly a decade, diligently and intelligently applied to the construction of a systematic treatise which possesses the necessary qualities of a good working handbook of the subject. Indeed we recall no other "local fauna" of equal extent, which rivals this one in methodical treatment. Ohioans have here, in fact, a correct history and description of their 300 birds, systematically arranged and classified, with diagnoses of the genera and higher groups, a considerable synonymy of each species with special reference to state literature, and a local bibliography—the whole forming a work of that useful kind called "a manual," and bearing the weight of competent authority. Since the death of Dr. Kirtland, we doubt that any one is better entitled to speak of Ohioan birds than Dr. Wheaton, who appears to have himself collected, in the vicinity of Columbus, more than two-thirds of the species he treats, and to have admitted none that he has not personally identified, except upon unimpeachable authority. His own description of his book, albeit perhaps too modest, may be transcribed:—

"In the following pages I have made free use of the writings of several authorities. The descriptions of species are almost without exception or alteration from Dr. Elliott Coues' Key to North American Birds. The keys to the genera are from Prof. D. S. Jordan's Manual of Vertebrates, the definitions of the higher groups are by Dr. Coues, and taken from the introductory chapter of North American Birds. The nomenclature adopted is that of Dr. Coues in his Check List of North American Birds [1874], with such modifications as changes, made since its publication, require. This is followed by references to all writers, whether general or local, who have mentioned that species as Ohioan. This is followed in most cases by such synonyms as will enable changes in the nomenclature to be traced. Following the description I give, as briefly as possible, an account of its general and breeding habits, together with such biographical observations as seem to me interesting or valuable. In the appendix I have inserted a list of the birds, with the dates of their appearance and disappearance, as observed by me in this vicinity; a list of the birds identified by me in my garden in this city; a bibliography of Ohio Ornithology, and a glossary of such scientific words as require definition" (p. 197). To which we may add that the work opens with a consideration of the physical geography of Ohio in its relation to the bird-fauna of the state; and that the appendix includes, besides late additions to and corrections of, the main text, an essay "on the relation between latitude and the pattern of coloration in Ohio birds," which will be found to contain some curious and novel observations.

"The list gives 292 species, 4 of which are represented by additional varieties, and 2 introduced species, making a total of 298 species and varieties. Of these 6 are considered accidental" (p. 570).

We have said enough to certify that this volume of some 450 pages is no slight nor uncertain addition to our ornithological literature. It is easily first in its special field, and takes its permanent place among the more comprehensive treatises on North American birds. Aside from the more

technical portions, the text is well written, and possesses the attraction of being mostly new and original. The mechanical execution of the work reminds us to say that "official" printing—paper, typography and binding—is generally so bad, that we wish we could instance the present case as an exception to the rule, though it might easily be worse than it is.

Dr. Wheaton is one of the pioneers in Ohioan ornithology, his publications upon the subject extending over a period of more than twenty years; and the Survey is certainly to be congratulated on the result of not intrusting the report to other hands, as we believe was at one time contemplated.—E. C.

ILLUSTRATIONS OF THE NESTS AND EGGS OF THE BIRDS OF OHIO.—We are always glad to record the continuation of this great work, the merits of which we have already sufficiently indicated. The last number which has reached us is a double one, being Parts 14 and 15, October 1882 and January 1883, published together about January 1, raising the text to p. 154, and the illustrations to pl. xlv. Pl. xl. representing *Icterus spurius*, is very characteristic as well as artistic; pl. xli, *Petrochelidon lunifrons*, with the bird itself protruding from the nose of the bottle; pl. xlii, *Thryothorus bewicki*, very prettily executed, and probably the first representation of the nest and eggs of this bird ever published; pl. xliii, *Astragalinus tristis*, in the crotch of a rank thistle; pl. xlv, *Melanerpes erythrocephalus*, the wood sawn to show the shape of the excavation, with the eggs at the bottom. Plate xlv introduces a new feature which was sure to come before the end, in cases where no nest is constructed, or the nest is too bulky to be represented, consisting of the eggs, three each, of *Tringoides macularius*, fig. 1, *Ægialites vociferus*, fig. 2, *Asio accipitrinus*, fig. 3, and *Corvus frugivorus*, fig. 4.—E. C.

BROWN'S BIRDS OF PORTLAND.*—This excellent local list—desirably supplementing those of Maine birds by Holmes, 1861; Verrill and Boardman, 1862; Hitchcock, 1864; Hamlin, 1865;—is stated to be prepared from notes systematically taken during the past twelve years, and to contain the names of scarcely any species which have not passed under the author's personal observation. Its reliability is therefore evident. The number of species given is 250, of which *Passer domesticus* and *Coturnix communis* are artificial introductions. The annotations, though not extensive, are to the point and seem judiciously adapted to convey a fair idea of the part each species plays in the composition of the Avifauna. This is really a more important matter than the mere enumeration of names, however nearly complete; for about half of the birds actually occurring in a given locality stamp the facies of its bird-life more clearly and characteristically than the other moiety of rare transients, irregular visitors, and "accidents." We could wish that this matter had been brought out

*A Catalogue of the Birds known to occur in the vicinity of Portland, Me. [etc.]. By Nathan Clifford Brown. Proc. Portland Soc. Nat. Hist., Dec. 4, 1882. Also separate, Portland, 8vo, pp. 37.

even more clearly by summaries at the end of the paper, in which tables it is always desirable to present birds in their several categories of permanent residents, summer visitants, spring and fall migrants, winter visitants, and the "irregular" or stragglers.

We note, as of interest in considering this locality: *Polioptila cœrulea*, *Oporornis agilis*, *Coccyzus americanus*, *Ulula cinerea*, *Falco islandicus*, *Falco peregrinus*, *Cathartes aura*, *Herodias egretta*, *Florida cœrulea*, *Actodromas bairdi*, *Ancylochilus subarquatus*, *Recurvirostra americana*, *Rallus elegans*, *R. longirostris crepitans*, and other rarities; and not only on account of their intrinsic interest, but as showing that the locality must have been pretty carefully gone over.

The article is fairly well printed, but, aside from typographical errors, we are surprised that Mr. Brown should have overlooked the peculiar orthography to be found here and there, which may, however, result from "authority" or personal predilection. We do not understand the use of the term *Spizella montana* (Forst.) Ridg. Forster certainly never described or named our Tree Sparrow, properly speaking—he simply mistook it for the European *Passer montana*; and no nomenclatural availability is conferred by the fact that the two birds belong to different modern genera.

We wish that the author had not deemed it advisable to suppress the original pagination of the article as a part of the Proceedings, and the number of the volume of the latter in which it appeared; for, as the pamphlet stands, we have no means of properly citing its original edition.—E. C.

RIDGWAY ON THE TREE-CREEPERS.*—Mr. Ridgway states that after a careful consideration of much material and all that has been written on the subject, he has been "forced to the conclusion that the *C. mexicana* itself cannot stand even as a race, or else it becomes necessary to recognize a larger number of races than have [has] usually been claimed for the species. In other words, it is simply a question of whether geographical variations of form and color are to be completely ignored as a factor in the genesis of species, or whether they should receive due consideration in connection with this important subject." Accepting the latter view as the more scientific one he proceeds to characterize 7 races as susceptible of definition, 3 of which are for the first time named. These races are as follows: 1. *familiaris* Linn., Scandinavia; 2. *costæ* Bailly, Central Europe; 3. *britannica* subs. nov., British Islands; 4. *rufa* Bartr., Eastern North America; 5. *montana* subs. nov., Middle Province of North America; 6. *occidentalis* subs. nov., Pacific coast of North America; 7. *mexicana* Gloger, Guatemala and Southern Mexico.—J. A. A.

*Critical Remarks on the Tree-creepers (Certhia) of Europe and North America. By Robert Ridgway. Proc. U. S. Nat. Mus., 1882, pp. 111-116. July 8, 1882.

RIDGWAY'S REVIEW OF THE GENUS CENTURUS.*—This revision is based on an examination of 227 specimens, representing 12 of the 14 forms considered as sufficiently distinct for recognition, of which "not more than six, or less than one-half, can be said to be perfectly isolated, or to possess the requirements of perfectly distinct species." "The so-called genus *Centurus*," says Mr. Ridgway, "is scarcely more than an artificial division of *Melanerpes*, distinguished from the typical section of that genus chiefly, if not only, by a different system of coloration, which characterizes most of the species." Even in this respect the intergradation is so complete that certain species may be referred with almost equal propriety to either group. *C. terricolor* is considered as doubtfully distinct from *C. tricolor*. To *C. aurifrons* are referred as races *santacruzii* Bon., *dubius* Cabot, and *hoffmanni* Cabanis. Each form recognized is described in detail, and the whole subject is treated with Mr. Ridgway's usual care and completeness.—J. A. A.

LAWRENCE ON NEW SPECIES OF BIRDS.†—In the first paper here mentioned Mr. Lawrence describes a new subspecies of *Loxigilla* (*L. portoricensis* var. *grandis*) from the Island of St. Christopher, W. I., collected by Mr. Ober. It differs from *L. portoricensis* in larger size and in some points of coloration. In the second paper he describes *Chaetura gaumeri*, from Yucatan, allied to *C. vauxi*. In the same paper he has notes on *Pyrranga roseigularis* Cabot, previously known from the single type specimen, and describes the female. He also describes the female of his *Centurus rubriventris*, and maintains its distinctness from *C. tricolor*, to which it has been referred. The species described in the third paper are *Leptoptila fulviventris* and *Formicarius pallidus*, both from Yucatan. In the fourth paper is described *Hemiprocne minor*, from New Granada.—J. A. A.

FREKE ON NORTH AMERICAN BIRDS CROSSING THE ATLANTIC.‡—This paper is based on the author's "Comparative Catalogue of Birds found in Europe and North America," published in 1880 (reviewed in this Bulletin,

* A Review of the genus *Centurus*, Swainson. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 93-119. June 2, 1881.

† 1. Description of a New Subspecies of *Loxigilla* from the Island of St. Christopher, West Indies. By George N. Lawrence. Proc. U. S. Nat. Mus., 1881, pp. 204-205. Nov. 18, 1881.

2. Description of a New Species of Swift of the genus *Chaetura*, with Notes on two other little known Birds. By George N. Lawrence. Ann. New York Acad. Sci., Vol. II, No. 8, pp. 247, 248. March, 1882.

3. Descriptions of New Species of Birds from Yucatan, of the Families Columbidae and Formicariidae. By George N. Lawrence. Ann. New York Acad. Sci., II, No. 9, pp. —, —, 1882.

4. Description of a New Species of Bird of the Family Cypselidae. By George N. Lawrence. Ann. New York Acad. Sci., II, No. 11, p.—, 1882.

‡ North American Birds crossing the Atlantic. By Percy Evans Freke. 8vo, pp. 11. From Scientific Proc. Roy. Dublin Society, Vol. III, 1881.

Vol. V, pp. 173, 174), of which it may be regarded as in part a summary, as also a most valuable résumé of the general subject of North American birds occurring in Europe. The species are divided into the three categories of "Land Birds," "Wading Birds," and "Swimming Birds," which are each separately tabulated to show the number of occurrences of each species in Europe, the countries where they were observed, and the month in which they were taken. The number of species is 69; the total number of occurrences, 494. The most decided result obtained by this analysis is the remarkable preponderance in the number of birds which visit Europe from North America during the autumnal migration as compared with the vernal migration, the ratio being apparently as 168 to 61. This leads the author very naturally to the belief that North American birds, in reaching Europe, are borne irresistably eastward by the strong westerly winds which prevail at the periods of migration, and that of the large number blown out of their course and unable to return but a few only survive to reach the European shores. The preponderance of such arrivals in autumn is attributed to the large proportion of young birds then migrating, which are less able to resist adverse currents than are the older and stronger.—J. A. A.

FREKE ON EUROPEAN BIRDS OBSERVED IN NORTH AMERICA.*—The total number of species included in the list is 56, of which 9 are regarded as artificially introduced, leaving 47 as wanderers from the Old World. Of these latter 13 are Land Birds, 17 are Waders, and an equal number are Swimmers. Of the whole number (47) only 12 have been recorded from the Eastern United States, 20 have been found only in Greenland, while 9 others have occurred only on the Pacific Coast (chiefly in Alaska). *Saxicola ananthe*, *Motacilla flava*, and five other species of Old World birds found more or less frequently in Greenland are excluded from the list as being on this account properly North American. On the other hand, *Tringa subarquata* and *Puffinus anglorum* are included among the stragglers from Europe. The list seems to have been most carefully worked out and may deservedly stand as a companion piece to Mr. J. J. Dagleish's "List of Occurrences of North American Birds in Europe," published in volume V of this Bulletin. The number of American visitors to Europe recorded by Mr. Dagleish, it may be remembered, is 67, or 20 more than appear to have visited us from the Old World.—J. A. A.

CANADIAN BIRDS—ERRATA.—[In the January number of the Bulletin (Vol. VIII, p. 57) is a review of a paper on birds observed near Ottawa, Canada, by Geo. R. White and W. L. Scott, in which reference is made to several astonishing announcements of species taken. In justice to the authors of the paper it is but fair to say that a list of "errata" were received by the editors of the Bulletin from Mr. Scott several days before

*On European Birds observed in North America. By Percy E. Freke. Zoologist, Sept., 1881. Also separate, pp. 1-14.

the January Bulletin was issued, but too late to be inserted in that number. We may further state that we are informed that the authors were away on a collecting trip when the paper was printed, and had no opportunity to correct the proof-sheets. The list of errata sent by Mr. Scott are here appended.—EDD.]

List of *Errata*.—Omit Nos. 12, 132, and 329. For "34 *P. rufescens*, Chestnut-backed," read "33 *P. hudsonius*, Hudsonian." After No. 337 read "One specimen seen, not shot." No. 406, for "Brown" read "Brant." For No. "470 *P. Jamaicensis*, Black," read "467 *R. Virginianus*, Virginian Rail." No. 507, for "Buffalo" read "Buffle." For "555 *L. Franklinii*" read "556 *L. Philadelphia*"; the English name is correct.

Nos. 162 and 398 are doubtful, both specimens having been mislaid.

In the "Report" itself the following corrections have to be made: Page 27, line 6, for "Iwelin" read "Gmelin"; l. 10, for "*Columbus*" read "*Colymbus*"; l. 13, for "*Haliaetus*" read "*Haliaëtus*"; l. 25, for "*Sayornis*" read "*Sayornis*." P. 28, l. 5, for "*H. cinereus*" read "*H. rufus*."—W. L. SCOTT.

MINOR ORNITHOLOGICAL PUBLICATIONS.—"Forest and Stream" for 1882 (Vols. XVIII and XIX) contains the following notes and articles (Nos., 190-235):

190. *Birds observed in Central Dakota. During the Summer of 1881.* By W. L. Abbott. *Forest and Stream*, XVII, No. 24, p. 486, Jan. 12, 1882.—A briefly annotated list of 81 species, observed "on a trip through central Dakota."

191. *Questions about Wild Turkeys.* By W. M. Waite. *Ibid.*, XVII, No. 25, p. 487, Jan. 19, 1882.—Remarks on "two distinct kinds [of Turkey], with a cross between the two, inhabiting one locality."

192. *Habits of Woodpeckers.* *Ibid.*, XVII, No. 26, p. 507, Jan. 26.—Two communications, signed respectively "Byrne" and "S. H. M.", chiefly on Woodpeckers storing food for winter use.

193. *The Road-runner.* By J. E. Wadham. *Ibid.* XVIII, No. 2, p. 27, Feb. 9, 1882.—On the habits of *Geococcyx californianus*.

194. *Habits of Cormorants* [*Phalacrocorax "mexicanus."*] By "Byrne." *Ibid.*, XVIII, No. 2, p. 27, Feb. 9, 1882.

195. *The Fauna of Spirit Lake [Iowa].* By A. A. Mosher. *Ibid.*, XVIII, No. 4, p. 66, Feb. 23, 1882.—Chiefly about birds.

196. [*Habits of*] *Red-headed Woodpeckers.* By H. W. Merrill. *Ibid.*, XVIII, No. 5, p. 66, Feb. 23, 1882.

197. *Recapture of the Australian Crested Parroquet at Sing Sing, N. Y.* By A. K. Fisher, M. D. *Ibid.*, XVIII, No. 4, p. 67, Feb. 23, 1882.—An escaped example of *Callopsittacus novæ-hollandiæ*.

198. *Crafty Feathered Fishers.* By J. C. Hughes. *Ibid.*, XVIII, No. 5, pp. 85, 86, March 2, 1882.—Capture of fish by the Bald Eagle (*Haliaëtus leucocephalus*) and the Fish Crow (*Corvus caurinus*).

199. *English Widgeon on the New Jersey Coast.* By "Homo." *Ibid.*, XVIII, No. 5, p. 86, March 2, 1882.—"Several" taken during "the

past two or three years" by baymen in Tuckerton and Big Bays, near Little Egg Harbor Inlet.

200. *Screech Owl* [*Scops asio*] in Confinement. *Ibid.*, XVIII, No. 6, pp. 106, 107, March 9, 1882.

201. *Shore Birds in Grenada*. By "Certhiola." *Ibid.*, XVIII, No. 7, p. 127, March 16, 1882.—Dates of arrival of 11 species.

202. *Ornithological Nomenclature*. By Everett Smith. *Ibid.*, XVIII, No. 8, p. 145, March 23, 1882.—An earnest protest against various recent changes and innovations in the nomenclature of North American birds.

203. *The New Check List*. By Elliott Coues. *Ibid.*, XVIII, No. 9, pp. 166, 167, March 30, 1882.—Announcing the new edition of the author's Check List as nearly ready for publication and giving an extract of several paragraphs from the "Introduction," anent the article last above-cited.

204. *Winter Notes. The Winter of 1881-2 in Lewis County, Northern New York*. By C. Hart Merriam, M. D. *Ibid.*, XVIII, No. 11, p. 207, April 13, 1882.—An article, nearly a page in length, chiefly ornithological.

205. *Early Birds in Maine*. By Everett Smith. *Ibid.*, XVIII, No. 11, p. 208, April 13, 1882.

206. *Red-headed Woodpeckers in Maine*. By Everett Smith. *Ibid.*, XVIII, No. 11, p. 208, April 13, 1882.—Their recent appearance in Maine.

207. *Spring Notes*. *Ibid.*, XVIII, No. 14, p. 266, May 4, 1882.—Three short articles relating respectively to (1) Kings County, Nova Scotia (by J. M. J[ones].), (2) Taunton, Mass. (by J. C. Cahoon), and (3) Deering, Me. (by J. E. M.), noting the arrival of birds at these localities.

208. *Cardinal Redbird winters in New York*. By Louis A. Zerega. *Ibid.*, XVIII, No. 15, p. 286, May 11, 1882.—The *Cardinalis virginiana* stated to be a permanent resident in Central Park, New York City.

209. *Spring Notes*. *Ibid.*, XVIII, No. 16, p. 305, May 18, 1882.—Four short papers relating to (1) Philadelphia, signed "Homo"; (2) Portland, Conn., by Jno. H. Sage; (3) Bay Ridge, L. I., by A. L. Townsend; (4) Cleveland, O., by Seym. R. Ingersoll.

210. *Odd Nesting Places*. By Col. Culver. *Ibid.*, XVIII, No. 16, p. 305, May 18, 1882.—Of *Cotile riparia*, *Coccygus erythrophthalmus*, *Turdus migratorius*, and *Melospiza meloda*.

211. *The Music of Nature. Our Wood Thrushes*. By B. Horsford. *Ibid.*, XVIII, No. 17, p. 326, May 25, 1882.—Description of the birds and their songs, with an attempt to indicate their notes by use of the musical scale.

212. *Birds and Electric Lights*. By W. N. B[yers?] *Ibid.*, XVIII, No. 19, p. 366, June 8.—Destruction of large numbers of birds by flying against the framework of electric light towers in Denver, Col.

213. *Remarkable Flight of Warblers*. By F. C. Browne. *Ibid.*, XVIII, No. 20, p. 386, June 15, 1882.—In Eastern Massachusetts, May 21 and succeeding days.

214. *Some Oölogical Notions*. By Lew Vanderpoel. *Ibid.*, XVIII, No. 21, p. 407, June 22, 1882.—Notes, among other things, that the eggs of the same species are almost invariably larger in the North than in the South,

and adds: "Perhaps the late Dr. Brewer's theory in this respect is sufficiently absolute that we might safely accept it as a law." *Query*: Where is this "theory" announced? See in this connection Bull. Nutt. Orn. Club, Vol. I. 1876, pp. 74, 75.

215. *Arrival of Spring Birds [at Bay Ridge, L. I.]*. By W. S. L. *Ibid.*, XVIII, No. 22, p. 427, June 29, 1882.

216. *A Mallard's Strange Nesting Place*. By Burr H. Polk. *Ibid.*, XVIII, No. 22, p. 427. — On the open prairie, in eastern Colorado.

217. *The Nighthawk in Cities*. By Louis A. Zerega. *Ibid.*, XVIII, No. 24, p. 467, July 13, 1882. — On the nesting of *Chordeiles popetue* on the flat rooftops of houses.

218. *Swallow-tailed Kite in Ohio*. By E. A. Brown. *Ibid.*, XIX, No. 3, p. 44, Aug. 17, 1882. — Taken at North Bloomfield, June, 1882.

219. *Note on the Red-headed Woodpecker*. By Samuel F. Dexter. *Ibid.*, XIX, No. 4, p. 65, Aug. 24, 1882. — Nesting at Oakland Beach, near Providence, R. I., July 28, 1882.

220. *Breeding Quail in Confinement*. By John J. Willis. *Ibid.*, XIX, Nos. 9 and 10, pp. 164, 165, 185, 186, Sept. 28 and Oct. 5, 1882. — Account of successful attempts at breeding *Ortyx virginiana* in confinement, copied from Westfield, N. J., "Monitor."

221. *Bird Migration in the Mississippi Valley*. Compiled from the notes of Mr. O. Widmann by W. W. Cooke. *Ibid.*, XIX, Nos. 10, 11, and 12, pp. 184, 185, 205, 224, Oct. 5, 12, and 19, 1882. — A very full and detailed record of arrivals and departures for the spring of 1882 at St. Louis, Mo.

222. *Spring Birds of Quebec*. By John Neilson. *Ibid.*, XIX, No. 11, pp. 205, 206, Oct. 12, 1882. — A detailed report for the period March 1 to July, originally published in the Quebec "Morning Chronicle."

223. *An Audacious Goshawk (Astur atricapillus)*. By C. Hart Merriam, M. D. *Ibid.*, XIX, No. 12, p. 225, Oct. 19, 1882.

224. *Western Shrike in New England*. By J. C. Cahoon. *Ibid.*, XIX, No. 12, p. 225, Oct. 19, 1882. — Capture of "*Lanius ludovicianus excubitorides*" at Taunton, Mass., Sept. 12, 1882.

225. *The Pine Grosbeak. Pinicola enucleator, Vieill.* By Dr. Elliott Coues. *Ibid.*, XIX, No. 14, pp. 264, 265, Nov. 2, 1882. — General history of this species.

226. *Bird Migration in the Mississippi Valley*, from observations collected by W. W. Cooke. *Ibid.*, XIX, Nos. 15 and 16, pp. 283, 284, 306, Nov. 9 and 16, 1882. — A condensed summary of observations made at twelve localities by different observers, extending from Fayetteville, Ark. northward to White Earth, Minn.

227. *A Cormorant in the Adirondacks*. By A. R. Fuller. *Ibid.*, XIX, No. 16, p. 307, Nov. 16, 1882. — A specimen of *Graculus dilophus* Linn., killed Nov. 9, 1882, at Meacham Lake by F. N. Collins.

228. *Caged Pine Grosbeaks*. By B. Horsford. *Ibid.*, XIX, No. 17, pp. 323, 324. — An interesting account of the habits of *Pinicola enucleator* in confinement.

229. *Grouse* [*Cupidonia cupido*] on *Martha's Vineyard*. By S. C. C. *Ibid.*, XIX, No. 18, p. 344, Nov. 30, 1882.

230. *Death of Mr. Willis's Quail*. *Ibid.*, XIX, No. 18, p. 345, Nov. 30, 1882. — Note from Mr. John J. Willis, of Westfield, N. J., announcing the death of his domesticated Quail [*Oxytyx virginiana*] with an autoptical report on the dead birds by the editor [G. B. Grinnell]. (See above, No. 220.) For a further note on the same subject see *Ibid.*, No. 20, p. 384, Dec. 14, 1882.

231. *The Boston Anti-Sparrow Crusade*. *Ibid.*, XIX, No. 18, p. 345. — Reprint of a letter by Wilson Flagg to the Boston "Transcript" of Nov. 18, with an introductory note by Dr. Elliott Coues. The formation of a society for the extermination of *Passer domesticus* urged.

232. *The Pine Siskin*. *Chrysomitris pinus*. By Dr. Elliott Coues. *Ibid.*, XIX, No. 19, p. 364, Dec. 7, 1882. — General history of the species, with cut of Pine Finch and of American Goldfinch.

233. *The New Zealand Bird Nuisance*. By "M.", Wellington, New Zealand. *Ibid.*, XIX, No. 20, p. 384, Dec. 14, 1883. — The principal offender is the English House Sparrow (*Passer domesticus*) whose rapid increase and ravages are recounted. It is estimated that they annually destroy grain to the value of \$66,600.

234. *Bird Migration in the Mississippi Valley*. By W. W. Cooke. *Ibid.*, XIX, No. 20, p. 384, Dec. 14, 1883. — A digest of observations made by Mr. H. A. Kline of Vesta, Neb.

235. *Strange Hawks' Nests*. By T. S. Roberts. *Ibid.*, XIX, No. 26, p. 505, Jan. 25, 1883. — In Central Dakota, composed of buffalo ribs.

General Notes.

PROBABLE BREEDING OF THE WINTER WREN (*Anorthura troglodytes hiemalis*) IN EASTERN MASSACHUSETTS.—Mr. George O. Welch tells me that a pair of Winter Wrens once passed the breeding season in a hemlock grove near Lynn. He first noticed them about the middle of May, when their actions led him to suspect that they were preparing to breed. During subsequent visits — which extended well into June — he rarely failed to hear the song of the male, and frequently its mate would be seen hopping in and out among some holes under the hemlock roots. He feels sure that they had a nest in one of these holes but all his efforts to discover it proved fruitless. At length, about the 10th of June, he shot both birds, thus definitely settling their identity.

The authenticity of the above facts is open to no doubt. They do not prove, of course, that these Wrens actually nested, but such an inference is, to say the least, highly probable. Assuming it granted, the occur-