

Birds

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THE OÖLOGIST,

FOR THE STUDENT OF

BIRDS, THEIR NESTS AND EGGS.

VOLUME XV.



ALBION, N. Y.:
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THE

OOLOGIST.

Monthly.

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ALBION, N. Y., JANUARY, 1898.

WHOLE NO. 140

Wants, Exchanges, and For Sales.

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John G. Buxton, Milo Centre, N. Y.

THE OÖLOGIST.

VOL. XV. NO. 1.

ALBION, N. Y., JANUARY, 1898.

WHOLE NO. 140

The Yellow-throated Vireo, With Remarks on Our Six Michigan Vireos.

There are six species of Greenlets in the Great Lake region, viz:—Red-eyed, Philadelphia, Warbling, Yellow-throated, Blue-headed and White-eyed.

A few remarks in a general way may not come amiss. The Yellow-throated appears first in the vernal migrations; next the Red-eyed; then the Blue-headed, and last of all the Philadelphia. The Red-eyed is the most abundant and is very generally distributed throughout the State and I have found it in every one of the eighteen counties where I have observed. It breeds in low woods, high oak groves, heavy timbered forests, orchards and city yards, in pine-ries where mixed with hardwood, and in cedar and tamarack swamps. If my readers will carefully make observations as I have, they will find that the Red-eyed Greenlet is the best and most evenly distributed bird in the State of Michigan. No matter where you go, in the forest or in sections not too well cleared, whether in the city or unsettled districts, if your ear is trained to distinguish, you will soon hear the simple notes of the retiring yet ubiquitous Red-eyed.

Next to the Red-eyed comes the Warbling in point of abundance; this bird being given to local distribution and is always found in cultivated sections, never in deep forests. The Yellow-throated is next commonest; the next is Blue-headed; the Philadelphia next, and the White-eyed the rarest. Some bird students in Michigan claim that the White-eyed is not rare, but I have not been convinced that it is to be found in any numbers anywhere in this State. It is certainly only locally distributed in the Great Lake region, and in over a

quarter of a century of close observation I have not seen it in Kalamazoo county.

The Blue-headed or Solitary Greenlet is quite generally distributed during migrations but is found usually in low woods and timber lands. It is found summering north of the 43d parallel but I have been unable to find its nest. The Philadelphia Vireo has been found in various quarters in Michigan and I have taken it in three counties, but it is never common, and so far as is known does not summer in our State; though it will undoubtedly be proven a nester in the Northern Peninsula by later observers. I am familiar with the songs of our four common species, and I have carefully noted the nesting habits of the Red-eyed, Warbling, and Yellow-throated in Michigan.

The Yellow-throated Vireo almost invariably arrives from the South during the last week in April, but in late seasons is not observed until after May first while in advanced springs they reach Southern Michigan by the twentieth of April or even earlier. Their presence is generally made known by their loud, defiant screaming notes which are somewhat like the rasping notes of the Crested Flycatcher. The song too, is loud and piercing, and is not agreeable when issued near at hand; but when heard coming from the forest at a distance is very pleasing, and will be remembered by a cultivated ear.

After the manner of all of our dear Michigan birds, and I believe the rule holds good throughout birddom in the whole of christendom, the Vireos are mated already on arriving. It is pleasing to think that birds are constant in their attachments and that they remain mated for years, and in all

probability until death or capture separates them. The vernal skirmishes and battles are the natural outcome of the lonesome, but it is fair, I think, to admit that the same identical pair of birds visits the same locality, and after neighborhood differences are settled begin nesting, often in the same tree as in the last season.

I have observed the nest in low bottom lands and one was built within twenty yards of the river. Others were found in orchards and the low horizontal branches of apple trees are often chosen. Two nests that came under my observation were built in forks in drooping lower branches of the common Northern hickory, *Carya tomentosa*, and were in open fields. One nest was at the roadside and within the corporate limits of a city. It had not been disturbed and contained four young birds about ready to fly. They were readily identified from their colors. This nest was at seven feet elevation. The lowest hung nest was placed at about four feet up, and I do not think that the average of all the nests I have found is over ten feet.

The nest much resembles the structure of the Red eyed in its main materials, but is a little larger and coarser and can be identified by a practical eye at any time during its construction. The situation chosen is similar to that selected by the other Greenlets, and always in a fork, generally at the end of a branch.

When the nest is completed it is adorned with spider's web to which is attached bits of lichens after the manner of the Hummer and Gnatcatcher; in truth these three species of birds are the only ones in Michigan, to my knowledge, who habitually ornament their nests in this manner. The Yellow-throated is not as artistic in its decorations as are the Hummer and Gnatcatcher.

This Vireo, after the general habits of

the Greenlets, often allows a lapse of a week or two before depositing the eggs after the nest is completed. This habit often leads to the early deposition of the Cowbird's eggs in the otherwise empty nest of the Red-eyed, but the Yellow-throated is not much bothered with alien eggs, at least in my experience. The old birds do not seem much disturbed by the visit of the despoiler, and do not make the protest observed when a Warbling Vireo's eggs are appropriated.

The eggs are almost invariably four in number, never more, and are handsomest of the Greenlets in Michigan, and are readily identified by their larger size and the more prominent markings. It is unnecessary to describe them here, for all the descriptions in the world could not portray their beauties, nor the record of a thousand measurements assist in the identification of an unknown miscellaneous collection. The truth is, that too much valuable space and time is taken in describing the color, size and markings of eggs and birds, to the exclusion of more entertaining matter. I don't gauge my estimate of a man by the size of his collection of eggs, and I think more of those who are observant of the habits of our feathered friends than of the *pseudo scientist* who talks big and reads technical descriptions and yet can't go into a grove and tell the songs of our common birds. If a man or boy can add one good point of information concerning the habits of our Michigan birds, true lovers of the study of birds will acknowledge his worth as a scientist much more readily than in the case of the individual who amasses a whole raft of eggs by the proverbial collecting and exchanging; yet knowing only of the bare facts of how high, date, incubation, etc., etc. There are too many of this class of collectors in our land.

After nesting duties are completed

the Yellow-throated Vireos are silent and are like most of the woodland song birds difficult to find. Later in the season and after moulting they tune up like the Red-eyed and Warbling Vireos, but their second period of song does not last long, nor is it ever so loud or continued an effort as the vernal burst.

MORRIS GIBBS,
Kalamazoo, Mich.

The White-rumped Shrike (?).

It is interesting to note how great a variation in the time of breeding of certain species there sometimes is between two points situated even within a few miles of each other. For instance, to compare the facts related by Mr. Short of Chili in the *Januaay*, '95, *OÖLOGIST* and those related by Mr. Reinecke of Buffalo in the *March* '96 number with my own observations, I find quite a difference in breeding dates the tendency being towards earlier breeding in nearly all species mentioned in this locality, than at either of the the points named.

What Mr. Short said concerning the White-rumped Shrike is so at variance with my observations, that I am tempted to relate my experience with this bird. There are few birds, I think, among all that visit us, that I am so thoroughly familiar with; and certainly there is none that I have taken more nests of.

Here in Western Orleans, I have never found a nest in June, but have found them times without number in April, the dates being, as a rule, the 27th and the full complement being never more or less than six. I did, on one occasion, find a nest containing six eggs as late as May 19th, but in this case I knew of this bird's previous set being taknn April 20th and this later nest was her second attempt at house-keeping. Didn't have the heart to take these.

In this locality one should have his eyes open for nests in process of construction or possibly completed by the 15th of April, in some old apple orchard or thorny hedge-row, not far removed from some dwelling. An old apple orchard is the preferred place, and the nest is very easily found, since the trees are perfectly devoid of any leaves or blossoms or anything to obstruct the view until well along into May.

One peculiar thing has happened in connection with my findiñg of the nests of this bird. In whatever locality, in March of each year, I have chanced to first note the arrival of the Shrike, in that immediate vicinity, during the following month, I have found its nest. It seems that upon its arrival, it drops right down upon its future nesting site.

The eggs of this species show considerable variation, the series in my collection varying all the way from n very sparse spotting to a spotting that almost hides the background color of the shell.

As regards the distribution of this species and its relative abundance in this locality would say that each square mile of territory is the home of about three pairs of birds in a season.

The dates of my finds are as follows, each set consisting of six eggs and being perfectly fresh, viz:

April 25, '86, April 26, '86, April 26, '86, April 27, '86, May 17, '86. April 27, '87, April 28, '87, April 29, '87. April 27, '88, April 27, '88, April 28, '88. April 26, '89, April 29, '89. April 27, '90, April 28, '90. April 28, '90. April 29, '91. April 26, '92, April 27, '92.

From this it will be seen, that there is virtually no variation in the breeding time of this species, either on account of a backward season, or for any other cause.

There is much that might be written concerning this interesting species, but it is so well known and widely distrib-

uted that perhaps I would be unable to say anything new respecting it and so will rest my pen.

NEIL F. POSSON,
Medina; N. Y.

Oologists' Association News.

During the year just past our association has acquired ten new members (not many, but all of them of a kind that adds strength and stability to an organization such as ours), as follows: J. Parker Norris and J. Parker Norris, Jr., Philadelphia, Pa.; A. H. Frost and R. C. Woodhouse, New York City, N. Y.; W. A. Davidson, Detroit, Mich.; J. W. Daniel, Jr., Lynchburg, Va.; J. Warren Jacobs, Waynesburg, Pa.; W. J. B. Williams, Holland Patent, N. Y.; C. F. Stone, Branchport, N. Y.; and Verdi Burtch, Penn Yan, N. Y.

March 15th last, the Executive Committee published Bulletin No. 1, the contents of which is known to you and which aided materially in securing the new members. The edition numbered 500 copies, and there remain only about 35 of same yet in the hands of the Secretary-Treasurer and myself.

In my annual report of Jan. 1, 1897, I appointed Jos. A. Dickinson, Gresham, Neb. to prepare and compile notes upon the order *Raptors*, but for some reason there was no response from the members in the way of notes. In view of this I hereby continue this work until such time as Mr. Dickinson shall have sufficient material to justify the preparation of a report such as this Association should be able to issue. Please send copy of all your notes upon the subject as soon as possible. If you have nothing to report send him copies of data of sets of Hawks and Owls in your collections; these in themselves are valuable to show breeding dates, range, etc.

The proposition to amend the con-

stitution of this Association as submitted in the November OOLOGIST having received a two-third vote in the affirmative is adopted. Please change your copy of the constitution to conform with same.

As our organization is now established upon a sound footing, it is advisable to take up a work for which there is a *very urgent need*. One of the prime objects of the Oölogists' Association is to protect oölogists against fraudulent, unscrupulous and dishonest individuals in the exchange or purchase of specimens, etc., and with that end in view I hereby appoint Brothers J. Parker Norris, Jr., 723 Walnut St., Philadelphia, Pa.; W. J. B. Williams, Holland Patent, N. Y. and Jno. W. Daniel, Jr., Lynchburg, Va., as a Committee on Frauds. This committee will receive all complaints and reports of fraudulent or dishonest dealings, investigate same and report a list of those found guilty to the Executive Committee of the Association. This list will be published in a forthcoming bulletin. It behooves everyone interested in the welfare of our favorite study to at once send full particulars to this committee of any dealings wherein there has been dishonesty, and all the members should help to make this very important branch of our work a success.

At the recent election of officers (Dec. 1 to 20, 1897) all the present officers were re-elected.

On account of the amended constitution there is a vacancy in the Executive Committee, and I hereby appoint Robt. C. Woodhouse of New York city as Executive Committeeman for the term commencing Jan. 1, 1898.

Edward Arnold, Battle Creek, Mich. and Dr. R. L. Jessee, Philo, Ills., have been elected to membership in the Association.

ISADOR S. TROSTLER, President.

Omaha, Neb.

THE OÖLOGIST.

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FRANK H. LATTIN, Editor and Publisher,
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Albion, Orleans Co., N. Y.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Great Blue Herons.

For three weeks had we been making calculations to visit a heronry, which we were told was in a black ash swamp some ten miles from here. We had lived here for upwards of forty years and had not learned of its existence until last year.

As we could only go on Saturday when the boys were out of school, and it had rained for two or three succeeding Saturdays, we began to think that

we should be disappointed until May 12th, which bidding fair for a pleasant day, we hitched up and taking an oölogist's paraphernalia and our dinners we started off.

A very pleasant ride, but longer than necessary, as we got beyond the object of our search before enquiring and were then told that it was half a mile back and some twenty or thirty rods off the road.

They said we would find lots of Cranes as they were there the other day and shot fifteen of them, but we must look out and take a stick along for they would fight if we disturbed their nests.

We went as directed and sure enough there they were and as we approached their quiet retreat they left their nests in great numbers and flew round and round uttering their coarse guttural notes of alarm.

A hundred or hundred and fifty such large birds winging their way slowly around in circles overhead seemed to fill the air and was a sight that will not soon be forgotten.

Occasionally would they light on a nest and then off again, or would settle down on some of the topmost branches of the tall trees on limbs that hardly seemed capable of holding up a Robin, with wings half spread and in constant motion to help balance themselves on their tall stilt-like legs on the swaying limb, they seemed much better adapted for a habitation on terra firma than in mid air.

Their nests too were a sight to behold. Built away in the tops of the trees on limbs that did not seem capable of holding them up, as big as a two bushel basket, and from one to eight in a tree we thought we had got paid for our drive if we got no eggs.

Our next object was to see what was in them. The empty, broken shells underneath told us that many had hatched and we might be too late.

Jumping from bog to bog or running the length of some prostrate log we soon reached a tree with half a dozen nests in it and prepared to go up.

We had a rope ladder that we could put up forty or fifty feet, but as there were no large limbs that would hold us, had to resort to the climbing irons.

One of the boys soon went up and after working an hour or so secured two good sets of eggs, which he let down in a pail with a string which we measured and found to be ninety feet long.

We all had good appetites for dinner by the time he reached the ground, which we soon disposed of. The boys botanized a little to rest themselves, then started for another tree containing eight nests, most of them near the body of the tree.

The other boy tried his luck this time. Ninety feet above ground, in the top of a swaying tree, with a good stiff breeze blowing is not a very delightful place to work for a landsman. A couple of hours and five more sets were secured, thirty eggs in all.

We had learned something from our forenoon's experience, so sent the boy a long fish pole with our drinking cup securely tied to one end. With that he could scoop out the eggs from those nests out of reach; even securing a set from a neighboring tree near by.

The nests were built entirely of twigs, with a slight depression on top for the eggs, and were woven or packed so tight together that they could scarcely be pulled apart, and would fall to the ground without breaking to pieces.

Some of the nests contained young, and all of the eggs were more or less incubated so that we only succeeded in saving two-thirds of them. Two of the sets contained five eggs each, the rest four. The eggs in the sets of five were decidedly smaller than those of only four.

But few of the birds kept in sight

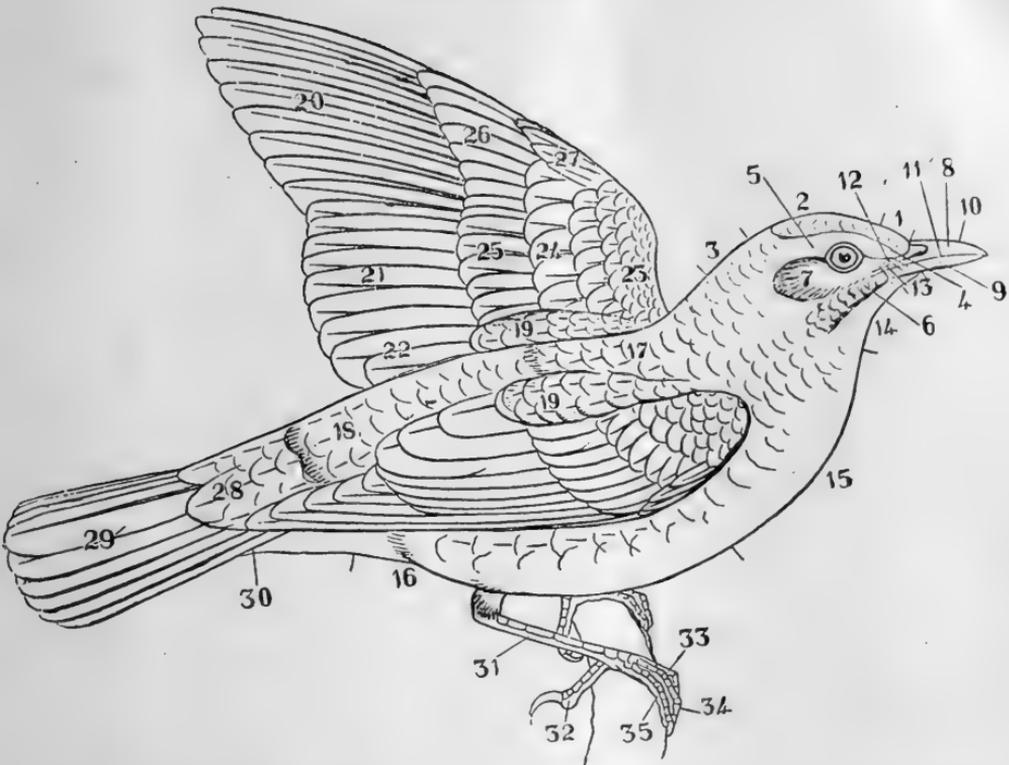
while we were around. Forty nests could be seen at once; but should think there were sixty or seventy in all, on about an acre of ground.

They visit the little lakes around here during the summer and most any evening about sundown can be seen winging their way to the southwest, and many a morning on first rising have I seen them fly up from the lake shore but a few rods from the house.

C. M. SLAYTON,
Grattan, Mich.

Diagram of a Bird, to Illustrate the Terminology of the Plumage and Limbs.

1. Forehead.
2. Crown.
3. Nape or occiput.
4. Lores (space in front of eye).
5. Supercilium.
6. Cheeks.
7. Ear-coverts.
8. Upper mandible or maxilla.
9. Lower mandible.
10. Culmen or upper profile of maxilla.
11. Commissure or line of junction of the two mandibles.
12. Rictal bristles or vibrissæ.
13. Chin.
14. Throat.
15. Breast.
16. Abdomen.
17. Back.
18. Rump.
19. Scapulars.
20. Primaries (the earlier or outermost 9 or 10 quills of the wing).
21. Secondaries (wing-quills springing from the radius and ulna.)
22. Tertiaries.
23. Lesser wing-coverts.
24. Median wing-coverts.
25. Greater wing-coverts.
26. Primary wing-coverts.
27. Winglet or bastard-wing.
28. Upper tail-coverts.



29. Tail-feathers or rectrices.
 30. Under tail-coverts.
 31. Tarsus.
 32. Hind toe or first toe or hallux.
 33. Inner or second toe.
 34. Middle or third toe.
 35. Outer or fourth toe.

Flanks or sides of body are the parts approximately covered by the closed wing.

Axillaries are the lengthen feathers springing from the axilla or region beneath the base of the wing.

Supplementary bristles or hairs are those springing from the side of the forehead in front of the rictal bristles.

Nasal bristles or hairs are those springing from the front of the forehead and covering the nostrils.

Measurements should be taken in millimeteres or in English inches and decimals, thus:

Length—The distance from the tip of

the bill to the tip of the longest tail-feather, unless otherwise stated.

Tail—The distance from the root of the tail, generally indicated both in the fresh and dried state by the presence of a piece of flesh on the underside, to the tip of the longest feather.

Wing—The greatest distance from the bend of the wing to the tip of the longest primary, measured straight. When the wing is curved, it is flattened out for the purpose of measurement.

Tarsus—The distance from the centre of articulation of the tarsus with the tibia to the base of the middle toe.

Bill—The distance from the angle of the gape to the tip, measured straight.

The Status of the Family Laniidæ in Western New York.

Hitherto the status of the Shrike family in Western New York, and for that matter, throughout the northern por-

tion of the Eastern United States generally, has been understood to be as follows:

Three species occurring,—or rather two species and a sub-species. First the Northern Shrike (*Lanius borealis*) breeding in the boreal regions and coming down regularly each fall to spend the winter or a goodly portion thereof in this latitude; second, the Loggerhead Shrike (*Lanius ludovicianus*), an inhabitant of the southern states which but very rarely strays as far north as New York, although the editor of THE OÖLOGIST a few years since found the bird breeding in the vicinity of his home at Gaines, N. Y., and third, the White-rumped Shrike (*Lanius ludovicianus excubitorides*) a varied form of the preceding, occurring quite commonly as a summer resident and breeding in April and June.

The above is the hitherto supposed status of the family in the northern East. Now, for a recent development.

During one of my trips to New York City, early in the present year, I took time to run up to the American Museum of Natural History, where considerable time was most profitably spent in the bird section. I was particularly interested in the collection of "Birds found within Fifty Miles of New York," arranged by Mr. Frank M. Chapman. Much time can be spent to good profit in looking over the collection. And I found that no species of the White-rumped Shrike was present, but that the Loggerhead Shrike was represented as a common summer resident. This was the first intimation I had had that it was the true *ludovicianus* instead of *excubitorides* that occurred as a summer resident in these latitudes. Mr. Chapman being at the time in Mexico I could not confer with him in regard to the matter, but later on I wrote him a letter asking him what he considered the true status of the Shrike in this section and stating that I had always con-

sidered that it was the White-rumped Shrike that occurred here. His reply to my letter is as follows:

"NEW YORK CITY, May 14, 1897.

MR. NEIL F. POSSON, Medina, N. Y.

DEAR SIR:—Returning from Mexico I find yours of April 12th. I am glad to know that you were pleased with our local collection, which has proven of much service to bird-students here.

I consider all small Shrikes east of the Mississippi to be *ludovicianus* and you will find that the recent A. O. U. list confirms this opinion. Birds from Western New York are not *typical ludovicianus*, but I think are nearer to this form than they are to *excubitorides*.

I have never had the fortune to work in your part of the state and cannot therefore give you any records. Should any come to my notice, however, I shall be happy to send them to you.

Yours very truly,

FRANK M. CHAPMAN."

It was my intention, after learning this, to settle the Shrike question definitely one way or the other, by securing this season a number of specimens of our Western New York Shrikes and submitting them to experts for a careful examination, but this I have been unable to do, inasmuch as I have been away from home, practically, throughout the entire year.

Here is a good field of work for some local ornithologist the coming season, who has the time and opportunity to collect a few specimens of our Western New York Shrikes. Let us determine whether we have been working on erroneous premises all these years.

NEIL F. POSSON.

How to do it.

All you have to do is, enclose in an envelope, 75 cents, stamps or postal order. I will send to you by return mail a well labeled collection of Shells and Curios from this locality. If you do not find them satisfactory return them and I will return your money. All specimens in natural state.

W. H. HILLER,

147 W. 23d St., Los Angeles, Calif.

Dr. Miles' Nervine

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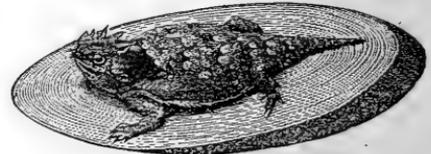
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Monthly.

VOL. XV. NO. 2.

ALBION, N. Y., FEBRUARY, 1898.

WHOLE No. 141

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THE OÖLOGIST.

VOL. XV. NO. 2.

ALBION, N. Y., FEBRUARY, 1898.

WHOLE No. 141

* Report on the Fifteenth Annual Congress of the A. O. U.

ARTHUR C. PARKER, White Plains, N. Y.

The fifteenth annual Congress of the American Ornithological Union, was held in the library of the American Museum of Natural History in Central Park, New York City, on the 9th, 10th and 11th of November.

The sessions, with the exception of the business meeting on the afternoon of the 8th were open to the public. Owing to various reasons the writer was unable to attend the convention Tuesday morning and Thursday, hence the report will not be exactly complete, but information has been obtained from different sources though not as much in detail as is desired.

An excellent paper was read Tuesday morning by Mr. Sylvester D. Judd, on the Protective Adaptations of Insects from an Ornithological point of view.

On Tuesday afternoon Mr. Chapman in an interesting address, told of his collecting tour in Mexico. At the first spot in which he camped, he collected but fifteen specimens during his three weeks stay, because of the intense heat which registered 96 to 98 degrees each day, whereas even on the Amazon during the collecting season it registered but 94. He exhibited numerous specimens which he had collected at his second stopping place near Mexico City. Among the interesting facts which he brought to notice was the difference between the same species of the table-lands and those of the lower plains. He also exhibited an interesting species of black oriole which had

many characteristics of a woodpecker, although its bill was not of woodpecker shape. Dr. Coues examined this skin with evident interest. The Mexican thrushes were particularly interesting, many having beautiful plumage and exquisite song, indeed Mr. Chapman said that the out-bursts of song from the myriads of bird throats sometimes nearly overwhelmed him. The skin of an American Robin, (Western type) was shown, and to prove that it bred in south central Mexico, he produced its nest and skins of its young. Several types of wrens and some interesting vireos were displayed, among which was the connecting link of the Warbling and the South American vireo. Hawks in Mexico are so numerous that a flock at a distance was compared with a swarm of gnats. A remarkable fact which he brought to light, was that many song and wild-birds lived in the cities, making the air merry with their tuneful notes. At the close of this entertaining talk, Daniel G. Elliot, F.R.S. E., in his pleasing manner, remarked upon his discovery of a new species. Incidentally he said that he was like a certain Colonel placed at the head of a regiment, a well meaning man, but very nervous. This officer was placed in a very exposed position, and told not to move until so ordered. Soon balls began to whistle through his ranks and men on every side fell wounded or dead. It was not long before his legs began to tremble, and then to shake, being conscious of this he bent down and surveying his tottering legs addressed them thus: "Oh you poor miserable legs, if you knew where I am going to take you in a few minutes, you would collapse altogether." He went

* This Report was sent in for December OÖLOGIST, but through oversight was omitted.
—Ed.

on to say that he was like that officer, he did not know where he would take himself during his talk. He said he had published a description in the "Auk," fondly thinking that he had discovered a new bird, but, in the succeeding number Mr. Nelson gently and tenderly said that he didn't know what he was talking about. Mr. Nelson said, however, that he had read a description which exactly tallied with that of Prof. Elliot's.

The chair then announced that if we would follow Mr. Chapman down into the "dark place," meaning the lecture room, that he would show some stereoptican views of his Mexican trip, together with a series of others, among which were views of the dense tropical vegetation, his camp in the forest, and also a view of a very peculiar nettle plant, which if touched causes a violent stinging wound, having every appearance of a burn. This plant makes it very uncomfortable some times, when a rare bird is shot and falls in a thicket of them. A number of beautiful views of Gulls, Cormorants and the nests and eggs of the Yellow-billed Cuckoo, Yellow-breasted Chat, Song Sparrow, Veery, and others were exhibited. The three plates showing a Puffin's burrow, its eggs and young were especially interesting, and a picture of the young of the Kittiwake in their cliff nest, afforded a striking example of protection by coloration.

Prof. A. S. Blackmore showed an interesting set of plates, examples of the recent advances in visual instruction. He showed what excellent results could be obtained by placing a properly focused telescope in front of a camera lense, for taking distant pictures, and said that rare specimens might be photographed in this way, the exposure requiring but .01 second. A series of views, belonging to the Dept. of Public Instruction were displayed and explained by Mr. Chapman. A field of

daises and clover was cast upon the canvass and then in another view the feathered inhabitants; and so on a stream and the Kingfisher; the deep wood and its inhabitants. Two slides showing Cormorant life on a small island, west of Hawaii, with its millions of birds and many more millions of eggs. Recently Yankee enterprise has built a railroad through their breeding ground for the purpose of collecting their eggs, which they take by the carload.

Wednesday morning was opened by the secretary's report of the preceeding day, after which John N. Clark read an interesting paper on his ten day's trip in the mountains of northern New Hampshire. He seemed to have a happy faculty for finding nests. Among the things which he mentioned was that he discovered a Hermit Thrush's nest, containing four eggs, which his companion warned him not to touch, saying that if he did so the bird would either destroy or remove them. Laughing and saying that he was not so superstitious, he examined them, and imagine his surprise when upon returning again, he found the nest empty. Upon the close of his paper, Mr. Oberholser corroborated the statement, that the eggs of a Hermit Thrush sometimes suddenly dissappeared. He had watched the nest and eggs at a distance to see if the parent would return, and failing to do so, he had again looked into the nest, finding it empty. Evidently a mystery. The only plausible reason which could be advanced was that a snake had eaten them, the nest being on the ground, and consequently of easy access.

The renowned, venerable Dr. Elliott Coues, in his original entertaining manner, gave an intensely interesting talk upon Audubon. He began by saying that "in 1826 there appeared in England an obscure man of fine form, striking personality, and engaging manner.

In the short period of five years, this obscure man, was lifted from his obscurity into fame immortal." When he returned to America, he brought his wonderful portfolio of paintings of British birds in natural colors. Assisted by the secretary, Dr. Coues lifted the massive portfolio, (measuring $2\frac{1}{2}$ by $3\frac{1}{2}$ feet) upon the table. It had originally been very handsome, of leather and brass bound; although now it is very dilapidated, having lost three of its corners and being torn and scratched. But portfolios of Audubon's are not always brought empty even to an A. O. U. convention in the Museum of Natural History," said Dr. Coues, and every one anticipated a pleasant surprise, nor were they dissatisfied. Painfully slow the eminent ornithologist opened the covers and tantalizingly he cut the string which bound the contents, then held up one of the original drawings of John James Audubon. In his latter years Audubon had a very original way of drawing his bird pictures. If one had chanced to look at the drawing of one of his sons, they would have seen a funny vacant space in the middle, and it was into this space that Audubon pasted his bird picture, having cut it out around the edges, the boys drawings forming the background. But the question arose as to the descriptive matter for his many plates, and Dr. Coues held up the original manuscript of Audubon's Life histories. "Miss Audubon has a habit of giving a sheet of this manuscript some times, to her close friends and insisted upon my taking two" said the scientist.

Dr. Coues then proceeded to give some interesting inside facts concerning Audubon's efforts to obtain a scientific man who could give satisfactory technical names to the birds which he had discovered and given an English nomenclature. His first efforts were to secure William Swainson who although very learned had a "wheel in his head."

In Swainson's reply to Audubon's letter he said that many times before he had offered to give technical names, but had met with solid refusals, and now that Audubon wished to use the knowledge which had taken twenty long years to acquire without giving proper credit even on the title page, he felt obliged to refuse. Thus it was that William Macgillivray was given the task of applying scientific names. This said Dr. Coues averted a terrible crisis which would have taken place if either Swainson or Audubon had undertaken.

Recently Messrs. Charles Scribner's Sons have consented to publish Audubon's European Journal of 1833 and the Missouri Journal of 1843. Dr. Coues said that he had read the proofs, and so one can see that it is well under way. Audubonian societies are springing into popular favor and through their efforts an immense amount of good is being done both in protecting bird life and popularizing ornithology. At last the people are beginning to realize the importance of Audubon's work, and have erected monuments in New York and New Orleans and others will follow.

As the Doctor spoke he distributed a number of Audubon's original pictures of birds together with some of his son's, John Woodhouse, through the audience. A photo of Audubon's oil painting as it hangs in the dining room of the family in Salem, N. Y., showed the naturalist as he appeared in his earlier life. Dr. Coues then summed up by saying that "when Audubon was good he was very good in his way, and when Audubon was bad he was very bad in his way" that is, in regard to his bird pictures. He then compared the rising young painter, Louis Agassiz Fuertes, with Audubon in this way and then criticized some of his pictures in a friendly way. After the Doctor had finished and retired Mr. Fuertes arose and walking up to Dr. Coues shook his hand, and although one could not hear

what he said, still one could see the broad smile which lit up the Doctors face, as he gave the young painter an encouraging pat.

"Is Uniformity in Local Lists Possible?" by Mr. J. Dwight, Jr., received a great deal of opposition. His plan was to give technical words in the first declension for the names we now use to describe birds on our local lists. The technical word is to be placed after the name of the species thus, he would have Downy Woodpecker (habitants) instead of, The Downy Woodpecker is a resident through the year, and breeds. His plan had its merits, it saved time in making lists, and would save a great amount of circumlocution, but the principal objection was the bringing so many more confusing foreign words into the study of ornithology would not be desirable, as already we have too many.

Mr. Harry Oberholser then gave a brief address on Liberian Birds. He began by giving a description of the physical conditions of the country and gradually led up to the subject of its feathered inhabitants. His descriptions were exceptionally good.

Dr. Coues informed us that something interesting was going to take place out side the Museum. This was rather vague but all followed Dr. Allen out side, where we saw two stuffed partridges, one in its natural feathers and the other with the back feathers of another bird fastened upon its breast, making it the exact color of the ground. Mr. Abbott H. Thayer explained that if we would stand back twenty-five feet or so, we would easily see that the ground colored bird was plainly visible, appearing black, while the other was much less conspicuous. He had colored two sweet potatoes one dirt-brown and the other brown on top gradually shading down to ashy underneath. They were strung on a wire so as to raise

them from the ground. From a distance of twenty-five feet the brown sweet potato was very plainly seen, but the other was scarcely visible. These experiments were to show that animals having lighter under parts were much less conspicuous than if they were a solid color, because, light coming from above cast a shadow below, thereby making the lower colors look darker. This experiment was entitled on the program, "Further Demonstrations on Protective Coloration."

On Thursday the Committee on Bird Protection made its report, which was read by the chairman, William Dutcher. He said that thousands of pamphlets had been distributed, and many news paper articles have been printed relative to the cruelty by which feathers were obtained for millinery purposes, yet women pleaded ignorance and continued to wear feathers. "The Terns of Penikese Islands, Mass" by Mr. G.H. Dutcher was an interesting paper which occupied a great deal of attention.

On Thursday afternoon at a few minutes past four the convention adjourned. This years Congress was probably one of the most interesting held during the fifteen years of its exhistance.

Early Nesting of *Sturnella Magna* *Neglecta*.

While hunting in the Spring of 1893 I found a nest of the Western Meadow Lark in a field near home. The nest was made of wire grass and was placed in a clump of grass. It contained two whole eggs and three broken eggs, so that the nest must have been finished March 10th.

I am certain that it was a new nest for the birds were around. The eggs were normal in all respects.

H. D. WATTS,
Compton, Cal.

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

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Are Ornithologists Cruel?

BY CHARLES L. PHILLIPS, Taunton,
Mass.

Cruelty is many times unjustly attributed to naturalists, and especially to ornithologists, by thoughtless persons. I do not mean to assert that ornithologists are never cruel, but that the true avian scientists are, as a rule, just as human as many other classes of intelligent men to whom inhumanity is very seldom imputed. Of course we all

know that in nearly every walk of life certain persons are encountered who are wantonly cruel. This unfortunate characteristic appears to be natural, and further, they do not seem to realize that they possess a tendency which induces others, of a more gentle and kind disposition, to judge them harshly.

But let us revert to ornithologists in general. Are they cruel? Many will say so but principally illiterate or shallow minded persons. Why? Because they do not give the matter logical consideration, but speak on the impulse of the moment. Very likely the ornithologist has a deeper affection for his favorites of the feathered tribe, a more sincere admiration, and would do more for their general protection, than the very ones who call him cruel. In fact, I know he would, and I take my own inner-consciousness as a criterion, because I am an ornithologist, and my thoughts and inclinations are open to my revisions, while those of my fellow lovers of the science are not. Ornithologists kill birds and preserve their skins, because they have a thirst for knowledge; because they wish to know the birds better than can be done by meandering through their sylvan retreats and making observation at a distance.

I think that thirst for knowledge was placed in man by the Creator as an essential factor toward progression. And it is just as natural for man to satisfy that craving, as to drink to quench thirst, or to eat to appease hunger. We follow that pursuit, for which we have a natural tendency, and if our brain development leads us to become an ornithologist, we must sacrifice more or less harmless birds so that we may not only educate ourselves but that we may learn that which will interest others to whom it is transmitted.

Reptiles, beasts, and birds of prey, hesitate not to appropriate birds by the million annually to satisfy their hunger

for flesh, which was given them by the Omnipotent. When birds are ruthlessly torn to pieces and devoured they help to keep life in the captor for a few hours only, but when they are taken by the naturalist he preserves and keeps them in his private collection, or places them in a museum, where they usually remain many decades, and during that time they give hours of pleasure and instruction to all lovers of natural science. After making this comparison can we conscientiously say that the ornithologist is more cruel than the designer of all things, who ordained that harmless and beautiful birds, of all kinds, should be rent and demolished by merciless beaks and fangs? I think not. It seems to me the cruelty of the naturalist is very small in comparison, and that the collector of birds, for scientific purposes, is perfectly justified by the glaring example set by his Maker.

One more point. The naturalist is often called a cruel wretch by the masses. How far is their judgment consistent? With one, if you say: "That bird is a Kirtland's Warbler and its skin is worth six dollars," the person will immediately lose sight of the wickedness, and no doubt, he will want to try collecting specimens himself. Further, some think any thing that is very nice to eat, it is perfectly allowable and justifiable to kill. It matters not whether it be pretty or useful. That class will judge by their palate and stomach. Oh, shallow humanity!

If God has willed that repulsive reptiles and brutal beasts shall have their choice of food from the most beautiful, gentle, melodious, and consequently pleasing, of the animated species of the earth ought it to be called cruel if man in the interest of progressive knowledge destroys a few birds? Every intelligent reader, after due consideration of the subject in hand, will, I think, say emphatically: "No!"

Birds of Montana.

In writing about the birds of Montana, I will not endeavor to write about all the birds but only such as I have come in contact with this last summer and last winter.

I will begin with the winter residents. Along in November when we have a cold wave we can see the little Snowflakes flying about in flocks uttering their twittering chirup; sometimes mixed with them may be seen a few Rosy Finches. There are not so very many Rosy Finches that winter in this locality, but there are quite a good many when it is very cold. The Snowy Owl comes down from his summer home and visits us during the winter, as can be shown by the number of stuffed specimens which are found among the different collections. I have seen the Canada Jay and Long-crested Jay here also but think they are only winter residents.

Those of the birds which stay here all the year are not many. We have both the Golden and Bald Eagles which stay the year round. The Golden Eagle breeds here but I have been unable to secure any eggs. They build in pine trees.

A boy told me last summer of finding a nest of a large black bird; he described the bird and the four eggs which the nest contained, and it must have been that of a Golden Eagle, but what was peculiar about it was that the nest was placed upon a hill side, which was pretty steep but not so steep but that the boy could walk up to it. There is an old nesting place near here where they have reared their young for years. I climbed the tree and the nest was about five feet high. For some reason they did not build there this year, although I see them around. A young man told me he shot at one of them and that may be the reason for their leaving the place.

On the 12th of December I went to look after a bait which I had set for Coyotes. and on the way near the bait I found a Golden Eagle lying upon his back, I walked up to it and saw where the Coyotes had danced around him, but the eagle was alive and had kept the Coyotes away with his large claws. I turned it over and it wobbled off a few feet and then looked at me. I went on to my bait and then came back and by driving the eagle and carrying him part way I got him home and put him in the stable. He seemed numb and stiff and I think he got a dose of strychnine at my bait, but not enough to kill him. I feed him Jack Rabbit and he is getting quite lively. I saw three of his fellows today.

I do not know of the Bald Eagle breeding here but am told they do about fifty or sixty miles from here. I have seen the birds here but do not know why the Gallatin Valley is not blessed with at least one pair. Clark's Nutcracker stays here the whole year and breeds in the pine covered hills. The Long tailed Chickadee stays here and breeds, I found a nest in an old stump. The nest was in a hole and made of fine squirrel hair; it contained 6 eggs pretty well incubated, so that I could not make a first class set of them, although I saved the set. The birds are plentiful but the nests are hard to find.

Then we have four species of Grouse, the Columbian Sharp-tailed, Sage, Gray Ruffed and Dusky Grouse. I found four nests of the Dusky last summer but only secured one set; the others were sucked when I found them. The American Dipper I have seen here in the winter and know that it breeds here, as I have the nest and eggs which I collected last summer. The nest is a beauty, it is made of moss, which all sticks together in a ball, with a hole on the side for entrance, on the inside it is lined with dry grass and the bottom covered with dry leaves upon which

rested the four white eggs which resemble those of the Purple Martin.

The summer residents are quite numerous but I will not mention all, as this article is getting too long. Lewis's Woodpecker breeds here, they make holes in live trees as well as dead ones in which to rear their young. I found a nest last summer and as both old birds were flying around and it was early for them to be laying, I was in no particular hurry to dig into their home, but a few days afterwards I went to the tree prepared with climbing irons, small saw, hammer and tacks besides a box and cotton, etc I got to the hole and started to measure the distance with a scoop net and found it to be about two feet, but listen, "What is that music which breaks on my ear?" It is the cries of the young birds. I come down the tree and leave them to their happiness.

I had quite an experience with Maryland Yellow throat. I found a nest situated in the ground, well hidden, it contained four eggs. I could not get a very good look at the female and as the male did not put in an appearance I had to flush the bird repeatedly and lie close to the nest while she came back and went on. I looked into the nest again and behold there were five eggs. I was quite sure what it was but to be real sure I decided to bring my gun along the next and secure the bird. The next day my brother looked into the nest and there were six eggs, two days after I came along with my gun, but before shooting the bird I looked into the nest, when I was surprised to find four young birds with two eggs just beginning to addle. I did not shoot but satisfied myself with a look at her and by finding another nest of the same species, the female of which was not so shy I saw what both birds were.

We have at least seven species of Hawk and four of Owl which I am sure nest here as I have seen them here in

the breeding season. I have found the Long-billed Curlew, Bratramian Sandpiper and Killdeer with young.

AMOS F. PYFER,
Salesville, Mont.

A Collecting Trip in Old Virginia.

It was a beautiful Spring, with that sweet freshness about it that only a TRUE lover of Nature can appreciate. The woods now covered with Spring flowers rang with melody from the throats of its little feathered inhabitants. The sweet song of the Cardinal, the Mockingbird and the Red-eyed Vireo could be distinguished from all others. In the distance the loud raps of the Red-headed Woodpecker could be heard as he beat his morning tattoo on some lifeless tree.

"Just a morning for a stroll in the woods!" I said to my companion, a true lover of Nature. "Right you are 'old Sport' and I'm with you." He said these words as he disappeared in the house for his collecting box. So armed with the collecting box we started for a collecting trip in Old Virginia. As we strolled through the woods above described our attention was attracted by a peculiar humming noise above our heads. We turned quickly and were much surprised to see a Ruby-throated Hummingbird swinging backward and forward in the air. We immediately sat down and watched the little fellow. After swinging there a few moments he flew and perched himself on a dead twig above our heads, and then again with a nervous quiver he alighted on a bed of moss. Our expectations were correct, his nest was near. My companion quickly fastened on his climbers and in a few moments was rewarded with two pearly beauties, pure white about the size of a pea. Placing these carefully away, we again started.

We had gone but a few steps when a Whip-poor-will flew almost from under

our feet leaving behind two beautiful eggs. The nest, if I may call it by that name, was only a pile of dry leaves. The eggs were cream colored, thickly blotched and spotted with light brown and lilac. We placed them in the collecting box and started again.

It was at least a half hour before we found another but this time we were rewarded indeed. My companion had stopped to watch a saucy squirrel as he "skampered" away, shaking his bushy tail, as if bidding defiance to all mankind, when a noise like thunder was heard to his right and a magnificent Wild Turkey hen arose high in the air and disappeared in the thick brush in front of us. We both made for the spot from which she had flown and much to our pleasure found a neat nest containing 12 eggs. The ground had been slightly indented and lined with feathers, bark, etc. Packing these away we joyfully left for home.

On our way back we found nests of Red-Eyed Vireo, Red-headed Woodpecker, Cardinal, etc. After enjoying a good supper we went to bed and dreamt of the future when we would again take a stroll through the forests of Virginia.

JOHN W. DANIEL, JR.,
Lynchburg, Va.

A Nest of the Barred Owl.

On Mar. 24, 1894 I found a nest of the Barred Owl containing one egg. I returned on the 31st and took the set of 2 beautiful white eggs, on which Madam Owl had just begun the duties of incubation. The nest was in a cavity about 10 inches deep, in a hollow linn tree; formerly occupied by a squirrel. The eggs were laid on a nice bed of leaves, evidently provided by the former occupant. The cavity was only 28 feet from the ground.

E. S. CRAFTON,
Plattsburg, Mo.

THE MONARCH CHAINLESS.

A Bicycle Gearing Absolutely New, Novel, and Practical.

In their indiscriminate haste to announce the making of chainless wheels, some manufacturers have tumbled over each other in the endeavor to be in front. To be in front is a spasm, to "keep in front" is sustained energy. To utter a truism is one thing, to live up to it is another.

The spirit of the aphorism of the Monarch Cycle Manufacturing Company, "Ride a Monarch and Keep in Front," is well illustrated in its latest product, The Monarch Chainless. Alive to the times, the company will produce a chainless bicycle which has been proven by repeated tests to be superior, in its class, in every particular.

Two surfaces that will roll on each other will transmit motion from one to the other. If the surfaces are comparatively smooth, the motion is transmitted by friction. But, when the surfaces are provided with projections, the motion, although it is unchanged in nature, is transmitted by direct pressure, and it is irregular unless the acting surfaces of the projections are carefully and exactly shaped to produce an even motion. It is the difficulty which is experienced to produce these perfect projections, when bevel gears are used, which leads the experienced mechanic away from them. Long experience in Sewing Machine manufacture has taught the Monarch Company that whatever transmission was used, bevel gears were not to be considered if easy running was to be thought of. The result has been a driving gear which is excellent in its easy running qualities.

The mechanism is simple. The crank axle and hub gears somewhat resemble the familiar sprocket wheels, the noticeable difference being the teeth which are closer together and V shape in cross section instead of four sided. The shaft connecting the two is provided at each end with a pinion having roller pin teeth which run in and out of the wide angle openings between the gear teeth. Each set of gears is enclosed

but should they from any cause be exposed the action of the pin teeth is such that they are self-cleaning, forcing mud and dirt out from between the teeth. One of the chief objections urged against chainless wheels by mechanics is that should the rear frame become twisted or out of line, there would be a consequent binding of the mating gears. The Monarch chainless is entirely free from this objection inasmuch that the junction of the pinions and gears form a type of the ball and socket joint, thereby permitting free running under the conditions usually met with in bicycle riding. A particular advantage which this gear has, and which gives it the highest efficiency, is the direct lift as against the end thrust which is common to all bevel gearing. This end thrust is a prominent factor in friction and frame strain.

Another point to be counted in favor of the Monarch gear is, that it is not of delicate construction although comparatively light in weight.

As stated by Grant, the well known authority on gears, "The pin gear is particularly valuable when the pins are made in the form of rollers for then the minimum of friction is reached." The friction between the tooth and pin, otherwise a sliding friction at a line bearing is, with a roller pin, a rolling friction. When properly made, there is no form of tooth that is superior to the roller pin tooth.

While the Monarch company is warranted from the study of experts in placing its chainless machine on the market as the best type of that class, its faith in the chain wheel is in no way diminished. It will continue to keep them in the forward ranks of that type of bicycle which is yet the choice of the majority of the people. In line with the general policy of the Monarch company, the price of its chainless will be \$100.00, which will give a complete line, including chain machines, ranging from this price to \$40.00.

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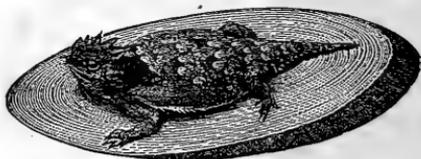
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OÖLOGIST.

Monthly.



VOL. XV. NO. 3.

ALBION, N. Y., MARCH, 1898.

WHOLE NO. 142

Wants, Exchanges, and For Sales.

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145 " " " " June, "

150, " " " " Nov., "

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Red-tailed Hawk, 2 to 3	.25
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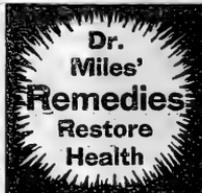


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THE OÖLOGIST.

VOL. XV. NO. 3.

ALBION, N. Y., MARCH, 1898.

WHOLE No. 142

Bobwhite.

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This species, the celebrated gamebird of the Eastern United States, is common in suitable localities. The clover, wheat and sage fields together with pastures and woods are where they will be found. The greater part of the year the Quail is found in coveys pairing in early spring some time in April; then each pair selects a particular locality where they remain to nest during the summer.

During the mating season the well known call of the male can be heard at intervals in the morning and late in the evening throughout the woods. By imitating the call he will come running through the grass, stopping every few yards to listen or to look in all directions to see if there is an enemy near, but if you have been perfectly quiet he will keep coming nearer until he finds out that he has been deceived. When you have him near, careful study will always be rewarded by finding out something new and interesting concerning his habits, although a somewhat common bird. It pays to watch even the commonest of our birds for we too often get the idea that if a bird is found in abundance it has no peculiar or unknown habit; the trouble lies in our not observing carefully.

Their flight is one of the most marked characteristics concerning them. When flushed it flies or rather sails swiftly in an almost straight line, which is one reason for its being prized so much by sportsmen. Sometimes it loses its life by attempting to cross a river, their strength giving out before the opposite shore is reached.

Often after having been flushed sev-

eral times they will alight in trees. Remember very well the first time I ever found any perched in trees. I was out gunning and had flushed a covey, but not being experienced in shooting, banged away in vain; the birds scaring me when they flew up almost as much as I frightened them with my gun, but I managed to see them as they sailed around a pine thicket. Thinking that I would redeem myself next shot, hurried on, but when I reached the place my dog searched everywhere without any result. Soon he began barking up into a thick pine and upon close investigation found the tree almost full of Bobwhites but as they had so cleverly hid themselves left them undisturbed.

This noted bird is about extinct in some localities and fast becoming so in others on account of the persecution it suffers. Some say that they pull down the heads of wheat and eat the grain. That may be true, but suppose it is, is that any comparison to the good these birds do? I say, "No," and if the stomach of one is examined everyone else will say the same. Their food consists mainly of seeds of various kinds, berries, bugs and stray grain. In the winter when these are covered by the snow, they will be found huddled around trees, eating seeds of weeds and frequently will go into barnyards to feed with the domestic fowls. During the severe winters in 1893 and 1894 hundreds of Bobwhites perished because the bugs were killed by the cold and the seeds were covered by the snow, so that the poor birds were left to starve and freeze to death.

At this time they were very tame and and some heartless hunters took advantage of their emaciated condition

by going out and searching for a covey, which of course would be found huddled together, so that at one shot all were killed. One hunter told me of his getting over one hundred birds in this way, sometimes killing fifteen at once. With this going on, the Bobwhite will soon be compelled to seek shelter in the dense and retired woods, just like our most magnificent gamebird, the Wild Turkey, has done, having been persecuted by the so-called sportsman but whose proper title is the "Destroyer and Persecutor of Innocent Birds."

Another cruel way of killing them is by netting, a practice which has not been very long used. When a covey is found the net is put into position and the thoughtless birds allow themselves to be driven into it by men on horseback. In this way the whole covey is caught.

Once had the opportunity to see how this was carried out and I never wish to see such a scene again, for it was really heart-rending to see those homeless little birds murdered. Oh! if before they went into their death trap, the thought would have struck the leader to fly, for then all would have followed and escaped the awful end which they met a few minutes later. Dogs had been sent out searching the fields and soon a beautiful pointer suddenly stopped. Such a picture, with his left front foot slightly raised, his tail erect and every muscle quivering; for he had found a covey of fifteen Bobwhites, who thoughtless of the danger which they were in, remained still. Soon a net was placed several yards in front of where the birds were, and two men came up on horseback to drive the poor birds into the net. The worse part was later on when all had been secured. Then the work of destruction commenced. After the skulls of the innocent birds were mashed on the brain, they were thrown in a bag; there to die in agony.

The Bobwhite is one of the best friends the farmer has and it is with a sorrowful heart that I think of the way they are treated in return for the harmful insects and destructive bugs, which would, if not eaten by these birds, destroy half his crop. One very sensible farmer once said to me, "Several years ago I would kill a Partridge as readily as a Crow but once I saw a whole covey in my wheat field destroying bugs and insects which would otherwise have ruined my crop and since then have never killed one." Another said, "Would rather have my best dog killed than a covey of birds." But still the destruction of our gamebird goes on and unless some new and unforeseen restriction arises, the familiar and well known note of the male will not be heard echoing throughout the woodland or when we go collecting will we be surprised by the whirl and rustle of the wings of a covey which have been startled from its roosting place. May the day be far off when we shall say:

"Once they were here but now they're gone
The Quails have perished, we're left to mourn
And weep without a comforter,
These birds can ne'er return."

All the larger Hawks are enemies to them, although their food consists mostly of mice, grasshoppers, rats, frogs, etc., if a Quail is seen it is almost sure to be caught and eaten. I have seen both Cooper's and Red-tailed Hawks chasing these birds. It is very likely that many of their nests are broken up on account of being placed upon the ground, and but for the large number of eggs laid, there is no doubt but that they would be very rare by this time.

The young from a nest, together with the parents, will remain together during the whole winter if not disturbed. They always roost upon the ground sometimes in the middle of an open field, often in a thicket or in the woods, and when roosting they sit near together.

er in a bunch with their heads outward, flying in all directions when startled; then soon utter their call-note and collect together.

Their nests with fresh eggs may be found from April to July, two and sometimes three birds are reared in one summer. The nest which is placed in grass, sometimes under a bank, but more frequently under a large tuft of sage or clover is not very easily found unless the female is flushed; the materials used for construction being only of grass put in a hollow scratched out by the birds. Both male and female assist in building but do not go very far from the nest for the material. It is arched over having an entrance on the side. If the birds are disturbed while building it, they will leave, but only to go somewhere else and start another right away.

The eggs vary in number. Nests have been found with ten eggs, the least, and twenty-five, the most, but fifteen to twenty is the usual number. The color of an egg is pure white; after remaining in the nest a short while it becomes stained. In shape they are pointed at one end while perfectly round at the other.

They will not leave the nest until almost trampled upon. When it does leave, if incubation has commenced, it will not rise but runs along beating the ground with its wings and feigning lameness, trying to draw the attention from her nest of eggs.

The young leave the nest soon after hatched and have a peculiar peep similar to a young Turkey and usually utter it two or three times in succession. When disturbed they will give several loud peeps while the old birds will fly about the intruder keeping up a continual fuss. Sometimes they will run around with their feathers ruffled up and wings down making somewhat of a cackling noise.

H. GOULD WELBORN,
Lexington, N. C.

Exceptions.

These exceptions are nothing more than random notes but perhaps may be of value to fellow collectors.

The Spotted Sandpiper (*Actitis macularia*), says Oliver Davie: "The nest is simply a depression in the soil, sometimes constructed of hay and moss. The eggs like all those of the waders lay in the nest with the small ends together."

I found only one exception to the position of the eggs in the Spotted Sandpiper—in this case the small ends were all lying in the same direction. I flushed the bird off the nest and the depression the five eggs made in the nest showed they had lain that way for some time at least. As to the composition of the nest in this locality, the majority of nests were located beneath a weed or a willow shrub where bits of dead black leaves formed the lining for the nest. As authority for this I have sixty-five sets of *Actitis macularia* before me taken from nests none of which compared to that of Davie.

Mourning Dove (*Zainaidura macroura*). In speaking of the position of the nest of this species Davie says, "The nest is placed in the horizontal branches of trees or stumps or on the top rail of old snake fences or rocks, in bushes and in treeless regions near the ground."

Out of personal examination of perhaps some three hundred nests of this Dove about one nest out of twenty was upon the ground and this is a well timbered country.

Cooper's Hawk (*Accipiter cooperi*). Davie says, "The number of eggs vary from four to six, rarely the latter number, and they may be found in various sections between April 7 and May 20."

Out of three sets of the *Accipiter cooperi* taken by me last year two sets were of three and one of four. The latter set was taken about June 20th.

One set of three was about half incubated so there could be little doubt but that the complement was complete.

Yellow-billed Cuckoo (*Coccyzus americanus*), "Being somewhat nocturnal in their habits, the notes of both our Cuckoos are often heard at night."—O. D. But he fails to note the nocturnal disposition of the Yellow-breasted Chat (*Icteria virens*) which sings tenfold more in *noctus* in this locality than does the Cuckoo.

Belted Kingfisher (*Ceryle alcyon*) Mr. Davie says the number of eggs is six but when a full complement is laid seven or eight. Five and six and sometimes seven constitute a set in this locality.

Red-headed Woodpecker (*Melanerpes erythrocephalus*). Davie says, "The egg are five or six in number." On the 6th day of June, 1897, I examined a nest of the *Melanerpes erythrocephalus* and found four young birds—one at least a week younger than the rest. While Mr. Davie made notice of the uneven hatching of the Cuckoos and Belted Kingfisher he never mentioned this fact in the Woodpecker which I have frequently noticed in my collecting trips.

Wood Pewee (*Contopus virens*). In concluding a description of the nest of this bird Davie says— "Externally it is covered with pieces of lichens which are held in position by webs, and the structure thus ornamented is indistinguishable from a natural protuberance itself."

Out of a personal examination of over a hundred nests only one contained any lichens at all.

The remarks of my observations are confined to Park county, Ind.

WINFIELD S. CATLIN.

A February Trip.

On Feb. 22, 1893 W. H. Osgood and I went to the mountains to look for

Horned Owls and Eagles eggs, but we found it too early owing to heavy rains and continued cold weather, so we repaired to a grove of cypress trees and a number of Anna's Hummingbirds darting about indicated nests. I soon found a nest 15 feet up on a horizontal cypress limb which proved to contain two eggs about half incubated. Mr. Osgood also discovered a nest of same bird and on climbing to it found one young and the remaining egg about to hatch.

C. BARLOW,
Santa Clara, Calif.

Pronunciation of Scientific Names.

Among the answers given in a recent OOLOGIST to the questions quoted in the September issue I find the author stating at the end of No. 5 that it is better to adopt the English pronunciation for scientific terms. Will the author of this advice kindly tell why it is better for the nations having accepted the English language in their constitutions to adopt a method of their own, when all the other nations are apparently well satisfied with the Roman pronunciation?

Why alter an old established system when it is satisfactory in every way? Just to save some the trouble of committing those few rules of pronunciation to memory?

I hope this is not the reason, for in my estimation it would be as just to adopt English terms altogether (as indeed some have had the nerve to advocate) and throw our beautiful old system into the attic. When the English speaking nations can boast of all the world having adopted their language, then and not before would it be advisable to change a system so universally employed as the one under consideration.

H. SCHWARZ,
St. Louis, Mo.

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Elevated Towhee's Nests.

In reply to an article by Mr. C. Piper Smith in the April '97 Oölogist I submit the following notes.

While returning from Indianapolis on May 21, 1897, in company with a friend we came to a dense woods bordering the road about 10 miles north of the city. He got over the fence and examined some bushes along it. Returning he informed me that he had found nothing but a grass-lined nest in

a bush. I concluded it must be a Towhee's nest, and so it proved, for a week later (May 28) he secured the nest and set. Nest was of the usual construction—twigs, grass-stems and dead leaves and lined with fine dry grass. Eggs were typical, elongate-ovate covered with fine specks of pinkish, and three in number. Nest was placed 18 inches up in a wild rose bush and contained an egg of the Cowbird.

On June 10 I was passing through a large woods and, in skirting a swampy pond, I happened to pass near a dense blackberry bush when I thought I saw a nest in it. Stooping down I saw a nest and also the head and neck of a female Towhee. She flitted off and alighted on a fallen log where she was joined by her mate and where both remained and scolded me during the few minutes I was in the vicinity. The nest was placed 44 inches from the ground and of the same construction as the above mentioned nest and contained three eggs of the same shape and markings as those above. Returning on June 13 I found the nest empty and could distinguish three slight depressions where the eggs had rested.

LOUIS W. BROKAW,
Carmel, Ind.

[Mr. Brokaw died Sept. 3, 1897. The above note was sent the Oölogist a few weeks previous.—ED.]

Some Shore Birds Recently Taken in Orleans County.

The Order *Limicola* or Shore Birds ought to be fairly well represented in Orleans County, for Lake Ontario forms our northern boundary. It seems that this order of birds that the bird-student becomes acquainted with. In nearly every instance it seems that this is the particular branch of his ornithological education that is neglected. I find that this is so in my own case. Perhaps this class of birds is more diffi-

cult to study by reason of their ever-varying plumage, as well as by reason of the fact that these birds frequent the seashore and the beaches of the inland lakes at those seasons of the year when man deserts these places.

□ The writer merely wishes to mention a few species which have been taken along the beach of Lake Ontario in this county, the past autumn—not by himself, however, but by Mr. Percy Smith of this place, to whom all the credit is due. Mr. Smith did the gunning, and I, with his consent, do the recording of his achievements.

On September 9, 1897, along the bank of Lake Ontario, in the town of Carlton Mr. Smith secured a young male of the Semipalmated Sandpiper, a young male Semipalmated Plover, a young female Black-billed Plover, and a young male Knot (*Tringa canutus*). The last mentioned bird is of rare enough occurrence in these parts to warrant more than passing notice. The Knot breeds in the Arctic Regions, and winters south from Florida, following very closely the Atlantic seaboard in the course of its migrations. Occasionally, although not often, in may occur on the larger inland lakes during migration. Two or three specimens have been taken at different times on the Lake Erie coast in the vicinity of Buffalo. The specimen taken by Mr. Smith on September 9th is the first one ever secured in this county so far as I know. The Knot is the largest of the Sandpipers. This specimen measured as follows: Length, 10; extent, 20.50; wing, 6.25; tail, 2.50; bill, 1 3-16; tarsus, 1 1-16; middle toe, 1 3-16; middle claw, 3-16; head, 1 3-16.

It was in company with a young female Black-bellied Plover, when shot. The weather at the time was pleasant and had been for some time.

Again on October 16, 1897, Mr. Smith spent another day at the lake, visiting the same locality. The day was not

pleasant, but presaged an approaching storm of wind and rain. Various flocks of different kinds of Sandpipers were flying from the beach out over the water, and continually returning again.

Four different species were secured by him. These were the Sanderling (*Calidris arenaria*), a young male, the Pectoral Sandpiper (*Tringa maculata*) male, the Red-backed Sandpiper or American Dunlin (*Tringa alpina pacifica*), two specimens shot; both female young of the year, and the White-rumped Sandpiper (*Tringa fuscicollis*), a male. The writer does not consider any of these four Sandpipers as very common migrants here. The Sanderling is undoubtedly more common than the others. The White-rumped Sandpiper is very rare here, even more so than the Knot; leastwise fewer of them seem to have been taken in this section, for I fail to find any published record of this bird having been taken before in Western New York, although McIlwraith mentions it in his "*Birds of Ontario*." A description of this rare Sandpiper as taken by Mr. Smith, may be of interest in this connection:

"Sex, male; length, 7 $\frac{1}{2}$; extent, 5 $\frac{1}{2}$; head, 1; tail, 2; wing, 4 15-16; bill, 1; tarsus, 1; middle toe and claw, about $\frac{1}{2}$; hind toe short and slight, about $\frac{1}{2}$; tibiae, bare, about $\frac{1}{2}$. Bill, black, moderately slender, flattened at tip. Feet black. Toes, slender, not webbed. Top of head finely mottled with dark and reddish-brown and white. Back, dark brown, most feathers narrowly edged with reddish-brown. Wings, brown. Narrow, longitudinal white band formed by tips of greater coverts. Smaller feathers of wing either tipped with reddish-brown or white. First primary, longest. Tail-coverts, white. Tail, brown, with narrow white edges. Breast and sides of neck narrowly edged with fine brown marks on dirty white ground. Chin, white; and belly

and crissum, white. Front of wings mottled with grey and white below."

Of the Red-backed Sandpipers two specimens were taken. There were quite a number of that species there, and very tame. They were in small flocks. I believe it is a characteristic of this species that they are not at all wary of approach. The gizzards of these birds as well as that of the Pectoral Sandpiper contained small snails.

While the account of these takings is hereby recorded by myself, I desire to repeat that none of the credit is due to me, as I was in another state on each of the above dates. Mr. Percy Smith of this place is entitled to the credit, and if all of our bird-students were as careful, thorough-going and particular with each little detail as is he, we would all know more about our feathered friends than we do today. I have merely assisted Mr. Smith in his identifications.

NEIL F. POSSON,
Medina, N. Y.

P. S.—I have unintentionally overlooked the fact that a Mr. Breed of Lyndonville accompanied Mr. Smith on these excursions to the lake, and he is doubtless entitled to a share of the credit. I desire to give credit where credit is due.

N. F. P.

Breeding of Wilson's Snipe in Western New York.

In Short's "List of Birds of Western New York" the Wilson's Snipe, *Gallinago delicata*, is reported as a migrant and common in some localities, therefore it gives me pleasure to offer the following data as evidences that Wilson's Snipe is at least a rare but probably a regular breeder. In my locality they are common migrants, are occasionally seen in mid-winter and a few pairs remain to breed. My suspicions that they were nesting in this locality were first aroused in 1895 when I noted

the birds ten miles north of here in Potter swamp as late as May 19, and they were verified on the 21st of May, 1896, when I found a nest in the side of a hummock containing four eggs which I have already noted in Vol. 1 No. 9 of *The Osprey*. I also had the pleasure of collecting another set of four eggs on May 12, 1897, by accidentally flushing the female which tried to lead me away from her nest by cutting up all sorts of antics. At first I thought surely her leg must be broken and when her wings began to hang helplessly at her sides as she fluttered around the hummocks, I thought that the poor bird must be in a dying condition' but when I stopped to examine the nest and she suddenly changed her tactics by running back and forth before me, jabbing her long bill regardless of its sensitiveness into the wood, and excitedly pulling up blades of grass meanwhile uttering a plaintive sound.

The nest was rather boldly situated within a dozen feet of a much traveled road that crosses the swamp. It was placed under a wire fence in an open grassy space where the water was about two inches deep. It was scarcely concealed at all except by a few dead weed stalks and the fresh green grass that was just springing up around the nest. The nest of Wilson's Snipe is generally described as being a mere depression scantily lined with grasses, but in this instance there was no depression whatever but a shallow cupped nest built of small weed stems and grass to a height of three inches with a diameter of six inches by actual measurement. The eggs were about half incubated which would indicate that about the first week in May is the proper time to look for fresh eggs. They are of a olive ground color slightly tinged with grayish. The spots are reddish-brown and form "en masse" on the large end and become scarcer and smaller towards the smaller ends and over all there is a few quite

spots of blackish in place of the usual sharp scratchy lines. The eggs measure 1.56x1.03, 1.50x1.06, 1.62x1.09, 1.63x1.09.

Another instance of the Wilson's Snipe breeding here came to my notice about the first of June this year. A young lad showed me two eggs that he had taken early in May from a nest on a hummock in a swampy pasture about one mile north of here.

C. F. STONE.

Branchport, N. Y.

Remarks on "Return of the Birds."

In perusing the OÖLOGIST I cannot help but notice Mr. W. N. Clute's article on the "Return of the Birds" (see page 80).

My note book reads:--Jan. 25, 1897, temperature 30 degrees F. A few American Crows and English Sparrows, only birds seen. They are always around.

Up to Jan. 21, 1897, Canada Geese were abundant but as the temperature went down they decreased in numbers.

Let us turn to 1898. December was a cold month with no snow to amount to anything, but the absence of birds was very marked.

January came in with two feet of snow; the temperature was high except the 30th and 31st, but flocks of from 20 to 100 Slate-colored Juncos are common. Bohemian Waxwings, Tree Sparrows and American Goldfinches are comparatively common. I have also observed a flock of about 40 Cedar Waxwings which "the snow" ought to drive south. Last winter, however, Snowy Owls were more common than this. I have seen but two this winter and had two reported me where last winter they were not at all rare.

Now if snow drives birds south and not the cold why don't the birds go to Dunn Co. (this state) where I understand they have no snow?

It is a warm day today, but the snow

is here nevertheless. In our neighbor's yard there is a flock of 25 Tree Sparrows feeding on the seeds of an ase tree. As I was walking along the street I saw a flock of 6 Redpolls, "but snow drives the birds south."

Canada Geese are very abundant on the prairie (Rock) this winter but there is two feet of snow.

H. H. T. JACKSON,
Milton, Wis.

Trail's Flycatcher.

In this locality Trail's Flycatcher is the most common of its family. It is generally found around hedges but is quite often met with in the hazel brush. It may be seen sitting on some dead branch, every now and then darting after some insect and again resuming its post, while between times it utters its simple song and flirts its tail as if impatient for another insect to turn up. The nest is placed in some upright fork or sodded on a horizontal branch of the hedge or hazel, and is never more than 9 or 10 feet from the ground. It prefers hedges not more than 15 feet high but in one or two cases I have found them in hedges 25 or so feet high and once in a box elder 25 feet up, and once 7 feet up in an apple tree.

The nest is composed of the inner bark of dead hedge and is lined with fine grass and horse hair. Sometimes a few feathers are stuck in quill end down, with the tips arched inward over the cavity. The nest is very compactly woven. A typical nest measures three inches in depth and 2½ inches in diameter outside and 1½x2 inside.

The eggs are three or four in number, of a cream color, spotted with reddish brown spots, chiefly at the larger end. The average size is .70x.58.

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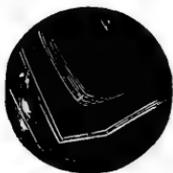
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Short-ear Owl.....	1 00
Screech Owl.....	40
Burrowing Owl.....	20
Yellow-billed Cuckoo.....	10
Hairy Woodpecker.....	50
Pileated Woodpecker.....	1 00
Red-bellied Woodpecker.....	25
Red-headed Woodpecker.....	10
Flicker.....	5
Scissor-tailed Flycatcher.....	10
Crested Flycatcher.....	05
Phoebe.....	15
Black Phoebe.....	15
Western Wood Pewee.....	20
Acadian Flycatcher.....	15
Least Flycatcher.....	15
Skylark.....	15
Prairie Horned Lark.....	15
American Crow.....	05
Fish Crow.....	35
Starling.....	10
Dwarf Cowbird.....	10
Red-winged Blackbird.....	05
Tricolored Blackbird.....	15
Western Meadowlark.....	10
Arizona Hooded Oriole.....	35
Orchard Oriole.....	05
Bullock's Oriole.....	10
House Finch.....	05
Seaside Sparrow.....	25
Sharp-tailed Sparrow.....	25
Lark Sparrow.....	05
California Towhee.....	10
Cardinal.....	05
Gray-tailed Cardinal.....	25
Lazuli Bunting.....	20
Painted Bunting.....	10
Sharpe's Seed-eater.....	50
Scarlet Tanager.....	25
Summer Tanager.....	25
Purple Martin.....	10
Barn Swallow.....	05
Tree Swallow.....	15
Cedar Waxwing.....	10
White-rumped Shrike.....	10
White-eyed Vireo.....	15
Bell's Vireo.....	15
Least Vireo.....	35
Yellow Warbler.....	05
Hooded Warbler.....	50
White Wagtail.....	10
Meadow Pipit.....	10
Mockingbird.....	05
Catbird.....	05
Sennet's Thrasher.....	15
Baird's Wren.....	20
Parkman's Wren.....	15
Oregon Chickadee.....	35
California Chickadee.....	50
Californiaian Busn-tit.....	15
Wood Thrush.....	05
Russet-backed Thrush.....	15

American Robin.....	05
Bluebird.....	05
English Pheasant.....	25
English Sparrow.....	05
Ring Pheasant.....	50
Gopher.....	35
Hammerhead Shark.....	-15
Red-leg Turtle.....	15
Snapping Turtle.....	15
Jackdaw.....	10
Rook.....	10
Maggie.....	10
Missill Thrush.....	10
Song Thrush.....	10
English Blackbird.....	10
Lesser White-th't Warbler.....	10
Garden Warbler.....	10
Reed Bunting.....	10
Green Finch.....	10
Willow Warbler.....	10
Chiff Chaff.....	10
Spotted Flycatcher.....	10
Common Bunting.....	10
Sedge Warbler.....	10
Nightingale.....	25
English Sparrow Hawk.....	35
Great Tit.....	10
English Swallow.....	10
Iledge Accentor.....	10
English Partidge.....	15
Ostrich.....	1 50

BIRD SKINS.

Redpoll.....	\$ 35
Snowflake.....	35
Tree Sparrow.....	35
Slate-colored Junco.....	35
Cedar Waxwing.....	35
Black-and-white Warbler.....	35
Myrtle Warble.....	35
Brown Creeper.....	35

SHELLS.

Murex brandaris.....	\$ 25
" trunculus.....	25
" salaenus.....	10
Eburna Japonica.....	25
Oliva litterata, extra.....	20
Cypraa moneta.....	10
Ovulum gibbosum.....	15
" secale.....	10
Nerita peleronta, select.....	10
Trochus (Livona) pica.....	25
Helix fideles.....	13
Bulimus Bahamaensis.....	15
Partula gibba.....	10
Orthalicus melanochilus.....	25
" undatum.....	25
Liguus fasciata.....	15
Achatinella perversa.....	10
" uniplicata.....	10
" spirizona.....	15
" olivacea.....	15
Pythea pyramidata.....	15
Pissurella barbadensis.....	10
Chama arcuella.....	15
Cardium isocardia.....	15
Tellina radiata.....	10
Fasciolaria distans.....	10
Melongenacorona.....	15

SEA CURIOS.

Precious coral, 1 oz. pkg.....	25
Organpipe Coral.....	10
Creamy Sea Fan.....	35
Yellow Sea Fan.....	35
Sand Dollar.....	10

Phillippian Urchin.....	35
Purple Urchin, select.....	25
Black Starfish.....	35
Acorn Barnacles.....	10
Keyhole Urchin.....	25
Lucky Tooth of Cod.....	10
Hermit Crab in Shell.....	35

MINERALS, &c.

Chialstolite Crystals.....	\$ 15
Coquina.....	25
"Electric" stone.....	25
Chalcedony Geodes select.....	50
GEM STONES, small cut and polished semi-precious stones, many suitable for mounting:	
Sard Trilby heart intag-lioos.....	\$ 15
Opals, Mexican.....	15, 25, 35, 50
Red Onyx.....	15
Black Onyx.....	15
Crocidolite, Tiger-eye.....	10, 15, 25
Lapis Lazuli.....	35
Chalcedony, tinted.....	10
" variegated.....	10
" artificial tree.....	15
Black Ribbon Agates.....	10
Red Ribbon Agate.....	10
Carnelian.....	10
Assorted dozen.....	50
Ditto, selects.....	1 00
Fossil Shark Teeth.....	5, 10
Scaphites nodosus.....	10, 25, 50, 1 00
Polyp Coral.....	10, 25, 50

MISCELLANEOUS.

Arrowheads, ½ doz. asst'd.....	\$ 50
Revolutionary Gun Flint.....	15
Dove Shell from British Guiana exhibited at World's Fair, pkg. of 12.....	25
Chines Horn Nut.....	10
Beetle Nut.....	10
Pkg Liver and Sea Beans, Scorpion in Box.....	15
Broken Bank Bill.....	10
Confederate State Bill.....	10
Chameleon in Alcohol.....	25
Alligator Tooth.....	5, 10, 15, 25
Young Naturalist's Marvelous Collection, '95 ed-50 labelled specimens.....	1 00
Chinese Coin.....	05
Trap Door Spider's Nest.....	50
Mexican Whistle, clay.....	10
7var.unusedCubanStamps.....	25
Resurrection Plant, Mex.....	10
Bird Arrow Point.....	25
Enamel ArmorialStickPin.....	25
Set of Souvenir World's Fair Tickets.....	1 00

PUBLICATIONS.

OÖLOGIST, 20 numbers.....	50
Nidologist, 8 numbers.....	1 00
The Wilson Quarterly and Semi Annual 4 numbers.....	1 00
Natural Science News, 52 back numbers.....	1 00
Back numbers of above publications are all different and of our selection.	
OÖLOGIST, 1892, bound cloth.....	1 00
Penkese, a volume of 96 pages, Giving an acct of Agassiz's summer school at Penkese Island.....	50
Lonks, Prothonotary Warbler.....	50
Shrt, Birds of W. N. Y.....	25

THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERMRY.

VOL XV. NO. 4.

ALBION, N. Y., APRIL, 1893.

WHOLE No. 143

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.
Strictly First-class specimens will be accepted in payment at one-third list rates.

What's Your Number?

Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 143 your subscription expires with this issue
145 " " " " June, "
150 " " " " Nov. "

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

This month's OÖLOGIST was mailed subscribers April 11.

WANTED.--Sets of Terns, Gulls, Ducks, Rails, Grouse, Ibises, Willet, Lapwing and others common and rare. Give cash, sets, etc. ALLEN PETERSON, Woodstown, N. J. A2t

SEE HERE:--On account of moving I want to close up my business *at once*. Send by return mail complete list of wants for estimates on job taxidermy work, skins, sets and curios. Prices will satisfy you. B. S. BOWDISH, Phelps, N. Y.

GREAT HORNED OWLS for sale. I have one pair and one egg belonging to same birds \$6.50. Also one female of the same species, \$3.00. First class work and satisfaction guaranteed. Cash only. Also the following A. O. U. Nos. to exchange for complete sets with data: 333 1-4, 1-1, 1-5; 412 1-7; 103 1-8. Parties meaning business please write. C R. MOSES, Lake Crystal, Minn.

EXCHANGE:--Fine Field Glasses and carrying case, pair pearl Opera Glasses and case, Silver Watch and Rolled Gold Chain, old Paper Money, Stamps and Albums, hundreds of Novels, Story Papers, etc., to exchange for fine Indian Relics, such as Pipes, Arrows, etc., also old coins and eggs wanted. Enclose stamp. R. D. HAY, Winston, N. C. A2t

WANTED.--A few well marked sets of Red-tailed and Red-shouldered Hawk, Broad-winged Hawk, Sharp-shinned Hawk, Osprey and others, also sets of Horned and Screech Owls. I can offer rare eggs from Prybilof Islands, Behring Sea, such as Least Auklet, Ancient Murrelet, nests and eggs of Lapland Longspur, nests and eggs of Aleutian Leucosticte, Murrelets and other rarities found in few collections. W. RAINE, Toronto, Canada.

SETS of 325, 590, 406, 456, 598, 617 and others, to exchange for sets not in my collection. Send list. JOHN G. SCOTT, Greenwood, Ind.

FOR SALE CHEAP.--Scientific Books, state what you are interested in. "Birds," Vol. I and II, half leather, \$1.50. Send for list now. H. NEUMANN, 204 Rock St., Watertown, Wis.

I HAVE \$90 00 worth of eggs in sets left for exchange: one pair of Great Horned Owls, in fine shape will lay in captivity, one year old, for the best offer in fine sets. All letters answered. First come, first served. D. R. WAL-LACE, 940 No. 27 Ave., Omaha, Neb.

DAVIE'S "NESTS AND EGGS," fifth edition, extra cloth, and a *new* subscription to either *The Osprey* or *Recreation* for only \$2.50. The book prepaid. BENJAMIN HOAG, Steph-entown, New York.

CAMERAS WANTED.--Send description. I will give rare Sea Birds Eggs and Hawks Eggs or rare Bird Skins and cash. I particularly want a good 5x7 Camera with tripod and a good hand Camera. W. RAINE, 181 Blecker St., Toronto, Canada.

WANTED.--Bendire's Life Histories, Vol. II. Will give rare Birds Eggs or rare Birds Skins from Northwest Canada and Prybilof Islands. W. RAINE, Toronto, Canada.

DAVID WARD, the lucky gold miner, who brought back the news of a rich find of gold on the American side of Alaska, and who says that the rush next spring will be far down the Yukon on the American side, spent three years in prospecting in Alaska and in that time only received seven letters from home. Since his return he has had more than that many thousands of letters from would-be argonauts in three months. He is now in Philadelphia, Pa., and tries to answer every inquiry concerning the Far North, its perils, rigors of climate and wonderful riches. His practical experience makes his advice highly valuable, and anyone interested in Alaska should avail themselves of his knowledge by writing to him.

FOR EXCHANGE.--Skins of 343, 337, 360, 368, 390, 507, 608 619, 131. Also some good sets for mounted birds. Wants first-class skins of Quail, Grouse and Pheasants. Could use Bicycle. A. I. JOHNSON, Taxidermist, 620 East Grand Ave., Des Moines, Ia. a2t

S. B. Crayton of Anderson, S. C. is now in Cordeal, Florida and expects to collect some nice sets of eggs and curios.

WANTED.—Camera. I want a good 5 x 7 camera, with first-class lens and shutter. Give full particulars with price. J. O. SNYDER, Stanford University, Cal.

SETS of Ridgeway's Nos. with data: 67 2-5, 115 1-3 161 1-4, 233 2-5, 331 1-4, 420 2-5, 431 1-4, 436 1/2, 439 1/2, 438 1/2, 516 1/2, 523 1/2 to exchange for "Premo B" Camera 4x5 in good condition, or photograph stock, or Indian relics. Write first. C. H. SLATING, Almont, Mich.

SKINS of Shore Larks and Song Sparrows wanted in exchange for western birds. Correspondence necessary. J. O. SNYDER, Curator of Zoological Museum, Stanford University, Cal.

WANTED.—Canvas-back, Redhead, Black Duck Eggs, fresh, unblown, want correspondence with collectors of sets from Pennsylvania, Delaware, Jersey, and Southern New York. Have coins, eggs. Write. BENJ. A. CARPENTER, Salem, N. J.

EGGS, Coins, Indian Relics, Paper Money, etc., to exchange for singles not in my collection. Birds of Maine. Knight, new, \$1.00 post paid. W. A. LEE, New Vineyard, Me.

WANT folding view camera, lens and tripod, 8x10 or 10x12. Must be good, very cheap, cash. Have fine Eagle, Owl, Hawk, Buzzard and Osprey eggs. Address with stamp, F. THEO. MILLER, Matthews C. H., Va.

SACRIFICE SALE.—A few more of those nicely prepared sets at greatly reduced prices in order to make room for fresh stock. Send for list. W. L. & R. D. FOXHALL, Tarboro, No. Car.

WANTED.—Autographs of Abe Lincoln, U. S. Grant, John A. Logan, Chester A. Arthur, James G. Blaine, Thomas A. Hendricks, Allen G. Thurman, Walter O. Gresham, G. P. Banks, Thomas Nast, Kate Field, Oliver Wendell Holmes, Harriett Beecher Stowe, Mark Twain, Henry George, Andrew Carnegie, Eugene Field, Edward Eggleston, and any other person of note. Will pay cash or give good exchange for any good autographs. F. O. NELSON, 237 S. Main St., Butte, Mont.

REMOVAL SALE BARGAINS in second-class eggs, a lot of rare eggs for little money, send for list, must clear out before May 1st. Look! Sooty Grouse, 10c; Least Auklet, 35c; Canvas-back Duck, 10c; Gray Ruffed Grouse, 07; Sooty Grouse, 10c; White Ibis, 07; Ferruginous Rough-legged Buzzard, 25c; Red-head Duck, 05; Baldpate, 10c; Northern Eiders, 06; Fulmar Petrel, 10c and 20 other good eggs as cheap, this is as chance to get some rare eggs very cheap. Send stamp for full list of first and second-class single eggs. W. RAINE, Toronto, Canada.

FIRST-CLASS Birds Skins for sale, choice Hawk Owls, \$1.50. Franklin's Gulls, \$1.50; American Scaup, \$1; Golden-eye Duck, \$1; Wilson's Phalarope, 50c; Curlew Sandpiper, \$1; Black Turnstone, \$1; Black Oystercatcher, \$1.75; Canadian Ruffed Grouse, \$1.00; White-tailed Ptarmigan, \$1; Swainson's Hawk, \$1.25; Sharp-shinned Hawk, 50c; Pigeon Hawk, 50c; Northern Waxwings, 75c; European Dunlin, 75c; Turnstone, 50c; Sanderling, 35c; 20 species of Warblers at 25c per skin; 12 species of Sparrows, 25c per skins. Send for full list. WALTER RAINE, Toronto, Canada.

EXCHANGE.—I will give the formula of any proprietary medicine, preparation, violet article, or anything on the market, in exchange for eggs. H. D. VAIL, Norwalk, O.

ERRATA.—In March issue in W. Raine's advertisement our printer priced an egg of the California Vulture at 35 cents. It should have been \$35.00, at which price an egg of this nearly extinct species is a great "snap."—Ed.

WILL exchange sets of 30, 32, 51a, 70, 74, 75, 79, 202, 508, for other sets or for large calibre revolver. J. R. MANN, Arlington Heights, Mass.

VIVE Cameras to exchange, any style, for desirable sets at one-third Lattin's list. Also rare typical singles. Send list of sets and singles. L. D. SUMNER, 503 State St., Madison, Wis. a5t

LOOK! For every 25 cents worth of Bird Eggs, Arrow Heads, or Curios sent me I will send recipes for making eighteen fine inks; maple syrup without maple trees and 25 other receipts. Every fifth one answering receives eggs worth 20 cents. F. W. COLLINS, Garden City, Kansas.

TO EXCHANGE.—Several sets each of 1, 77, 132, 203, 221, 226, 337b, 378, 390, 476, 501c, 622b and California Crow. ALTON BIGELOW, Selma, Calif.

FOR SALE.—Live Bull Snakes, bird skins, mounted birds and mammals. Will collect fresh skins of birds found here, and also first-class eggs. O. S. BIGGS, San Jose, Ill.

A FEW mineral specimens from Klondike to exchange for curios as any kind—what have you to trade. H. STEPHENSON, 239 So. 25th St., Lincoln, Neb.

WANTED:—To exchange A1 bird skins of this locality for A1 southern or western skins or sets. Send for list if you mean business. A. W. PERRIOR, 316 E. Kennedy St., Syracuse, N. Y.

STAMPS to exchange for mounted specimens. The Sparrow and Warbler family more particularly wanted. W. H. SINTON, 1406 Harlem Ave, Baltimore, Md.

COLLECTORS.—I have fine Natural History specimens of all kinds to exchange for eggs in sets, bird and mammal skins, etc. G. H. BRIGGS, Livermore, Maine.

PREMIUMS:—I will sell, in amounts of 50c or over, any of the premiums offered on last page of this month's OÖLOGIST at 1/2 pricelisted for cash—(e. i. \$1 worth for 50c; \$2 worth for \$1, &c). FRANK H. LATTIN, Albion, N. Y.

HAND EGG Blow-pipe for blowing and rinsing eggs. Sent prepaid with instructions for 75c or will exchange one for \$3 worth of A1 sets. DR. M. T. CLECKLEY, 457 Greene St., Augusta, Ga. M3t

WANTED.—Collectors in the United States and Canada to gather and prepare for me, scientifically, birds eggs, in large quantities, in sets with data at a reasonable price. State what varieties in your locality and terms. DR. M. T. CLECKLEY, 457 Greene St., Augusta, Ga. F3t

I received more answers to my ad. THE OÖLOGIST that I could not attend to them all. I exchanged over \$350.00 worth of Eggs and could have exchanged more, had I have had that. J. W. SUGDEN, Salt Lake City, Utah.

BOOKS WANTED:—New or 2d hand copies of Davie's "Nests and Eggs" (any edition); Bendire's "Life Histories of N. A. Birds;" Fisher's "Hawks and Owls" or any standard work or publication on Ornithology or Oology. Will give good exchange or cash. FRANK H. LATTIN, Albion, N. Y.

WANTED.—For every good long handled egg drill sent me I will send a fine highly polished Mexican Opal, suitable for mounting. WALTON I. MITCHELL, Parvenir, San Miguel Co., New Mexico.

EXCHANGE EXTRAORDINARY.—Southern, Northern and Canadian birds eggs in choice sets with full original data to exchange for A 1 sets and large singles. Have employed competent collectors. Carefully selected sets for private collections for sale at a reasonable price a specialty. DR. M. T. CLECKLEY, 457 Greene St., Augusta, Ga.

PARTIES sending me original A No. 1 set with data, eggs not listed under 10c each. I will send a beautiful birds-eye view lithograph 4x23 of Trans-Mississippi Exposition Grounds to be held June 1 to Nov. 1898 together with a 36 page pamphlet with cuts and description of main buildings and other general information. Address, GEO. W. MOORE, care Union Depot Hotel, Omaha, Neb.

THE DR. HAS PROOF.—"I am thoroughly persuaded that it pays to advertise in the OÖLOGIST. I have been one of your subscribers and advertisers for years and do not hesitate to recommend the OÖLOGIST as the peer of all other naturalists' magazines. DR. M. T. CLECKLEY, Augusta, Ga.

FOR SALE.—Printing Press and outfit, almost new. Cost \$12.00. Will sell cheap. Prints card 3x5 inches. Will also collect insects for teachers. For particulars address. G. E. TAFT, 320 Am. Bk. Bldg., Kansas City, Mo.

BLACK Crystallized Slag. Just the thing for your collection. A beautiful novelty. For information address. E. W. KIMBALL, 616 Marine St., Boulder, Colo.

FOR SALE OR EXCHANGE.—I will give one pair steel climbing irons, strapped complete for \$1.25 money or better \$2.50 worth of sets with data. Send list. F. W. COLLINS, Box 431, Garden City, Kans.

DOG WANTED.—I want a well-bred registered setter dog; weaned pup preferred. If older, must be broke. Send pedigree, age, etc. Will give good trade or cash. Write at once to FOSTER MARIS, Annapolis, Indiana.

READ THIS.—Brewer's Sparrow, $\frac{1}{2}$, 45c; Screech Owl, $\frac{1}{2}$, 50c; Turkey Vulture, $\frac{1}{2}$, 50c; Least Flycatcher, $\frac{1}{4}$, 25c; Wilson's Thrush, $\frac{1}{4}$, 25c; Ruffed Grouse, 1-7, 40c; Bullock's Oriole, 1-5, 10c; Ovenbird, $\frac{1}{4}$, 10c; Meadow Lark, 1-5, 15c; California Murre, 10-1, 12c each; Am. Herring Gull, $\frac{1}{4}$, 20c; prices per set *prepaid*. Lists free. Davie's "Nests and Eggs," fifth edition, extra cloth, and 50c worth any above sets, both prepaid, \$2.25. Let me quote you prices on any book or magazines wanted: in any branch of literature. BENJAMIN HOAG, Stephentown, N. Y.

"SHORT," our local Dealer in Supplies and Specimens for the Naturalist, in a recent conversation very flatteringly assured us that the OÖLOGIST was practically the only medium which had paid him from an advertising standpoint and that in the future he should confine his ads. almost exclusively to its columns.

"BURNHAM," the Opal Dealer and Manufacturing Jeweler of Providence, R. I., recently made us a very pleasant visit and in speaking of his past experience with advertising in the OÖLOGIST said to this effect, "That in all of his extended advertising, for the amount invested the OÖLOGIST beat them all and that he sometimes thought it was the only medium that really *paid*." We were convinced that he knew whereof he spoke from the fact that he greatly increased his order for space and left with us "collateral" sufficient to more than cover half a dozen pages.

"THE OSPREY" is unquestionably the most popular and up-to-date illustrated Ornithological magazine in the entire world and the two-page adv. in the OÖLOGIST testifies volumes in relation to the enterprise and hustling qualities of its Editor and Publisher. These same two pages of advertising, as well as two more contracted for future issues of THE OÖLOGIST illustrates how a Brother Publisher regards the OÖLOGIST as an advertising medium and adds a very substantial testimonial, to the thousands previously received as to the OÖLOGIST's value in that direction. For these four pages the Publisher of the "Osprey" pays our *regular* and *ONLY* rate viz:—\$8.40 per page or 5c per line. THE OÖLOGIST has but a single rate and it makes no difference whether you wish to use 5 lines or 10 pages of space it will cost you 5c per line for each and every insertion and furthermore the little 5 line adv. is just as gratefully received as a full page one.

100 choice mixed West Indian Sea Shells, 15 varieties choice rare curiosities, 25c. 10 varieties Indian Relics, 40c. Chisel, 18c. Spade, 20c. Hoe, 25c. Axe, 37c. Celt, 15c. 10 choice Sea Shells, 10c. Lists free. 50c premium on every dollars worth sold. WILLIAM P. ARNOLD, Peacedale, R. I.

FLORIDA.

Do you want to know more about it? Do you want a home there among orange groves and pineapple plantations? If so, then send 25 cents for six months trial subscription to the

BISCAYNE BAY MONTHLY.

Southernmost Periodical in the U. S.

Regular subscription price is \$1 per year but we are making this special offer to readers of the OÖLOGIST and in addition will send each one subscribing a set of five different Confederate Bills, (fac similes) and a Florida curio, or souvenir. Address,

BISCAYNE BAY CO.,
ORANGE CITY, FLA.

Note our Prices on Printing.

5,000 Note Heads.....	\$5.00;	10,000, \$9.00
5,000 Good No. 6 Envelopes.....	5.00;	10,000, 9.00
5,000 Bill Heads.....	5.00;	10,000, 9.00
5,000 Statements.....	5.00;	10,000, 9.00
5,000 Business Cards.....	4.00;	10,000, 7.50

All work and stock guaranteed first-class. It will pay you to send your printing to A. M. EDDY, Albion, N. Y.

Lattin's Standard Catalog of North American Birds Eggs.

Enlarged (contains 72 pages) revised, corrected and brought up to date of going to press—March, 1893. Giving all of the new A. O. U. changes and additions. Also divided and subdivided into orders, sub-orders, families, and sub-families.

Values are based on the 1893 ones which were determined by the compiler, from invaluable notes, suggestions and assistance from Major Chas. E. Bendire, J. Parker Norris, Esq., and Captain B. F. Goss. In addition to these notes, which have been carefully reworked, the compiler has had suggestions from over FORTY LEADING AMERICAN OÖLOGISTS, all of which were carefully considered and where advisable, adopted. Lattin's Catalogue has long been recognized by leading Oölogists as the "Standard." The compiler intends to issue a new one as soon as this edition is exhausted and desires the assistance of every working Oölogist, in making values, etc. On this account he has concluded to close out this edition at the following rates, postpaid (regular price was 25 cents per copy.) Single copy 10 cents; 3 for 25 cents; 7 for 50 cents; 15 for \$1.00.

Address, FRANK H. LATTIN, ALBION, N. Y.

THOUSANDS OF OLD BOOKS

Have accumulated in the libraries of our public institutions, and those of prominent public men, both in duplicate and otherwise. They cost them nothing and oft-times are valued accordingly. They are, however, both valued and desired by specialists and parties interested. Perhaps you or your friends may have some of the identical volumes which I desire, crowding library shelves or stowed away in garrets, doing nobody any good; but had I them I would not only appreciate them but might know of a dozen others who would do likewise. Look over my list of wants and if you have anything I desire or others write me, stating what you wish in exchange, and perhaps we can arrange an exchange which will be advantageous to each. I will exchange for single volumes—but the larger the exchange the better.

I WANT

Government and State Reports.—Annual Reports and Bulletins and U. S. Geological Survey, with F. V. Hayden in charge. Reports of Wheeler's U. S. Geological Surveys W. of the 100th Meridian. Reports of King's U. S. Geological Survey. Natural History of New York. Smithsonian Contributions to Knowledge. U. S. Reports on Ethnology.

Botany.—Any of Gray's or Wood's Text-Books and Publications. Lesquereaux & James, "Mosses." Tuckerman's "Lichens." Goodale's "Wild Flowers," Hervey's "Sea Mosses." Sargent's "Silva of N. A." Hough's "American Woods."

Geology, Mineralogy and Palæontology.—Any of Dana's Winchell's, Miller's or Geikie's Works

Conchology.—Any of Tryon's Sowerby's, Gill's or Woodward's Works.

Entomology.—Any of Packard's, Westwood's or Comstock's Books. Any of Maynard's, Edward's or Scudder's Works on "Butterflies."

Ornithology, Oology and Taxidermy.—Works by any of the following: Baird, Bendire, Brewer, Brewster, Cassin, Chapman, Cory, Coues, Davie, DeKay, Fisher, Gentry, Goss, Hornaday, McIlwraith, Maynard, Minot, Nuttall, Nehring, Raine, Ridgeway, Shufeldt, Studer, Warren, Wilson. Also back numbers of volumes of any of the following publications: "Auk," "Ibis," "Ornithologist and Oölogist," "Nidologist," "Osprey," "Bird Books." Pamphlets and Publications are my specialty and I can use almost anything in that line advantageously either in large or small lots, old or new.

Medical.—Quain's Anatomy, 10th ed.; Campbell's Language of Medicine; Gould's Medical Dictionary; The National Dispensary; Gray's Anatomy; Gould's Medical Dictionary; Reese's Toxicology; Osler's Medicine; Park's or American Text Book of Surgery; Parvin's, American Text Book, or Lusk's Obstetrics; Garrigue's or Keating & Coe's Gynecology; Ingal's Laryngology; Duhring's Dermatology; Dana's Nervous Diseases; Kirchoff's or Blandford's Insanity; Reese's Medical Jurisprudence.

I also desire second-hand copies of any *standard* book, report of publication devoted to Medicine, Ornithology, Oology, Geology, Mineralogy, Palæontology, Zoology, Conchology, Botany, Microscopy, etc., etc.

I also want choice Birds Eggs in Sets with data; A No. 1 Mounted Birds and Reptiles; a Good Microscope; Indian Relics, and choice collections of U. S. or Foreign Stamps or Coins, Typewriter, Field Glass, Collecting Guns or anything new or in good condition, suitable for a collector, naturalist, sportsman, or for a physician and surgeon.

I CAN OFFER IN EXCHANGE

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THE OÖLOGIST.

VOL. XV. NO. 4.

ALBION, N. Y., APRIL, 1898.

WHOLE NO. 143

Redhead and Ruddy.

There are more facts in earth than the books have told; and it is the delight of the Ornithologist to search out these.

Not every bird-lover may wade waist deep in marsh ooze a search for delightful surprises, among the ranks of rush, and the mazes of last year's tangled grass. And so the many miss the pleasures of a close acquaintance with these two—the Redhead and the Ruddy—among the most attractive of our fresh water ducks. Big, marshy, land-girt lakes are the haunts they love. There must be acres of dense rushes for covert and nest hiding; and a plentiful choice of tiny open areas of water where parent and brood may wash and feed.

But little *Erismatura* has his own idiosyncrasy. Unlike the Redhead, he loves nothing better, either for transient sojourn or for a summer home, than an acre-bit of slough, rush-bordered and grass-girt, with all the center clear; to make smooth sailing on the summer winds. For, at least so Thomas Miller says,—and he surely knows,—“During a gale of wind the Ruddy erects his tail at right angles with his body to catch the wind and push him along.”

Thoroughly local are both these birds except in migration, or by incident, they are rarely abroad. One may live within a mile of their haunts and yet be none the wiser. For all that, the Ruddy is found, quite plentifully for *him*, wherever the above conditions are satisfying, and, as for the Redhead, he swarms in such a *locus*.

Witness words of Mr. Miller, in a report concerning the birds of the Heron

Lake region: “Redhead: Once our most plentiful duck, here, has been killed in thousands on this lake, for the last fifteen years. Fancy twenty guns hunting on one lake every day, for two and a half months at a stretch, each gun killing from thirty to ninety Redheads a day. Is it any wonder that they are not as plenty as they used to be?” In apathetic rafts of ten to twenty, at most, the Ruddy is found, in migration, on favorable lakes, flying only when they must, and then only for a stone's throw, in flat, muddled masses. Meanwhile the Redhead swarms everywhere among the other ducks; for, unlike the Ruddy, he is no eremite.

Now, visit the Redhead and Ruddy haunts, in early May. Of the Ruddy, we find simply one or two, in mute solitude, here and there, upon the open water. But as for the Redhead, while *she* is seldom to be seen, the careless mate rises from every open space, and from the secluded margins of the bays, in groups of five or even more, and circles about the naturalist, in all the halcyon fearlessness of the close season; sometimes venturing so near that we may note the exquisite vermiculation of his back; catch a glint of the brownness of his eyes, and listen to the hoarseness of his quack, which sounds like the voice of a suppositious Mallard, suffering from bronchitis.

Of course it is the nest that we look for next. But we do not find it, search as we may. We just stumble upon it. We have floundered among the mazes of the rushes for an hour, with the water often waist deep. The old wading suit grows heavier and we grow more and more tired. Suddenly from a dense clump, the eye catches the glint of

creamy eggs, where the sunlight peers through upon them.

That glance is enough to repay the fatigues of a week; for whoever saw another such a nest? It is smuggled into a rather isolated clump of rushes, in three feet of water. The nest-material, pieces of rush, exclusively, is built up to a height of twelve inches above the water line. The rushes overhead are canopied together, scantily, some being broken over at such a height as to make one marvel at the builder's agility. And there are thirteen eggs lying in three layers in the narrow nest. There is no attempt at down-lining.

Another day, we souse our way through acres and acres of rushy wilderness, wondering with an impatient wonder, why it is that male Redheads are so plenty and Redheads' nests so scarce. We have found the spot where the fussy solicitude of the Ibises would seem to center; and, with beating heart, are traversing the area over which a male Ibis is hovering. A nest in sight: it is a Coot nest, only, containing the bodies of young birds, whom the minks have victimized. A long cross-shot brings down the Ibis; a systematic search begins, with wading up and down. But, before the dead bird and his nest have greeted our delighted eyes, we have stumbled upon an embryonic Ruddy nest, already admirable in its sketchy suggestion of artistic skill.

It is a mere saucer of rush sections, about a foot long, barely a foot above the surface of the two-foot depth of water. Five eggs have been laid; and the dozen or more of standing rushes that have drawn together to conceal the nest well indicate what the careful mother would have done by way of protecting her home, had the rushes been more plenty. She must have done some tall reaching, too; for the point of bending in the canoping rushes, is at least two feet above the nest level. No Ruddy is in sight of course,—whoever

was lynx-eyed and cat-footed enough to surprise a Ruddy duck, at, or even *near* her nest?

But we must not dwell, delightedly, upon those Heron Lake experiences. Let us hasten to the far north of North Dakota, three miles from the International Boundry Line; and wade into what is known as the Geroux Marsh—a long, snaky slough, whose whole make-up is thoroughly Heron-Lake-like—with an *ornis* numerically far less; yet in character much the same.

One June day outing reveals a single Redhead nest, quite like the one at which we have just been looking, save that all the environ is beaten down by the tread of competition; for there are about twenty-two eggs, so far as can be told, today, in and about the nest, which has become submerged by combined stress of weight and flood; and the eggs must have been some thirty days deserted. So far as one may judge, after the blanching of water and sun have done their work, about sixteen of the eggs were laid by a Redhead; and the rest by a Canvas-back.

In the same marsh, and at a small slough on the Minnesota side, among the rushes, are found two Ruddy Duck nests, containing seven and eight eggs; the nests being made of rushes, and raised about a foot above the water. At this same little rush-bordered slough is found our first nest of the Ruddy, built on the ground. The site must have been of deliberate choice; and it lay about six feet in-shore from the water line.

But near the end of the following June, was found, at this same slough, the most interesting nest of our quaint little friend, *Erismatura*.

Wading the margin, systematically, that no nest escapes the searcher's scrutiny, one falls to eyeing, with more than usual curiosity, a highly colored ruddy duck, that is sailing before the wind, with his bristle-tail erect. It gives a

keen pleasure to note in him a trait that would seem, somehow, to have escaped the notice of the book-makers. We had supposed the Ruddy to be quite dumb; but this lonely fellow is sailing about, with his head bobbing queerly, up, and down, first in quarter-seconds of rhythm, and in succession, like the drumming of *Bonasa*, with more than double that rate of rapidity, and, at the end of each succession of head bobbing, a single choking note. The whole performance, which would seem to be for the performer's sole edification, is many times repeated, and appears like this: —, —, *gup*, —, —, *gup*. But the clown in chestnut sails around the corner of things, and, almost at the same instant a Ruddy's nest sweeps into view, over the waving grass tops. This grass is the coarse, palm-like angular-stemmed sort, that grows everywhere in the west, amid the water of the sloughs. Of this grass, the nest is made, green blades and dead being woven together into the snuggest basket that ever a Ruddy wove; all being fastened to the grass tops, that waved above ten inches of water.

As finally taken, some days later, the nest was heavily lined and decorated with down; and the nest contained 12 eggs. These were piled three-deep, one having been nest-cracked, and become imbedded at the bottom, eluding all the mother's care, in the up-bringing, and over-turning that ever goes with incubation. The eggs were all laid, without a doubt, by the same bird.

To show, in closing this already too-long-spun yarn, the constant need of verification, one's mind goes back to a nest found last June, in the Geroux Marsh. It was the nest of an *Aythya*, no doubt of that, but the eggs were pale green.

After six days, with exercise of most scrupulous care, the female is found at her nest, and closely scrutinized, to prove that she is what she *ought* to be—

a Canvas-back; and, sure enough, with her round head, stubby beak, and white head feathers she is—a—Redhead.

P. B. PEABODY,
Hallock, Minn.

Prairie Horned Lark in Illinois.

"Life is too short to learn *all* about even one bird" says Olive Thorn Miller. This quotation may with appropriateness be attributed to our Illinois member of the Shore Lark family—the Prairie Horned Lark—for the study of this interesting little body affords a never ending source of pleasure to the enthusiastic and observing field-student.

Each time we seek him in his haunts (and he is always to be found), we may confidently expect to learn something new of this attractive bird.

It is not the knowledge of well-known facts and the desire to view a repetition, that imparts to us a bouyant, elastic step when we start for an hour in the field. Is it not the delight we experience in making *new* discoveries—those very interesting *little* details, usually deemed of too small a significance to be given space in our Ornithological Journals.

Naturally, to the Oölogist, the nesting habits of "*Practicola*" must prove of of paramount interest, but I find the two 'ölogies" so closely connected, so inseparately linked that I am unable to separate them, and what Oölogist can long pursue his favorite theme, without unconsciously digressing—to Ornithölogy.

The Prairie Horned Lark is a charming singer and contributes to our enjoyment, one of the sweetest of all bird songs.

Simple and child-like as the song of the Indigo, it combines the sweet mellow tones of the Meadowlark with the hurrying time of the House Wren; not loud and distinct as with *Sturnella magna*, but so soft and low that one must needs be quite near, and all attention,

to catch the more exquisite notes. These finer tones will compare favorably (in point of excellence) with the liquid notes of our melodious Bobolink.

The song proper, like all other bird melodies is difficult of description and must be heard to be fully appreciated. The male sings while perched on a clod or fence post or while on the wing. His flying song however, is a finer production and of much longer duration.

On a fine April morning of last season, I was treated to a mid-air rendition from *Praticola* that surely would rival the best production of the far-famed English Skylark.

I was first attracted by an unusually animated song which seemed directly above me. I soon discovered a Horned Lark, with rapidly vibrating wings, circling round and round, over a freshly plowed field. He seemed wholly carried away with power of his song as he mounted higher and higher, until he passed beyond my vision. I could still hear him as the climax was reached, when with almost a scream of ecstasy he fluttered back to earth, "sliding down on the scale of his own music." He dropped to the surface utterly spent by his violent exertions and the interesting performance was over. I wended my way homeward with an increased admiration for the accomplishments of this terrestrial songster.

The Prairie Horned Lark is a constant resident with us and while seemingly not so common in the mid-winter months, I do not believe that any portion of them leave us (as some writers contend) during that time. On very cold days, they leave the pasture-lands and meadows and seek shelter in the corn-fields, where they are found with difficulty. This probably accounts for their apparent disappearance.

Inhabitant of field and meadow, it adds a pleasing picture to our dreary winter landscape that could not well be spared.

On a typical winter Sabbath in February, I am coaxed out of my winter quarters in the hopes of meeting some early arrival from the south. I am prepared to welcome an old Crow, if nothing more interesting appears.

Suddenly I meet a shower of Horned Larks, rolling and bounding through the air in Goldfinch-like curves. They all alight but one male—he leaving his companions, mounts into the air. Higher and higher he goes with each bound, and describing an extensive circle, reaches a great altitude. When a mere speck in the sky, his ambition seems satisfied and closing his wings, he drops like a meteor to the earth. It is a pretty and interesting performance.

Even at this early date, I feel sure they are mated, for they appear to divide in pairs and the notes of the male have assumed a more lover-like tone than the monotonous "preet preet" of a month previous.

They are our earliest nest-builders—so early indeed that the female is often compelled to finish her task of incubation amid the ice and snow of a late winter storm.

Two or three broods are reared each season. I have evidence of only two, but as the first brood is hatched in March and the second in June, a third brood for the season is very probable.

The nests are always placed on the ground, sunken in the earth or placed at the roots of corn. The first nests are usually built in meadows and pastures where a natural depression or cow-track is chosen. They are composed of fine dry grasses and feathers, firmly interwoven into a strongly made nest, able to withstand the fury of heavy March winds.

In marked contrast are the nests furnished for the second broods. These are placed at the roots of growing corn in early June and are but small masses of weeds and grasses, so carelessly

thrown together that a nest as a whole could not be lifted from the ground.

It view of the rapid degeneration in the art of nest building, it would be interesting to note the architecture and composition of the third or fourth nests of a season.

The eggs of the Prairie Horned Lark are three or four in number—usually four. The sizes vary greatly, in a series of sets, as will be seen by the following measurements of three sets of my collecting: 64x85, 65x86, 63x81, 58x84; 62x76, 62x77, 63x76, 63x78; 69x92, 68x91, 70x91.

The eggs are wholly unlike those of our other birds, and once seen will never be confounded with the eggs of other species.

The color may be described as greenish-gray. The markings are tiny and so thickly sprinkled over the entire surface, as to wholly obscure the ground color. In some sets a wreath is found encircling the larger end, which gradually shades into a darker hue.

A noteworthy characteristic of the species, is the frequency with which an abnormally marked egg occurs, in a series of sets. This characteristic may however, be only local, as I have never seen this feature mentioned, regarding this particular bird. The most interesting deviation I have yet noted appears in a set, now in the collection of Mr. C. H. Morrell.

An abnormal egg in this set presents so entirely a different shade of coloration that it does not appear to belong to the set.

ISAAC E. HESS,
Philo, Illinois.

The Summer Home of Vireo Solitarius Cassini and Other Notes.

On June 9th of the past year I left camp early in the morning and followed a path along a ditch through the forest in El Dorado Co., intent upon studying the varied bird life of the

Sierras. The sides of the ditch were covered with rank ferns while "mountain misery" grew luxuriantly at the side of the path, and I vainly sought to flush some Calaveras Warbler from her nest in such a promising spot. All of a sudden I heard a tremendous hammering in the woods and concluded that the workman must be a Pileated Woodpecker. Following the sound I soon located *Ceophloeus* on a large dead pine, perhaps 50 feet up, and again he repeated his resounding tattoo on the dead tree and expressed his approval in a harsh, resonant cry which could be heard a long distance. A female was shot later by Mr. Beck and Mr. Nutting found a nest in a dead burnt pine containing four young on June 18. Altitude 3,700 feet.

I watched the Woodpecker's undulating flight until he disappeared, when I turned to several Warblers, principally *D. nigrescens*, which were flitting about among the small cedar and spruce, now and then bursting forth in a weak though sweet, song. A pair of Audubon's Warbler's were nervously threading their way up through a large spruce, but finally were given up for other avian attractions which seem to succeed each other so rapidly in the forest. Suddenly there burst upon my ear a beautiful bell-like note but ten feet away and recognizing the musician as a Cassin's Vireo I knew that its handsomely-woven little nest was in a certain small black oak sapling standing alone in the clearing, from whence floated the song. A few steps and there, hidden only by the light-colored leaves, swung the nest with its unsuspecting little owner rocking to and fro in the morning breeze. She flitted off to a near-by bush and poured forth her full, round song with no sign of alarm, and with that perfect confidence with which some birds are imbued. The nest was at the end of a drooping branch of the black oak and only seven.



From Photo by R. H. Beck.

Cassin's Vireo on Nest.

feet from the ground. The four eggs were advanced in incubation at this date, June 9th. This was the only nest I saw of this species during the morning's stroll. The nest was composed of light grasses, shredded leaves, soft plant fibres and decorated externally with the white outer silk of a cocoon found on the trees. It was lined with fine brown rootlets and grasses of the same color.

I was surprised at the decrease in numbers of Cassin's Vireo in this locality since the summer of 1896. At that time in travelling over the wooded hill-sides there was scarcely a time when one could not hear the song of this Vireo close at hand in one of the numerous small black oaks, and nests containing young were very numerous. This year I missed the familiar song of my little friend and only now and then did I come upon a pair during my rambles. This change was no doubt to the fact that in 1896 a collection of skins was made by several collectors in this

locality and the Vireos came in for their share of the sacrifice, quite a series being taken. And this year the woods missed their usual joyous song.

In 1896 a number of nests were found, all with young and situated, with one exception in the low drooping limbs of the black-oak from three to eight feet from the ground. One nest was suspended from the fork of an alder tree about 12 feet from the ground, along a creek. This year on June 8th I found a nest half-built five feet up in a black oak; on June 9th a nest seven feet up containing eggs advanced in incubation; June 12, one just completed placed ten feet up in a drooping black oak overhanging a path; on June 15th a nest six feet up just completed and ready for eggs. On the afternoon of June 15th while walking down the stage road I heard the note of a Cassin's Vireo, and glancing up into a black oak beside the road espied the nest 12 feet up, with the bird on. This I collected with four fresh eggs, the nest being of the same

composition as the one described. The eggs are pure white, quite thickly dotted with small uniform dots of reddish-brown about the large end, and measure 76x60, 77x59, 77x58 and 75x58 inches.

Cassin's Vireo is the largest and handsomest representative of its genus in the west. Its food is largely of insects and grubs which are found plentiful on the leaves of the trees and amongst the vegetation. The song is usually uttered near the nest and more often by the female while she rocks back and forth in her dainty home. The song is gladsome and full of vivacity, and though short, rings through the woodland most beautifully. It is sounded often when one is in the vicinity of the nest, in a jolly, enquiring way and cannot be satisfactorily expressed in words. The nests of Cassin's Vireo, so far as I have examined them, always may be identified by the white cocoons with which they are outwardly decorated. The accompanying illustration is from a photograph taken by R. H. Beck in June, 1896, showing a Vireo on its nest, which was in a small black oak bush only three feet up. With admirable courage the bird remained bravely on her nest while the camera was being focused and the exposure made. I found one nest in the Sierras in 1896 which contained five young but the usual complement is four.

June 14th we had a delightful walk for two miles to a burnt district, a large area which had, several years before, been swept by a forest fire, leaving only the charred trunks of the pines. On the border of this district were growths of small cedar saplings and pine, while an undergrowth of deer brush had sprung up between the burnt trees. This locality was noticeable for the numerous Woodpeckers, to whom it offered no doubt a tempting feeding ground. Here were seen the Pileated, Cabanis's and Red-breasted Wood-

peckers. On the way a nest of the Red-breasted Sapsucker was found in a dead bark-stripped pine, 40 feet up, which contained young which the parents were feeding.

The bushes were full of bird life, the sweet songs of the Thick-billed Sparrows, Warblers and others coming to us from all sides. A pair of Green-tailed Towhees drew attention to their nest 1½ feet up in a small bush, containing five young which fluttered away at our approach. Macgillivray's Warblers were numerous, all with broods of young. Western Robins were common and a nest with three fresh eggs was taken from the top of a 12-foot cedar growing on a flat. Olive-sided Flycatchers were calling frequently from the edge of the timber but generally kept well-up in the tall conifers, where their nests were safe from discovery. I was somewhat surprised, while walking through a growth of small cedars to see a dainty little nest of the California Bush-Tit hanging from a cedar limb 8 feet up. It seemed rather odd to see little *Psaltriparus* so far up in the mountains. The nest held seven incubated eggs.

A short distance further I noticed the nest of some Warbler which has since satisfactorily proven to be Audubon's. It was 4½ feet up in a small cedar on a horizontal limb, next the trunk and held one egg which was partly hidden in the feathery lining and proved to be addled, the nest apparently not having been used. Evidently the mother bird had been shot after the first egg was deposited. The nest is composed of small roots, weed fibres, fine grass and a light brownish fibre resembling horse hair. Lined with feathers, among which are several chestnut ones of the Plumed Quail. I left this nest several days and then took it with its one egg.

Late on June 15th while waiting for the stage to take us out of the mountains I rambled down the road and on

to a hillside, which was grown up with manzanita and various trees. A small nest was noticed, nicely concealed in the center of a manzanita bush, seven feet from the ground, the manzanita leaves affording it protection, because of their light gray color. Soon two Black-throated Gray Warblers appeared in a tree overhead, chirping vigorously at my intrusion and claiming the nest. The eggs, four in number were advanced in incubation and were preserved without blowing. The nest was placed in a crotch of the bush and composed almost entirely of soft, light grayish plant stems, with a few small strips of bark intermixed. It is lined very sparingly with horse-hair and a few feathers.

CHESTER BARLOW.

The Dickcissel or Black-throated Bunting.

Although this bird seems to be increasing greatly in numbers every year, it was not until 1895 that I began to pay particular attention to him.

A short distance up the avenue I find him sitting on a telephone wire serenading the fields round about him with *chink, chink, chee-chee-chee*, repeated over and over again at short intervals at all hours of the day.

The nest is not far from where he sits singing this ditty; but he shows no alarm about your finding it.

In the past three years I have found four sets of this species as follows:

A set of four fresh eggs on June 11, 1895; a set of four slightly incubated eggs on June 29, 1895; a set of five fresh eggs on June 18, 1896 and a set of two slightly incubated eggs on July 8, 1897.

The set taken July 8 was the only one taken that year, and seems to have been rather late. Of this set I have the following description:

Number of eggs, 2; incubation begun, nest, in bunch of clover 4 inches from the ground; was composed of grass and

weed stems, and lined with finer grasses and horse hair; depth inside, $2\frac{1}{2}$ inches; inside diameter, $2\frac{3}{8}$ inches; outside diameter, $4\frac{1}{2}$ inches; height, $5\frac{1}{2}$ inches; eggs resemble those of the Blue-bird both in color and size and measure 13-16 x 5-8 and 7-8 x 11-16 inches.

Spiza americana arrives in the early part of May and leaves in the latter part of August or early in September, spending the winter beyond the limits of the United States.

The forepart of the head is greenish olive, hind head, neck and cheeks dark ash gray; streak over eye and mandible, lower neck and middle of the breast yellow; chin white, throat black, sides gray, abdomen white, and lesser wing coverts bright chestnut; length, $6\frac{1}{2}$ inches.

The female resembles the male excepting the black on the throat.

Its food consists of caterpillars, insects, and immense numbers of canker-worms early in the summer; it also eats seeds of various grasses.

GLEN M. HATHORN,
Cedar Rapids, Ia.

Wrapping Eggs for Packing.

An old subscriber makes the following request which we trust will have a tendency to abate the "thread nuisance:"

"I wish you would point out to some oölogists the mistake they make in wrapping yards of thread around the cotton in which small eggs are wrapped. It does not insure the safety of the eggs at all, if anything, it adds to the chance of breakages, and it takes four times as long to unpack eggs wrapped around with two feet of thread and life is too short to waste in unpacking a lot of small eggs wrapped up in this way and one requires the patience of Job to do it."

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TAXIDERMV.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Saved by an Egg Collection.

A TRUE NARRATIVE.

In the early spring of 1879 while attending Sunday-school, in a New England city, I placed on the library card the numbers of some books that I desired to read.

With the usual carefulness of the average librarian, a book was given me

that of course differed in number from anything appearing on the card.

Upon arriving home, and for the first time noticing the error, I was highly indignant at being given that which was considered by me as a "kid's book," having reached at that period of my existence the somewhat mature age of fourteen years.

The title of the despised volume was "Boys at Chequasset" by Mrs. A. D. T. Whitney, and, as I had nothing else to particularly interest me just then, condescended to glance over the first few pages. In a very few minutes I was completely fascinated, little dreaming that this book, reaching me apparently by chance was to influence my future life to an extent never attained by any other book.

From that moment an oölogist was born. I forgot everything in a mad insatiable desire for bird's eggs. I wondered how it was possible that I had struggled over the by gone years without possessing a collection, and I longed with an intense yearning for the days to pass that kept me from the one thing that seemed absolutely necessary for my very existence.

At length the time came that I judged would be propitious for my enterprise, and armed with hope and tin ointment box filled with cotton-batten, I sallied forth, firmly resolved to conquer, or to leave my bones to bleach at the top of some gigantic pine. Fortune invariably smiles at the beginning of every venture, and my first climb was rewarded with an egg that in beauty exceeded anything my youthful eyes had ever gazed upon.

At that moment I would have indignantly rejected an offer to exchange it for the Koh-inoor, had anyone been sufficiently rash to suggest such a transaction.

I packed the egg very carefully in my box, and to this day I am unable to state with any degree of certainty,

whether I slid, fell or flew from the tree.

However I made a bee-line for home, and hid my treasure in the barn, got out a ponderous work on natural history and looked up all the birds to see if I could ascertain the exact value of my newly acquired treasure. My efforts in this direction not being crowned with success, I got my hat and ambled sideways out of the house in quest of an acquaintance, who had, in my estimation attained universal knowledge.

He listened patiently and reverently to my narrative and at its close informed me that I had been singularly blessed by the Fates, and that my oölogical specimen was that of the "migratory thrush." When I eventually discovered that the common, ordinary, every day robin was technically designated migratory thrush, I felt a lump in my throat as big as a balloon.

Retribution has overtaken my boyhood friend, he is now a college professor.

If there was a bird's nest within a radius of ten miles from the house in which I lived, that I didn't find that year, all I can say is that it must been ten feet under ground.

Years passed as they somehow have a habit of doing and with them the school days that the average boy spends generally in wishing them gone, and the remainder of his existence in wishing them back again.

Life began gradually to assume a more serious aspect, and, like the majority of my friends and companions I entered the actual arena of the world.

Then, like thousands of other boys, having an enormous conception of what constituted a man, took for my example the one of all others I should have avoided, and firmly resolved to attain the enviable position that to my poor deluded mind, he occupied. I attained it! In a few short years, filled with assorted bitter and sweet, the former in

big chunks and the latter in infinitesimal grains. I found myself in the maelstrom of a large city, gone home, gone friends, gone cash, everything in fact gone, but the cheerful certainty of eventual annihilation and the craving of a tiger in my vitals for one more drink

So the months faded slowly into eternity, and one Saturday afternoon, I mechanically bent my way to the Natural History Room of the great city, stupidly fumbled up the steps and aimlessly wandered into the edifice. At last drifting into that portion of the building devoted to oölogical specimens. As I gazed wearily at the collection in an instant the thought flashed through my poor muddled brain of the previous visits and under what different circumstances I thought of what I was when as a free-hearted boy I roamed through the same structure, filled with natures treasures, more beautiful by far than anything wrought by the hand of man, and as I compared the present with the happy past, the tears trickled down my cheeks, and I resolved to kill the demon I had myself reared and regain if possible some of my bygone happiness.

But it is far easier to resolve than to accomplish, and the days, weeks and even months that followed, recorded but a succession of unequal struggles and inglorious defeats.

At length one evening, while under the influence of liquor, as usual, I was attracted by a light in the vestry of a church that I sometimes attended, so over I went and after going in, discovered that it was a sociable held under the auspices of the W. C. T. U., and that the main object of the affair was the inducing of those present to sign the p.ledge.

Something seemed to whisper to me that this was my last chance, and I guess it actually was. Still I hesitated, finally I said to myself, picking out a

young lady the farthest from me, now I'll leave it to chance. If she asks me I will sign, otherwise not.

No sooner had I made this agreement with myself, than the lady wheeled round, walked straight to me, held out the pledge extended a pencil and said "sign it."

I did so and a minute afterwards would have given anything to have blotted out the act. Notwithstanding all the misery, agony, and disgrace caused by the demon rum.

I did not understand its power then, I do not comprehend it even now, but so it was.

Suffice to say that although quite a number of years have passed since that eventful evening, I have never tasted a drop of liquor in any form, and I now have a pleasant home of my own, filled with books, pictures and curiosities galore.

Although I have some friends and a fair position I shall never be what I might have been had not King Alcohol and I joined forces.

"Each loss has its compensation,
There is healing for every pain;
But the bird with the broken pinion
Never soars so high again."

Boys, profit by the lesson I have so bitterly committed to memory and remember that should you seek forbidden paths you may not be "saved by a collection of eggs."

God grant you may never need it!

WHY.

The Brunnich's Murre as a Western New Yorker.

Brunnich's Murre (*Uria lomvia*) is a frequenter of the coasts and islands of the North Atlantic and eastern Arctic Oceans, moving southward in winter along the Atlantic coast of America as far as New Jersey, occasionally wandering inland to the more easterly of the Great Lakes.

It seems to be only during the last few years that this wanderer from the North Atlantic has been observed in Western New York, but within the past few years, several individuals have been taken on the larger water-ways of this section.

The writer has not observed in any of the ornithological publications of the day any mention of these occurrences, and it appeared to me that a mere mention of the visitations of this bird to this section might be in order, so that they might become matters of record.

Mr. J. L. Davison of Lockport reports that two specimens were taken in Niagara River, Nov. 9, 1894, and that on Dec. 19, 1896, five specimens were taken in Niagara River. I am also reliably informed that at least one specimen, and I am not certain but two, were taken during the past fall or winter on Lake Erie in the vicinity of Buffalo. I recently saw in the collection of the Buffalo Society of Natural Sciences, two mounted specimens of *Uria lomvia*, which had apparently been but lately placed there and it may be that these are the specimens referred to in the above information.

An individual of this species was also taken during 1897 (in the fall, I believe) on Lake Ontario in the western part of Monroe county, and came into the hands of Mr. George F. Guelf of Brockport, in whose possession I believe the specimen is now.

Our little county of Orleans has its record also. During the first half of March, 1897, a specimen in winter plumage was taken on the ice of Sandy Creek near Murray, N. Y. (seven miles inland from Lake Ontario) and brought to Mr. F. A. Macomber of Murray for mounting. The bird was in a famished, exhausted condition, permitting itself to be taken alive by hand. Its body was considerably emaciated, and upon examination its stomach was found to be entirely empty. This bird is now in

the possession of Mr. Macomber of Murray, and on the 22nd of December last, the writer paid him a visit for the purpose of seeing the bird as well as other "rare takes" which he has, and I felt well repaid for my walk of four miles from the Holley depot through a thickening snow storm to his home.

It would prove interesting and instructive to learn of other records of the occurrence of *Uria lomvia* in Western New York, if other records there are, in order that we may more nearly know of just how frequent occurrence it may be here.

It would seem that it is only during the past few years that this Guillemot has extended its wanderings into this section.

It is called Thick-billed Guillemot and Arr, and Mr. L. S. Foster of New York, upon whom I recently had the pleasure of calling, informs me that on Long Island, the bird is commonly called "Crow Guillemot," an epithet which can be fully appreciated when we observe the head of Brunnich's Murre, for the form and shape of its head is very much like that of the common Crow. The resemblance is marked.

NEIL F. POSSON,

Feb. 9, 1898. Medina, N. Y.

Additional Notes on Road-Runner.

On pages 78-9 of the OÖLOGIST, Vol. XIV, No. 8, issued in August of the past year, were published a few desultory remarks relative to the nomenclature of the Road-runner and it was with genuine surprise that we noted the fact that our name was subscribed thereto. Retrospection, however, has convinced us that we are indeed the culprit. If our memory is good, that paper was written six or seven years ago, and why Editor Lattin finally liberated it from its cell in the file of rejected matter, we are at quite a loss to know. It was by reason, no doubt, of a dearth of

superior material, yet its publication has elated us to such a degree that we now make a few additional remarks, which, provided they are accorded a like deference, will be brought to light at some period during the first quarter of the ensuing century.

Since the writing of that sketch the hieroglyphics in those sections of our note books allotted to the fleet-footed *G. californicanus* have been augmented considerably. And furthermore in consideration of the fact that the time has come when most any old thing may, with impunity, make ugly faces at Nancy Hanks we doubt not it would be wise to substitute the name of Star Pointer or Joe Patchen in lieu of Nancy's in the sixth line of our former endeavor.

So far as our information goes, the Road-runner is very generally diffused over all sections of our state with probably the exception of the most northern counties, but we have never known it to exist in such amazing exuberance as it does in the most southern districts. In south Texas chaparal regions, few birds are more frequently found than the Paisano, by which appellation it is locally known, and which in English signifies, a country man. However, they are not gregarious and we have seldom if ever seen more than half a dozen in company.

The diet of the Road-runner appears to be a *vevata quæstio*, some imputing to him the crime of cannibalism—claiming that small chicks and the young hopefuls of small birds are to him a favorite *entre*. A previous writer in the OÖLOGIST asseverates that he has personally witnessed the immolation of immature Mockingbirds upon the altar of the Road-runner's voracity and further states, but does not give his authority for so doing, that he is also a despoiler of the chicken-house. *Vide*, Vol. XI, No. 8, p. 265. We will accept for true his first statement because he has

had scular evidence and so declares. But are not his conclusions upon the second head based upon hearsay? Now we in no way attempt to refute his statement touching their chicken-eating propensities, and it may be that we are not so conversant with the food habits of these birds as is the gentleman, but we have never met with a single circumstance to confirm his theory. When removed from the nest at an early age, they may be partially domesticated and the birds that we have undertaken to "civilize" have never evinced any cravings for a tender prospective spring chicken. So we must reiterate our former statement that "the principal diet of the Roadrunner consists of snails with an occasional small reptile," and will state in addition that grasshoppers are devoured by them in large numbers. Even a superficial knowledge of the nature of their customary *menu* would persuade one that they are of great economical value to agriculture and worthy of the sedulous protection of man.

In March of last year another and a greater vagary concerning *G. californianus* was promulgated by a writer in the *Osprey* Vol. I, No. 7, (A Peculiar Hybrid) a fallacy which was exploded in the following issue of that journal when one of its editors virtually demanded evidence positive that would substantiate the remarkable assertion. That claim was, in brief, that cases of inter-breeding between Chaparral Cocks and common hens was of frequent occurrence, a union resulting in a hybrid having—to use the writer's words—"the general appearance of the hen, although possessing many of the peculiarities of form and disposition of its wild progenitor." 'Tis quite needless to add that the desired proof was never submitted.

The Road-runner is but a mediocre architect at best but it seems to us that those resident in this section are more

careless and inartistic in nest-building than those of the west. Simply an interlaced platform of small twigs with slight or no depression and might easily be mistaken for that of a small Heron. Placed but a few feet from the ground in thorny chaparral—again dissimilar to the western birds (West Texan we mean) who situate their nests in trees at various altitudes ranging between 5 and 20 feet. We have taken many sets of these eggs but we have yet to discover a nest containing eggs exceeding seven in number.

We have observed several different notes and calls of these birds but as we have never yet seen in print, a really intelligible spelling of bird-notes we shall not attempt to so describe them.

One, however, is strangely similar to the cackle of the domestic hen, but omitting the long-drawn finis.

JAMES J. CARROLL,
Refugio, Texas.

Bird Haunts.

The owners of the land thought that the new clearing was a great improvement, but to me the freshly sawed logs and endless heaps of burning brush were melancholy sights, for although the Vincennes University is called my alma mater my real education was acquired in those Fort Knox woods. I have spent many a day there in shady hollow or airy tree top studying the varying aspects of nature.

Leaving town in the early morning I would soon get beyond the zone of English Sparrows and reach the haunts of native birds. The first of these were the Blackbirds, gathering in swarms in the scattered trees in the open pasture and chattering noisily above the browsing cattle.

Farther on where the meadows were swampy and almost impassible the Crows called their noisy councils in an isolated clump of gnarled water oaks

and planned forays to neighboring fields to gather their mixed stores of cutworms and seed corn.

Following the railroad the lowlands were soon passed and densely wooded hills rose on one side while on the other a broad sweep of the Wabash brought the river close to the track. At this point I would leave the road and climbing the sloping hill, over a litter of misshapen, glazed bricks, the remains of old Fort Knox, where, it is said, Zachary Taylor once commanded, would find myself in an open field, the clearing of which dates back to the time of the military possession.

From this point Turkey Vultures could always be seen, soaring in magnificent curves and rarely deigning to flap a wing, but using their broad pinions mainly as sails to catch the fitful currents of the upper air in a manner which I could admire but not understand. These birds could be seen here all the year around, except now and then a few very cold days in mid-winter. I had always thought that they avoided the excessive cold by making temporary visits to the South, but a native gave me an entirely different explanation of their disappearance saying, "When the cold snaps comes they jist scrooch down in holler trees an' waits till the clouds roll by!"

Another constant resident of this place was the Chewink, the little "Ground Robin" that frequented the blackberry bushes around the field, running about on the ground and when molested dodging among brush heaps, hiding in thickets and taking flight with extreme reluctance.

The Black-capped Chickadee, the bravest of the brave, also lived here, nesting in such cavities in the stems and branches as could be found near the ground. Once when climbing the fence of this field I was startled by a Black-cap dashing herself against my hand. She was defending her nes

which was in a knot hole in one of the rails. After that when passing that spot I always paid her a visit and when the half dozen little ones were fledged and had gone out in the world to begin their relentless warfare upon tent caterpillars I examined the nest. The fence rail was a large one and a rough knot made it extremely thick at one point. The knothole had been pecked out and made considerably larger at the bottom in a manner which seemed to hint that the owner had received the assistance of a Downy Woodpecker in preparing her residence, or at least that she had taken lessons of one. The nest cavity was neatly lined with quail feathers, rabbit hair and fine moss matted together like felt. Sometime in June I was surprised to find that the nest had been renewed and that the little cavity was again the home of a family of young Chickadees.

Once when leaving the railroad I found a fine Woodcock lying dead in the ditch. It had flown against the telegraph wires and broken its neck. The Woodcock's beautiful eyes are too large for bright sunshine and it often comes to grief when flying in the daytime, but it is safe enough at night, unless dazzled by electric lights, and its migrations are conducted under cover of darkness.

In the low ground between the hills I would often find the muddy banks of the little creeks and pools pierced with countless holes, as if some idle boy had been amusing himself by thrusting a switch into the ground. Sometimes I would see how these mysterious holes really were made. A Woodcock would saunter along with dainty, mincing gait, avoiding the water and stepping gingerly on the mud and every few steps probing deep into the ooze with his long beak, occasionally getting the reward of toil in the form of a fine worm. Even when he pierced deepest in the mud his fine eyes were safe and watchful, being placed so high up in

his head. These birds did not, however, confine themselves exclusively to the lowlands, for I have seen them wandering over the hills, turning over leaves and sticks in search of game.

Sometimes I would find a nest on the ground, a nest constructed of a few dead leaves and a little dried grass thrown together in a slatternly haphazard way that suggested the Whip-poor-will, but the four, smooth, clay colored eggs with their crowded spots of dark brown betrayed the Woodcock. On emerging from the shell the young Woodcocks were covered with a yellowish down, striped with brown or black and were the comical little things imaginable. Helpless as they were they had no thought of remaining idly in the nest but began to toddle about, seemingly overloaded with their excessively large bills, as soon as they were hatched.

Woodcocks migrate in heedless, go as you please style and I have seen some stragglers so late in the fall and others so early in the spring that I could almost believe that a few stayed with us through the winter, though this is improbable.

Deep in the woods the little creek was overhung by a jutting bank of sandstone fringed by waving ferns and dainty maidenhair and fragrant in early springtime with the witching perfume of pink hepaticas. There was no spring on the rock, but water oozed from the crevices and gathering in a tiny stream trickled into the brook below.

This silvery thread of dropping water furnished a convenient bath for the Hummingbirds and I have seen them dart back and forth through it in great apparent delight and then seek convenient twigs on which to preen their feathers.

All this is past now. The woods are cleared, the springs dried up, the rocks bare and unsightly, with no nesting

place for bird and no study place for boy, but a crop will soon be planted on the available portions of the new ground.

ANGUS GAINES,
Vincennes, Indiana.

The Nesting of the American Goldfinch in North-eastern Iowa.

Two miles below Decorah, skirting the bank of the upper Iowa river, is a small grove of large trees, mostly cottonwoods. The ground beneath these trees is covered with maple second growth and a tangle of weeds, thistles and climbing vines. In this place I have found the American Goldfinches nesting in great numbers. Surrounded as it is by thistle-patches and covered with thistles itself, no better place for a nesting site could be imagined for Goldfinches, which are sometimes called Thistle Birds. Their numbers, undulating flight, and peculiar plaintive lisp-ing notes immediately attract ones attention.

It was late in July, 1895 when I first visited this place in quest of their nests and eggs. Several nests just finished were found and one set of five badly incubated eggs was taken.

On August 7th I again visited this place and was rewarded by a set of six fresh eggs from a nest in an ash tree five feet from the ground. On the following dates I obtained sets of eggs from the same place: August 10th, a set of six; August 17th, a set of four; August 19th, two sets of five and a set of six.

In 1896 I had no opportunity of visiting this almost colony of Goldfinches, but in 1897 I again took many sets of five and six from this same place.

The nest of the American Goldfinch is a very beautiful and compact little domicile. Many different materials are used in their construction. Those which predominate are vegetable fibers,

spider balls, cotton from cotton-wood tree, horse hair, and last but not least, thistle down. I have found in all the nests I have examined that the inner rim was almost always encircled by wiry brown grass, while the rest of the nest was lined entirely with thistle-down, sometimes even to the depth of an inch.

The position of the nest is decided upon without much reference to concealment. An upright crotch is the most usual place for its situation. The distance from the ground is seldom less than five feet, and although I have never found any more than ten feet high some are recorded as being as high as forty feet.

Most of the nests I have taken were in large thistles, from five to six feet from the ground. Small maples, box alders and scrub willows seem to be next in preference. The size of the nest is usually about the same, an average nest measuring three and a half inches in diameter by three and one-half inches in depth outside, and two inches in diameter by one and one-fourth inches in depth inside.

The number of eggs varies from four to six. Sets of six are oftener found than those of five, while sets of four are still more uncommon.

The largest egg in my collection measures .74x.51 inches; the smallest .62x.49 inches. An average specimen measures .66x.51 inches.

R. W. HEGNER,
Decorah, Iowa.

Breeding of Wilson's Snipe in Orleans County.

Having noticed in the March OÖLOGIST the article by Mr. Stone of Branchport in regard to the breeding of the Wilson's Snipe in Western New York; it may not be out of place for me to state that our little county of Orleans has two or three records of the breed-

ing of this bird within its limits. This Snipe would appear to be a regular breeder, although perhaps a rare one, in this section. Without question, the greater number of the birds migrate further north to breed; but that a few pairs, at least, remain here and breed with us each season, is no longer a question of any uncertainty.

There has come to my notice recently the shooting of a female Wilson's Snipe near Murray, in this county, in whose ovary was found an egg which would have had to be deposited somewhere inside of forty-eight hours.

A nest with eggs has also been found near Murray, and one or more sets have, to my knowledge, been taken from out the Barre marshes.

The writer, has, during the past few months, spent considerable time in looking up rare bird-records for our little county of Orleans, and, as a result, has obtained authentic accounts of the occurrence within our limits of many birds not hitherto supposed to be found, as well as run across breeding-records of several species not regularly attributed to our breeding-fauna. The most of these records not having been published, I shall hope a little later to write them up for mention in THE OÖLOGIST. Our county air-fauna comprises something like 230 species, rather more than less.

NEIL F. POSSON,
Medina, N. Y.

[In the early '80's a local sportsman shot a female Wilson's Snipe in Carlton (Orleans Co). Upon dressing, an egg, ready for deposition, was found in oviduct. This specimen was presented the Editor of the OÖLOGIST.—ED.]

HOAG, (Benj.) of Stephentown, N. Y., who has been extensively running his subscription notices in the various natural History publications for the past few months, writes:—"The OÖLOGIST is the medium to use when you want to reach the most "bird men." With best wishes for its continued prosperity."

The Oologist for 1898

"Will be fully up to its old standard of the early '90's—in fact we intend to make it second to none. In order to accomplish this we expect the hearty coöperation of every person interested in Nature Study and Natural Sciences as well as those interested in Ornithology and Oölogy. In order to enlist this coöperation we make on other pages of this issue one of the most liberal subscription offers ever made by an American Publisher.

"Our experience as a Publisher has taught us that subscribers bring SUCCESS. Our Offer will bring the former and the latter will surely follow. In order to fully merit this "SUCCESS," which will surely come our way we intend to give our subscribers a treat in line of Articles, Exchanges and Advertisements, and in order not only to secure but guarantee this "treat" we offer the following prizes.

"For the best Mss. of about 1,000 words (800 to 1,200), accompanied with photos or drawings, if convenient.

"1st prize \$5 Cash. 2d prize \$5 Books. 3d prize \$5 Premiums."

The Publisher of the OÖLOGIST has selected the more meritorious Mss. received in response to the above and has published them in this issue (April) and leaves it with the readers of the OÖLOGIST to say which should receive the prizes. You are requested to name the three articles appearing in *this* issue which you consider of greatest value, merit and interest. Write your decision on the back of a postal in the order which you think the prizes should be awarded and mail at once (none accounted after May 1st) to the Publisher of the OÖLOGIST. The first five "judges" naming the winning articles correctly or in nearest order will *each* be presented with \$1.00 worth of Premiums, their selection. Only subscribers of the OÖLOGIST can act as judges. Both the Mss. and Judges' prizes will be awarded on May 10th.

MORE PRIZES FOR MSS.—Prizes of same value viz: 1st \$5.00 Cash, 2d \$5.00 Books and 3d \$5.00 Premiums—will be

awarded for best Mss. (about 1,000 words) received between the dates of April 1st and June 1st.

PICTURES WANTED.—We also want unpublished photos illustrating bird life. Anything of interest to the Ornithologist and Oölogist or suitable for reproduction in the columns of the OÖLOGIST acceptable. For the three best photos received before June 1st duplicates of the Mss. prizes will be awarded, viz: 1st \$5.00 Cash, 2d \$5.00 Books, 3d \$5.00 Premiums. All photos or prints, sent in this contest shall become the property of the OÖLOGIST.

200 SUBSCRIPTIONS, new or renewals must be received during the month of April if you wish the May issue to be of 32 pages. Since January 1st we have been receiving an average of about 100 subscriptions each month. With this number with the premium subscription offers we are making we can only afford to publish a 16-page issue. By simply showing this issue to an interested friend and calling attention to our subscription offers the necessary or additional 100 subscriptions would easily more than be secured each month and a 32-page OÖLOGIST guaranteed.

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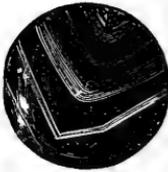
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O-JAW-AW-NE (The Bluebird), by Chief Pokagon, in the April OSPREY, is the third article by this celebrated venerable Pottowattomie Chief to have appeared, originally, in THE OSPREY. The two former articles were furnished by Chief Simon Pokagon himself; this one was purchased by Mr. William Brewster and afterwards presented to THE OSPREY by him.

Part One of W. E. Louck's **LIFE HISTORY OF THE PROTHONOTARY WARBLER** also appears in the April number, and is one of the most interesting features of the present volume, as far as the text is concerned. With PART ONE is a large map showing the distribution of the Golden Swamp Warbler in Illinois. Accompanying PART TWO will be photographs showing nesting sites, etc. These photographs will be selected from a large series obtained by a party sent out to secure them for THE OSPREY.

A YOUNG BURROWING OWL, a remarkably fine photograph from life, taken by Mr. H. W. Nash in Colorado, will be the cover illustration for April.

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in down.....	1 05
American Sparrow Hawk, young.....	1 25
in down.....	1 15
Saw-whet Owl.....	2 20
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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERMRY.

VOL. XV. NO. 5.

ALBION, N. Y., MAY, 1898.

WHOLE No. 144

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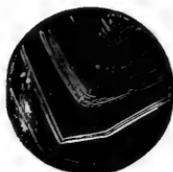
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THE OÖLOGIST.

VOL. XV. NO. 5.

ALBION, N. Y., MAY, 1898.

WHOLE NO. 144

The Coloration of Eggs.

CHARLES L. PHILLIPS, TAUNTON, MASS.

Oology if properly followed as a study is a very laudable and instructive science. Too many collectors, however, do not have a proper regard for birds, nor do they really make a true study of oology. They simply have a liking for the freedom and spirit of adventure felt while exploring the woods and fields for the nests and eggs of birds, and a certain elation in amassing a large collection, and perhaps procuring specimens which some fellow collector has been unable to obtain. In other words, rivalry often exists among the young oologists of a neighborhood, and in trying to outdo each other they seem to lose sight of the primary object of their chosen science. It is not only advisable to become familiar with the birds themselves, their habits, songs, nidification, and in fact the general features taught in the ordinary book treating of the ornithology of a given section of country, but it is best to learn these things and at the same time to probe deeper into the science which we are considering. To assist the readers of *THE OÖLOGIST* in the way suggested is the object of this article.

As we glance over a large collection of eggs we are usually impressed with the variety and beauties of the colorations. Hardly a shade of color known to the experienced artist is absent, and the charming combinations of tints are tastefully blended and often much enhanced by a glossy surface, while again some specimens have their markings made more pleasing to the eye by the dullness of the shell which seems to give the colors a velvety appearance.

This is especially noticeable among the browns and neutral tints. There are some eggs which owing to the absence of markings and the rough chalky exterior cannot be called pretty, but they are interesting, nevertheless, and they must not be omitted from the collection. These plain eggs offer contrast to the colors and they are just as valuable to the lover of oology as the most richly marked specimen in the cabinet.

The primary colors or pigments used by nature in decorating the eggs of birds have by spectrum-analysis been divided into seven distinct substances to the admixture of which in certain proportions all known tints are due. These coloring substances, which bear rather long scientific appellations, are seemingly blood and bile secretions made upon the surface of the egg as it passes through the oviduct. Primarily the spots are doubtless nearly circular in form, but the motion of the egg causes most of them to become smeared, prolonged, or otherwise distorted from the original form. The pale, obscure tints are evidently first deposited and so become deeply seated, rubbed off in part, and perhaps slightly covered with the lime-like substance of the shell. The bright marks are those deposited just before the exclusion of the egg. If they be round the egg was moving slowly or possibly not at all, or if they be prolonged into streaks the egg was evidently progressing quite rapidly, and these marks sometimes show that the egg was slowly revolving during its passage. The ground tint which uniformly covers the whole egg of certain species is probably laid on before the egg begins its motion. It is well-known that some families, the hawks for instance, lay, as a rule, one or more eggs

in each set that is noticeably deficient in marking if not entirely destitute of the characteristic spots and blotches. This fact is easily explained. If the last egg laid was without marking, the others evidently exhausted the secretion of pigments for the time so that when the plain egg passed through the oviduct the glands contained no color with which to mark it. If the first egg lacked coloration, the color had probably not been secreted when that egg was laid. This would indicate that the egg-producing functions at that time were not quite in harmony. It is usually the last egg that is slighted in the respect of marking, although numerous cases are on record where it was the reverse. If a bird be captured or frightened when a half-formed egg is about to enter the oviduct the egg will be laid prematurely and it will be defective in marking. On the other hand, over excitement or debility of the organs in question may cause the egg to be richly colored. Further, old birds in some instances seem to deposit more color than young, mature individuals of the same species.

In some eggs the shell is fine grained and glossy; this class is more commonly white and translucent, as in the Woodpecker family. In others the shell is dull, more porous and consequently better adapted to absorbing the colors. Some eggs have an enamelled, pitted appearance, others have no oleaginous exterior as the ducks. Collectors, it seems to me, cannot help noticing these differences in shell structure as they handle and mark the eggs of various species. The composition of the shell of course has a decided bearing upon the coloration. If porous the color will be absorbed giving the tint a softened appearance; if fine grained the pigment will be deposited upon the surface, imparting a brightness to the color which will augment the attractiveness of the specimen.

Oologists, no doubt, have noticed that some eggs with fine texture, glossy exterior and red markings may be damaged when fresh by handling with wet fingers. Under these conditions the colors are liable to soften and come off when touched, leaving the marking considerably lighter in tint than originally. For example, some of the beautiful eggs of certain species of Flycatchers are liable to this injury.

These subjects and kindred studies which concern the particulars of the science of oölogy are worthy of the young student's careful consideration, and I should like to expatiate more fully upon them at some future time.

Octocoris in Western New York.

FOR THE OÖLOGIST BY B. S. BOWDISH.

It is now some eight years since *Octocoris* took a prominent position in my ornithological interest.

Whether or not the bird had always been abundant in Ontario Co. I will not say, but certain it is that the bird did not attract great attention on my part until about '89 or '90.

It is a comparatively few years ago that *Octocoris*, or *Eremophila* as it was sometimes called, had not branched out into the numerous sub-species which were so suddenly developed, when comparatively little had been definitely settled regarding its exact distribution and breeding range, students generally of that day regarding the bird of our locality as simply *Octocoris alpestris*, or *Eremophila alpestris*.

For the past few years it has been my effort to ascertain just what percentage of the birds entering our limits (i. e. those of Western New York) were the true *alpestris* and what were *praticola*.

So far all my efforts to include the *alpestris* among our birds have failed, save on the authority of E. H. Short who includes it in the "Birds of West-

ern New York" as a winter resident, and whose term of visitation alternates with that of *praticola*.

In 1884 when Langille presented his "Our Birds in Their Haunts" to the public the division line between *alpestris* and *praticola* had not grown up and the birds ranging from Western New York to Labrador are by him included under the one head of *Eremophila alpestris*. He says, "Until very recently the breeding habit of this species has been assigned wholly to the far north, but it is now well understood that it breeds abundantly in the lake counties of Western New York and more or less to the eastward as far as Troy."

Since the settling of the present code of nomenclature most writers have, I believe, considered our bird as *praticola* entirely. I have shot, measured, compared and studied specimens at various seasons in a vain endeavor to separate them into two varieties. The result has been confusion, worse confounded. At last I am compelled to admit that I have secured no specimens which I could ascribe to other than *alpestris* [? Ed.] and the result of efforts I submit for what they may be worth.

Langille gives the measurements as 7.730 inches length. The length of a series which I took during the winter of '96-'97 were as follows;

Jan. 9, male, length 6.56; Feb. 1, female, length 6.65; Feb. 1, male, length 6.68; Feb. 2, male, length 6.58; Feb. 2, male, length 6.58; Feb. 2, male, length 5.81; Feb. 4, male, length 6.80; Feb. 13, male, length 6.40; Feb. 16, male, length 6.75 (dark breeding plumage); Feb. 16, female, length 6.40; Feb. 18, male, length 6.74; Feb. 18, ?, length 6.60.

As the above list were shot at random they probably represent very well the average length of specimens of this particular locality (these specimens were all secured in the town of York, Livingston Co.) It would also seem

that at this season the males are decidedly in the majority, as will appear from an inspection of the foregoing scale, and it appears very probable that as the birds begin and become abundant preceding the breeding season that the males arrive somewhat in advance of the females as is the case with many other species of birds.

Langille gives the following description of the Horned Lark, "7-7.50 inches long (as will be seen an average of my specimens is 6.56 inches), somewhat larger than our ordinary sized, its shape being about as peculiar as its voice. The bill is rather long for a song bird, quite pointed and a little curved; on its head are two tufts of erectile black feathers from which it receives part of its common name. As in the case of other birds, but unlike the rest of song-birds, the scales of the leg extend around behind; and its is very long and straight. This Lark is always in a squatting position with drooping tail when at rest. With a long black patch on either cheek; a somewhat triangular black spot on the upper part of the breast, reddish light brown above and dull white beneath, with yellow throat, long pointed wings tipped with black and a tail of the same color, a peculiar undulating flight often accompanied with a soft *tseep* or *tseep-ses*, whether sitting, walking or flying, this bird readily appeals to the eye of the observer."

To this description I will add that the intensity of tints varies greatly in different individuals and at different seasons, the black ranging from a greyish, faded tint to jetty; the yellow from very faint to well defined; and the white from dirty sickly white to a much nearer approach to clear white; this largely irrespective of sex, but conforming largely to seasons as the deepening of shades increases in general with the approaching breeding season and declines with its departure. Ten

stomachs which I examined contained fine sand or gravel. Without doubt insects are included in the bird's bill of fare when examined.

Before the separation of *alpestris* and *praticola* the bird was given place as a resident. Since *praticola* became a separate individual, many have denied him this status claiming absence on his part during December and some during late November and early January.

That he is equally entitled to a place as resident with the American Goldfinch and Cedar Waxwing will be conceded from a glance at the following records for doubtful months during '97. Jan. 9th, one; 18th, four; Nov. 17, (raw west wind with flurries of snow) seven; 18th, flock of about twenty (snowed and by noon of 20th was three inches deep, then thawed); 20th, two-22d, {heard one; 25th, two; Dec. 9th, three (weather bright, wind south); 10th, six (weather mild); 11th, one (mild); 15th, six (mild); 16th, heard several (mild); 21st, (during the interval between this and previous record there had been several snow storms and some quite severe weather) flock of four, and later amidst a heavy snow storm a flock of about ten passed over. 27th, four; 28th, flock of eight and one of fifteen flying southwest; 31st, two.

During the dates of the above records all kinds of weather prevailed and the result is much better than I could get with the Goldfinch which at best during the winter is very irregular throughout Western New York or with the Cedar Waxwing which is rarely seen at that time.

□ From the results I would deduce that the larger portion of *praticola* pass south in winter, that the remainder while somewhat irregular are never far from us and are liable to appear at any time without much regard to weather conditions.

As an example of variation in plum-

age of different individuals taken on the 16th of Feb. are thus described in my note book: "One, a male lacking cinnamon tinge on neck and shoulders being dusky instead and having the horns whitish; the other a male, being a dark bird with but very little tinge of the cinnamon, the breast-color a jetty black and the horns with conspicuous black upper edge, in fact, general plumage thoroughly breeding type."

In the matter of breeding, however, the weather very evidently does influence the Prairie Horned Lark to a marked degree. Langille gives dates of finding first nest April 23, 1875, nest containing four young; April 7, 1878, female feeding young, which were able to fly (He concludes nest must have been begun early in March); April 9, 1880, four eggs about half incubated. He does not state what the weather was previous to finding of nests for two or three weeks and this I believe to be an important factor. In Ontario I took my first set of this species in '89, a set of three in which incubation had proceeded about one-third. This nest was found the first week in May and was unquestionably a first nest.

Probably in Western New York nest building does not begin as a rule much if any before the 1st of April, often not until later, but exceptions to this rule produced by unusual weather are liable to occur as was evidenced by the spring of '94 when I took a nest of four nearly fresh eggs on the 10th of March, another of three fresh the 20th, a set of three, incubation advanced, the 27th, and another of three advanced in incubation on the 3d of April. The whole of the month of March up to about the 25th was most exceptional, the ground being free from snow and the weather more balmy than we usually see it in April. During the last week of March a light snow fell but it was not sufficient to cause the birds to leave their nests, but about April 10th there was a

fall of a foot or more of snow and all nests were immediately deserted, the birds congregating in small flocks by the roadside feeding and were often seen in small flocks subsequently. Nor did I, during the remainder of the season note any attempt to renew efforts at nidification.

The nests are usually sunken in the ground, their rim flush with the surface and nest and eggs offer so little contrast that they are by no means readily discovered. Moreover the bird in my experience, is but seldom flushed from the nest, usually skulking, while the intruder is yet some distance from it. The nests are seldom as substantially built as those of the Song Sparrow or Goldfinch.

Set 2-4, Phelps, Ontario Co., N. Y., March 19, 1894, eggs four, incubation just begun, nest depth outside $2\frac{1}{2}$ inches inside $1\frac{3}{4}$ inches, diameter outside $3\frac{3}{4}$ inches, inside $2\frac{1}{2}$ inches; dry grass and rootlets, outer lining plantain leaves, inner lining wheat straw, situated flush with brim in hole apparently excavated by birds, in open clover meadow a short distance from barn on slope facing east.

On going to this field in search of nests as I climbed the fence two birds flew up. I marked both spots, searched the first without success and the second with above results.

Set 3-3, Phelps, N. Y., March 27, 1894, eggs three, incubation advanced, nest depth outside 2 inches, inside $1\frac{1}{4}$ inches, diameter outside $3\frac{1}{2}$ inches, inside 2 inches; composed of dry grass lined with wheat-chaff. About two inches of snow when found and bird flushed quite near me from depression in ground in wheat stubble field.

Set 4-3, Phelps, N. Y., April 3, 1894, eggs three, incubation advanced, nest depth outside $3\frac{1}{4}$ inches, inside $2\frac{1}{2}$ inches; composed of grasses, fine roots and lined with same and wheat-chaff. Excavation by birds in meadow.

Set 5-4, Phelps, N. Y., May 19, 1897, eggs four, incubation advanced, nest depth 3×2 inches, diameter 4×3 inches; composed of fine grasses, lined with same, depression of ground in clover pasture. A few sets of five eggs have been reported. I have never been so fortunate as to observe such. The general number for first sets is probably four but sets of three are frequent.

The above is the result of eight years of as careful observation as other duties would allow. In view of the fact that I have failed practically in the first object of this study, may we not consider that there is room for investigation as to the respective status of *Oolocoris alpestris* and *Oolocoris alpestris praticola* in Western New York?

Nests of the Wood Pewee.

Editor Oologist:

I noticed in last OÖLOGIST Mr. W. S. Catlin, speaking of Wood Pewee's nests in his instructive article, "Exceptions," says, "Out of a personal examination of over a hundred nests only one contained any lichens." Every nest that I have examined in this state, was as thickly adorned with lichen on the exterior as those of the far-famed Blue-gray Gnat-catcher.

And furthermore under the head of "Exceptions," I might add that they were all neat and compact, and in beauty, nearly equal to the Gnatcatchers, instead of being "far inferior in design to the poorest nests of the Blue-gray Gnatcatcher, and Ruby-throated Hummingbird," * * * * nor do they "suggest a one story, flimsy poverty stricken home," as Mr. Davie says.

JACOB BASTIAN, JR.,
Statesville, N. C.

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Raptors in Elgin Co., Ontario.

In dealing with this subject I shall endeavor to give a few interesting notes on these birds, especially on their breeding habits in this locality as far as my observations have extended.

Along the northern shore of Lake Erie, the Bald Eagle is perhaps one of the best known "Birds of Prey," both on account of his great size, and the liking he has for fish, which he obtains

either direct from the pond nets or picks up along the shore where they have drifted. Between the Eagle and the Great Blue Heron, the fishermen lose quite a number of fish.

It was my good fortune to hear of a nest of this bird, early in March. Accordingly on Good Friday we started out for the situation—Port Stanley—about twenty miles away. Arriving there we found that there was a climb before us. The nest was situated in a large red oak in the corner of a field, with woods on both sides of it. About a mile west you could see the docks putting out into the Lake, at the Port, while half that distance to the south of us the water was breaking on the cliffs.

The tree itself was six feet in diameter at the base, and tapered down to three and a half at the first limb which was seventy feet from the ground. The nest was situated 85 feet above that, on an upright branch out to one side of the tree. The bark was fast to the tree although it was partly dead, and as I afterward found out so hard that it was only with the greatest difficulty that I could drive the spurs of the climbers into it. After a laborious climb I succeeded in reaching the nest—but then! there lay two beautiful fresh eggs—my reward. The nest was three feet deep by three and a half wide on top and tapering to where it was placed in a crotch, built of large sticks and quite hollow in the centre, where a neat nest of straw had been built on which the eggs rested. Having carefully lowered these to the ground, I commenced the descent, feeling well repaid for the climb. The eggs were almost white with slight bluish tinge and measure 2.04x2.70 and 2.06x2.74 respectively.

We learned from Mr. Himdley, on whose farm the nest was, that a pair of Eagles had nested on his place, every year for upwards of 50 years, during which time the nest had been blown

down four times. The first nest was built in a chestnut, the second in a white oak, this nest was 100 feet up, Mr. H. taking a pair of young birds by felling a tree against the one containing the nest. The third nest was in another chestnut. Fifteen years ago the Eagles first built in the present red oak on the central limb, where it remained for eleven or twelve years, when it, too, was blown down, and they built the present nest. Some years ago one of old ones was shot. The other sailed away, returning next day with a mate. While building the nest the Eagles would fly along and seize a dead limb in their claws, thus breaking it off. The male does not allow any Eagle to rest near his domain and drives him away by a series of attacks. This led to the capture of two Eagles under peculiar circumstances. A farmer west of Port Stanley, while walking along the shore, came upon two Eagles with their feet bound fast in the long grass. They had been fighting with the result that they were both captured alive.

One of our commonest Hawks is the Red-shouldered (*Buteo lineatus*). This large Hawk may be seen sailing in graceful circles, high above the trees, most any fine day. It is one of the 'Hen Hawks' of the farmer, and often faces a victim to his vengeance on a charge of chicken stealing, a charge which he is seldom, if ever, guilty of, his food consisting almost entirely of mice and snakes among which it creates great havoc. This Hawk builds its nest in beech trees almost without exception. I have taken several sets of eggs varying greatly in markings. The first set was of three taken Apr. 28, 1896, with distinct blotches of brown on two of the eggs, the third being scarcely marked. Another set taken on the second of the next March, were also well marked and were perfectly fresh.

May 24, 1897, I took a set of five high-

ly incubated from a nest 60 feet up in a maple. This is the only set, so far, that I have taken from any tree, except beech. Some of the eggs are heavily marked, the small ends of two of them being almost uniform brown. Another set of four on the 28th of the same month had two eggs without a distinct blotch, the other two are only slightly incubated. But for Red-shoulders a set of four taken on the 12th of last April surpasses them all. They are nearly uniform in size, 1.73x2.13 and of a very light background heavily blotched with dark brown. The surfaces of two of them seeming to be half brown, so thickly are they marked. The last set taken April 30th contained four highly incubated eggs, four of which are heavily marked, the fifth having no distinct markings.

The Red-tail (*Buteo borealis*) is another large Hawk which seems to be quite plentiful. Its favorite position is setting on a dead tree in the edge of the woods or in a field, watching for mice, which form a large part of their diet. The nest is built of sticks and bark, is of a large size and placed in any large tree, generally in an elm or beech. The eggs, two or three in number, have a whitish background with markings of brown and lilac. A set of two taken April 23, 1897, measure 1.72x2.35 and 1.80x2.40 respectively.

Cooper's Hawk (*Accipiter cooperi*). This destructive Hawk is well represented in numbers, and many are the geese, chickens and small rodents that fall a victim to his dexterity. A set taken May 7, 1897, contains four blueish eggs; one of them being blotched with lilac on smaller end.

I have also found Swainson's Broad-winged and American Sparrow Hawk breeding here, while I shot a female American Rough-leg while collecting Hawk's eggs in April.

The American Osprey occurs along the Lake shore, and in fall and spring

the Pigeon and Goshawks are sometimes seen, the former quite often. There are also two or three others that are here in fall and winter, which I have not as yet had a chance to identify.

The Owls are represented by the following: Gt. Horned (*Bubo virginianus*), Am. Long-eared Owl (*Asio wilsonianus*), Screech Owl and Short-eared Owl. The first three I have found breeding. The Gt. Horned is quite common in all the larger blocks of woods, one nest found April 23, 1898, contained two young about one-third grown. On the edge of the nest were part of four large rats. The Owls had taken possession of an old Red-tail's nest which was situated in a maple 70 feet up. I was surprised to find a nest of Bubo in such an open place, as you could see right through the woods, and it did not contain a single evergreen. On May 4th while botanizing in the edge of a large swamp, I discovered a full-grown young Bubo sitting in a second growth maple. A little search found the other young one in a hollow pine stub. At the foot of the stub were the remains of some previous feasts—the hind quarters of a "Cotton tail," the feathers of a Crow. The old ones came quite near in their anxiety for their young. I have found three nests of *Asio wilsonianus* this year. The first nest April 25th contained three young and two eggs. The second nest found same day, four fresh eggs. The third nest May 9th contained five fresh eggs. In every case they had taken possession of old Crow's nests, in second growth pines. The Short-eared Owl is often seen in the fall, generally in pairs when disturbed circling around in their peculiar flight. The Snowy Owl (*Nyctea nyctea*) is often shot along the shore of Lake Erie during the winter, and I have record of one being caught in a steel trap in June, while extracting young chickens from a coop. He had

been visiting the coop night after night.

R. T. ANDERSON,
Aylmer West, Ontario.

A Correction.

Mr. W. Lindsay Foxhall in the February issue of the OÖLOGIST, page 27, states that the Chickadee, *Parus atricapillus*, is a common resident of Edgecombe County, N. C., which is in the eastern part of the state. I want to ask if this is not a mistake, for this bird is considered a rare and irregular winter resident in this locality; and while I am aware that it breeds in the mountains of North Carolina, I have never seen the breeding range given so as to include the eastern part of the state.

I presume he refers to the Carolina Chickadee (*Parus carolinensis*), a very similar bird.

Hoping you will correct this error if it should be one, I remain,

J. HARVEY RILEY.

Eggs of Greater Yellow-legs.

On April 27th, a female Greater Yellow-legs (locally called Tell-tale or Prairie Turkey), was shot near this village.

It was observed that she was quite plump and a slight pressure brought to light a perfect and finely marked egg.

The ground color is light grey, profusely marked over the entire surface with dots and heavy blotches of deep lavender and dark brown.

The egg measures 1.80x1.67 inches and is somewhat similar in shape to the egg of our Bartramian Sandpiper.

The larger and heavier splashes of rich brown, add a pleasing color and serve to readily distinguish the egg, from those of our resident Sandpipers.

Question:—Did this bird intend to nest in this vicinity? Does the species ever nest so far south as this, the 40th parallel?

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XV. NO. 6

ALBION, N. Y., JUNE, 1898.

WHOLE No. 145

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150 " " " " " Nov. "
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THE OÖLOGIST.

VOL. XV. NO. 6.

ALBION, N. Y., JUNE, 1898.

WHOLE NO. 14

A Collecting Trip in California.

For a long time I had been trying to find the principal nesting place or places of the myriads of Hummingbirds seen in the valley during the rainy season. At last I had found it, and here I was with my feet turned toward a small pass through the foot-hills, known locally as Brea Canon.

The day was all that could be desired a perfect "day in June." High overhead in the cloudless blue soared a single Vulture, mute witness to the end of all things. From every fence-post a Meadowlark poured forth his bubbling song, while from every hillside numbers of Western Lark Sparrows rose in small coveys. Here and there a Burrowing Owl regarded me with great, round eyes from the doorway of his subterranean home. Road-runners and Towhees now and again appeared at the border of some dense thicket or clump of cacti. All the world was alive and making the most of that life while the cool hours of the morning remained.

But I must hurry over the events of my trip, only stopping to notice the taking of three eggs of the California Thrasher (*Harpórhynchus redivivus*). I considered this remarkable only in that the eggs were fresh and the date rather late for this species. The nest as usual was merely a platform of sticks and the eggs a beautiful pea-green spotted with brown.

At last, about eight o'clock, I arrived at a place which to my mind seemed to be the home of every Hummingbird in Southern California. The brushy sides of the canon formed excellent nesting sites for the Towhees, Thrashers and Western Yellow-throats; from an old

sheep "corral" came the musical call of the Valley Quail; but down where the little stream wandered along among tall willows and knotty oaks there were the Hummingbirds.

From under a ledge of rock darted a Black Phœbe (*Sayornis nigricans*). Soon her tiny nest, placed so snugly under the sheltering rock, was found, and the five slightly incubated eggs, pure white in color, packed safely away in my box. Glancing upward I saw not ten feet above me a nest, from which only the tail of the parent bird could be seen. A few minutes' climb revealed to me a female of Cassin's Purple Finch (*Carpodacus cassini*). This nest contained four badly incubated eggs, but as they were my first set of this species I took them together with the nest.

Sitting down under the spreading branches of a live oak I heard the peculiar note of a California Bush-tit. Long and diligently I searched and at last found—her empty nest. A pair of Costa's Hummers (*Trochilus costæ*) seemed to be very much excited, the female repeatedly darting at my head. Finally, after standing immovable for nearly half an hour, I was pleased to see Mrs. Trochilus settle down on the tiny white nest. The nest together with the two pure white eggs it contained soon found its way into my collecting box. A little further on another nest of the same species containing one highly incubated egg, was found. This I did not take as the shell these eggs in this condition is about as tender as wet blotting paper.

In a small clump of "tules," covering perhaps a square rod, was a pair of Marsh Wrens, but no nest could be found. Far up in the top of a tall wil-

low, swung a pensile nest, ownership unknown. A vigorous shaking of the tree sent a female Bullock's Oriole (*Icterus bullocki*) off the nest in short order. Four young birds nearly ready to fly rewarded my climb.

Walking slowly along the banks of the Arroyo I was surprised to see a California Chickadee leave an old stump in response to a hearty rap with my cane. For the first time in my life I had found the home of *Parus rufescens neglectus*, I was almost afraid to open the nest for fear that no eggs would be found. Much to my delight five half incubated eggs were lying on a mass of fur, feathers and seed down, fitted so closely together that no possible cold could come to the young, when hatched. These eggs do not differ at all from those of the common Chickadee (*Parus atricapillus*) so well known to Eastern collectors.

Passing under the spreading branches of a live oak I heard the sudden whirr of tiny wings. Just on a level with my eyes I found the nest, and a few minutes' waiting showed me the parent birds. The cinnamon colored throat and metallic crest plainly showed them to be Rufous Hummingbirds. The nest contained two fresh eggs and was well hidden on the extreme tip of a small limb. The eggs seem to differ from those of other *Trochilidae* only in being more oval, and the nest larger than usual with Hummingbirds. On the opposite side of this tree was a nest of Costa's Hummer (*Trochilus costae*) containing two eggs nearly fresh. Further on, in the top of a tall Willow was found a nest of Cassin's Kingbird (*Tyrannus vociferans*). To my surprise the nest contained four eggs, incubation about one-half. This is the only nest of this species I have ever found placed on a horizontal limb. Usually a fork is taken and the nest placed on a more solid foundation.

By this time I was quite ready for

my lunch as it was past two o'clock. While eating I noticed a pair of Cassin's Vireos but was unable to locate the nest. Perhaps, however, their house-keeping was over for that season. By carefully watching a pair of Violet-green Swallows I found two nests high up in the face of a limestone cliff. They had chosen two cracks in the face of the stone, but by dint of hard labor had so filled them up that a sort of shelf was formed, on which the eggs, three and five respectively, were laid. Generally these birds prefer a hollow tree or else a "tunnel" into the face of the cliff; rather than an open nest.

The eggs were pure white and fresh. I think the set of three was incomplete, as they generally, in this section at least, lay from four to seven eggs. There were at least fifty nests of the common Cliff Swallow (*Petrochelidon lunifrons*) on the same cliff, but these I did not disturb as my series of this species was full and probably most of the nests contained young.

For the next hour my search was unrewarded. Then I took a fine set of California Towhee (*Pipilo fuscus cristalis*). The nest, firmly woven and well lined, was placed in a white sage bush which overhung the stream. It contained four eggs incubation slight. While these nests are large and bulky and their owners very familiar, still they are not so easily found as might be supposed. But it was now time to start for home, so retracing my steps I went slowly down the canon. Walking carelessly along I brushed my hand against a tall "nettle weed." This brought an exclamation from me and a sudden "whir-r-r" from the bush. Looking down I saw not over two feet from the ground a Hummingbird's nest containing two eggs. The return of the birds at once identified the eggs as those of *Trochilus alexandri*—the Black-chinned Hummingbird. Packing these in my case I started once more on my return

journey, arriving at home tired but well pleased with the day's trip.

HARRY H. DUNN,
Fullerton, Orange Co., Cal.

The Photographing of Birds, Their Nests and Eggs.

To me a trip after birds eggs is incomplete without the taking of a few photographs. Not only because they recall to mind many of the delights of the trip but because they are of the utmost scientific value. It is impossible in writing out the data for a set of eggs to give all the particulars of the location of the nest and the locality, and yet these are perhaps the most important things next to the date.

In the following article I purpose to give a few hints, a suggestion to collectors which I think will be found of considerable value, both to the beginner and the more advanced student.

THE CAMERA.

First of all get a good camera. There are many on the market and you will find no trouble in getting one that is suited to the purpose. It should be arranged for both time and instantaneous exposures. The size of the pictures should be $3\frac{1}{2} \times 3\frac{1}{2}$ inches or over. I find the 4x5 size the best for all round work. Either plates or films can be used, but the latter on account of less weight are much better. A film camera weighs when loaded less than one half as much as a plate glass camera. This will be found of the utmost importance as extra weight is always to be avoided on a collecting trip.

A large picture is of course the best. There are two ways of arriving at this point, one is by using a 5x7 or over camera and the other is by enlarging. The latter is preferable as a 5x7 camera is unweildy and a good negative from the smaller camera can be enlarged up to 30x40 inches, or to any intermediate size desired. Of course the larger

camera does away with the extra work of enlarging, but it is a question whether this makes up for the greater handiness of the smaller one.

Better pictures can be obtained by the use of a tripod as most of the pictures will have to be time exposures and few, if any, can hold a camera steady enough for this purpose. Of course the tripod adds extra weight and is not a very convenient thing to carry, but there is one that comes which folds up into a staff about four feet long which will be found a very acceptable aid in walking as well as being always ready for use.

FOCUSING.

The next thing to be considered is focusing. If any reader will take the trouble to look through some of our illustrated Ornithological Magazines he will find that in eighty per cent of the pictures either the entire picture or some part of it is more or less indistinct. This arises from two causes, first, the camera has been placed too near the object, and second, the camera has not been held steady. Let me say right here *don't* get too near the object. The nest or bird may appear very small in the finder but it will be twenty times the size on the plate and if you intend to enlarge you can make it plenty big enough.

The $3\frac{1}{2} \times 3\frac{1}{2}$ inch camera will be found to make the best pictures as it is known as the fixed-focus type. That is, all objects are in the same focus. The larger camera are of the acromatic-type and have to be focussed.

Never get nearer than eight feet of the object to be photographed, if you do the picture will be blurred and consequently worthless. Always keep your camera horizontal otherwise the picture will be slanting. In certain cases the camera can be pointed downward.

Endeavor to get your photo when the sun is shining from behind, but you can also take it when the sunlight comes

from either side in which case you must prevent the direct sunlight from striking the lens of the camera.

It will sometimes be found advantageous to use a mirror and by means of it throw a beam of light on the object while photographing it. However, there is another way of reaching the same end. Make the exposure longer and when developing as soon as appears the part which is lightest in the object photographed will appear first. As soon as it is distinct take the plate out of the developer and wash it off with clear, cold water. Then take a fine, soft camel's hair brush and paint over that part of the surface which appeared first with a ten per cent. solution of Bromide of Potassium. Repeat this several times according to density of the different parts of plate. Replace in developer and develop until finished. The bromide restrains that part of the plate treated and allows the other part of the plate to come up.

TIME AND INSTANTANEOUS EXPOSURES.

Nests in the open fields and large nests on isolated trees, nests built on the seashore and on rocks can be photographed instantaneously but nests in the thickets and deep woods must be time exposures.

The length of time for exposures varies according to the brand of plates, amount of light and size of stop used.

I advocate a quick plate. The smaller the stop the sharper and better the picture but the exposure must be lengthened accordingly.

Where there is a fair amount of light four seconds is about the proper time using the largest stop. If using the smallest, ten times as long is required or forty seconds.

To those who may not know what the stop is the following explanation will suffice.

In the better make of cameras a small circular diaphragm of steel is used. It is placed either in front of, or between

the lenses and is perforated with circular holes of different sizes and can be moved so that the different holes are brought opposite the lenses

The largest stop must always be used for snap shots unless the picture is taken over water upon which bright sunlight is falling in which case the next size smaller is used.

DEVELOPING AND PRINTING.

Any good developer will do and the plates are developed the same as others. A few drops of a ten per cent. solution of bromide of potassium will be found useful in retarding over exposed negatives.

If you intend to publish your photographs albumen paper is the best to print on. Print carefully and tone so as to obtain clear whites. The picture should be carefully mounted and highly burnished.

I trust that the few hints which I have given will be found useful and if this does not reach the editor's scrap-basket I will give a few pointers on enlarging and photographing of wild birds in their haunts, in the near future.

ROBERT C. WOODHOUSE,
New York City.

Davie's "Nests and Eggs of North American Birds," is out and ready for delivery—in fact has been for two months, BUT owing to some sort of a complication between printer and publisher the edition is held up pending a settlement. An early untangling of affairs is most sincerely to be hoped—if possible; urgently demanded. Until then interested parties must wait with best possible grace.

Ripans Tabules cure dyspepsia.

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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FRANK H. LATTIN,
Albion, Orleans Co., N. Y.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Prothonotary Warbler. (*Protonotaria citria*).

This handsome little Warbler first came under my observation in 1888, while out looking for Downy Woodpeckers' eggs. I was out in the bottom lands of the Mississippi River working my way along the edge of the pond, among the willows and birch, when out flew what I at first thought was a Yellow Warbler, but on getting a bet-

ter view, saw it was a new bird to me. Did not find any nests that year but in 1889 found a set of six handsome eggs on June 15th, in an old Downy Woodpecker's hole, placed in a rotten stub. The nest was a mass of moss, some of which still had the roots and dirt adhering, filling the cavity almost to the top, lined with a few strips of the inner bark of grapevines, some hair-like roots, and a feather.

Since then I have taken many nests and eggs, ranging from three to seven in each nest. Some heavily marked with large spots and blotches, others thinly and evenly marked with small spots and specks, of a reddish or brownish color, with lilac shell markings underneath.

Some years the bulk of the nests were found in stubs standing at the edge of or in the water, other years from ten to one hundred feet back from it, and in thick woods.

They were the most numerous in the marshy bottom land at the head of Lake Pepin, where there were many stubs, dead trees and stumps standing in and at the edge of the water. This year I went down there with Willis F. Hill of Lake City, Minn., and we only found one set of four and another nest containing one egg. The action of the ice in spring and heavy winds having torn and blown down nearly all of the suitable nesting places, causing them to seek nesting sites somewhere else.

The height of the nesting season was from May 30th to about June 15th, in some years, and others from about June 5th to about the 25th.

The height ranged from one foot above water (one nest) and two feet to thirteen feet, averaging from four to six feet up. One dead tree contained a Prothonotary Warbler's nest six feet up, and two feet higher a Tree Swallow, and about six feet higher a Downy Woodpecker's. All containing young.

Nearly every nest found was in an old

and sometimes broken out Downy Woodpecker's hole. Very frequently we could tear away the rotten wood all around the nest and take it out whole. The oldest and rottenest holes seem to be preferred.

In all the books and papers that I have, none mention this Warbler as a summer resident, except G. G. Cantwell's list of the birds of Minnesota. It certainly should be classed as fairly common in suitable localities along the Mississippi River in southern Minnesota.

C. B. JOHNSON,
Red Wing, Minn.

Nesting of the Short-eared Owl in Western New York.

On April 7th while on a trip for Hawk's eggs I had the good fortune to find a set of Short-eared Owls. As I am unable to find anything about this bird in such back numbers of the OÖLOGIST as are in my possession I thought it might interest your readers to know something about this find.

The nest was in a low swampy tract of land on the outskirts of a tamarack swamp.

The land had at one time been plowed and parallel ditches dug about 20 feet apart, but it had evidently never been cultivated for it was overgrown with weeds and cat-tails.

I had just jumped one of these ditches when the old Owl flew up not 10 feet ahead of me, and began circling around me snapping her bill and giving a peculiar cry resembling very much the "yowl" of a cat when you step on her tail.

A hasty examination of the clump of flags from which she had flown disclosed seven (7) eggs in all stages of dirtiness from the worst (probably the first one laid) which was stained a dark drab, to the best which was a pure white.

The nest was simply a slight hollow

in the ground, in the center of a bunch of last years flags, it was lined with flags from the clump in which it was located and contained a few feathers. It measured 6 inches in diameter by 2½ inches deep. Beside it lay a little ball consisting of the fur, bones and teeth of some small animal, probably a mouse.

Before disturbing the nest, however, I turned my attention to the bird and by the aid of my opera glasses I was able to get a very good description of her while she was hovering over me, and finally when she gave up and alighted on a small tree near by I was able to get a good stationary view of her from all sides.

I then returned to the nest (which I had marked by sticking my climber in the ground near it), packed the eggs and started on.

On blowing, the eggs were found to be slightly incubated. They measured 1.51x1.30, 1.53x1.26, 1.68x1.25, 1.53x1.31, 1.56x1.30, 1.58x1.29 and 1.57x1.28. I had no trouble in identifying the bird from the noies. The location of the nest would have almost proven the species.

I think that there must be several pair in the vicinity for there was hardly a stump or an ant hill in the whole marsh that did not have one or two of those little balls of fur and bones on it.

While passing through a marsh near the river two days later I saw another pair of the birds but was unable to find their nest.

I find that Short in his list of birds of Western New York has this bird down as, "Common fall or winter visitant and possible rare breeder."

I am glad to be able to prove that his supposition was correct.

FRANK S. LOW,
Buffalo, N. Y.

I SOLD my Eagle through the adv. Advertising in the OÖLOGIST pays. F. W. COLLINS, Garden City, Kans.

Nesting Habits of the Red-breasted Nuthatch.

The Red-breasted Nuthatch *Sitta canadensis* is generally distributed throughout this State, occurring as a resident of varying abundance in that portion which is embraced in the Canadian Fauna, and as a winter resident in the southwestern part. The species is most abundant in spring and fall, and when resident, is more common in summer than in winter. Though occurring at all seasons they are somewhat migratory, moving southward in the fall and returning in the spring, but whether the winter birds are individuals that do not take part in the migratory movement, or are migrants from the north I am unable to determine. The past winter I found these birds wintering quite commonly in Cumberland County, Nova Scotia, along the shore of the Bay of Fundy.

The call-note "quank" "quank" "quank" is well known, but the numerous conversational notes of which they have quite an extensive command, are not so often heard. Many of these are uttered in so low and soft a tone that one must be quite near the birds to hear them. I think their notes are more varied than those of their White-breasted relative which is much less common here, but are not as loud. I have never seen the two species associated, though the Red-breasted gets along very amiably with the Chickadees and Brown Creepers, and are usually found with them in the spring and fall.

In their quest for food most of their time is spent on the trunks and limbs of the large trees, searching the interstices in the bark and the bunches of moss for something edible, working with much assiduity, all the time on the go, often clinging head downward, and with much conversational chatter. In the fall they frequently ascend to

the tops of the spruces, working about over the limbs and searching the cones closely. In rare instances I have seen them come to the ground and scratch around among the leaves for food. In this locality the birds usually commence nesting operations late in April and the full complement is generally in the nest by the 20th of May, though the date varies somewhat according to the earliness or lateness of the spring. The locality chosen is in old growths, principally of soft wood, in which dead and decaying fir stubs are numerous, and where the ground is rather low and damp.

Fir stubs are most frequently chosen and the nest cavities are excavated at heights varying from five to forty feet. Most of the nests I have examined were between fifteen and thirty feet from the ground. The slender bill of the bird is hardly strong enough for digging in sound wood and the nests are nearly always in wood so rotten that it is easily broken away with the fingers, or can be cut away with a jack-knife. The nests are easily found. I generally go into the woods about the time the birds are excavating a nest cavity and listen for their note. They are usually near the nest and once they are located the nest can be found by observing the birds. The tapping of the bird in the nest-hole can be heard some distance away and is easily located.

I have never seen the birds sharing the work of excavation as is done by the Chickadees, Mr. Nuthatch allowing his better half to do it all, though he is near and offers encouragement in the way of song and occasionally a dainty morsel is brought and presented for refreshment. The female (distinguished by her paler coloration) enters the cavity and taps away for a time, then brings out the bits of wood she has detached. Usually she comes entirely out of the hole standing head downward

and scattering the contents of her bill by a flirt of the head, turning around to enter again. Sometimes only the head is protruded from the hole, the wood being scattered in the same way.

The entrance is an inch and a half in diameter and the cavity is five to six inches in depth. The nests, of which I have several before me, are all precisely alike. They are rather slight structures composed entirely of fine brownish shreds of cedar bark, placed in the bottom of the cavity. I have never known the birds to use a cavity other than of their own construction and a new cavity seems to be made for every nest. Usually some feathers become detached from the bird and are attached to the wall of the cavity and mingle with the nest material. The eggs are five to seven in number, six being most frequently found; pure white, dotted with red, more heavily at the larger end where the spots sometimes tend to form a wreath. A typical set measures in inches, .63x.47, .60x.48, .65x.45, .62x.47, .61x.47, .61x.47. They are not distinguishable from eggs of the Chickadee but the nest is entirely different and could not be mistaken. There is always a quantity of fresh fir pitch about the entrance to the nest, frequently entirely surrounding it, the greatest quantity being directly below the entrance and often extending down some inches. I have never been able to satisfactorily determine its purpose, but it is invariably present. The nest is about as easily found after incubation commences as when it is being built, as a few raps on the stub is sufficient to cause the bird to leave the nest.

If one knows a pair of Nuthatches are nesting in a certain block of woods, a careful examination of the suitable stubs, rapping on each, will be quite certain to reveal the nest. The parent birds display considerable solicitude whenever the nest is disturbed, remaining near, uttering notes of anger and

distress. The female is especially bold, coming close to the spoiler of her home and uttering those protests which are the hardest part of collecting even though we know the distress we are causing will be soon forgotten and another nest and eggs replace the ones we are taking.

C. H. MORRELL,
Pittsfield, Maine.

April Contest.

Twenty-two subscribers sent in their opinions as to the value of April OÖLOGIST. Seven articles were mentioned. The winning one and credits and premiums to which each is entitled follows:

1st prize, \$5.00 cash. "The Summer Home of *Vireo Solitarius Cassini* and Other Notes." 46 credits.

2d prize, \$5.00 worth of books. "Red-head and Ruddy." 39 credits.

3d prize, \$5.00 worth of premiums. "Prairie Horned Lark in Illinois." 27 credits.

Six judges named the winning articles in their correct order, hence the prizes were awarded in the order in which their decisions were received.

1st prize, \$1.00 cash. No. 1, E. A. Doolittle, Painesville, O.

2d prize, \$1.00 worth of books. No. 4, F. B. McKechnie, Dorchester, Mass.

3d prize, \$1.00 worth of premiums. No. 9, V. L. Beed, Hampton, Iowa.

Inasmuch as the three following named the winning articles 50 cents worth of premiums were awarded each.

No. 14, R. P. Smithwick, Merry Hill, N. C.

No. 15, Ralph W. Clayton, Galesburg, Ills.

No. 19, R. H. Beck, Berryessa, Cal.

A portion of the Mss. received in June contest appears in May and June OÖLOGISTS. The balance will appear in July issue at which time an opportunity will be given the readers of the OÖLOGIST to decide on the merits of the articles in the three numbers.

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Values are based on the 1893 ones which were determined by the compiler, from invaluable notes, suggestions and assistance from Major Chas. E. Bendire, J. Parker Norris, Esq., and Captain B. F. Goss. In addition to these notes, which have been carefully reworked, the compiler has had suggestions from over FORTY LEADING AMERICAN OÖLOGISTS, all of which were carefully considered and where advisable, adopted. Lattin's Catalogue has long been recognized by leading Oölogists as the "Standard." The compiler intends to issue a new one as soon as this edition is exhausted and desires the assistance of every working Oölogist, in making values, etc. On this account he has concluded to close out this edition at the following rates, postpaid (regular price was 25 cents per copy.) Single copy 10 cents; 3 for 25 cents; 7 for 50 cents; 15 for \$1 00.

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From this same stand point the OÖLOGIST's rank among publications devoted not only to Ornithology but Natural History as well is identical to that of the COUNTRY GENTLEMEN among agricultural publications.

Mr. W. Raine, of Toronto, who has already purchased \$20 worth of space in the OÖLOGIST for '98 and who has patronized its columns to a greater or less extent for the past ten years, under date of March 2d, writes:

"I do not wish to jolly you but I must say that the OÖLOGIST is the best advertising journal of its kind in this continent. You should see the pile of letters I have received the past two weeks. Many from my old correspondents of years standing. For 12 years I have advertised in every Ornithological journal published in the United States, but *none* bring as good results as the OÖLOGIST."

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERMYY.

VOL. XV. NO. 7.

ALBION, N. Y., JULY, 1898.

WHOLE No. 146

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

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155	"	"	"	"	Apr.	"
160	"	"	"	"	Sept.	"

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This month's OÖLOGIST was mailed subscribers July 31.

WANTED.—A good 32 single shot rifle. Will exchange sets and singles. State price and write at once to, GEORGE D. BRADSHAW, Carlyon, N. Y.

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LITTLE BROWN CRANE Eggs and Skins for sale. 3 sets of 2 eggs each with skins of the parent birds, obtained in Assiniboia last month with original datas. Full particulars about the nesting of the Little Brown Crane in North West Canada will soon appear in the *Auk*.

W. RAINE, Kew Beach, Toronto, Canada.

CHEAP STAMPS.—4 var. Argentine, 5c; 5, Cuba, 5c; 15, Holland, 10c; 17, Italy, 10c; 5, Mexico, 5c; 7, Salvador, 10c; 11, U. S., 5c. List of sets, &c. free. 17 var. western bird skins, \$1, postpaid. F. T. CORLESS, Logan, Ore. M4t

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NOTICE:—Having gone to the front with the Geneva 34th, I would like all previously arranged exchanges and correspondence postponed until the close of the war. B. S. BOWDISH.

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TO EXCHANGE:—The following A. O. U. singles for sets: 120c, 126, 208, 261, 316, 337, 387, 88, 444, 467, 488, 495, 498, 507, 511b, 519, 546, 550, 584, 593, 613, 616, 622a, 633, 652, 684, 687, 704, 705, 721 and 725. Address Lock Box 854, Wellington, Kas.

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WANTED:—Ithaca, Remington, Spencer Winchester and Parker Bros. shot guns, 12 gauge. Also fox hound, Pheasants and Turkeys. Can offer in exchange for above one hundred first class sets, data, Fancy Pigeons, etc. J. O. JOHNSON, Southington, Conn.

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EUGENE S. ROLFE,

July 2t Minnewaukan, N. Dak.

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THE OÖLOGIST.

VOL. XV. NO. 7.

ALBION, N. Y., JULY, 1898.

WHOLE No. 146

A Day With the Parulas.

In the south western portion of Rhode Island, close by the boundary of Connecticut, and just in sight of the

Lake. A more beautiful spot is hard to find. It is one of those wilderness like places which give the impression of being miles from civilization. Two sides are filled in with tangled masses



Nest of Parula Warbler. From Photo by F. J. B., Haversham, R. I.

eastern end of Long Island, is a small post office district which goes by the name of Haversham. It is a low lying place facing the ocean and covered by numerous small swamps and sloughs. The tide pond in front is open to the sea only by a narrow branch, in and out through which the tide surges with great rapidity. The east end of this pond is styled Inoncontang, and four miles back from its shore is Wauchog

of cedar and alder growth, one end is partially cleared off, and the remaining side forms a forest of tall Hornbeams.

It was to this lake that on June 1st I directed my way in company with a friend. The day was not particularly fine, a strong north east wind wind was churning up the surface of the lake and every little while great drops of rain splashed down. Securing one of the fishing skiffs of the place we started

to row, aiming for a creek at the upper end where we expected to find usnea moss, the home of many Parulas. Night Herons flew awkwardly back and forth among the swamps, and flocks of Waxwings dashed restlessly about the alders, where we discovered several completed nests beautifully constructed of usnea. Now and then Red-shouldered Hawks soared over, and once an Osprey. On reaching the end of the pond a search was begun for the mouth of the brook which, well concealed by alders was at length discovered. A tule swamp grew about and thinking to find a few Red-winged Blackbirds' nests, we began to wade. Water snakes wiggled in and out and once in a while a black one. The black-birds were in plenty with eggs ready to hatch, we were about to return to the boat when I caught a glimpse of white eggs through the brake, there was a fine set of Least Bittern's eggs, five in number, warm as when the bird stealthily left them. The nest, a rough platform of tules was raised about six inches above the water and so slight was the depression that the eggs readily rolled about. They proved to be slightly incubated when blown. Four fresh Long-billed Marsh Wren's nests were passed on the way back to the boat. The creek is the outlet to the lake and probably forms one of the principal sources. It is about twelve feet wide, continuing so for a mile and a half when it disappears under an underground bridge, over which an old road passes. On all sides is a thick swamp of ash, alders and tall, gaunt dead wood, pierced countless times by Woodpecker's holes. It was reported that Woodduck roosted here, but we found only one old nest in a shaky stub. The usnea grew very thick as we poled along and hearing our first Parula song, we hunted and soon had the nest, a delicate affair hung to an old tree eight feet high. Four slightly incubated eggs

were the contents. From this spot the nests became fairly common, being placed in a variety of situations. Some were over ten feet up while others were not five. One was hung right over mid stream and without the boat could not have been examined. The male birds in all cases were singing about three hundred yards away, and unless the nests held sets, the females were not observed. The majority of nests were empty, being about completed and others held two or four eggs, the latter number being the set. Only twice while taking eggs was any alarm displayed and then the females simply uttered a few chirps after leaving the nests, and then flew off. We urged the skiff along in this way till past noon when arriving at the bridge our progress was stopped. Here we ate lunch and then started back to look for the inlet to the lake. This we found in much the same way as the outlet. The inlet which we called "Usnea Creek" is only navigable for a short distance where it broadens into a thick swamp. The Parulas were not so abundant here and we found but three nests. A pair of Chickadees were singing loudly about, so a little search found us the nest in a paper-birch stub leaning over the water. It contained young almost ready to fly.

The afternoon was now well spent, so turning towards home we slowly rowed along looking for more nests in the moss which still continued to be thick about the hornbeams. Three more nests were seen, one containing two eggs, the rest empty. A Green Heron called from a cedar clump near and arose splashingly. We entered and found a nest containing young about hatched with the broken shells beneath. A few Black-throated Green Warbler's were singing their quaint songs about the cedar tops, but we failed to find their nests.

We reached the shore in an hour or so, and pulling up the boat, with a last

look at the lake over which the sun was now beaming, left. A pair of Spotted Sand-pipers flew noisily before us and in the pasture above a Vesper Sparrow flushed from her nest and three eggs. Chats flew passionately into the air pouring forth their medley of songs, and Bob White's called from the brush. It was a long-to-be-remembered scene.

Our last Parula's nest was found as we were passing through an old moss grown orchard, it was entirely different from all of the others. The general shape was that of the lower half of a Baltimore orioles nest, straws were sticking through the moss and it was almost entirely composed of the disk shaped usnea, "Usnea barbata." Four eggs slightly incubated was the complement contained. The male was singing from the woods near.

The illustration shows a typical nest as we found them. It was photographed at home and showed fairly well the shape and situation. With the exception of the last nest found, all of our nests were entirely composed of the moss with the addition of a few fine straws or pine needles which constituted a firmer lining for the bottom of the nest. The average egg measures .63x .46 and is glossy white dotted with claret brown and lilac, often wreathed about the larger end. The size of the nest of course varies with the bunch of moss selected, but the entrance has a diameter averaging about three-fourths of an inch.

FRANK J. BIRTWELL,
Dorchester, Mass.

Further Remarks on Ornithological Photography.

Editor Oologist:

Noticing the remarks of Mr. R. C. Woodhouse in the June issue on this subject I beg to submit a few suggestions along this line, which differ materially in many respects from the above

writer's experience. Doubtless every collector who has made use of the camera in the field will agree as to its inestimable value, and each artist has probably marked out his own methods of photographing birds and nests; and consequently what I may offer is simply individual opinion.

The collector who goes afield should not expect to gain valuable results without some trouble and pains, and many of the best ornithological views are the results of continued patience and perseverance on the part of the artist. If you have a subject worth taking do not mind a little extra weight or trouble in getting your apparatus to the spot. Select a good camera and a large one if necessary and you will not regret your trouble when the finished print lies before you.

I would advocate using at least a 5x7 camera, as it gives the best all-round satisfactory results and is not as unwieldy as one who has not used it would be led to believe. I have used a 5x7 camera entirely for several years and never find it a burden when I have bird photography in view, and especially if the subject is to be one of interest. My present camera is a "Midget," manufactured by the R. O. Co., and can be folded up to a thickness of about 2½ inches and the lense and shutter dropped into my pocket. The plate holders can be packed next the camera and the whole wrapped in a focusing cloth and carried by a strap, making a convenient package, and when in use is transformed into a very neat bellows camera. I should by all means recommend a focusing camera and not one of the fixed-focus type, the results with the former being eminently more satisfactory.

Use a tripod and take time to carefully focus on the bird or nest you wish to take; then use the "stop" you consider will give the best results and time accordingly. In such cases with

a focus camera, good results are almost certain to follow. No hard and fast rules can be given as to timing photographs, there being many factors necessary for consideration in each subject. I prefer a time view wherever possible, even in the sunlight, when with a moderate stop and quick exposure the results seem superior to an instantaneous view. A small stop and long exposure will give great detail, but a moderate stop and quicker exposure produces a greater contrast of light and shade.

Mr. Woodhouse recommends that you "never get nearer than eight feet from the object to be photographed." By using a focus camera and proper stops a nest can be perfectly photographed at a much less distance, and without any part of the picture being out of focus. There are many subjects which we meet in the field which require unusual treatment to secure and many of the rules usually followed must be disregarded if the object is to be photographed. This summer while in the mountains I found a nest of the Hermit Warbler 45 feet up in a pine tree, which I wished very much to record *in situ*. The nest was on a horizontal limb, resting on the pine needles not over five feet from the top of the tree. There was no opportunity to use a tripod or stand for the camera so I was obliged to straddle a small limb, hold on to the trunk of the tree and hold the camera tightly against the tree until the proper focus was gained. Then, owing to the sun shining indirectly on the nest, it was necessary to make a quick time exposure. The nest was not over four feet from the camera and is almost in perfect focus, as are also the limbs about it. I made four negatives of the nest, one instantaneous one being undertimed in the shade and the others slightly blurred by the vibration of the limb. But the one perfect negative is a pleasing reward for

all my trouble. Nests and birds taken at four and five feet distant almost always come out well if properly focused and a suitable stop used.

I also use occasionally an "extension" which fits into the camera in place of the front board, the latter fitting into the front end of the extension, and thus giving about six inches greater focus and making small nests and objects almost natural size. Small nests may be photographed at a distance of from one to two feet but should be given a longer exposure than is necessary with the camera proper, and the smallest stop should be used which will usually cut a sharp picture.

I use Stanley "50" plates, which give excellent results and are rapid. The matter of finishing the pictures rests with the individual and his taste; personally I prefer the Aristo gelatine finish, and dry my prints on ferrotype tin, which imparts a high polish. Finally the worker who expects interesting results must prepare for and endure often considerable trouble before his object is attained, but the greater the work necessary to secure a good photograph, the more will it afterwards be appreciated.

C. BARLOW.

Santa Clara, Calif.

A Collecting Trip in the Thousand Islands.

There are many quarters in America known as the "Thousand Islands," and in every case they are interesting to observers and tourists. I have had the pleasure of winding about, and in and out among the islands of several of these picturesque groups, from a steamer trip through the celebrated group in the beautiful St. Lawrence river to a canoe cruise among the mangrove-lined edges of the low isles in Florida.

One April not long since two other collectors and myself were rusticated at a small hotel at the southern part of

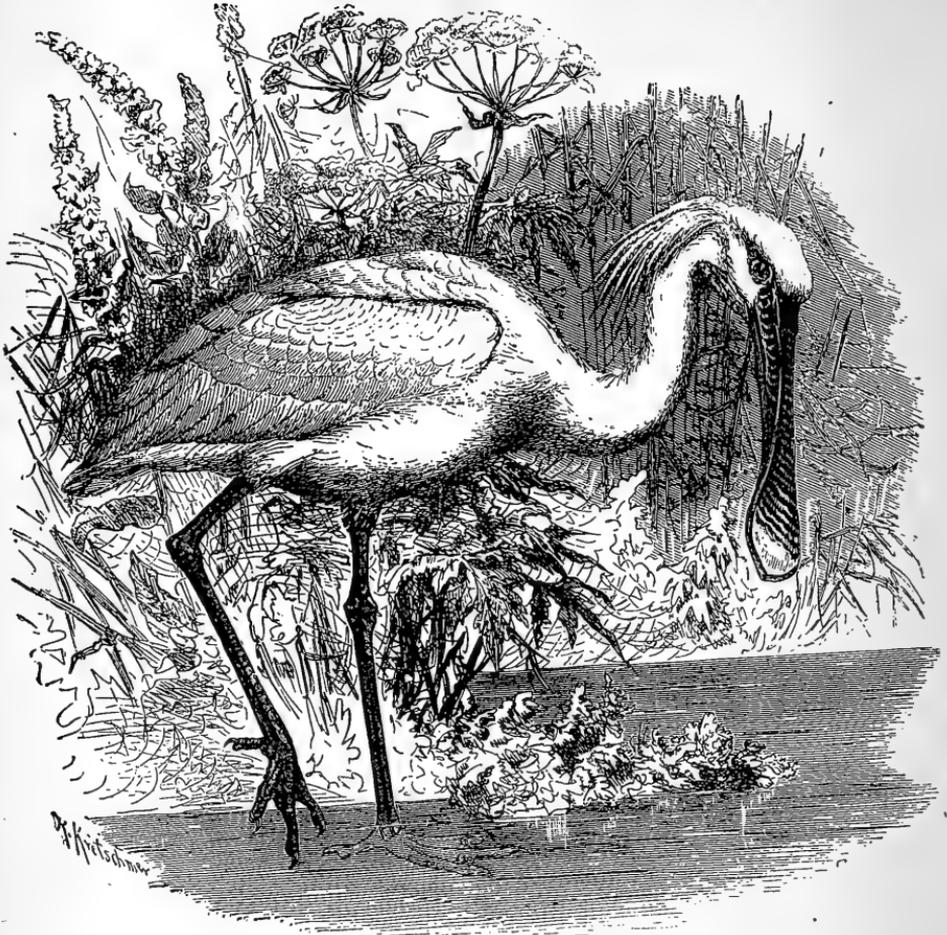
is said to breed in the large marshes. Here the eggs are usually laid on a tussock entirely surrounded by water, and so near it that the female sometimes sits with her feet in the water. On the islands of Franklin Bay and on those of the Arctic Ocean, the Whistling Swan constructs a large nest of moss, grass and herbage of various kinds. According to Nelson this fine bird arrives on the shore of Bering Sea in the vicinity of St. Michael's early in May, and in some seasons by the 27th of April. At Nulato, Dall found them laying eggs by May 21, but on the sea coast the earliest date Nelson records is May 30. The ordinary number to a nest is three to six. The nest is usually upon a small island in some secluded lakelet, or on a to a clutch is usually two, sometimes only one and very rarely three. When three are found in a nest it is generally believed that the third has been laid by another female. According to Mr. Ingraham's observations the nests in our illustration must be considered correct except in height. They are simply small mounds. The old story of the Flamingo bestriding its nest in an ungainly attitude while incubating is absurd fiction. The eggs are one or two in number, elongate-ovate in shape, with a thick shell, roughened, with a white flakey substance, but bluish when this is scraped off. It requires thirty-two days for the eggs to hatch. Size 3.57x2.20, with considerable variation.

183. ROSEATE SPOONBILL. *Ajaja ajaja* (Linn.) Geog. Dist.—Southern United States and southward into Southern America. Formerly north to Southern Illinois.

The Rosy Spoonbill, of so handsome plumage and singular form, is distributed throughout South and Central America, Mexico, and in all favorable localities of the Gulf region of the United States. In Florida it was formerly abundant, but its numbers have greatly diminished by the constant persecution of the "plume hunters." Rare as far north as the Carolinas. Marshy or muddy borders of estuaries, the mouths of rivers, shrubby islands of tropical seas, or some dense marsh, are the favorite breeding resorts. Mr. R. E. Rachford visited a small colony of these birds in Southwestern Louisiana, June 2, 1886. The birds were found nesting in a clump of cypress trees in a low marshy place fully twenty miles from habitation. Here also nested the Snow, Louisiana and Little Blue Herons, and the Snake Bird. The nests of the Spoonbills were placed from eight to eighteen feet from the ground, and the usual number of eggs found in the nests was three or four; although from one nest seven eggs were taken, and five or six from several others. The nests were platforms of sticks, and for the most part were built close to the trunks of the trees; they were usually more massive than the Herons' nests. The general shape of the eggs is ovate; and their color is white, or buffy-white, blotched, spotted and stained with various shades of brown; sometimes a pure white egg is found in a nest with spotted or marked examples. They measure from 2.50x1.70 to 2.60x1.77.

184. WHITE IBIS. *Guara alba* (Linn.) Geog. Dist.—South Atlantic and Gulf States southward to the West Indies and Northern South America; casually on the Atlantic coast to Long Island; in the interior to the Lower Ohio Valley and Great Salt Lake.

The White Ibis or Spanish Curlew is distributed in summer throughout the South Atlantic and Gulf States from the Carolinas southward, throughout Mexico, Central America, and portions of Northern South America. It breeds in communities by thousands in the tangled marshes of the southern coast; fastening the nest to broken down or upright living reeds; it is composed of reeds, compactly woven



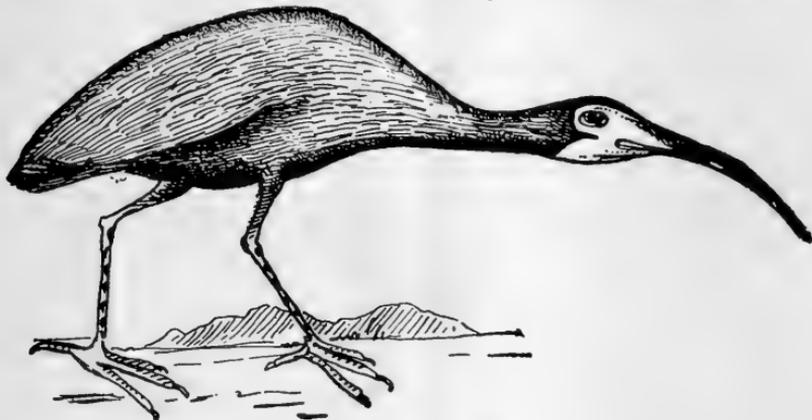
EUROPEAN SPOONBILL (From Brehm).

together, is deep and much hollowed, which is unlike the frail platform nests of the herons. Mr. Stuart says the White Ibis breeds abundantly on the low mangrove bushes on the islands of the Gulf coast. There is a large rookery in Charlotte Harbor. The nests are usually made of the green twigs of the mangrove. The eggs are laid in June. At Cape Sable eggs are deposited after the 10th of April; these are from three to five in number, ashy-blue, spotted and blotched irregularly with yellowish, reddish and umber-brown of varying shades; two or three in number, and measure about 2.25 by 1.50.

[185.] **SCARLET IBIS.** *Guara rubra* (Linn.) Geog. Dist.—Eastern coasts of tropical America, north casually to Florida, Louisiana and Texas; southward to the West Indies.

An exquisite bird of the richest scarlet plumage. There is probably no well authenticated instance of its having been taken within the United States. Wilson was not correctly informed concerning its abundance in the Southern States, and Au-

dubon only saw a flock of three in Louisiana. The bird is said not to be an uncommon visitant to Jamaica and Cuba, and very common on the Island of Trinidad, where it formerly nested. Mr. Warren observed the Scarlet Ibis breeding in immense colonies on the banks of the Amazon, in dense, impenetrable thickets of bamboo canes, several kinds of thorny cactus and Spanish bayonets, besides numbers of small mangroves and palmettos, all interlaced and tangled with huge vines. In one place every bush and tree had on it from five to twenty nests; they were about a foot and a half in diameter and perfectly flat; the materials used in their construction were twigs, fibrous roots and leaves. Mr. Warren states that the Ibises, being disturbed, rose in immense numbers, and a more striking spectacle than a



185. SCARLET IBIS.

large flock of these splendid birds floating through the air, like a crimson cloud, cannot possibly be conceived. The rookeries are only tenanted during the dry season. The eggs are two or three in number, grayish-white in color, marked with spots and blotches of brown of varying shades, and distributed variously over the surface, but generally more profusely at the larger end. The average size is 2.15x1.46.

186. GLOSSY IBIS. *Plegadis autumnalis* (Hasselq.) Geog. Dist.—Old World, West Indies, and Eastern United States.

This species occurs irregularly in the eastern portions of the United States, and has been known to breed in Florida. It has also been found breeding in Nevada. In Europe the course of its migrations for the summer is said to be chiefly in a line from Egypt, to Turkey, Hungary and Poland, and to the southern parts of Russia. In its passage from Africa it is occasionally seen in the Grecian Archipelago, in Sicily, Sardinia, Genoa, Switzerland, France, Holland and Great Britain. The nesting of the Glossy Ibis is like that of the next species. The eggs are of a deep greenish-blue and average 2.01x1.47.



186. GLOSSY IBIS.

187. WHITE-FACED GLOSSY IBIS. *Plegadis guarauna* (Linn.) Geog. Dist.—Western United States (Texas, Utah, Nevada, Oregon, California, etc.), southward to Mexico, West Indies, Central and South America.

This beautiful, lustrous Ibis inhabits southwestern United States and south into tropical America. It is found as far north as Kansas, west through New Mexico and Arizona to California. It is especially abundant in southern Texas, and in some localities along the banks of the Rio Grande swarms by thousands. At this place Dr. James C. Merrill, in company with Mr. G. B. Sennett, on the 16th of May, 1877, visited a large patch of tule reeds, growing in a shallow lagoon about ten miles from Fort Brown, in which large numbers of this Ibis and several kinds of Herons were breeding. The reeds covered an area of perhaps seventy-five acres or less. Besides the Ibises, the Great and Little White Egrets, Louisiana and Night Herons, and several other birds were breeding here. The reeds grew about six feet above the surface of the water, and were either beaten down to form a support for the nests, or dead and partly floating stalks of the previous year were used for that purpose. Dr. Merrill states that it was impossible to estimate the number of the Ibises and different Herons nesting here. "Both nests and eggs of the Ibises were quite unlike those of any of the Herons, and could be distinguished at a glance. The nests were made of broken bits of dead tules, supported by and attached to broken and upright stalks of living ones. They were rather well and compactly built, and were usually well cupped, quite unlike the clumsy platforms of the Herons. The eggs were nearly always three in number, and at this date were far advanced in incubation; many of the nests contained young of all sizes. Fifty eggs now before me average 1.95x1.35, the extremes being 2.20x1.49 and 1.73x1.29; they are decidedly pointed at the smaller end, and are of a deep bluish-green color."

188. WOOD IBIS. *Tantalus loculator* Linn. Geog. Dist.—Southern United States from Ohio Valley, Colorado, Utah, California, etc., south to Buenos Ayres; casually northward to Pennsylvania and New York.

The American Wood Stork, as it is called, is distributed over a large portion of South and Central America, Mexico and Southern North America. It is found in all the Gulf States, and is most abundant in Florida, where, Mr. Stuart informs me, it nests in the interior in dense cypress swamps, on the tallest trees, which are often more than one hundred feet in height. In these rookeries are also found nesting the American Egret, *Ardea egretta*; Great Blue Heron, *A. herodias*; the Anhinga and others. The nests, like those of the Herons, are platforms of sticks loosely arranged, with a lining of long moss. The same rookery is occupied each year, and the nests are repaired and augmented until they often become of immense size. The eggs are chalky-white, sometimes spotted with pale reddish-brown; somewhat elliptical. The shell is rough, with a flaky substance. Two or three is the number laid, but almost invariably three. Size from 2.70 to 2.75 long by 1.70 to 1.75 broad.

[189.] **JABIRU.** *Mycteria americana* Linn. Geog. Dist.—Tropical America, north casually to Southern Texas.

This singular bird is known as the American Stork. It is found in portions of Central America and throughout most of South America, but occurs rarely farther north. One specimen is said to have been taken within the limits of the United States, and that near Galveston, Texas. The bird is said to have the same general habits peculiar to the White Stork of Europe. The nest is a large platform of sticks built in the highest trees. An egg is described by Dr. Brewer as rounded-oval in shape, and of an olive-green color; size 3.33x2.20.



172. NEST AND EGGS OF THE CANADA GOOSE. (Photo. by W. Raine.)

they were six days old, and this was in early morning and evening, at which times the old birds would float off from their island with their well-known *honk*, the young following single file behind them, feeding at the extreme end of the lake. This was kept up until August, when the young could fly and take care of themselves. The eggs were always seven and never more than eight in number. What is most remarkable about these birds is that they would go south every fall and return every spring; their number always being diminished by the time they returned; some probably being killed by sportsmen. Mr. Vergon says the geese often strayed away from "home" as far as ten and fifteen miles on the Olentangy River and other waters in the neighborhood. He fed them on a high ridge near the lake and on this ridge they were always first seen in spring when they returned. Mr. Vernon says he thinks they always came at night and is very sure they always departed in autumn at night. While the flocks that departed in the fall and returned in the spring had often been diminished in numbers, yet as many as twenty-two new ones came with them and stayed at the lake. Out of thirty that departed the fall of 1886 only three returned in the spring. The birds were very much afraid of strangers, but with Mr. Vergon they were very familiar, allowing him to handle and caress them at pleasure. Dr. Merrill found this species breeding on the Upper Missouri, Yellowstone, and Big Horn Rivers, where their favorite nesting sites were on the numerous low sandy islands in these rivers, covered in the higher parts with a growth of young willows. Their nests were simply a hollow in the sand, around which was placed a few sticks and twigs, and the eggs lay on a layer of gray down. Nests were found on the tops of broken trunks of trees; one on a rocky ledge three hundred yards from the river; another was made on a pile of brush that had collected in the top of a fallen tree that had floated down and lodged near the middle of the river; some nests

were placed on the high banks among high grass, or on piles of drift wood. By the first of May the nests contained the full complement of eggs, generally five in number. Dr. Merrill says: "When these geese nest among the branches of a tree I do not think they ever construct the nest entirely themselves, but take possession of a deserted nest of the Fish Hawk, and repair it with twigs and a lining of down. They have been seen to carry small sticks to the nest for this purpose." The color of the eggs is a pale dull greenish, and their size is about 3.50x2.50.

172a. HUTCHINS'S GOOSE. *Branta canadensis hutchinsii* (Sw. & Rich.) Geog. Dist.—North America, breeding in the Arctic regions, migrating south in winter, chiefly through the Western United States and Mississippi Valley; Eastern Asia.

This bird, which is like *canadensis* in color, but of a smaller size, breeds in boreal regions. Its length is about 24 to 34 inches. Its general habits are the same as those of the common Canada Goose. Breeds abundantly along the Yukon River and on the islands on the coast of Alaska. Nests have been found on the Islands of the Anderson River and on the Arctic coast. In these regions eggs of this species have been taken from Hawks' and Crows' nests built in trees. It nests usually on sand-beaches, depositing from four to six eggs in hollows in which there are more or less leaves, grasses, feathers and down. In his paper on "The Birds of the Western Aleutian Islands," Mr. Dall states that it does not breed east of Amchita Island, but some nest on Amchitka, Kyska and other islands there. Its nesting habits, notes, and general mode of life are identical with those of the Cackling Goose. The eggs are white, and measure 3.18x2.10. In the Arctic regions the eggs are laid in June and July. Eggs of this bird taken at the mouth of the Yukon in June measure 3.02x2.10, 3.08x2.11, 3.04x2.00, 3.00x2.11, 2.90x2.07. There is a great variation in the size of the eggs of this bird and those of *minima*.

172b. WHITE-CHEEKED GOOSE. *Branta canadensis occidentalis* (Baird.) Geog. Dist.—Pacific coast region, from Sitka south, in winter to California.

A larger sub-species than Hutchins's Goose, length about 35 inches. Mr. Nelson states that during his residence on the coast of Bering Sea this bird was not seen, as hundreds of the two other related forms were examined both at St. Michael's and at the Yukon mouth it appeared evident that either the White-cheeked Goose proper never reached those localities; if at all, merely as a straggler. Mr. Dall records specimens having been taken at Sitka during the Western Union Telegraph expedition. The nesting habits and the eggs are more than likely like those of the Canada Goose.

172c. CACKLING GOOSE. *Branta canadensis minima* Ridgw. Geog. Dist.—Coast of Alaska, migrating southward into Western United States east to Wisconsin.

The length of the Cackling Goose is about 24 inches. Nelson states that this is the most common and generally distributed goose found breeding along the Alaskan coast of Bering Sea. From the sea shore its breeding ground extends along the courses of the great rivers far into the interior. While descending the Yukon, Dall found their eggs laid upon the bare sand banks, as were those of the White-fronted species. The last week of May finds many of these birds already depositing their eggs. Upon the grassy borders of ponds, in the midst of a bunch of grass, or on a small knoll these birds find a spot where they make a slight depression and line it with a scanty layer of grasses, after which the eggs are laid, numbering from five to eight. These eggs, like the birds, average smaller than those of the other geese.

The following measurements, taken from a large series of eggs, show about the average sizes: 3.00x1.90, 2.90x1.90, 2.80x2.00, 2.75x2.00, 2.70x1.92. As the eggs are deposited the female gradually lines the nest with feathers plucked from her breast until they rest in a bed of down. When first laid the eggs are white, but by the time incubation begins all are soiled and dingy.

173. BRANT. *Branta bernicla* (Linn.) Geog. Dist.—Northern portions of the Northern Hemisphere; in North America chiefly on the Atlantic coast, rare in the interior or away from salt water.

The Brant Goose is almost cosmopolitan in its distribution. It is found on the sea coasts of Europe and eastern North America, breeding only within the Arctic circle. Hagerup records this bird to be common as a migratory species along the southern shores of Greenland, and says it breeds possibly in the northern part of Danish Greenland. While being more maritime than United States geese generally are, it is also found inland occasionally on lakes and rivers. During the migrations it is abundant, and seems to prefer the coast to the interior, seldom passing over large tracts of land, following the windings of the shore, and nearly always keeping over water. The Brant is a particular favorite with sportsmen, and many are shot from points of land which project out into the sea. The common Brant Goose is said to breed in immense numbers in Spitzbergen and on the islands about the coast. The nest is constructed on the sandy beaches, of grasses, moss, feathers and down, the birds depositing from four to six eggs. In some parts of Greenland where this species is known to breed, some of the birds make their nests on cliffs. The eggs are grayish or dirty-white, and average in size 2.70 by 1.80, according to Saunders.

174. BLACK BRANT. *Branta nigricans* (Lawr.) Geog. Dist.—Arctic and Western North America; rare in the Atlantic States.

The Black Brant is very closely allied to the common Brant Goose; it is found on the Pacific coast, where the latter does not occur. Its summer home is in high latitudes, and in Alaska, the mouth of the Yukon, is said probably to form the extreme southern limit of this bird's occurrence in the breeding season. At Point Barrow, according to Murdoch, a few remain to breed in June. The nest is placed in rather marshy ground and is a simple depression lined with down, with which the eggs are completely covered when the birds leave the nest. Breeds in abundance on islands northeast of the mouth of Anderson River, in Liverpool Bay on the Arctic coast, on the shores of Franklin Bay, and on various other parts of the coast, especially in regions west of Anderson River. In these regions, according to Dr. Brewer, nests were found by Mr. MacFarlane on small islets in fresh water ponds; others on islands in the Anderson near its mouth; many were made on the shore or on islands in Franklin Bay, and in various parts of the Arctic Sea. Some of the nests were nothing but mere depressions lined with down, while in others the quantity of down was quite large. The number of eggs in a nest was generally five; but in one case as many as seven were seen, and, in six or seven instances six. The eggs are grayish-white, and range from 2.75 to 2.90 long by 1.80 to 1.85 broad.

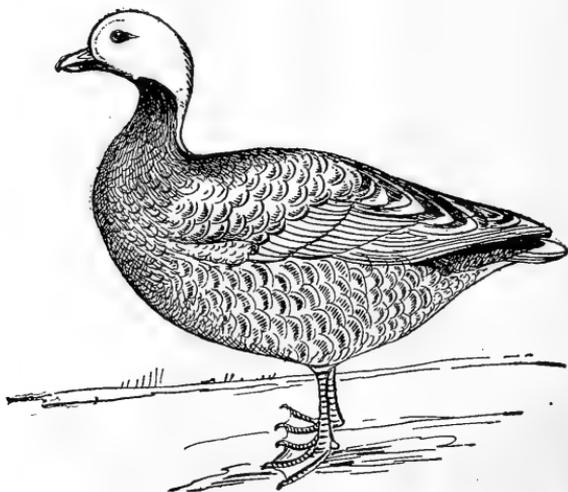
[175.] **BARNACLE GOOSE.** *Branta leucopsis* (Bechst.) Geog. Dist.—Northern parts of the Old World; casual in Eastern North America.

The Barnacle Goose inhabits the northern portions of Europe and is occasionally found on the Atlantic coast of North America. But many of the specimens taken on this side of the Atlantic are birds that are supposed to have escaped from con-

finement. In Great Britain it is a winter visitant. During the migrations it is said to be found in great numbers along the coast of Norway, and at these seasons it is stated to be abundant in Holland, France and Germany. It is said to occur during the breeding season in Northern Siberia. The shores of the White Sea to the eastward are supposed to be the great breeding places of this bird.* The eggs are grayish-white and measure 3.71x2.38.

176. **EMPEROR GOOSE.** *Philacte canagica* (Sevast.) Geog. Dist.—Coast and islands of Alaska north of the Peninsula; chiefly about Norton Sound and Valley of the Lower Yukon; Commander Islands, Kamtchatka; casually southward to Humboldt Bay, California.

Among the various species of birds more or less peculiar to Alaska, says Mr. Nelson, this goose is perhaps the most noteworthy. This author and naturalist lay camped on a lonely islet in the middle of the Yukon delta for the purpose of gaining some knowledge of the habits of these geese and other water fowl during the last of May and first of June. The birds arrive about those periods. Early in June the



176. EMPEROR GOOSE.

Emperor Goose begins to deposit eggs on the flat, marshy islands bordering the sea. On June 5 a female was found setting upon her eggs on a little knoll, near by a small fragment of bleached driftwood. The nest contained three eggs. They rested in a depression with no sign of a lining. Other nests were found and the birds each time betrayed them by flying off with a startled cry. The majority of the nests contained from three to five eggs, the full complement usually ranging from five to eight. The eggs are absolutely indistinguishable from those of the White-fronted Goose, and in form and measurements present a wide range of variation; some are much elongated, while others are slightly pyriform. As usually taken from the nests they are of a dirty brownish-white, but when fresh are nearly pure white. As the complement of eggs approaches completion the parent makes a bed of leaves, fine grass and feathers plucked from her own breast. The eggs vary in size from 3.28x2.22 to 3.03x2.00.

* Yarrell, III, p. 74.

that so-called river, the Hillsborough, which with the Halifax and Indian rivers, all long, narrow lagoons of salt water forming a peculiar coast line for nearly three hundred miles along the Atlantic seaboard in this sub-tropical region.

We had all done some collecting both the season mentioned and in previous years, and naturally when we consulted we decided to join and try our joint forces in this, to us, comparatively newer field. Now it is a fact that collecting in any form costs money when you are away from home, and I can say in all sincerity that southern collecting is the most expensive of all, for the residents of that region are on a warm trail after the coin of the winter tourists.

Well! passing over preliminaries, with the dickering and delays—we at last started on our trip in a sloop-rigged craft manned by a crew of two colored boys, or plain *niggers* as they are invariably called south of the Mason and Dixon line. The little cabin was nearly eight feet wide and over eleven feet long and four and a half high. The table was with drop leaves, and on the center-board, with a berth on each side, while lockers and space forward gave room for most of our baggage. One of us slept on the floor, and the crew bunked in the cockpit protected by a tarpaulin.

The weather was perfect, and after victualing our craft with eggs at 35 cents a dozen and canned goods and everything else in proportion, we started out with intentions of a week's trip on Hillsboro, Halifax and through the Haulover to Indian river, with the Thousand Islands as a center of operations. Our yacht only drew seven inches and we could run her anywhere, and the darkeys were excellent as workers and good natured to a fault if well fed and properly praised.

A full account of this trip would take

fifty pages; so I will only give a short account of our work and takes, without entering into details or describing date and locality. Our first stop after running onto a shoal in a wide but shallow channel was to anchor alongside of a low island literally covered with herons. It was difficult to keep the boys and crew from shooting ten times more than we had use for, but I had previous experience and headed them off. As it was, skinning was in order until midnight in our crowded quarters and then not one-third of the supply of three species of Herons was in shape.

Next morning we made a raid on the nests and during the day we secured at that place and two other heronies over 300 eggs and could have taken 500 more. In only a very few instances were positive identifications secured, and I would give but very little for the entire lot for my own private collection. This is the usual manner of collecting, and as the nests are massed together and several species of Herons breeding in one tree or group, it is next to impossible to secure perfect identification. If accurate notes were taken and the parent bird secured, the time consumed would make the prices much higher than they are at present for Herons' eggs,

During the trip we secured a few sets of accurately identified Louisiana, Snowy, Little Blue and Great Blue Herons. We felt confident that some of our eggs were those of the White and Yellow-crowned Night Herons as the birds were shot, but they were not good enough for an honorable collector to offer in exchange. Let me tell of the condition of one of these heronies whether in cypress swamps around fresh water or in scrubs or mangroves about salt water. I have seen hundreds of nests in one group in a space not over an acre in extent. As many as fifty nests are seen in one tree. In most cases the nests are built low and I

have often looked into the nests of the Louisiana and Little Blue Herons built in the low mangroves from the steamer deck as we passed near the shore.

Often as many as three species of Herons are found nesting in one group, sometimes five species will be found occupying a space of an acre or less and generally two kinds and in the tangle it is very difficult to secure the parent bird as the Herons leave the spot and give but little opportunity to shoot them near the nest. Many nests were not above twelve feet while some were not over six or seven feet up. The average of the lot of Heron's nests seen on the trip was not above twenty feet. The greatest elevation was in the case of the Great Blue Heron a few of which were over fifty feet up, but many of them were at only ten or fifteen.

Of course an attempt was made to secure only good fresh sets, but the eggs were often mixed and the waste was large in the preparation. The Great Blue Heron nearly always lays three or four, more often three in Florida, as my notes show, while at the north this species lays five and six and occasionally seven. The Snowy, Louisiana and Little Blue Herons varied from three to five and one nest contained seven eggs but from color and shape two hens had evidently laid in one nest.

We took all sorts of trips on shore away from the boat and secured many of the smaller birds but few of their eggs. We changed our location daily and often several times a day and fished, fiddled and fussed to our hearts' content. One of the boys had a violin and one of the darkies a banjo and we all sang (yelled). It was not a rare thing to go bounding over the lagoons or rivers, while one or two would be skinning birds in the cabin or blowing eggs, another trolling for southern weak-fish or channel bass, someone picking on the banjo and the

whole lot grinding pretty fair music with the aid of the colored crew who sang well.

It was really essential to catch fish to supply the craft and as it was we had to run back for more supplies in four days although we thought we had enough to last a week when we started.

Eat! Did you say? There was never anything like it, and I defy anyone to cite a parallel instance. When we pulled into port we made extra provision also for the care of specimens, as the confined quarters made it rather close work to cook meals and skin birds, etc., in one little cabin and there was not room to house the specimens, especially the skins. Then one of the boys was a conchologist and collected hundreds of shells. So we added a lot of dry goods boxes which we placed on deck. But things were just as cluttered up inside of two days as ever. It was not a fashionable quarter you may be sure, but we kept the *nigs* scrubbing and things in fair shape and as long as the arsenic did not get in the pancake batter it was O. K., no matter if some little alligators and a lot of hermit crabs were crawling about the floor and we were a dirty crowd. We were in perfect health and spirits and enjoyed life and the outing amazingly.

When at last, after eleven days of vagabondizing we returned to partial civilization we had secured over 200 skins and nearly 3,000 eggs. We had noted 86 species of birds and found 32 species nesting. I took very few of the eggs as my share as they were mostly unaccompanied with proper data.

In conclusion I wish to say a word in regard to this form of collecting. It is to be deplored that more attention is not given to careful notes and less attention to the greedy gathering of specimens. Many collectors look to the amassing of a collection rather than to the true-blue worth of the studious and thoughtful ornithologist.

Am sorry there is not space to describe the trip and specimens more elaborately, but it is not compatible, so I have given this form of description to our little trip feeling that many will be interested in a yacht trip for specimens in Florida.

PICUS.

An Imitation that Imitates.

THE REDSTART READILY STARTLED.

[Patent applied for. All rights reserved.]

One of the things which an ornithologist often desires to do and which proves as difficult as anything he may attempt, is to reproduce, with any degree of similarity at all to the original sounds, the songs of our feathered friends. Nothing puzzles ornithological writers more than to coin such wordings and phrasings and arrange such intonations and accentuations as shall serve to represent and describe somewhere nearly, the songs of the birds they may be treating.

It is difficult business as all will agree but the writer desires to state that in so far as the song of the American Redstart (*Setophaga ruticilla*) is concerned, he has secured a corner on the market and is prepared to furnish on short notice, Redstart songs of his own manufacture at so much per song. Said manufactured Redstart songs are guaranteed to be as good as the original and in no wise distinguishable from the real thing; in fact I may add that so perfect is my reproduction that I have actually deceived, many times, the Redstarts themselves.

While, as I say, this invention of mine is patented and all rights to it are vested in myself only, the editor of the OÖMLOGIST has finally, after much negotiating, prevailed upon me to lease to him (at an exorbitant price) the right to tell "the boys" about it through his paper.

So listen! Take two of the small roofing tins commonly used by roofers

in attaching felt or paper roofing. Place them with their concave surfaces together and putting them thus in your mouth between your teeth and lips, tin-whistle fashion, blow through the central hole alternately with an inhaling and exhaling breath, beginning with an inhaling whistle and ending with an exhalation,—four of each. Blow gently, not loudly.

This I have found to be a remarkably exact imitation of the Redstart's song, so much so that on a recent occasion, by repeating it at intervals, I led a female Redstart clear through a sizable piece of woodland, she answering all the time; and then returning, I made her follow me all the way back through the woods again. Try it. If you are not convinced and if you do not find it an entirely correct representation of the song, your money will be refunded.

NEIL F. POSSON,

Medina, N. Y.

Two-Storied Nest of Phœbe.

May 6, 1888, I found a nest of Phœbe under the overhanging bank of a creek, which contained three eggs of the Phœbe and two of Cowbird. I took the Cowbirds and left the others.

May 13 while passing by the nest in my boat I noticed the Phœbe fly to the nest. I went to it, put my hand in and it appeared to be empty but I felt something break and on removing the lining I found the three Phœbe's eggs broken. They had been *entirely* covered over.

Query:—Why did she cover her own eggs?

VERDI BURTON,

Penn Yan, N. Y.

THE OÖLOGIST.

A Monthly Publication Devoted to
OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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FRANK H. LATTIN,
Albion, Orleans Co., N. Y.

Nesting of the American Dipper.

The Dipper, or as the Mexicans call it, "*Gallinita de la agua*" literally "little chicken of the water" is one of the commonest birds of Northern New Mexico, from 6,000 feet up to timber line, breeding most commonly at 7,000 feet.

Here at Porvenir, at an altitude of 7,400, in the midst of thick pine forests and mountain streams is an ideal place for the Dippers, a pair of which can be found every quarter of a mile. When

I first came out here in February the Dipper could be seen at every open place along the streams, but as soon as the ice had all broken up, by the first of March, the birds began to pair off and commence looking out for suitable nesting sites.

On April 13th I found my first nest, only a few pieces of mud and moss on a ledge of rock, three feet over a regular torrent rushing around the corner of a huge boulder. The old nest was about twenty feet to the left of the new one much higher up. On the 14th the foundation was completed and the walls and roof were entirely finished on the night of the 17th. The 18th the lining was begun and not finished until the 23rd, when nothing was done to the nest until the first egg was laid on the 29th. When at work on the nest the male always kept watch, the female flying about a hundred feet for material. I never saw the male assist in any way whatever. On the morning of May 3rd I collected the set of five eggs and nest, the birds being nowhere in sight. The nest was composed of mud and moss, lined with dry pine needles, grass, and the eggs resting on a bed of dry oak leaves. The nest measures 18 inches long, 9 high and six and a half in width, the roof being over an inch in thickness. In the afternoon of the 3rd while walking further up the canon I found another nest almost inaccessible, being 9 feet over the water on a ledge. The stream was about 12 feet wide and six deep and a huge rock rose seven feet out of the water right opposite the nest, and about nine feet from it. I felled a pine tree near by and rested one end on the boulder and the other on the ledge, a few inches from the nest, and by careful balancing secured the set of five all right. Both sets were perfectly fresh, and measured as follows. Set I. .97x.68. .97x.69. .98x.70. .96x.68. .96x.68. Set II. 1.00x.74. 1.00x.71. 1.02x.76. 1.00x.75. .98x.70.

WALTON I. MITCHELL,
Porvenir, New Mexico.

Nests and Eggs of North American Birds+++

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I have only a few copies left (only six) and knowing full well that I shall be unable to obtain copies in the future to fill orders at this price and perhaps not at any price I have decided to close out the ones I have if taken before September 15th at only **\$5 per copy**. (35 cents additional if sent prepaid.)

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*Can furnish in sets.

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Florida Gallinule	10
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Calif. Partridge	15
Gray Ruffed Grouse	75
Col. Sharp-tailed Grouse	50
*Mourning Dove	05
Western Red-tail	50
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American Sparrow Hawk	35
Screech Owl	50
*Burrowing Owl	20
Yellow-billed Cuckoo	10
Hairy Woodpecker	50
Gardiner's Woodpecker	35
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Red-bellied Woodpecker	25
Red-headed Woodpecker	10
Flicker	5
Scissor-tailed Flycatcher	10
*Arkansas Kingbird	06
Cassin's Kingbird	25
Crested Flycatcher	15
Phoebe	05
Black Phoebe	15
Western Wood Pewee	20
Skylark	10
Prairie Horned Lark	15
American Crow	05
Fish Crow	35
Starling	10
*Red-winged Blackbird	05
Bicolored Blackbird	10
Tricolored Blackbird	10
Meadowlark	10
Western Meadowlark	10
Arizona Hooded Oriole	35
*Orchard Oriole	05
*Bullock's Oriole	10
*Boat-tailed Grackle	15
House Finch	05
Western Lark Sparrow	05
Cardinal	05
*Western Goldfinch	10
*Arkansas Goldfinch	10
*Lawrence's Goldfinch	08
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Painted Bunting	10
Sharpe's Seed-eater	50
Scarlet Tanager	25
Summer Tanager	25
Purple Martin	10
Tree Swallow	15
Cedar Waxwing	10
White-rumped Shrike	10
*California Shrike	08
White-eyed Vireo	15
Bell's Vireo	16
Yellow Warbler	05
White Wagtail	10
Meadow Pipit	10
Mockingbird	05
Catbird	05
Sennet's Thrasher	15
California Thrasher	20
*Cactus Wren	20
Baird's Wren	20
Parkman's Wren	15

California Chickadee	50
*Californian Bush-tit	15
Wood Thrush	05
Russet-backed Thrush	15
American Robin	05
Bluebird	05
English Pheasant	25
English Sparrow	05
Ring Pheasant	50
Gopher	35
Hammerhead Shark	15
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Jackdaw	10
Rook	10
Magpie	10
Missel Thrush	10
Song Thrush	10
English Blackbird	10
Lesser White-th't Warbler	10
Garden Warbler	10
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Green Finch	10
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Common Bunting	10
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Nerita peleronta, select.	10
Trochus (Livona) pica	25
Helix fideles	13
Bulimus Bahamaensis	15
Partula gibba	10
Orthalicus melanochillus	25
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Achatinella perversa	10
" uniplicata	10
" spirizona	10
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Precious coral, 1 oz. pkg.	25
Organpipe Coral	10
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Carnelian	10
Assorted dozen	50 1 00
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MISCELLANEOUS.

Arrowheads, 1/2 doz. asst'd	50
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Dove Shell from British Guiana exhibit at World's Fair, pkg. of 12	25
Chines Horn Nut	10
Beetle Nut	10
Broken Bank Bill	10
Confederate State Bill	10
Chameleon in Alcohol	25
Alligator Tooth	5, 10, 15, 25
Young Naturalist's Marvelous Collection, 50 labelled specimens	1 00
Chinese Coin	05
Mexican Whistle, clay	10
7 var. unused Cuban Stamps	35
Resurrection Plant, Mex.	10
Bird Arrow Point	25
Set of Souvenir World's Fair Tickets	1 00

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OÖLOGIST, 20 numbers	50
Nidologist, 8 numbers	1 00
The Wilson Quarterly and Semi Annual 4 numbers	1 00
Natural Science News, 52 back numbers	1 00
Above publications are all different and of our selection.	
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Advertising in OÖLOGIST	.50-1

THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XV. NO. 8-10.

ALBION, N. Y., AUG.-OCT., 1898.

WHOLE No. 147

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

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Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 147 your subscription expires with this issue

150	"	"	"	"	Nov.	"
155	"	"	"	"	Apr.	'99
160	"	"	"	"	Sept.	"

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

This month's OÖLOGIST was mailed subscribers Oct. 6.

IMPORTANT:—Owing to the fact that the publisher of THE OÖLOGIST has been absent from home the past few months this issue has necessarily been delayed and while this issue is dated "August-October" it does not imply a "double number" but will count as one only towards the ones due on subscriptions. Next issue will appear promptly on November 10th.

MOUNTED BIRDS:—Cooper's Hawk pouncing on Quail, Nos. 151, 30, 373e, 595, 636, 521, 474, 474b, 360, 242, 70, 413, 477, 501, 498, 497, 587. Will sell single or in lot. I have a nice glass case for the lot. ROBT. BURNHAM, 143 Gallup St., Providence, R. I.

WANTED at once a copy of Bulletin No. 4 of Division of Forestry, Dept. of Agriculture—"The Nomenclature of the Arborecent Flora of the U. S."—FRANK H. LATTIN, Albion, N. Y.

WANTED:—Sets or singles of 8. 51a, 59, 125, 144, 163, 166, 200, 228, 275, 289, 375, 378, 423, 434, 463, 461, 474b, 477, 498, 501, 563, 735, 761, 766. In exchange for mineral specimens. ROBERT BURNHAM, 143 Gallup St., Providence, R. I.

WANTED:—Auks single copies or volumes previous to and including 1896. Will give cash or Davies' new Nest and Egg book. Write what you have. JAMES H. HILL, New London, Conn., P. O. Box 485. a 4t

CHOICE:—A No. 1 sets with full original data, for sale or exchange. A. O. U. Nos. 58, 63, 69, 70, 80, 201, 211, 258, 280, 373, 412, 456, 466a, 474b, 475, 477, 488, 498, 506, 513, 529, 563, 593, 595, 598, 601, 604, 622, 622a, 683, 703, 704, 705, 735, 766. M. T. CLECKSEY, 457 Greene street, Augusta Ga.

FOR SALE.—My entire collection of 500 sets, all different. Must be sold and at snap prices. For list, description and terms, address. W. F. HILL, Lake City, Minn.

TO EXCHANGE or SELL.—Sets, data, 202, 488, 511, 593, 412, 423, 456, 540, 531, 613, 702, 725, 781, 766; also singles. Want singles of 550, 92, etc. WILLIAM B. CRISPEN, Box 17, Salem, N. J.

TO EXCHANGE:—The following A. O. U. sets: 359a 1-2, 631 2-4, 703 2-5, 726a 1-6 (from Arizona), 749 1-4, 751 1-4 and many rare singles. Next season I will have for sale and exchange many sets from this state. E. F. POPE, Colmesnell, Tex.

FOR SALE.—Vol. I and II of *Osprey* also vol. XIV of *Oölogist*. All for \$4, express paid. A great bargain, worth over \$5. GEO. ROBERTS, JR., 63 Washington St., Hartford, Conn.

IT PAYS to advertise in the OÖLOGIST. AMOS W. PYFER, Salesville, Montana.

WANTED.—Nos. 7, 30, 204, 205, 206, 208, 301. Can give in exchange 475 1-6 1-7, 273 1-4, 511b 1-5, 348 1-4, 420a 1-2 and others. AMOS W. PYFER, Salesville, Mont.

TO EXCHANGE.—Fine sets of 191 1-4, 6 1-6, 348 1-4, 420a 1-2 and second class set of two eggs of Golden Eagle. AMOS M. PYFER, Salesville, Mont.

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FOR EXCHANGE:—Five sets bird eggs with or without nests, Pacific coast sea shells, Illinois river shells, etc. Will exchange above for sets not in my collection. OTHO N. GAY, Camp Point, Ill.

FOR SALE:—I have a nice collection of fine first class sets, will sell very cheap. Parties who wish to buy, send for list immediately. FREEMAN J. GRIDLEY, Nordhoff, Ventura Co., California.

WANTED:—Comstocks. Entomology, can offer in exchange eggs, 366 1-4, 735 1-7, 507 1-6, 622 a 1-5. Botanical specimens, and part cash. Send description of stock. R. T. ANDERSON, Aymer West, Ont.

SHELLS:—50 land and fresh water shells from Haiti, assorted. 50 cents, Post. free. T. G. PRIDDEY, 371 Carlton street, Toronto. s2t

OVERSTOCKED:—Choice sets with full original data for sale at reasonable prices, or exchange for desirable sets, or large singles. List for 2c stamp. DR. M. T. CLECKLEY, 457 Greene street, Augusta, Ga. s2t

WANTED:—A. 1 sets A. O. U, Nos. 7, 58, 64, 137, 139, 144, 190, 172, 218, 261, 263, 273, 334, 339, 364, 387, 388, and many others. Offer other sets and cash if cheap enough. FRANK HARRIS, La Crescent, Houston Co., Minn.

TO EXCHANGE:—Sets of 263, 461, 465, 474b, 488, 501, 540, 581, 587, 598, 608, 681, 687, 735, 751, 756, 766 with full data. HARRY CUTLER, Saranac, Michigan.

CABINETS:—Store boxes for insects or eggs also cabinets or single drawers, cases, etc. Apply to T. G. PRIDDEY, 371 Carlton street, Toronto. s2t

CAMERA, Hall's typewriter, and coffee mill for sale. Magazines and story papers to exchange for minerals or curios. H. N. BUGBEE, Fitchburg, Mass.

NEATLY and scientifically prepared sets of 490 1-2, 428 n-2, 731 1-5, and others at very low prices. Satisfaction guaranteed. Write for prices. W. L. & R. D. FOXHALL, Tarboro, No. Car.

MY COLLECTION of birds eggs to exchange for first class shot gun or bicycle, or 25 cal. rifle, Stevens preferred, send for entire list of eggs. W. L. HART, Tacoma, 1106 Pacific Ave., Wash.

TO EXCHANGE:—Fine sets of Mallard, Cinnamon Teal, Avocet, Black Stilt, Red-head and White-face Glossy Ibis. The latter can be supplied in series of from one to a dozen sets. Send your list excluding eggs catalogued at 25c or under. A. M. SHIELDS, Crocker Building, San Francisco. Jly2t

HOW TO MAKE MONEY! If you are out of employment and want a position, paying you from \$50 to \$100 monthly clear above expenses by working regularly, or, if you want to increase your present income from \$300 to \$500 yearly, by working at odd times, write the GLOBE CO., 723 Chestnut St., Phila., Pa., stating age, whether married or single, last or present employment, and you can secure a position with them by which you can make more money easier and faster than you ever made before in your life. Jlyr

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THE OÖLOGIST.

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ALBION, N. Y., AUG.-OCT., 1898.

WHOLE No. 147

Bachman's Sparrow.

(*Peuceea aestivalis bachmanii.*)

Several years ago I was asked by a bright looking little negro about eleven years of age, "What little bird is it that can't fly good but runs along on the ground like a rat; and makes its nest in a bunch of sage, laying four little white eggs." Being very much puzzled and at the same time astonished to be told that a bird having wings could not fly but only used them to flutter and tumble along the ground with, I began to question him about this phenomenon of a bird, and brought out the fact that it resembled very closely a Field Sparrow, also that when he chased it for some distance it would fly several yards, then run again but he still thought that it couldn't fly good. Afterwards he told me that he knew where a nest with four eggs was, so I immediately set out with him to find the place.

I was naturally very anxious to secure the set and find out something concerning this peculiar bird as I had never before heard of one acting as he told me this one had done, but am afraid then that I was after the eggs just because they would be a new set to add to my collection. This seems to be the impression with too many of our collectors of the present day.

Soon we came to a field which was covered with sage, a few pines and thickets were scattered throughout it, a very suitable place for this species; here the boy said the nest was situated. We had not gone very far when he stopped and pointed to a tussock of grass and said that the nest was under it on the other side. So I very cautiously went

around and sure enough there was a little nest of wiry grass placed under the tussock, Slowly advancing I managed to see a little bird on the nest which resembled very closely a common Field Sparrow. I got within a few feet of her before she slipped off the nest and ran along through the grass for nearly one hundred feet then she hopped up on a low limb of a tree and uttered a chirp very similar to a Field or Chipping Sparrow. In a few minutes her mate appeared and they kept chirping continually as long as I was there.

When I took up the nest I found that a slight hollow had been scratched out by the birds, into this they had put pieces of coarse grass; then as a lining which was very thick, fine grass tops were used. On the whole it was put together rather substantially and was roofed over or domed, the entrance of which was about two or three inches from the ground, being nearly two and one-half inches in diameter.

Capt. Charles E. Bendire very ably describes its nests and I think that a much better idea can be gotten concerning them by reading what he says than any description that I can offer, so I will quote it in full, as follows: "All the nests of this bird vary totally in structure from those of the other species of the genus *Peuceea*, as far as known to me. They are all distinctly roofed-over or domed, a feature only found in the nest of a closely allied species, *Embernagra rufivirgata*, the Texas Sparrow, which constructs a somewhat similar nest. They are cylindrical in shape, about seven or eight inches long by three inches in height and four and one-half inches wide. The inner cavity it from three to four



CALIFORNIA VULTURE. *Pseudograpus colifornianus*.

inches in length, about two inches wide and one and three-quarters inch high. The rear wall of the nest is about one and three-quarters inches thick, the sides about an inch, and the roof a little over half an inch in thickness. These measurements vary somewhat in different specimens. The nests are all constructed out of dry grasses exclusively, and are lined with fine grass tops only. Some are much more artistically and compactly built than others, the roof projects somewhat over the entrance in all cases."

So far I have neglected to say much about the contents of this nest. It contained four eggs, of a dead white color. I knew the eggs must be of a kind of Sparrow but what species I could not positively tell. Took nest and eggs and started back home but as luck would have it, when I was going through a strip of woods a twig turned the nest over and out rolled two of my beauties, one smashed up while the other fell in some grass and was saved. I reached home with the three others which measured as follows: 77 by 60, 79 by 59 and 78 by 57. Searched through Davie's "Nests and Eggs of North America Birds" and came to the conclusion that I had found a nest of Bachman's Sparrow which he said came as far north as North Carolina but to be certain I sent one of the eggs to the editor of OÖLOGIST, receiving a reply that it was certainly this species that I had found.

I am now going to tell as best I can, what I have learned of this bird since then although I have never had an opportunity of watching a pair very closely as I have not found a nest near home. Whether they remain with us the whole year I am at present unable to say. During the summer it seems to be a common breeder in certain localities but they are very hard birds to locate and their nests being so difficult to find have not had very good luck in

collecting their eggs. Only five nests have come under my observation though I know of others having been found but was not able to secure the eggs.

The only nest that I found myself was accidentally. A friend and myself were walking through a sage field which was covered with old field pines and when nearing the edge about ten yards from a cultivated field a Bachman's Sparrow started from under my feet, fluttering and tumbling along the ground, as though its wing was broken, uttering a slight chirping sound, seeming all the time to be in great distress. My first inclination was to give chase and catch the wounded bird but I had been fooled before, so we began looking for the nest. We searched for over five minutes in vain and were about disgusted with her when my friend saw a small hole in one side of a tussock of sage, and he said to me that he thought he had found her nest.

We carefully pushed away the grass and to our delight found that it contained four eggs. I knew that they were badly incubated but being such a rare find we took them. The next day when an attempt was made to blow our eggs, our delight was turned to disgust when the drill smashed through the shell of the first, as though it were tissue paper. Though we felt pretty bad about not being able to save the eggs and also to have deprived the mother of the four little chicks which she would have inevitably had the next day. It was a good find anyhow for the nest was roofed over more than any I have ever seen; the eggs not being visible until we had partly removed the roof. A large amount of coarse grass was used in the construction of the nest, being lined with fine wiry grass. The entrance was not over half an inch from the ground. The date of the finding of this nest was May 12, 1894.

Later in the summer along about the

tenth of June, a little boy said to me that he knew of a nest of a little ground sparrow which contained three white eggs, so I told him to wait until the four were deposited then I would go with him to the nest. On the fifteenth I looked up the boy and he started out with me; bringing along a dog which had helped find the nest.

On entering a sage field, the dog, which had gone ahead, flushed the bird and seemed to enjoy chasing her around; for the foolish bird (foolish I may say in one sense but in another exceedingly wise) kept flying around sometimes almost touching the ground until pretty well tired out when she alighted in the top of a small pine to see what would become of her eggs. All the time chirping very loudly. There were four slightly incubated eggs in the nest and the sun shining as it was upon them gave to them a beautiful pinkish appearance, bringing vividly to my mind the scenes surrounding the taking of my first set of the Flicker which showed the yolk through the translucent shell, beautifying them so much.

It seemed very strange that the bird should have selected such an open place, in which to build her nest when all around was thicker sage. With the exception of the tussock within which the nest was placed, there was not a bush or much grass nearer than six or eight feet. It might have been that she could find it easier more probable though because an enemy could be seen very much sooner.

The materials used in building the nest were wholly of fine grasses. It was very slightly domed and was a rather frail structure when placed beside my other nests of this species. A hollow of about an inch deep was scratched out by the birds for the nest.

The next nest I examined was placed in a graveyard, only a few feet from a walk. When we came in, the female,

which was on, allowed us to come within a few feet before leaving and this time only ran a few yards before taking flight. Four fresh eggs were what the nest contained.

A few week's later another nest was found within ten feet of a sidewalk over which several hundred people passed daily. It was on the campus of Guilford College, N. C., between the atheletic fields and one of the dormitories; hence the birds must have been disturbed very much by the boys running across the field, sometimes almost stepping on it. The Young Men's Christian Association Hall was within ten yards also, which was undergoing repairs at this time, so I think that the birds must have had quite a noisy place in which to live; yet, they built their nest and deposited the eggs which would have hatched in a few days if one of the boys had not disturbed it. Both of the last two described nests were found in May.

The first time I ever saw a young bird was one morning when I was going through a pea patch, a sage field bordering this, in which a pair had succeeded in raising a brood. My dog had gone ahead and suddenly a little bird that could hardly fly, flew up (uttering a sound something like *chee chee*), which passed me; the mother was right after it and as soon as the little fellow came to the ground, she quick as a flash darted down to the same place, soon with wings spread and dangling legs she arose flying a few feet then ran along as if wounded or in great distress, only to rise again keeping this up for several yards. I at once began chasing her, thinking all the time I was after the young bird and had gone quite a distance before finding out my mistake.

Upon discovering that I had been deceived, I hurriedly went back to where the bird had stopped and found him snugly hid among the peas. He allowed me to almost touch him before tak-

ing flight but as he could not go very far, I easily made him a prisoner. I hoped very much that I could raise him but he died in two or three days, although I fed him butterflies, worms and common house flies. He was exceedingly noisy, mostly I think on account of the lack of his mother's tender care; for every two or three minutes during the day he would give forth an utterance which sounded something like *chee, chee, chee*, (the same as when I flushed him though faster and somewhat louder) continuing until he had said it eight or nine times. A pair of English Sparrows which had had a nest of young near by came to the cage and brought food to the young bird several times. I secured two others later on but they died also.

Most writers give four as the number of eggs deposited by this species, while this is the number generally laid by them, five are sometimes found. I was for a time of the opinion that sets of three would probably be taken late in the season but from my observations this year I find that sets of three are as common at the first of the season as sets of four.

The earliest nest I have ever taken was in the first week of May, while a nest with three eggs was found on July 16th incubation far advanced; and on August 3d, took two young from a nest in a clover field, on hillside. From this it stands to reason that two or three broods are reared in one season.

I know of only one article that has been published in your excellent journal on this species, and that was in THE YOUNG OÖLOGIST for October, 1884. Let us hear more on this interesting and peculiar bird.

H. GOULD WELBORN,
Lexington, N. C.

THE OÖLOGIST.

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The Horned Lark in Western New York.

(*Olocooris alpestris*.)

The article in the May OöLOGIST by Mr. B. S. Bowdish regarding the status of the Horned Lark (*O. alpestris*) and the Prairie Horned Lark (*O. a. praticola*) in Western New York, was read with much interest by myself, and ever since then I have been trying to find time to send the OöLOGIST a note

on the subject from my own wayward pen. This seems to be the first opportunity I have found for doing so.

Mr. Bowdish states that his researches of eight years have failed to find for him any occurrences of the true Horned Lark (*alpestris*), and his article seems to tend towards eliminating the bird from our Western New York avifauna. Personally, I have not had the opportunity to determine what proportion of our Larks are *alpestris*, inasmuch as I have been away from home almost continually during the past five years: but that the true Horned Lark (*Otocoris alpestris*) does occur in Western New York is conclusively evidenced by the facts which I here append.

I have in my possession an interesting letter from my friend, the eminent ornithologist, Mr. J. L. Davison of Lockport, N. Y., written under date of Jan. 20, 1891, in which he informs us that on the 13th of April, 1889, he sent two specimens of *Otocoris* (taken near Lockport) to the American Museum of Natural History at New York and two specimens to Dr. A. K. Fisher of Washington. Of the two sent to the New York Museum and examined by Dr. Jonathan Dwight, Jr., one proved to be *alpestris* and the other *praticola*. In *The Auk* for April, 1890, is an exhaustive article on "The Horned Larks of North America" by Dr. Dwight, and in this article mention is made of the Lockport specimen of *alpestris*. The Lockport specimen having been taken on the 13th of April it would appear that *alpestris* overlaps *praticola* and remains with us after *praticola* has commenced breeding.

Further, there are in a private collection connected with the collection of the Buffalo Society of Natural Sciences, several specimens which I consider and which, indeed, are considered by the owner and other ornithologists connected with the Society as referable to the true Horned Lark, *O. alpestris*

The opinion I have held for the past eight years concerning the status of the Horned Larks in the lake counties of Western New York remains unchanged, and may be briefly stated as follows:

474. *Otocoris alpestris* (Linn.) Horned Lark. Winter resident, not common, arriving from the North in December or earlier and lingering until into April.

474b. *Otocoris alpestris praticola*. (Hensh.) Prairie Horned Lark. Common summer resident. Breeds. Arrives about February 1st or sometimes a few days earlier and departs in November, thus being nearly continual. Sometimes individuals or small flocks may spend the entire winter with us.

Should the facts and theories herein related prove of interest to any of the OÖLOGIST's readers it will be a source of satisfaction to

NEIL F. POSSON,
Medina, N. Y.

Cuckoo and Other Notes.

The American Cuckoos exhibit many peculiarities, but I have lately noticed two circumstances that are new to me though I have collected their eggs for 11 years, examining hundreds of nests. We have both the Yellow-billed and Black-billed species in Western New York, the latter much more common. On the 28th of May this year I flushed a Black-billed Cuckoo from her nest in the usual situation, a thick bush in a second growth tract. The nest then contained one egg, evidently fresh as indicated by the bright color and cleanliness of the shell. On returning to the nest one week later, June 4th, I found four eggs, I thought this strange as two eggs is the usual complement of the Black-bill with us and over three I had never found.

Imagine my surprise on reaching home to find three eggs on the point of

hatching and one egg almost fresh. Now the question arises, did she bring those three hatched eggs from another nest of hers, or did she steal them from one or more of her kind? In either case, how did she get the eggs to the nest, for she certainly never brought them to the hatching point in seven days allowing her a day to lay each egg.

Now for my second discovery, on the 11th of June I found a typical nest of the Black-billed Cuckoo; they build nearer the ground than the Yellow-bill, containing two eggs of Black-bill and one of Yellow-bill. The eggs exhibit all the characteristics of typical eggs of the two species as to color and size. Now did the Yellow-bill lay in the others nest or did Mrs. Black-bill take to theiving. The eggs were not incubated and probably deserted as they were sinking somewhat into the nest. Adding these facts to the Yellow-bills habit of laying her eggs at intervals of about three days, sitting continuously and often having fresh eggs and young birds in the same nest, and the habit of sitting on the nest for days before any eggs are laid, which peculiarity seems to belong to both birds, with the parasitic habits of the European bird and I think they may safely be called one of the odd birds.

I note Mr. Low's article in a recent OÖLOGIST, confirming my suspicions in regard to the Short-eared Owl, thus adding another breeder to the list.

In regard to Mr. Posson's statements about the Horned Lark, I would say that I shot one in company with Longspurs a short time before moving into Orleans County, but have never seen one since to my knowledge here. All taken by me in Orleans County have been of the *Prairie* variety.

I have in my possession an incomplete set of Mourning Warbler taken June 13th in same locality as set of five taken last year. They are of an en-

tirely distinct type of coloration, blotches being larger and entirely in a wreath, closely resembling some sets of Black-and-White Warbler but slightly smaller. They are a trifle larger than the five eggs taken last year. Unfortunately there were only two eggs and the collector did not leave them for a complete set.

ERNEST H. SHORT,
Orleans County, N. Y.

Purple Grackle.

The first Grackle colony I ever visited was about twenty miles from New York City in Bergen Co., New Jersey. It was in some spruce and pine trees surrounding a farm house. On May 16, 1893, I made my first visit. The place was full of nests, but only one in each tree, and that was placed in the top. Most of the nests contained young, some had four, others five and there were two with six. I saw four sets of eggs, two of four, one of five and one of six.

I visited it again April 28, 1894. This year I was a little early but found two sets of four and two of five.

The way they build is this: First they get a lot of rags, straw, paper, etc. (In one nest there was a rag about three inches wide and three feet long.) This is collected for the foundation and is placed on one of the branches and against the central main branch near the top, often the very top. This is in the spruce trees, but in the pines they build out on the branches, or they often use last year's nest for the foundation. After they get a firm foundation they cover it with horse-manure and mud and on this they build an almost perfectly round nest of grass and mud, lining it with plenty of fine grass, also a few horse-hairs.

The nests measure inside 5½ inches in diameter and 4½ inches in depth, so the

eggs could hardly roll out even in a high wind. The eggs four to six in number vary in size, color and markings. In some the ground color is light greenish-white and others it is rusty-brown. [Sometimes there are a great many markings which almost obscure the ground color and often there are very few markings.

The eggs are usually pale blue, blotched, spotted and lined with brown and amber in a circle around the large end.

The average size is about 1.18x.84.

J. C. M. E.

The Slate-colored Junco in Western New York in Summer.

EDITOR OÖLOGIST;

On the afternoon of August 25th just past, flitting about through some underbrush near the ponderous rocks at the famous Rock City, near Olean, N. Y., I observed some three or four Slate-colored Juncos (*Junco hyemalis*), both males and females being in the group. I was first attracted to them by hearing their familiar twitter, and after expending considerable time, patience and silence, I was rewarded by having two individuals come out from the brush into full view, alighting only a few feet from me.

I relate this incident, not because it is anything new, for the Junco is reported as breeding in Cattaraugus county, but because it was so new to me to see the bird in midsummer, and then besides, I thought the note might tend to corroborate the fact that *Junco hyemalis* is a summer resident in some parts of Southern New York, if indeed any corroboration is necessary. I am also reminded that nine years ago, back in 1889, the last week in July, in the days of high weels, while taking a bicycle tour through southwestern New York a Slate-colored Junco flitted across the road in front of my wheel

as I was spinning along in the vicinity of Beaver Lake, Cattaraugus county.

Dismounting, I chased the little fellow over through a grove on the right of the road until I made my identification complete. At that time, nine years ago, I was greatly surprised to find the Junco here in midsummer—it was a new discovery for me, but I presume to say that its occurrence as a summer resident in Cattaraugus county is not now considered unusual.

NEIL F. POSSON,
Medina, N. Y.

We are requested by Mr. Edward S. Schmid, 712 Twelfth Street, N. W., Washington, D. C., to announce that he will give absolutely free to all readers of the OÖLOGIST who wish it a copy of his large illustrated catalogue of his Birds, Poultry, Dogs and Taxidermy. This offer only holds good until the 15th of December. Mr. Schmid's catalogue is conceded to be the finest one of its kind ever issued. It has 106 pages, over 200 illustrations, and is handsomely bound in blue-tinted cover. It is valuable reference book and is fully worth twenty-five cents to any one interested. You can get it free if you will write him as above. We would like to see every reader of the OÖLOGIST have a copy of this book.

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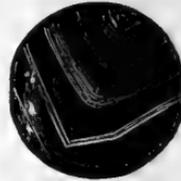
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VOL. XV. NO. 11.

ALBION, N. Y., NOV., 1898.

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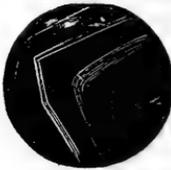
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THE OÖLOGIST.

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WHOLE NO. 148

A Day in a Swamp.

Not twenty miles from the State House at Boston, is a long belt of rich swamp land. A narrow river winds its crooked bed throughout the entire length and combined with the numerous tributary streams, probably forms the basis of the swamp. The growth is varied. Along the banks clusters of dark green pickerel weeds flourish with perhaps a bright cow lily blooming near. Tall grass and bull rushes fringe the edge of the river, the rushes growing in well defined tracts. The short quill grass is found in another place and serrated triangular grass in others. These growths are strangely pronounced, although the general conditions appear to be similar. For example, at one part of the marsh I may find the triangular grass with the purple swamp Geum blooming profusely among it. In another an entirely different form takes the place of both grass and geum. This is characteristic of the entire swamp.

Dividing the marsh into two portions is an active railway, the river taking its course on the left. Bordering the dry land are woods of oak, maple and cedar, alder and willow growths, fields and cow pastures. A few island like groves of cedar are present on the right side of the place. During the time intervening from August till April the marshes are quite frequently visited by gunners after rail, snipe, muskrats, etc., but happily the breeding period of the birds finds them seldom intruded upon, unless by collectors after specimens in various branches of natural science.

On the 11th of June 1898, I visited the above locality in company with a very

desirable friend, after a few eggs of the Long-billed Marsh Wren, and ornithological recreation in general. We procured a small gunning skiff and started off. The day was cloudy and at times decidedly threatening but no drops of rain disturbed the surface of the stream throughout the day. This, however, mattered little to us—we were wet as possible when our landing was reached toward dusk.

The air was full of the delightful sounds of nature and our spirits were at their best. What new unexpected glimpses of life might not gladden our eyes before the day was past! It is perhaps these fine surprises which constitute much of the charm of a trip like ours. Birds were all about us. Redwings rose from the dark green grass, Bitterns boomed at regular intervals throughout the day. Swamp Sparrows trilled gaily from the dry grass patches and the twitterings of countless Tree Swallows circling about tended to produce a beautiful medley. Even the air was more than ordinarily fresh and the shrill pipings of the little *Hylodes* were the loudest of all.

We found the vivacious Marsh Wrens very abundant along the river side and succeeded in finding plenty of nests, only one of which held eggs. The Wrens were chuckling and chattering even while we secured this and were at it when we left.

At every bend in the river we landed and splashed about through the dense grass, and at one point while thus engaged I ran right upon a Virginia Rail which was carefully guarding six eggs. The bird left and splashed out of sight as I bent down toward her and remained so until I had left, once making a loud croaking sound. Three eggs

were sterile, the others badly incubated. The nest was a small irregular platform of broad grass blades, placed close to the water in a large coarse bunch of grass. The river was a few rods distant.

Just above here the river makes a wide curve and passes for a half mile along the railroad bank. As we rounded the curve a Least Bittern rose silently from a patch of rushes and a female followed. Investigation showed a nest about ready for eggs, constructed of fresh blades of the rushes woven together. The nest was subsequently deserted as was proved a week later. I wished to secure a few pitcher plants which bloomed on the opposite side so we landed and were soon waist deep in the delightful warm mud and water of the right swamp. Here tufts of swamp azalia in bloom were making the air still sweeter. Bees were humming in abundance about the crimson petals of the pitcher blossoms. I was crossing a ditch when a Sora took flight from the sparse grass not ten feet away. Nestling down in a scant bunch of pale green grass was a well shaped nest literally full of eggs. There were fourteen, the eggs being piled one upon the other. Their condition varied from fresh to quite badly incubated, and mixed in at the very bottom were some of the most recent laid eggs with well incubated ones beside them. After the first splashing as the bird left I saw her no more.

I was returning to the boat with my arms full of plants. My friend was just behind. In front a small circle of six cedar trees not three feet tall grew. Just as I was passing this a great splash was heard and a mallard duck (*Anas boschas*) darted off like a rocket. Now in this vicinity the mallard is rare even in imagination, so I lost no time in examining those cedars. The sight was well worth any amount of trouble in getting there. Nine eggs were grouped

in a nest sunk between the stems of the cedars. The nest was a well shaped mass of damp and decaying weeds, marsh grass and a very little green cedar. A few breast feathers flecked the rim. The eggs were very badly incubated, almost on the verge of hatching and were preserved only by using repeated injections of 20 per cent. solution of caustic potash. The tough membranes prevented serious injury to the shell.

The eggs were discolored to dark dirty green which was well worked into the shell and the nest smelt rankly. The bowl of the nest was four inches above water and an equal number of inches in depth. The outside diameter measured 20½ inches and the inside 10. Before taking the set we retired for at least half an hour. By that time the eggs had cooled and the bird was still away. When visited a week later the empty nest was as we left it. Owing to its loose composition and disagreeable odor I could not collect it. The average egg of this set measures 2.26x 1.70 inches, and when cleaned is of a clear brownish color. I have but twice before recorded a mallard in my district, the last time being in March 1898, when a pair male and female, were seen in a marsh four miles from this one.

FRANK J. BIRTWELL,
Dorchester, Mass.

The Effect of Storms on Birds.

I will give some incidents that have come under my notice in the last few years, along the line of which I am trying to describe. In the very cold winters of '93 and '94 many birds perished of hunger and cold. It was no more than usual to find dead birds lying around on the ground. Among those who suffered most were the Bluebird and the Mourning Dove.

This change was noticed by all, not

only by ornithologists but by all; every man had something to say about the scarcity of Bluebirds in particular. It was mentioned in newspapers as well as in scientific ones.

The absence of the Doves was not so marked as that of the Bluebirds, on account of their not being so numerous when the cold began, but the student of nature was not long to discover that they were almost entirely wanting in some sections where they once were numerous. Their gentle cooing was not heard by the roadside as it had been in former years. The cold had entirely swept them from the places where they were once plentiful, not numerous, but could be heard by the roadside and on the edges of the fields. They have become frequent in some places since the time I am talking of.

Another of our birds that suffered greatly was the Bobwhite. Covies of those innocent little birds would all huddle together to get warm, and sometimes be found all frozen to death in a bunch; how cold they must have gotten to huddle up in a bunch and froze to death. It looks as if they had taken to their wings for a spell they might have gotten warm, but the weather was so cold from day to day, and the ground frozen so hard, that they could get but very little to eat, so it would seem as if they died of hunger as much as of cold.

One day while walking along a road through a piece of woods, I saw a Carolina Wren in a slight hollow in a pine stump standing by the side of the road; on investigation it proved to be dead, and appeared to have been there for sometime. I left it in its silent and elevated grave to sleep the sleep of *natures rest*.

One day after a thunder storm I was walking across a field in which were small pine bushes growing here and there, as it happened, I stumbled on an overturned nest a Chipping Sparrow with its contents, four eggs, laying on

the ground below unbroken, and buried in the mud about half. The parent birds were nowhere to be seen.

In the latter part of April 1898 there came a rain storm with some snow, and the wind blew hard and steady all the while. The nests of birds were blown out and the eggs destroyed. Walking through the woods you might see overturned nests of various kinds, and once in a while a young bird was seen, wet and cold if not dead. One nest particularly noticed by me was one of the Pine Warbler, placed on a pine limb at the height of twenty-five feet from the ground. I found it lying on the ground, with egg shells in and around it. I had calculating to get a set of eggs from it as soon as I could catch the bird on the nest—to know for certain it was ready to take—and not have to climb up and run the risk of causing the birds to leave the nest before a full complement was to be obtained.

I found nests of Pine Warblers, Chipping Sparrows and the White-breasted Nuthatch destroyed.

One touching scene came to my eyes, it was the dead body of a young Carolina Wren, wet and cold he yielded to the grim hand of death. How many more followed? Surely many of the young of all the earlier species perished in the rain and snow; draggled and wet and cold, I saw some that looked as if they would die in a few more hours.

R. P. SMITHWICK.
Merry Hill, N. C.



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Cuckoo Notes from Yates Co. N. Y.

It seems to me a singular coincident that Mr. Short should be having some strange experience with Cuckoos at the same time that I was. I refer to the incubation of their eggs. My method of ascertaining the state of incubation in eggs that I leave for complete sets is to hold the egg between my eye and the sun, for if the weather is dry it has

been my experience that eggs are not stained to any great extent so incubation might be three or four days along and the eggs look fresh especially in a dark tangle of foliage. On May 30, 1898, I found a nest—in a thorn bush—of the Black billed Cuckoo containing three eggs and as they usually lay four and knowing that the first egg laid was liable to hatch before the fourth egg would be laid I was very careful to examine each egg, the result being that two eggs proved to be fresh, while one egg gave evidence of containing a *tiny* embryo, so I decided to leave them. I visited the nest every day and the fourth egg was laid on June 1st, yet I left them for a possible set of five, but as there were no more eggs laid on June 3d I took the four eggs. Upon blowing them I found that incubation in three eggs ranged from a little bloody to small embryos, while the other egg contained a *fully* developed embryo that probably would have hatched in a few hours, so I could not save the egg. Now, as there was an interval of two days between the laying of the third and fourth eggs, and assuming that there was the same interval between each egg, it would indicate that the first egg was laid on May 26th, so my conclusions are that the Black-billed Cuckoos incubate their eggs in nine days. Regarding above set I noted the following in my data book. "The eggs were fresh on Decoration Day, incubation of Cuckoos eggs must be remarkably short."

Another Cuckoo incident came to my notice on June 5th of this year, when I found a Black-bills nest with the mother bird sitting upon three young ones and a slightly incubated egg and a typical egg of the Yellow-bill, also on same day I found a deserted Robins nest containing an unmistakable egg of the Yellow-billed Cuckoo.

In January '93 or '94 I shot a specimen of the Horned Lark from a flock of

about 50 that were feeding in a bare wheat field. The skin is in my collection but as my notes are rather scant regarding the larks I shall try to find out the status of *Otocoris alpestris* in my locality the coming winter.

C. F. STONE,
Branchport, N. Y.

The Humming Bird.

Most of the hummers sip honey from the flowers. Poised on wings that move so rapidly that they appear like a semi-circle of film around their swaying bodies, the birds insert their long beaks into the tubes of flowers and extract nectar with relish. It is true that some of the warblers and kinglets will some of the warbler shrdluntaoin shrdluncf times poise in this way before a leaf and peck an insect from its surface, but this occurs rarely, and it is not a regular habit of these birds. The susurrus of the hummer's wings as he balances in the air or darts from flower to flower has given the birdling his name. One of the most wonderful features of hummer flight is the bird's ability to move backward while on the wing—probably the only instance in which a bird is able to accomplish this feat. Mr. Ridgway says that this movement is greatly assisted by a forward flirt of the bird's expanded tail.

There are, however, a few exceptions to this rapid manner of flight, even in the hummer family. One of the most striking is that of the giant humming bird, which flaps its wings in a slow, leisurely way as it hovers over a flower much like the desultory vibrations of a large butterfly's wings. During flight its tail is constantly expanded and closed like a fan, and its body is kept in an almost vertical position, and seems to be suspended from a central point.

It is not to be wondered at that the humming birds are sought for decorative purposes. Their rich colors and bright ornaments make them a tempting prize to the lovers of gaudy fashions. Vast numbers are slaughtered in

Mexico and South America, being killed with fine shot or caught with nets and line. On account of this ruthless destruction some species are said to be on the verge of extinction, and of course it will be the most beautiful kinds that will be exterminated first. At a sale held in London on March 21, 1888, more than 12,000 hummer skins were disposed of and in one week 100,000 hummers and other American birds were sold in London at auction. A brilliant hummer, flitting airily amid the foliage and flowers, is "a thing of beauty and a joy forever." On a woman's bonnet such a decoration is little short of garish. All the colors of the spectrum, with many intermingled tints, are combined in their plumage, so that some of them seem to be truly kaleidoscopic. One of the most striking ornaments of many of the hummers is the "gorget," as it is called—that is, a gleaming throat patch of imbricated feathers. In the common ruby throat it is ruby, as the name implies; in several species, like Costa's humming bird, the tips of the feathers are purple and the basal portions snow white. In others they gleam in the most metallic red or violet. Sometimes the feathers of these gorgets are elongated into a beautiful ruff on each side of the neck, or into a bearded tuft reaching down from the chin.

Still more wonderful are the crests worn by a number of the species. There for instance, is Guerin's helmet crest, whose head is surmounted by a tall, slender top-knot that looks like a miniature pyramid, while a pointed beard of almost the same length depends from its chin. Princess Helena's coquette has a double crest, both parts running to a sharp point, making them look like two tiny horns, while its gorget is decorated at its base with a semi-circle of elongated feathers that stream out like pennants. The spangled coquette has a crest of the finest spray spread out in the form of a round fan, dappled with metallic black spots.

No less varied and wonderful are the tails of the hummers. Robert Ridgway says: "The shape and development of

the tail feathers of the humming birds vary to a degree that has no parallel among other birds, many of the forms assumed being also entirely unique. There are deeply forked and scissor-shaped tails, wedge-shaped tails, double rounded and double emarginated tails, tails and streamers of curious forms, tails with raquette-shaped feathers and tails whose quaint and elaborate structure defies description by any specific term. Several species have long feathers that sweep around in graceful festoons, either running parallel or else crossing each other. These pennants are often free of vanes, save at the end, where there is a broad, fanlike expansion. In one form these elongated appendages make a graceful double curve and cross each other twice.

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2	1 " " " 4x4 " "	25
3	10 lbs. Agatized Wood, Ariz., " "	2 00
4	100 lbs. Actinolite, Mass., good	6 00
5	100 lbs. Alabaster, Italy, fine	10 00
7	100 lbs. Albite, N. H., fine	5 00
8	1 specimen Allanite, N. H., 2x3, fine	10
9	1 " " " Analcite, N. H., 2x3, fine	10
10	1 " " " Amber Baltic Sea	10
11	1 " " " Ankerite, Penn., 2x3	10
12	1 " " " Andalusite, Mass., good	05
13	1 " " " " " " " " " " " "	15
14	1 " " " Antimony, Japan, 2x2, fine	15
15	1 " " " " " " " " " " " "	25
16	1 " " " Asbestos, Mass., " " " "	10
17	1 " " " " " " " " " " " "	25
18	1 " " " Azurite, Col., " " " "	05
19	1 " " " " " " " " " " " "	15
20	1 " " " Barite, Eng., 2x3, good	10
21	1 " " " " " " " " " " " "	35
22	100 lbs. Beryl, N. H., good	6 00
23	1 specimen Biotite (15 lbs.), Mass., Matrix	1 00
24	1 specimen Biotite, Mass., 2x3	05
25	1 " " " " " " " " " " " "	10
26	1 " " " Black Spinel, N. Y., mat.	25
27	1 " " " " " " " " " " " "	10
28	1 " " " Bowenite, R. I.	10
29	1 " " " Bornite, Col.	10
30	1 " " " Brookite, Ark.	10
31	40 lbs. Brown Spar, R. I.	2 40
32	1 specimen Brucite, Pa.	10
33	40 lbs. Bustrone, France	3 00
34	1 specimen Calamine, N. Y.	15

35	40 lbs. Calcareous Tufa, N. Y.	2 40
36	40 lbs. Canrinite, Me.	4 00
37	1 specimen Catlinite, Minn., 3x5	30
38	1 " " Cerargyrite, Nev., 1 oz.	35
39	1 " " Chabazite, N. S.	10
40	1 Chalcedony on Coral, Fla.	20
41	10 lbs. Chalcopyrite, Col.	75
42	1 specimen Chlorite, R. I.	10
43	1 " " Chrysocolite, Col.	10
44	10 lbs. Cinnabar, Col., fine	4 00
45	1 specimen Columbite, Conn.	10
46	400 lbs. Coquina	16 00
47	1 specimen Copalite, Africa	10
48	1 " " " Cyanite, Conn.	05
49	10 lbs. Cyanite, Conn.	1 00
50	1 specimen Diamond, Africa	2 00
51	15 lbs. Diaspore, Mass.	3 75
52	15 lbs. Elaeolite, Ark.	90
53	40 lbs. Eimery, Mass.	3 60
54	40 lbs. Epidote, Mass.	3 60
55	1 specimen Flint, Eng.	10
56	1 " " " Franklinite, N. J.	10
57	100 lbs. Galenite, Col.	10 00
58	10 lbs. Galenite, Mass., rare	1 00
59	200 lbs. Granite in Matrix, Mass.	18 00
60	400 lbs. Quartz, R. I.	20 00
61	200 lbs. " " " Geodes, Ill.	16 00
62	100 lbs. Chalcedony Geodes, Ill.	10 00
63	1 specimen Graphite, Europe	15
64	1 " " " Bloodstone, Europe	25
65	1 " " " Heulandite, N. S.	10
66	100 lbs. Hornblende, Mass.	8 00
67	200 lbs. Hematite, R. I.	16 00
68	40 lbs. Pyrite, Col.	3 00
69	1 specimen Lava, Ves.	10
70	1 " " " Leoparidite, N. C.	25
71	1 " " " Malachite, Chili.	15
72	10 lbs. Margarite, Mass.	1 50
73	1 specimen Masonite, R. I.	10
74	1 " " " Pearl spar, N. Y.	10
75	10 lbs. Petrified Wood, Ariz.	80
76	10 lbs. Phyllite, R. I.	70
77	1 specimen Pyrolusite, Col.	15
78	10 Quartz Crystals, N. Y. and Ark.	20
79	10 " " " " " " " "	30
80	10 " " " " " " " "	50
81	10 " " " " " " " "	1 00

82	100 lbs. Rhomb Spar, R. I.	5 00	157	1 " Unio Trigonus	1 00
83	10 lbs. Scapolite, Mass.	60		These shells are polished and shine like a mirror.	
84	1 specimen Selenite Crystal, Ark.	10	158	1 dozen Scalloped shells, pierced and polished	25
85	10 lbs. Seyberite, Me.	1 00	159	1 Hermit Crab and Shell	10
86	4 specimens Silver Ore.	1 00	160	1 Horse Shoe Crab	10
87	1 spec. Smoky Quartz Crystal, Col.	05	161	1 " " 8 inch.	20
88	1 " " Col.	15	162	1 Sea Urchin (sand dollar)	05
89	1 " Sodalite, Me.	10	163	1 dozen Skates eggs	10
90	1 " Specular Iron, 2x2 Ala	10	164	1/2 dozen Sturgeon plates	25
91	10 lbs. Sphaerite, Mo.	70	165	3/4 Sea Clam, 4x6 for painting.	20
92	1 specimen Splene, N. Y.	50	166	1/2 gallon mixed Shells.	30
93	10 lbs. Stilbite, N. S.	50	167	1/2 doz. White Murex	58
94	5 lbs. Spodumme, Mass.	40	168	1/2 " Pink Murex	68
95	1 specimen Sulphur, 4x4	30	169	1/2 " Conch Shells	50
96	1 " " Crystal.	15	170	1/2 " Helmet or Queen Shells.	1 00
97	1 " " Tourmaline, Mass.	25	171	1 doz. large Alligator Teeth.	35
98	1 " " Tremolite.	25	172	Large Turtle Shell, (gopher) Fla.	75
99	1 " " Troosite Matrix Xtal.	25	173	1 Saw-fish-saw, 11 inches, Fla.	15
100	1 " " Obsidian (10 lbs.) Mex.	2 25	174	1 Trunk Fish, 7	30
101	1 " " Wollastonite	10	175	1 Porcupine Fish, 5	25
102	1 " " Zincite, N. J.	10	176	Pistol used 50 years ago	50
103	10 Zircon Crystals	35	177	1 piece Mexican Onyx, 8 square in.	25
104	10 lbs. Zoisite, Mass.	80	178	1 " " 16 " fine.	1 00
105	1 specimen Nuttallite, 4x5, 2 lbs., Mass.	15	179	10 " Fossil Coral, 50 square in., fine.	2 00
106	1 " Pink Wernerite, 4x5, 2 lbs. Mass.	15	180	11 " black and white Agate, 45" good	1 60
107	4 " Boltonite, 3x3, 1 lb. Mass.	12	181	10 " red and white Agate, 40"	1 50
108	1 Epidote in Actinolite, 4x5, 3 lbs., Mass.	25	182	1 " Moss Agate, Brazil, 4 inch	25
109	1 Grey Epidote, 4x4, 1 1/2, Mass.	25	183	1 " " 3 " "	10
110	1 Grey Epidote, 1 1/2 x 1 1/4	25	184	1 Epidote, Mass., 5 inch. good	25
111	1 specimen Kyanite, Conn., 4x5, 3 lbs.	25	185	1 doz. Opals (fine) Mexico	50
112	1 " Selenite, Mich., 4x6, 4 1/2 lbs.	25	186	1 doz. " "	1 00
113	1 " Magnesite, Greece	25	187	1/2 doz. " "	1 00
114	1 " Porphyretic Granite, N. H., 5x5, 5 lbs.	20	189	1/2 " precious Opals, Australia	1 00
115	1 specimens Apatite Crystals, N. B., 2x3 1/2	75	190	1/2 " " "	1 50
116	1 specimen Pearl Spar, base, 4x5, 2 Galenite Crystals, 2x3 1/2, 1 1/4 x 1 1/4 cut by large Calcite Crystals, beauty.	1 00	191	1 " " "	1 50
117	1 specimen smoky Quartz, R. I.	15	192	2 " " "	2 00
118	4 " Stilbite, 4x4, N. S.	1 50	193	1 " " "	2 00
119	1 " Smoky Quartz Crystal, 5x5, N. C.	75	194	1 " " "	3 00
120	30 Arrowheads, different States.	90	195	1 " " Mex. or Aus.	5 00
121	10 " " "	75	196	1 " " "	10 00
122	10 " Obsidian, Mexico	2 50	187	1 Tourmaline, S. Paris, Me., fine 1/4 Kt	8 00
123	10 " " Mexico	5 00	198	1 " " " 1-16"	12 00
124	10 " " "	7 50	199	1 " " " " good 1/4"	6 00
125	10 " " "	10 00	200	1 " " " " fine 5 1/2 Kt	6 00
126	1 Obsidian Knife, Mexico	25	201	1 " " " " 3"	4 00
127	1 " " "	25	202	1 " " " " 3 1/2 in. x 3/4"	3 00
128	1 " " "	40	203	1 " " " " " 3"	1 50
129	1 " " "	50	204	1 Red Carbuncle, 10mmx14mm fine	1 50
130	1 " " "	75	205	1 Amethyst Carbuncle, 8x12, fine.	1 50
131	1 " " "	1 00	206	1 " " " Faceted, 8x12 fine	1 00
Mounted Birds on Stands.			207	1 American Turquoise, 3/8 in. x 9-16, fine	2 00
132	Cooper's Hawk pouncing on Quail	5 00	208	1 " " " 3 1-16 in. x 3/4"	1 00
133	American Golden-eye (see Duck)	3 00	209	1 Topaz, faceted, 3-8 in fine.	1 00
134	Murre, Common Gullmott	1 50	210	1 pr. Sardonix for sleeve buttons, fine	75
135	Rocky Mountain Screech Owl	5 00	211	1 pr. Onyx, do.	75
136	Rose-breasted Grosbeak	1 00	212	4 oz. Rough Opals, specimens different colors to show all kinds and conditions	25
137	Black and White Warbler.		213	4 oz. better quality	50
138	Crossbill (Am.)		214	4 oz. still better	1 00
139	Chewink, Towhee.		215	1 Topaz specimen Crystal	20
140	Red and Yellow-shouldered Blackbird.		216	1 Ruby	30
141	Red-shafted Flicker.		217	1 " " large	50
142	Yellow-headed Blackbird.		218	1 Emerald	40
143	Wilson's Tern.		219	1 Sapphire	15
144	Blue Jay.		220	1 Diamond	3 00
145	Least Sandpiper.		221	1 Skookum Stone.	25
146	Meadow Lark.		222	1 Maple Desk 150 years old. Can send drawing. Perfect proof of age and history will be sent on request.	40 00
147	Sparrow Hawk.		223	2 Chairs, solid mahogany, very old. In good repair, each.	5 00
148	Meadow Lark.		224	1 Table cloth 6 yards long, 6 napkins. These were the property of Maximilian and used by him in Mexico. Have the coat of arms of Austria. Are very heavy linen.	75 00
149	Great Blue Heron.		225	1 doz. fine hand-painted calendars, 1899, each.	15
Fresh Water Shells, polished.			226	1 doz. photo views of Providence.	15
150	1 pair Unio Solidus, rare.	75	227	1 doz. books flowers of New England, hand-painted, each.	50
151	1 " Unio Alatus, Wis.	1 50	228	1 Arctic Fox skin, white.	5 50
152	1 " Unio rectus	75			
153	1 " Unio gibbosus	75			
154	1 " Unio Ligamultines, Wis.	85			
155	1 " Unio Plicatus, Wis.	95			
156	1 " Unio Metanever, "	75			

Annual Holiday Sale.

Birds Eggs in sets with data.

For \$1.00 you can select \$2.50 worth.

For \$2.00 you can select \$6.00 worth.

All orders of over \$2.00 can select three times the amount sent.

No discount on orders of less than \$1.00.

Everything sent prepaid. With all orders of \$5 or over will be shipped free a suitable tray for every set purchased.

Figures following the name give the number of eggs in each set.

Western Grebe, 4.....	\$2 00	Canvas-back Duck, 7.....	8 75
" " 5.....	2 50	Lesser-scaup Duck, 5.....	3 75
Holboell's Grebe, 3.....	1 50	American Golden-eye, 8.....	6 00
St Domingo Grebe, 4.....	1 40	Harlequin Duck, 5.....	5 00
Tufted Puffin, 1.....	75	Northern Eider, 5.....	2 00
" " 1.....	20	American Eider, 6.....	1 60
Large-billed Puffin, 1.....	1 00	Whitewinged Scoter, 7.....	17 50
Horned Puffin, 1.....	2 00	Ruddy Duck, 10.....	5 00
Cassin's Auklet, 1.....	1 50	Canada Goose, 5.....	7 50
Black Guillemot, 2.....	50	American Flamingo, 1.....	1 00
Pigeon Guillemot, 2.....	1 00	Wood Ibis, 2.....	2 00
Murre, 1.....	20	American Bittern, 4.....	3 00
California Murre, 1.....	20	Least Bittern, 4.....	80
Pallas's Murre, 1.....	50	" " 5.....	1 00
Razor-billed Auk, 1.....	25	Great Blue Heron, 5.....	1 75
Skua, 2.....	1 00	European Blue Heron, 4.....	80
Parasitic Jaeger, 2.....	1 00	American Egret, 3.....	90
Kittiwake, 3.....	1 20	Reddish Egret, 3.....	1 05
Iceland Gull, 2.....	1 50	" " 4.....	1 40
Herring Gull, 3.....	60	Louisiana Heron, 4.....	48
American Herring Gull, 3.....	60	Green Heron, 3.....	36
Mew Gull, 2 (1 dam).....	50	" " 4.....	48
Gull-billed Tern, 3.....	75	Black-crowned Night Heron, 4.....	48
Caspain Tern, 2.....	70	Yellow-crowned Night Heron, 4.....	60
Royal Tern, 2.....	60	" " 6.....	1 20
Cabot's Tern, 3.....	1 20	King Kail, 7.....	1 40
Common Tern, 3.....	24	Clapper Rail, 10.....	1 20
Arctic, 3.....	30	" " 12.....	1 44
Roseate, Tern, 3.....	45	Virginia Rail, 8.....	1 20
Least Tern, 2.....	16	" " 5.....	75
Sooty Tern, 1.....	25	Spotted Crane, 4.....	1 20
Bridled Tern, 1.....	1 00	Sora Rail, 6.....	60
Black Tern, 3.....	30	" " 12.....	1 20
White-winged Black Tern, 3.....	1 50	Corn Crane, 8.....	1 60
Noddy Tern, 1.....	35	Purple Gallinule, 8.....	2 00
Black Skimmer, 3.....	36	Florida Gallinule, 7.....	70
" " 4.....	48	European Coot, 6.....	1 90
Fulmar, 1.....	75	American Coot, 5.....	40
Manx Shearwater, 1.....	75	" " 12.....	96
Audubon's Shearwater, 1.....	1 50	Northern Phalarope, 4.....	3 00
Stormy Petrel, 1.....	50	Wilson's Phalarope, 4.....	3 00
Leach's Petrel, 1.....	20	American Avocet, 2.....	1 00
Yellow-billed Tropic Bird, 1.....	2 50	Black-necked Stilt, 3.....	1 50
Booby, 1.....	1 75	" " 4.....	2 00
Gannet, 1.....	35	European Snipe, 4.....	1 00
Cormorant, 4.....	1 00	Spotted Sandpiper, 3.....	45
Double-crested Cormorant, 4.....	1 00	Lapwing, 4.....	60
Farallone Cormorant, 4.....	2 00	Golden Plover, 4.....	1 60
Pelagic Cormorant, 3.....	3 00	Killdeer, 4.....	80
American White Pelican, 3.....	1 05	Ring Plover, 4.....	80
Brown Pelican, 3.....	60	Little Ring Plover, 4.....	1 00
" " 4.....	80	Snowy Plover, 3.....	1 50
California Brown Pelican, 3.....	2 25	Wilson's Plover, 3.....	75
Man-o-war Bird, 1.....	1 00	Oyster-catcher, 3.....	75
Red-breasted Merganser, 6.....	4 50	Bob-white, 12.....	1 20
Mallard, 8.....	1 60	Texan Bob-white, 9.....	90
Gadwall, 5.....	3 75	California Partridge, 7.....	70
Widgeon, 8.....	2 00	Valley Partridge, 17.....	2 55
Baldpate, 5.....	3 75	Sooty Grouse, 5.....	4 25
European Teal, 7.....	1 40	Ruffed Grouse, 7.....	1 75
Blue-winged Teal, 8.....	1 60	Oregon Ruffed Grouse, 9.....	3 60
Cinnamon Teal, 9.....	3 15	Rock Ptarmigan, 6.....	3 00
Showeller, 10.....	3 50	Prairie Sharp-tailed Grouse, 10.....	5 00
Pintail, 8.....	2 40	" " 6.....	3 00
Red-head Duck, 7.....	2 45	English Pheasant, 13.....	3 25
" " 9.....	3 15	" " 10.....	2 50

Chachalaca, 3	1 20	Arkansas Kingbird, 3	18
Band-tailed Pigeon, 2	2 00	" 5	30
Red-billed Pigeon, 1	50	Cassin's Kingbird, 4 (1 dam)	1 00
White-crowned Pigeon, 2	2 00	Crested Flycatcher, 5	60
Mourning Dove, 2	08	Mexican-Crested Flycatcher, 5	1 15
White-fronted Dove, 2	70	Lawrence's Flycatcher, 3	2 25
" winged Dove, 2	30	Phoebe, 4	16
Mexican Ground Dove, 2	70	" 5	20
Inca Dove, 2	1 50	Say's Phoebe, 5	75
Turkey Vulture, 2	1 50	Wood Pewee, 2	24
Black Vulture, 2	1 50	" 3	36
Marsh Hawk, 3	1 05	Western Wood Pewee, 3	60
" 5	1 75	Acadian Flycatcher, 3	45
Cooper's Hawk, 3	90	" 4	60
" 5	1 25	Trail's Flycatcher, 3	45
Harris's Hawk, 3	1 50	Alder Flycatcher, 4	60
European Buzzard, 3	1 20	Least Flycatcher, 4	60
Red-tailed Hawk, 2	3 00	Vermilion Flycatcher, 3	3 00
Red-shouldered Hawk, 2	70	Skylark, 3	45
" 4	1 05	Prairie Horned Lark, 4	80
Florida Red-shouldered Hawk, 2	1 20	Desert Horned Lark, 3	60
Swainson's Hawk, 2	1 00	Texan Horned Lark, 5	1 50
Rough-legged Hawk, 3	1 20	American Magpie, 6	90
Ferruginous Rough-legged Hawk, 3	7 50	Yellow-billed Magpie, 5	2 50
Merlin, 3	1 50	Pinon Jay, 2	5 00
Kestrel, 4	80	Blue Jay, 5	20
American Sparrow Hawk, 3	60	" 4	25
" 5	1 00	Florida Blue Jay, 4	1 00
Desert Sparrow Hawk, 3	1 05	American Crow, 4	20
Audubon's Caracara, 3	3 00	" 5	25
American Osprey, 2	1 00	Florida Crow, 5	2 10
" 3	1 50	Fish Crow, 5	1 75
American Barn Owl, 4	1 60	Starling, 6	60
American Long-eared Owl, 4	1 40	" 4	40
" 5	1 75	Bobolink, 4	1 00
Short-eared Owl, 5	7 50	Red-eyed Cowbird, 1	40
Barred Owl, 3	4 50	Yellow-headed Blackbird, 4	20
Florida-barred Owl, 2	2 50	Red-winged Blackbird, 4	08
Screech Owl, 3	1 05	Sonoran Redwing, 4	2 00
" 4	2 00	Bahaman Redwing, 4	2 00
" 5	2 00	Bicolored Blackbird, 3	30
Florida Screech Owl, 4	2 00	Meadowlark, 5	50
Texan Screech Owl, 3	1 20	" 4	40
California Screech Owl, 4	1 80	Mexican Meadowlark, 5	2 50
Mexican Screech Owl, 2	2 00	Western Meadowlark, 6	60
Great Horned Owl, 2	2 50	Hooded Oriole, 4	2 00
Western Horned Owl, 2	2 00	Orchard Oriole, 5	30
Burrowing Owl, 8	1 60	Baltimore Oriole, 4	24
" 9	1 80	" 5	30
Groove-billed Ani, 6	4 50	Bulleck's Oriole, 4	40
Road-runner, 4	1 00	" 6	60
Mangrove Cuckoo, 4	4 60	Purple Grackle, 5	50
Yellow-billed Cuckoo, 2	20	Bronzed Grackle, 4	20
Black-billed Cuckoo, 4	60	" 5	25
" 2	30	Great-tailed Grackle, 4	60
Belted Kingfisher, 5	1 00	Boat-tailed Grackle, 3	45
Hairy Woodpecker, 4	2 00	" 4	60
Downy Woodpecker, 3	60	Purple Finch, 4	80
" 4	89	California Purple Finch, 4	1 40
Red-naped Sapsucker, 2	2 00	House Finch, 5	25
Red-headed Woodpecker, 5	40	St. Lucas House Finch, 4	1 40
California Woodpecker, 5	2 00	Redpoll, 3	1 05
Red-bellied Woodpecker, 4	1 00	American Goldfinch, 5	25
Golden-fronted Woodpecker, 5	1 76	" n-4	1 20
Gila Woodpecker, 3	4 50	Western Goldfinch, 6	60
Flicker, 7	21	Arkansas Goldfinch, 3	30
" 9	27	Mexican Goldfinch, 5	2 50
Red-shafted Flicker, 8	80	Lawrence's Goldfinch, 5	1 00
Northwestern Flicker, 6	1 50	European Goldfinch, 5	1 00
Chuck-wills-widow, 2	3 00	" Tree Sparrow, 5	75
Whip-poor-will, 2	3 00	Snowflake, 3	1 50
Merrill's Parakee, 2	5 00	" (1 dam), 2	75
Nighthawk, 2	80	Chestnut-collared Longspur, 3	1 05
Western Nighthawk, 2	80	McCown's Longspur, 3	3 00
Florida Nighthawk, 2	1 50	Vesper Sparrow, 4	20
Texan Nighthawk, 2	80	Savannah Sparrow, 4	40
Black-chinned Hummingbird, n-2	1 20	Lark Sparrow, 4	20
Costa's Hummingbird, n-2	1 20	Western Lark Sparrow, 4	20
Anna's Hummingbird, n-2	1 20	White-crowned Sparrow, 5	2 50
Rufous Hummingbird, n-2	1 20	Gambel's Sparrow, 4	60
Scissor-tailed Flycatcher, 4	40	Chipping Sparrow, 4	08
Kingbird, 3	09	Slate-colored Junco, 5	1 75
Gray Kingbird, 4	2 00	Oregon Junco, 4	2 00
Couch's Kingbird, 4	4 00	Black-throated Sparrow, 3	1 05

Song Sparrow, 4.....	12	Florida Wren, 4.....	1 40
" 5.....	15	Lomita Wren, 5.....	2 50
Desert Song Sparrow, 5.....	1 75	House Wren, 5.....	40
Mountain Song Sparrow, 4.....	1 00	" 6.....	48
Heerman's Song Sparrow, 4.....	39	" 7.....	56
Samuel's Song Sparrow, 5.....	40	Parkman's Wren, 6.....	90
Rusty Song Sparrow, 5.....	2 00	Western House Wren, 5.....	40
Sooty Song Sparrow, 5.....	2 50	Long-billed Marsh Wren, 4.....	20
Swamp Sparrow, 4.....	48	White-breasted Nuthatch, 3.....	2 10
Towhee, 3.....	30	Slender-billed Nuthatch, 6.....	2 25
White-eyed Towhee, (1 dam.) 4.....	1 75	Red-breasted Nuthatch, 5.....	6 25
Arctic Towhee, 4.....	3 00	Tufted Titmouse, 6.....	3 00
Green-tailed Towhee, 3.....	1 50	Plain Titmouse, 4.....	3 00
Canon Towhee, 3.....	1 50	Chickadee, 7.....	1 05
St. Lucas Towhee, 3.....	3 00	" 8.....	1 20
California Towhee, 3.....	40	Oregon Chickadee, 7.....	2 45
Abert's Towhee, 3.....	2 25	Carolina Chickadee, 4.....	60
Cardinal, 3.....	15	California Bush Tit, 5.....	75
Gray-tailed Cardinal, 3.....	1 05	Verdin, 3.....	1 05
Rose-breasted Grosbeak, 4.....	40	Blue-gray Gnatcatcher, 4.....	80
Black-headed Grosbeak, 8.....	45	Western Gnatcatcher, 5.....	2 50
Blue Grosbeak, 4.....	1 00	Wood Thrush, 4.....	24
Indigo Bunting, 4.....	32	Wilson's Thrush, 4.....	48
" n-3.....	35	Willow Thrush, 3.....	3 00
Lazuli Bunting, 4.....	80	Russet-backed Thrush, 4.....	60
Painted Bunting, 3.....	30	Dwarf Hermit Thrush, 4.....	6 00
Dickcissel, 4.....	32	American Robin, 4.....	12
Scarlet Tanager, 3.....	75	Western Robin, 4.....	40
" n-4.....	1 25	Red-spotted Blue-throat, 5.....	3 75
Summer Tanager, 4.....	1 00	Wheatear, 5.....	50
Purple Martin, 5.....	60	Bluebird, 4.....	20
Cliff Swallow, 6.....	30	English Pheasant, 13.....	3 25
Barn Swallow, 4.....	20	" 10.....	2 50
Tree Swallow, 6.....	2 40	Nest of Black-chinned Hummer.....	30
Violet-green Swallow, 6.....	2 40	" African Starling.....	1 50
Bank Swallow, 5.....	15		
Rough-winged Swallow, 5.....	1 25		
Cedar Waxwing, 5.....	50		
" 4.....	40		
Phainopepla, 2.....	70		
" 3.....	1 05		
Loggerhead Shrike, 6.....	48		
White-rumped Shrike, 6.....	48		
California Shrike, 5.....	40		
Red-eyed Vireo, 4.....	40		
" n-3.....	36		
Yellow-throated Vireo, 3.....	75		
Cassin's Vireo, 3.....	3 00		
White-eyed Vireo, 4.....	60		
Bell's Vireo, 4.....	60		
Least Vireo, 3.....	1 05		
Black and White Warbler, 3.....	1 50		
Prothonotary Warbler, 4.....	1 00		
Blue-winged Warbler, 4.....	6 00		
Parula Warbler, 3.....	60		
Yellow Warbler, 4.....	20		
" 5.....	25		
" n-4.....	30		
Sonora Yellow Warbler, 5.....	2 50		
Chestnut-sided Warbler, 4.....	80		
" 3.....	60		
Yellow-throated Warbler, 3.....	4 50		
Pine Warbler, 4.....	2 00		
Ovenbird, 4.....	80		
Louisiana Water Thrush, 5.....	1 75		
Yellow-breasted Chat, 4.....	32		
Hooded Warbler, 3.....	1 50		
" 4.....	2 00		
Pileolated Warbler, 3.....	2 25		
American Redstart, 4.....	60		
White Wagtail, 6.....	60		
Meadow Pipit, 5.....	50		
Sage Thrasher, 2.....	1 00		
Mockingbird, 4.....	20		
Catbird, 4.....	12		
Brown Thrasher, 4.....	12		
" 5.....	15		
Palmer's Thrasher, 4.....	1 41		
Bendire's Thrasher, 3.....	2 25		
" 4.....	3 00		
California Thrasher, 3.....	60		
Crisall Thrasher, 2.....	2 00		
Cactus Wren, 4.....	72		
Carolina Wren, 5.....	50		

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Olive-backed Thrush, 4.....	\$ 1 40
Winter Wren, 4.....	4 00
Loon, 2.....	3 00
Green-winged Teal, 10.....	5 00
Wood Duck, 8.....	8 00
Great White Heron, 4.....	8 00
American Woodcock, 3.....	4 50
Red-shouldered Hawk, 3.....	1 05
Great Horned Owl, 3.....	3 75
White-throated Sparrow, 4.....	1 40
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All bright male birds on perches.

Indigo Bunting.....	\$ 75
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American Goldfinch.....	50
Yellow Warbler.....	50
Snow Bunting.....	75
Cedar Waxwing.....	60
Bluebird.....	75
Blue Jay.....	1 00
Red Squirrel with nut in paws.....	1 00
Chipmunk with nut in paws.....	1 00
Screech Owl with bird in claws.....	1 10

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Western Grebe	\$ 50
Herring Gull	35
*Least Tern	10
Pintail	35
Green Heron	12
Florida Gallinule	10
European Coot	20
American Coot	10
Lapwing	20
Calif. Partridge	15
Gray Ruffed Grouse	75
Col. Sharp-tailed Grouse	50
*Mourning Dove	05
Western Red-tail	50
*Swainson's Hawk	50
American Sparrow Hawk	35
Screech Owl	50
*Burrowing Owl	20
Yellow-billed Cuckoo	10
Halcy Woodpecker	50
Gardner's Woodpecker	35
Pileated Woodpecker	1 00
Red-bellied Woodpecker	25
Red-headed Woodpecker	10
Flicker	5
Scissor-tailed Flycatcher	10
*Arkansas Kingbird	06
Cassin's Kingbird	25
Crested Flycatcher	15
Phoebe	05
Black Phoebe	15
Western Wood Pewee	20
Skylerk	15
Prairie Horned Lark	15
American Crow	05
Fish Crow	35
Starling	10
*Red-winged Blackbird	05
Bicolored Blackbird	10
Tricolored Blackbird	15
Meadowlark	10
Western Meadowlark	10
Arizona Hooded Oriole	35
*Orchard Oriole	05
*Bullock's Oriole	10
*Boat-tailed Grackle	15
House Finch	05
Western Lark Sparrow	05
Cardinal	05
*Western Goldfinch	10
*Arkansas Goldfinch	10
*Lawrence's Goldfinch	20
Heermann's Song Sparrow	08
Gray-tailed Cardinal	25
Black-headed Grosbeak	15
Lazuli Bunting	20
Painted Bunting	10
Sharpe's Seed-eater	50
Scarlet Tanager	25
Summer Tanager	25
Purple Martin	10
Tree Swallow	15
Cedar Waxwing	10
White-rumped Shrike	10
*California Shrike	08
White-eyed Vireo	15
Bell's Vireo	18
Yellow Warbler	05
White Wagtail	10
Meadow Pipit	10
Mockingbird	05
Catbird	05
Sennet's Thrasher	15
California Thrasher	20
*Cactus Wren	20
Baird's Wren	20
Parkman's Wren	15

California Chickadee	50
*California Bush-tit	05
Wood Thrush	15
Russet-backed Thrush	15
American Robin	05
Bluebird	05
English Pheasant	25
English Sparrow	05
Ring Pheasant	50
Gopher	35
Hammerhead Shark	15
*Red-leg Turtle	15
*Snapping Turtle	15
Jackdaw	50
Rook	10
Magpie	10
Missel Thrush	10
Song Thrush	10
English Blackbird	10
Lesser White-th't Warbler	10
Garden Warbler	10
Reed Bunting	10
Green Finch	10
Willow Warbler	10
Common Bunting	10
Sedge Warbler	10
Nightingale	25
English Sparrow Hawk	35
Great Tit	10
English Swallow	10
Hedge Accentor	10
English Partridge	15

BIRD SKINS.

Redpoll	\$ 35
Snowflake	35
Tree Sparrow	35
Slate-colored Junco	35
Cedar Waxwing	35
Black-and-white Warbler	35
Myrtle Warbler	35
Brown Creeper	35

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" trunculus	25
" saleanus	10
Eburna Japonica	25
Oliva litterata, extra	20
Cypraea moneta	35
Ovulum gibbosum	15
" secale	10
Nerita peleronta, select.	10
Trochus (Livona) pica	25
Helix fideles	13
Bullus Bahamaensis	15
Partula gibba	15
Orthaculus melanochilus	25
" undatum	25
Liguus fasciata	15
Achatinella perversa	10
" uniplicata	10
" spirizona	10
" olivacea	10
Pythea pyramidata	15
Fissurella barbadensis	10
Chama arcinella	15
Cardium isocardia	15
Tellina radiata	10
Fasciolaria distans	10
Melongena corona	15

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Precious coral, 1 oz. pkg.	25
Organpipe Coral	15
Creamy Sea Fan	35
Yellow Sea Fan	35
Sand Dollar	10

Phillipian Urchin	35
Purple Urchin, select	25
Black Starfish	35
Acorn Barnacles	10
Keyhole Urchin	25
Lucky Tooth of Cod	10
Hermit Crab in Shell	35
"Eye Stones"	05

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Chalstolite Crystals	\$ 15
Coquina	25
"Electric" stone	25
Chalcedony Geodes select.	50
GEM STONES, small cut and polished semi-precious stones, many suitable for mounting:	
Sard	15
Trilby heart intag.	15
loes	15
Opals, Mexican	15, 25, 35, 50
Red Onyx	15
Black Onyx	15
Crocidolite, Tiger-eye	10, 15, 25
Lapis Lazuli	35
Chalcedony, 3 var. each	10
Black Ribbon Agates	10
Red Ribbon Agate	10
Carnelian	10
Assorted dozen	50 1 00
Fossil Shark Teeth	5, 10
Scaphites nodosus	10, 25, 50, 1 00
Polyp Coral	10, 25, 50

MISCELLANEOUS.

Arrowheads, ½ doz. asst'd	50
Revolutionary Gun Flint	15
Dove Shell from British Gulana exhibit at World's Fair, pkg. of 12.	25
Chines Horn Nut	10
Beetle Nut	10
Broken Bank Bill	10
Confederate State Bill	10
Chameleon in Alcohol	25
Alligator Tooth	5, 10, 15, 25
Young Naturalist's Marvelous Collection,	
50 labelled specimens	1 00
Chinese Coin	05
Mexican Whistle, clay	10
7var. unused Cuban Stamps	35
Resurrection Plant, Mex.	10
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Set of Souverir World's Fair Tickets	1 00

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OÖLOGIST, 20 numbers	50
Nidologist, 8 numbers	1 00
The Wilson Quarterly and Semi Annual 4 numbers	1 00
Natural Science News, 52 back numbers	1 00
Above publications are all different and of our selection.	
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Penkese, a volume of 96 pages. Giving an acct' of Agassiz's summer school at Penkese Island	50
Loucks, Prothonotary Warbler	35
Short, Birds of W. N. Y.	15
Lattin's Standard Egg Cat	15
Directions for Collecting Minerals, 16 pp.	05
Exchange Notice (or Coupon) in OÖLOGIST	25
Advertising in OÖLOGIST	50-51

THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERM-Y.

VOL. XV. NO. 12.

ALBION, N. Y., DEC., 1898.

WHOLE NO. 149

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-third list rates.

What's Your Number?

Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 149 your subscription expires with this issue

150 " " " " " Jan., '99"

155 " " " " " June " "

160 " " " " " Nov. " "

Intermediate numbers can easily be determined. If we have you credited wrong we wish to rectify.

TO EXCHANGE.—Fine sets of 11 1-1, 49 1-3, 51a 1-3, 202 1-4 1-3, 225 1-4, 269 1-3, 319 1-2, 331 1-4, 342 1-3, 375 1-3, 467 1-3, 595 1-4, 608 1-3, 619 3-5, 624 1-3, 673 2-4, 674 1-4, 681 1-4, 687 1-4, 713 1-3, 755 2-4. JOHN H. FLANAGAN, 29 Weybosset St., Providence, R. I.

WANTED.—"Osprey" Vol. II, combined numbers 6-7; for this number, to complete my file, I will give good exchange in prints of nests and eggs, sending list for your selection. WM. H. FISHER, 1602 Mt. Royal Ave., Baltimore, Md.

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Do not neglect to look over our new and revised list of Books and Publications devoted to Ornithology and Oology and Natural History in general, offered in this month's OÖLOGIST and above all do not overlook the "Extraordinary Christmas Offer."

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FRANK H. LATTIN, ALBION, N. Y.

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Enlarged (contains 72 pages) revised, corrected and brought up to date of going to press—March, 1896. Giving all of the new A. O. U. changes and additions. Also divided and subdivided into orders, sub-orders, families, and sub-families.

Values are based on the 1893 ones which were determined by the compiler, from invaluable notes, suggestions and assistance from Major Chas. E. Bendire, J. Parker Norris, Esq., and Captain B. F. Goss. In addition to these notes, which have been carefully reworked, the compiler has had suggestions from over FORTY LEADING AMERICAN OOLOGISTS, all of which were carefully considered and where advisable, adopted. Lattin’s Catalogue has long been recognized by leading Oologists as the “Standard.” The compiler intends to issue a new one as soon as this edition is exhausted and desires the assistance of every working Oologist, in making values, etc. On this account he has concluded to close out this edition at the following rates, postpaid (regular price was 25 cents per copy.) Single copy 10 cents; 3 for 25 cents; 7 for 50 cents; 15 for \$1.00.

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140	Red and Yellow-shouldered Blackbird.....		191	¼ " " ".....	1 50
141	Red-shafted Flicker.....		192	2 " " ".....	2 00
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			213	4 oz., better quality.....	59
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			216	1 Ruby " ".....	20
			217	1 " " large.....	50
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150	1 pair Unio Solidus, rare.....	75
151	1 " Unio Alatus, Wis.....	1 50
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	These shells are polished and shine like a mirror.	
158	1 dozen Scalloped shells, pierced and polished.....	25
159	1 Hermite Crab and Shell.....	10
160	1 Horse Shoe Crab, small.....	10
161	1 " " 8 inch.....	20
162	1 Sea Urchin (sand dollar).....	05
163	1 dozen Scallops eggs.....	10
164	½ dozen sturgeon plates.....	20
165	½ " Sea Cham, 4x6 for painting.....	25
166	½ gallon mixed shells.....	30
167	½ doz. White Murex.....	58
168	½ " Pink Murex.....	68
169	½ " Conch Shells.....	50
170	½ " Helmet or Queen Shells.....	1 00
171	1 doz. large Alligator Teeth.....	35
172	Large Turtle Shell, (gopher) Fla.....	75
173	1 Saw-fish-saw, 11 inches, Fla.....	15
174	1 Trunk Fish.....	30
175	1 Porcupine Fish.....	25
176	Pistol used 50 years ago.....	50
177	1 piece Mexican Onyx, 8 square in.....	25
178	1 " " 16 " fine.....	1 00
179	10 " Fossil Coral, 50 square in., fine.....	2 00
180	11 " black and white Agate.45 "good.....	1 60
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182	1 " Moss Agate, Brazil, 4 inch.....	25
183	1 " " 3 " ".....	10

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In one Quarto Volume, Silk Cloth, Gilt top, untrimmed edges, \$7.50.

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Volumes I to IV, as above,	5.00.

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THE OÖLOGIST.

VOL. XV. NO. 12.

ALBION, N. Y., DEC., 1898.

WHOLE No. 149

Ring-necked Pheasant in New Jersey.

This year's report of the New Jersey Fish and Game Commission contains an exhaustive and interesting review of the work undertaken to stock the State with the Ring-necked Pheasant. Owing to our limited space we are able to give only a few of the more interesting paragraphs and reports:

In many of the States of the Union the Ring-necked Pheasant has been introduced with success, although in nearly every case its introduction was due primarily at least to private enterprise. There is perhaps no State better adapted to this bird than New Jersey, especially in the southern part, where the sparsely settled yet cultivated country seems to offer them a home where they may propagate their species without assistance from human kind. For it must be remembered that in most places where the Ring-necked Pheasant has been introduced it was propagated by the eggs being placed under the common hen, the parent bird declining to sit long enough to hatch out the young or to take care of them after they had left the shell. Experiments tried in this country show that the female bird makes a better mother in this country than it does in England, and many instances are recorded of the bird rearing its own young. Scientists attribute this to the more prolific insect life in this country; they argue that in Europe and in England especially, insects are less numerous than they are here, and that consequently there the Pheasant has enough to do to provide for its own subsistence without troubling itself with a numerous progeny. Be the facts what they may, it is well established that the Ring Pheasants in

this country take care of their own young.

All these facts having been taken into consideration your commission concluded to try the experiment of introducing the Ring-necked Pheasant into New Jersey. For this purpose a number of birds were sent out two years ago, care being taken to provide homes for them where there was a probability of their being looked after for some time. Everywhere they were received with pleasure, especially so in farming communities. The inhabitants had observed with regret the diminution in the numbers of the indigenous Ruffed Grouse and they welcomed the beautiful stranger. No argument could be adduced against the bird, for it destroys no growing crops, pilfers little of the fallen grain and far more than compensates for the loss of the grain by the destruction of insects. The result of the experiment was closely watched, and it was so encouraging that your commission was induced to continue its efforts toward the better introduction of the bird. Last year the number put out was increased over that of the preceding year, and although failures are reported in a few instances, a perusal of the subjoined letters will probably bring the careful reader to the conclusion arrived at by your commission, that the bird may be introduced into New Jersey, and that with a close season for a few years, and proper care, it will soon become more numerous here than the Ruffed Grouse. Your commission has no desire whatever to persist in the experiment of introducing the bird unless there is at least a probable chance of its ultimate success and in order that yourself and the public generally may know just what degree

of success or failure has attended the experiment, letters were written to those who had received birds, inquiring as to what had been the outcome. Some answers to these letters are herewith reproduced, both for information as to the experiment itself and for the purpose of guiding such persons as may in the future feel inclined to assist in the introduction of the bird.

Ring-necked Pheasants have been distributed to counties as follows: Atlantic 6, Bergen 37, Burlington 63, Camden 6, Cape May 12, Cumberland 98, Essex 0, Gloucester 24, Hudson 0, Hunterdon 12, Mercer 18, Middlesex 18, Monmouth 24, Morris 42, Ocean 24, Passaic 18, Salem 54, Somerset 0, Sussex 6, Union 6, Warren 6; total 464.

From George W. Dunham, fish and game warden, Flemington, Aug. 25, 1898: In April, 1897, you sent me twelve Pheasants—three cocks and nine hens. They were turned out in different localities, between Flemington and the Delaware River, a distance of about ten miles. Wherever they were placed the farmers promised to protect them and prohibit gunning that year. This was done, and so far as I can learn but four birds were shot. Three of the hens, however, were killed by mowing machines, leaving but six to hatch. Last December, after careful investigation, I found that there were at least sixty birds in the vicinity where they were released.

I have visited these farms recently and find the result most satisfactory, the farmers having taken pride in protecting the birds and feeding them during the winter. Many of them fed with their fowls all winter. Several have been killed by mowing machines this summer, as they nest in the tall grass near the underbrush, and cannot be seen. I attach hereto the names of some of the farmers upon whose lands they have hatched, and do not hesitate to say there are at least 300 birds in the

immediate vicinity where they were first released.

There is exceptionally fine cover for them in that locality. This, together with the protection afforded them, accounts for the increase. A few of the young birds scattered, but I do not learn of any nesting far away, and the old ones are still on the ground where they were turned out. Other broods are reported, but I am unable at this writing to say positively that the information is true; these farms are situated in three adjoining townships. The old pheasants on them number at least 100, and quail are abundant throughout that section. The report is made upon personal examination, and the numbers are not exaggerated.

From Mr. M. L. Hoagland, secretary of the White Meadow Club, Rockaway, Aug. 27, 1898. In addition to the three cocks and six hens received from you, we purchased six hens, making twelve hens and three cocks in all; these were put in coops separately, with one cock and four hens to a coop; they began laying on April 16, and averaged nine eggs per day till they had laid in all 308 eggs up to about the latter part of July, and then they stopped. The eggs we hatched under hens and found that bantam hens are far superior to any other kind; in fact nearly all we lost were with large hens, so there is no question but that bantam hens are the best to mother the chicks. We also found the first eggs were by far the best, producing stronger chicks and a larger percentage than those laid later in the summer. Out of the 300 and odd eggs received we hatched about 280 chicks; these we kept in runs made of 1 inch mess wire, 4 feet wide and 8 feet long, with a tight coop in one end for the mother hen. All the birds we hatched out at first died from different causes, but I think the most fatal of all was the lice, which seem sure death to little pheasants; it was not till we had lost by

far the greater number of those hatched that we found out how to care for them, so we could raise them with any degree of success, and by that time our old hens had stopped laying. Of the 280 chicks hatched out we have only succeeded in raising to maturity thirty-six, which we have recently liberated. This seems a very poor return for all our trouble and expense, but I am certain that next year we can raise seventy-five per cent. of those hatched; when we began last spring no one knew anything about raising them, and we went by such instruction as we could gather, with the result that we lost nearly all our birds, and it was not till we began to follow the dictates of common sense that we succeeded in raising any. I would advise any one trying to raise Pheasants to burn up all printed matter he may have on the subject and go at it to reproduce, as near as possible, the natural conditions as the bird would find them in the woods, giving them all kinds of insects and plenty of fresh water. There is no reason why they cannot be raised if they are properly cared for; the last hen we had come off hatched eleven birds from thirteen eggs, and we raised nine of the birds, and let them go, so you see if we had been able to do anything like that at first we would have had a fine lot, but experience is absolutely necessary, and when we began we had none; however, we propose to keep our old birds over till next year, and fully expect to raise a good lot of birds. I hope that those who like us have tried to raise them and failed, because of inexperience, will not get discouraged and quit, but will keep at it till our State is well stocked with them. We hope for some good results from the thirty-six young birds we turned out this summer, and if they breed at all and we raise some more next year we will soon get the country stocked with them.

From Colonel J. Howard Willets,

Fort Elizabeth, Aug. 29, 1898: The pheasants sent last year did splendidly, and if they had not been killed by law in the fall we should have had hundreds of them for breeding this spring. The last consignment this spring also did well. I placed two hens and a cock from last year's birds in a pen; one hen laid twenty-seven eggs and the other thirty-two, but neither hen would set. I took the eggs and placed them under a bantam chicken, and they hatched out two broods. These lived and did well, and this spring I turned them loose, so we had them to begin with. This spring's consignment of one dozen I turned out at once. I located four nests, and they all hatched out well, one of thirty-one, one of twenty-six and one of twenty-two. The last nest had only nine eggs; as they were very late I judged that something destroyed the first nest, and that the hen laid only nine on second laying. A farmer mowed over her nest, and as they were all "piped" and the workmen kept the hen from returning to the nest, he notified me, and at noon I went over and got the eggs, placed them under a hen, and the next morning they were all hatched. I took them back, found the old bird (with my dog) and I let the young go. Their "peep" soon brought the mother, and she has the whole nine, save one, now. I saw them yesterday, they are the size of quail. A farmer told me last week that he had found a nest of thirty-one eggs a few weeks ago, and watched them until they hatched every egg. The only reason I can see that will prevent the plan of introducing them here is that they will go to the open fields of grass and especially meadows to breed, and as the law permits shooting and they in the open they will all be killed as fast as they breed, and before they become numerous enough to be compelled to take to the woods. The three farms upon which we have seven broods that we

know of we shall be compelled to 'post' this year, and keep everybody off in order to save the birds. Our local sportsmen we can control, and they will not kill them, but the reed and rail bird shooting here brings so many strangers that they follow it up when the quail season comes in, and we can protect the pheasants in no other way. The "out" birds in the woods will no doubt, many of them, be killed. I know of at least a dozen broods in the woods within two or three miles, which shows that they will soon spread over a large area of territory, and I think enough of them will escape this fall to insure the success of their introduction. They breed such large broods, take good care of their young, stand the winters well and will no doubt multiply. If we had only had last year and this year, while they were gaining a foothold, a close season, we would have made a complete success of their introduction, and would probably after that never had need of anything.

From Mr. Julius Munch, Preakness, Sept. 15, 1898: The half-dozen Ring-necked Pheasants sent me gave me a desire to attempt the raising of these birds on a more extensive scale, and I accordingly secured two dozen more, and I am glad to say that I am more than gratified with the result. I was wholly inexperienced, and to this I attribute the loss of many young birds. I first attempted to induce the hen pheasant to sit, but did not succeed. I watched the bird very closely and thought she showed a determination to sit, as she was most of the time crouched on the ground in a nest she had made in the sand. I permitted her to keep her own eggs, and added others to it, but the bird never sat more than five or ten minutes at a time, when she would get up and run away for several minutes, after which she returned to her eggs. I saw she would not hatch, and so I took all but two of the eggs

away from her, and she spoiled these two.

I found that I had the best success with game and bantam hens, the only objection to the latter being that they cannot cover more than eight eggs. I hatched out nearly every egg in this way.

At first I started near my house in small boxes, with a little runway for the chicks, keeping the hen shut up in the box. Rainstorms killed from thirty to fifty chicks a day, and so I abandoned this method and placed the hens and chicks in the woods, where I gave the little ones more runway. I think this obviated the difficulty, for after that I did not lose more than one or two chicks a day, and some days not at all. It is my opinion that most of the losses were due to the fact that the chicks did not have enough exercise to keep the body heat while I had them near the house.

I think the birds have locality very well developed, and do not believe that they will wander far from any place where there is food and shelter. Even the chicks showed this to a remarkable extent, and it was amusing to watch them at feeding time. At one time I had as many as two dozen broods in the woods, each brood with its own enclosure and feeding box. The chicks wandered at will in the woods, but when feeding time came they each repaired to its own box and never have I seen a chick from one brood eat out of a box placed for another brood. It was very amusing to see them scurrying about looking for their own particular feed box and paying no attention to the boxes used by the others. I had the woods fenced in with wire netting, but occasionally some little fellow developed sufficient strength of wing to get over the fence without having sagacity sufficient to find its way back. When we opened the fence sufficiently to permit it to come back, it made a direct

line for its own feeding box, passing others by on the way.

Of course a number escaped, and others I liberated purposely. I should suppose that over 100 thus got away from my enclosures, and these are in the woods or fields adjoining, excepting of course, such as were destroyed by hawks. I have over 200 of the birds, either old or half grown, now in my enclosures.

Cedar Lake.

Cedar Lake, better known as the Slough, is a small body of water a mile across "as the crow flies." It is rapidly becoming dry land as it has but one inlet, a small stream known as McClod's Run, which furnishes the only supply of water. The Illinois Central Railroad Company's tracks divides the Lake into two parts. One part, the larger of the two, is called the Big Slough, and of this I am going to write.

Into the north end of the Big Slough the small stream, before mentioned, empties. Near the mouth of this stream is a cape extending out into the Lake for half or three-quarters of a mile. It is covered with shrubbery and dwarf trees and makes an excellent place for building sites for birds. To the south of this miniature peninsula is an island covered with rank grass, flag and willows. Just off this island is where the Coot breeds. This bird is very common in Fall and Spring, but very few of them remain to breed.

Duck and Sora Rail are also numerous. In the Fall of '97 I and a friend of mine took a boat and went out into the Lake after Rails. We had a revolver, some shot cartridges and an air gun. Rowing out among the reeds, rushes and wild rice, we succeeded in bagging half a dozen in about as many minutes. They are very easily killed with a shot gun, but are so small that it takes several of them to make a meal. Not many Ducks

are killed as they are "few and far between," but a large number of Coots are taken by those who consider them fit to eat. All shooting on the Lake must cease sooner or later as a fine of fifty dollars is the consequence of anyone's being caught with a gun in his possession in that vicinity, even though he has not fired a shot. I have seen but nine Ducks so far this year—four on the 29th of July and five on Oct. 11th, so you see that we have very little hunting here. Perhaps after the Ducks read in the papers that a fifty dollar fine will be inflicted upon any person hunting them, they may be induced to come here in large numbers.

If this Lake were a few miles out of town and was as large as it was fifty years ago, we sportsmen might enjoy a good hunt once in a while. But I see no way of moving it, and I suppose we shall have to be contented to let it remain where it is and "make no mournful sounds in objection thereof."

GLEN M. HATHORN,

Cedar Rapids, Ohio.

"Ridgway's Nomenclature of Colours"

The following from the Publishers is not very encouraging, to say the least, to the many ornithologists desiring to obtain a copy of this invaluable work:

"In reply to yours of November 28th we would say that Ridgway's Nomenclature of Colours is entirely out of print, and we have had no copies on hand for a long time. We have no new edition in preparation.

Regretting that we cannot help you, we remain,

Yours very respectfully,
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In April OÖLOGIST we offered prizes for the three best articles sent in after April 1st. These articles have been published in the OÖLOGIST from May to December issues, inclusive, and the publisher leaves it with the readers to decide the three best articles published in these six issues, and to designate the articles which should receive the prizes.

You are requested to name the three

articles appearing in these issues which you consider of greatest value, merit and interest. Write your decision on the back of a postal in the order which you think the prizes should be awarded and mail at once (none counted that are mailed after Jan. 10th) to the Publisher of the OÖLOGIST. The first five "judges" naming the winning articles correctly or in nearest order will each be presented with \$1.00 worth of Premiums, their selection. Only subscribers of the OÖLOGIST can act as judges. Both the Mss. and Judges' prizes will be awarded on Jan. 20th.

N. B. You are to select the three best from all the issues *not each issue, i. e.:* send the titles of three articles only, selected from the various issues and not those of eighteen (3 from each issue).

The White-rumped Shriko.

This species is the only one of the family *Laniidae*, which has been found breeding here, as far as my knowledge extends, is rather common in our fields during the summer months.

It prefers an open field to wooded land, a favorite resort being a thick hedge skirting a field.

Here, perched on some tree a little elevated from its neighbors, the male bird will sit uttering its notes every few minutes, at the same time keeping a sharp lookout for some helpless Sparrow that might chance to pass its way. But where is the female? Having found the male, you may be sure that its mate is not far away.

Look a little closer into that dense hawthorne near by, there is only a last year Catbird's nest, but no! what does that gleam of fresh, white feathers mean? A more careful examination reveals Mrs. Shriko squatting closely in her feathery abode.

Softly but swiftly she glides from the nest, through that mass of thorns without a scratch, although you will pro-

bably receive several in reaching the nest.

You will notice how large and bulky the nest is in comparison with the bird, and how thick the lining is, the better to withstand the inclemency of the weather at so early a nesting date.

The bird's home is also well protected against enemies, placed as it is, in the centre of a thorn bush and being built externally of thorns and other material. But what a commotion you have created through your investigations. The female on leaving the nest is immediately joined by her partner, and together they give vent to their feelings by snapping their bills, at the same time emitting a hissing sound similar to that of the Cuckoo and Thrasher.

If the nest contains incubated eggs or young the parents become greatly disturbed flying about the intruder in a very menacing manner.

The Shrike has earned the well deserved appellation of butcher-bird from the manner in which it obtains its food. Although resembling birds of prey in its choice of food, it differs from them in its manner of eating it.

Birds of the Raptores order devour their food as soon as procured, whilst the Shrike impales it on some thorn or other sharp projection, and in epicurean style, after devouring some dainty morsels about the head, presumably the brain, leaves it to become tender and gamey.

No doubt this habit of spitting its prey also enables the bird to devour it at ease and leisure and secures it from animals. I have often come across the larder of a Shrike in some thick hawthorn or again on a barbed wire fence.

Sometimes the provisions consist of a mere beetle or two, but more often it is a small bird or a field mouse and once I found four young Goldfinches with the mother bird, hung up side by side close to their late home.

The White-rumped Shrike usually

arrive here sometime during the first week of April. They begin building about the middle of April and the nests contain full sets of eggs about the last of the month or first week in May, my earliest record being the 24th of April, 1898 when I took a set of six fresh eggs from a nest in a Hawthorn bush.

They lay a second time about the beginning of June. On June 6, 1896 I found a nest placed on a horizontal sloping branch of an oak, in an open field, containing six fresh eggs.

The number of eggs laid at a time is almost invariably six, though rarely and chiefly in second sets, five.

Out of a number of nests personally examined, the eggs were of a yellowish white color, thickly spotted over the entire surface with several shades of grayish brown varying to yellowish.

In a few instances, however, the eggs were of a pure white ground color sparingly dotted with light yellowish brown, being very distinct from the first variety. LEWIS M. TERRILL,

Montreal, Que.

Pet Bird Show.

On Thanksgiving Day the first pet bird show of this country opened, under the auspices of the New York Ornithological Society, at New York City. It is claimed there were over 3,500 birds on exhibition, comprising nearly every kind of pet bird known to this land and foreign countries. There were larks, linnets, goldfinches, thrushes, nightingales, many varieties of canaries, including Belgian canaries, and one bird which sings Yankee Doodle, and a parrot which speaks several different languages. Mules, hybrids, which are offspring of canaries and goldfinches, and which fanciers declare excel their parents in singing but do not breed, were exhibited. Enthusiastic bird breeders tell some curious stories to account for the physical peculiar-

ities of the various kinds of canaries which one saw in the cages. For instance, they declare that the Chinese white canaries, which Mr. Ferond shows, owe their color to a long system of treatment by the Chinamen, which gradually bleached them out after many generations and left them albinos. Their forefathers were yellow, or perhaps green, as are the canaries in their native islands, but by keeping them in a white room, feeding them on white food, and even having their attendants clothed in white garments, so that the birds never saw any color except white, they were gradually made to produce white offspring which now perpetuate that color. The long Belgian birds, with down-pointed craning necks, are said to have been produced by keeping their progenitors confined in narrow cages, which forced them always to stand bolt upright and to crane their necks downward to get food and water, and the crescent-shaped birds, the fanciers say, were produced by similar means. One does not have to believe these stories, but one can certainly see some very fine specimens of the various sorts of birds at the show. No dealer is allowed to belong to the association, and its purposes are to spread a knowledge of the breeding and care of cage birds among New Yorkers.—*American Field*.

A Discovery.

While passing through a wet ash swamp on June 14th, 1895, I observed a Chickadee leave a hole in a small stub about eight feet from the ground. Reaching the opening, I gently removed the bark and wood until I could see into the cavity. There on a bed of rabbit-fur and moss lay a single fresh egg of the Chickadee. On removing the nest I was surprised at the thickness of the material, but on dividing the nest I found another fresh egg. This led to

further experiment the result of which was that I discovered a set of six eggs, all fresh, each one being separated from the next by a layer of nest material (fur and moss). What was the bird's object?

R. T. ANDERSON,
Aylmer, Ont.

Stray Cardinals.

On December 4th saw a male and female Cardinal Grosbeak in the brush bordering the Bronx River in Wakefield, N. Y. City. Never saw any of these birds here before at any time of the year.

THOMAS CORRIGAN.

Xmas Bargains in Books.

Until Jan. 1st I offer the following books and publications *prepaid* at prices quoted :

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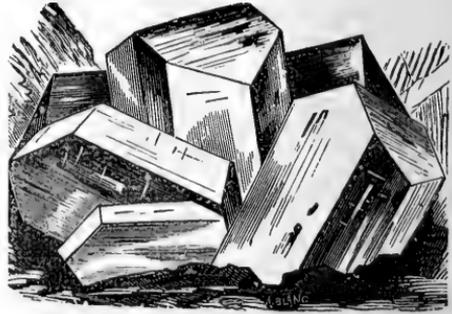
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THE OÖLOGIST.

VOL. XVI. NO. 1.

ALBION, N. Y., JAN., 1899.

WHOLE NO. 150

Dickeissel in His Illinois Haunts.

Is it not a strange omission on the part of our people—when one of our representative birds, probably more common in this section than any other migrating species and certainly as conspicuous during its breeding season—should be so overlooked, as to be given neither common nor local names.

Our little Dickceissel (*Spiza americana*), enjoys this doubtful distinction and while seemingly an unappreciated bird, is really fortunate in having no "outlandish" nick-names attached to its pretty wags.

Even our children, are acquainted with the Bluebird and Oriole and can readily distinguish and name them—yet the Dickceissel, many times more numerous and with equally attractive features, is practically a nameless bird.

Any one who passes along our hot and dusty country highways during June or July can describe the little, yellow-breasted songster, mounted every few rods along the hedge-rows, but few indeed, are they who are able to give you his true name.

Perhaps nowhere on the American continent is this bird to be found in greater numbers, than through central Illinois, bordering on the 40th parallel. Just why he has seemed to have chosen this section for the center of his base of operations, I am unable to say.

I remember "Dick" to have been present in much less numbers than now, when I was a lad, but still they were numerous enough to be noticable among the boy collectors. "Old timers" however do not seem to remember him and I would gather from this, that he has been a follower of the great march of civilization westward.

The destruction of our forests and the transformation of our swamps and lowlands into broad acres of tillable soil, has effected the disappearance of many of our former birds, several of which we will never see here again.

This same cause however has given us the Dickceissel—he is a bird of civilization and it is evident from his rapidly increasing numbers, that he has come to stay. While they seem to be quite evenly distributed through our timothy and clover fields, along the open ditches and in the hedge-rows bordering the public roads, occasionally, one will discover a colony, of perhaps ten or a dozen pairs in some out-of-the-way, but suitable breeding place.

The song of this interesting bird invariably begins with three notes, very much resembling the syllables—Dick! Dick! Dick! These are followed by an indescribable warble with the notes running rapidly together.

There is a perseverance in his song that compels one to notice and admire him, for on the hottest of midsummer days, when the sun beats down so fiercely that all Nature seems to be dying under its merciless rays—little Dick is all animation and his sprightly notes come as a welcome relief.

If you approach too near the singer you are apt to hear his alarm notes—sharp and metallic and exceedingly penetrating. While these notes convey no meaning to the average listener, they are fully understood by his dusky little sweetheart, who, not far distant, silently slides off a nest of pale blue eggs and remains hidden until she hears her lord and guardians' reassuring song. If however you are particularly obtrusive she excitedly joins her mate and remains by his side until all dan-

ger is past. You pass on and when he is assured that you mean no harm, you will hear his most joyous song as he throws back his head and gushes until it seems his little throat will burst.

Their nests, I have found in all conceivable places—high in the hedge-rows away out of reach, down in the lower branches of raspberry bushes, nestling in the prickly arms of giant thistle-plants, flat on the ground in the midst of clover blossoms. Sometimes woven around and firmly fastened to some large weed-stalk, oftimes loosely placed in the treacherous tops of waving swamp-grass.

The greater number of first nests are placed in the clover fields and these generally come to grief, for about the time the nest and set are complete and the female begins her task of incubation, the hay-maker arrives with his mower and the little homes are destroyed. In July of last season, I followed a mower in a five acre clover field near the village and picked up no less than six nests in which eggs had been broken or dumped out.

In this way thousands of nests are destroyed each season and the great Dickcissel army is obliged to rebuild.

They are not easily discouraged, however, and a few hours later may be seen busily engaged in carrying material for new homes.

This time they look for a more substantial site and generally their choice falls on the thistle plants which by this date have attained a fair size and are growing in profusion along our open ditches and country highways. There the Dickcissel is comparatively safe and enough families of *Spiza americana* are successfully reared in the protecting arms of this hardy plant to have appropriately deserved the name of "Thistle-finch."

The nesting season extends well through the summer and no fixed rule will cover the reproducing period of

this interesting bird. During the season of 1896 I found young on May 29th, while several nests near by contained fresh on June 2d. In 1897 I searched in vain during June for nests of this bird and found none earlier than July 2d. This too, seemed to be among the first of the season, for during the month of July I examined over thirty nests all containing fresh to slightly incubated eggs.

The nest is a very neat and compact structure (when placed in other than a ground situation), composed mainly of fine grasses and weed-stems, with occasionally a horse hair lining. One especially fine one observed was completely covered with stems of tongue-grass, giving it an artistic effect evidently designed for the sole purpose of ornamentation.

The prettily constructed nests of yellow sun-dried grasses, nestling in the rich dark green of the thick foliage and holding four dainty pale blue eggs, furnished a rare combination of colors. Add to this picture the trim little female and her golden-breasted, black-throated lover and you have one of Nature's most beautiful pictures—one of immeasurable and matchless works of art she is ever disclosing to those who would know her secrets.

ISAAC E. HESS,
Philo, Ills.

Oological Favorites.

I suppose that in the collection of every oologist there are perhaps half a dozen sets that are his particular favorites.

These are not necessarily the rarest or most valuable, but the fact remains that he regards them with particular solicitude.

In this article I shall give a sketch of three of my favorites, that I took during a year's visit to Colorado, that paradise of the oologist.

On June 2, 1896, Mr. G. D. Emerson

and myself, started on a short collecting trip in the mountains back of the town (Boulder.) We first went up Boulder Canon and took a set of Dipper's eggs from a nest I had located a few days before. This nest was built on the stringer of a bridge, over which teams were constantly passing, and resembled very much the ordinary Phœbe nest. None of the nests that I examined in fact were the green mossy structure described by Davie, but were composed of fibrous roots and dried grass, lined with softer grasses, and resembled very much those little bunches of drift stuff that is found lodged in the bushes and among the rocks along streams after a flood. Perhaps, however, in other sections of the country they build otherwise.

After taking the set of Dipper's eggs, we climbed out of the canon and struck off over the foot hills toward home.

We rapped on all the dead trees we passed in hope of locating a woodpecker's nest. As we passed a likely looking stub a little out of our line of march I threw a rock against it and was pleased to see a small dark-colored bird fly out and light in a neighboring tree. My companion turned his attention to the bird while I climbed the stub. After examining all the larger holes and finding them empty I noticed a smaller one about an inch in diameter, and being unable to feel the bottom, I inserted my thumb and tore off a strip of the rotten wood, disclosing the daintiest little nest that it has ever been my pleasure to see, with the possible exception of a Hummingbird's.

The hole was about ten inches in depth and was filled up for about two inches with feathers. In the center of this soft bed was a little cup-shaped depression, in which nestled (7) seven perfectly fresh eggs, arranged in two layers, four (4) on the bottom and three (3) on top.

The ground color was a clear crystal-

ine white, through which the yolk shone giving them the beautiful pinkish tinge so common in woodpeckers' eggs. They were spotted sparingly over their entire surface, with light reddish brown.

Before disturbing the nest I joined my companion and we noted down a description of the bird, which had obligingly seated itself on a limb where we could readily see it. After taking sufficient notes to insure its identity, we returned to the stub, and after admiring the nest and contents for some time, I carefully packed the eggs in my box, but was forced to leave the nest as it contained nothing but feathers and would not hold together.

A short distance farther on Mr. E. found another nest, identically the same, also containing seven (7) eggs. Both nests were in rotten stubs, about twenty (20) feet from the ground.

After taking this set we hurried on as the sun had dropped behind the snow-capped peaks of the Rockies, and the shadows were growing deeper, as we scrambled down an abandoned log chute and took the road toward home.

In the evening upon consulting the authorities our sets proved to be those of the Pigmy Nuthatch. The eggs averaged .62 x .43.

The next set is that of Cassin's Purple Finch.

Perhaps it was the difficulty I had in getting it that makes me so fond of this set.

A friend of mine met me one day early in June, (on the 9th to be exact,) and told me of a bird that had built its nest in a balsam tree near his home. From his description I was pretty sure of its identity, but to clinch matters I sallied around that afternoon to see for myself.

The nest was located among the thick shoots that had sprung from the trunk of the tree, where it had been cut off. They were so dense that I could not see the nest, but a well directed pebble

brought out the bird which proved to be as I had supposed, a Cassin's Purple Finch. But with the nest located and species determined, my troubles had just begun.

The tree stood in the front yard right in front of the veranda and not twenty (20) feet from the side walk, where people were constantly passing.

The people of the house were, to put it mildly, not in sympathy with the egg collector, so I knew that the only way to get the set was by stealth.

I decided that nothing was to be gained by delay and determined to begin operations that very night. Shortly after dark I walked around by the house, accompanied by the friend who had showed me the nest, and waited for a favorable opportunity. It was a long time coming. The family were all on the front veranda and of course it was impossible to do anything till they went inside. After waiting till about 10:30 they finally retired and left the coast clear. After one or two attempts that were interrupted by pedestrians, I succeeded in shinning up the tree and partially hiding myself among the sprouts. Now if any one imagines that it is an easy task to hang on to a slippery tree trunk, on a pitch dark night and explore, through a veritable thicket for a little nest, the exact location of which is unknown, let him try it and be convinced of his error:

After hanging there for what seemed to be an hour and my entire stock of "conjur words" had been exhausted, I was so fortunate as to get my hand on the nest. Without stopping to count or examine the eggs I stowed them away in various corners of my mouth, after the manner of the school boy and putting the nest under my hat I slid cautiously to the ground. The eggs were transferred to my collecting box and, wrapping the nest in a piece of paper, I started home.

Upon unpacking next morning they

proved to be five (5) in number, of a light green-ground color, very sparsely dotted, chiefly around the larger end, fine slate colored and black dots. They were so badly incubated that in spite of my best efforts two were broken in blowing. The three remaining ones measured .80 x .63, .78 x .60 and .78 x .58 in.

The nest was composed of rootlets, vegetable fibers, and a few shreds of bark, lined with cotton wood down. It resembled very much the nest of a Yellow Warbler, but was not so deep or nearly so firmly felted.

The third set is that of Lincoln's Sparrow.

This, like the preceding one was discovered by another. A youngster while hunting stray cattle among the foot hills flushed the bird from the nest, and later took me to it.

I spent the better part of two days trying to identify the parents, but no matter how stealthily I approached the nest or how cautiously I followed the bird, it always kept just out of sight, only showing itself for a moment, as it ran or fluttered from place to place, always keeping hid in the grass or behind a stone.

At last completely baffled and fearful lest such constant pursuit would make the birds leave the nest, I was under the painful necessity of resorting to the shot gun. I only do so as a last resort, for it is very seldom that a little patience will fail to bring the bird within range of the less deadly opera glass, but on this occasion it seemed impossible, so a charge of number ten shot was a necessity.

Upon consulting Coues' Key the specimen in hand proved to be a Lincoln Finch.

The nest, which was placed in a slight hollow in the ground under shelter of a tussock of grass, was composed of coarse grass and weed stalks outside, lined with soft grass and a few hairs in-

side and measured about two inches and a half ($2\frac{1}{2}$) inside diameter.

The eggs, four (4) in number, were a light pea green, spotted and slightly lined with various shades of brown and lilac, chiefly in the form of a wreath around the larger end. They measured .78 x .64, .80 x .63, .81 x .63 and .81 x .62.

This set was taken June 6, '96, and were well advanced in incubation.

FRANK S. LOW,
Buffalo, N. Y.

Nesting of the Duck Hawk in Hamilton Co., New York.*

In the spring of '97 I noticed a pair of Hawks and later the brood of 4 young who nested in a ledge about a mile back of the Griffin farm near Indian Lake in Hamilton Co., and after having watched them closely, I concluded they were the rather rare Duck Hawk. The following spring '98 I watched for their advent and finally one day had the pleasure (?) of seeing one drop on a chicken by the barn. A ball from a Winchester made him drop it, but did not hurt the Hawk; and the chicken, although it dropped over a hundred feet escaped unhurt and is still on this earth unless it has been interviewed by an axe.

The following day Mr. T. Monell of New York, who was visiting me, and myself climbed the ledge and after several hours' work located the nest in a crack in the face of the ledge about 75 feet below the top and 150 feet from the foot. The ledge was practically perpendicular except for a few small clumps of bushes that grow out of the cracks or on little shelves.

* Last month, Dec. '98, Mr. D. H. Haight of New York City wrote us in reference to the repair of a couple of eggs of the Duck Hawk, which he took with two others in Hamilton county, this state, during the past season. The two in question having been broken by some "express agent" when sending home, at our request Mr. H. sent the broken but once beautiful specimens (which we much regret are beyond repair) with an account of taking them. This interesting account we herewith give to the readers of the OÖLOGIST.—ED.

The birds kept circling around and I shot one as it lit on the limb of a pine which grew near the top. It fell down and lodged in one of those clumps of bushes. As it was late and we had no rope we deferred trying for the nest until the next day.

May 31, the following day, Monell and I and a boy named Graham started up with rope, axes, and a baking powder can with cotton in it and the gun, for we wanted that other bird and we got him but he fell down and stuck the same as the first one

Well, we got the rope and began to let each other down and worked out across the face of the ledge. Here the boy proved to be a human fly and he got to the nest first followed by Monell, while I remained below so as to pass down the eggs. The crack proved to be about 15 feet long by 6 feet deep and at the opening about 3 feet wide.

The nest was at the furthest end, at least the eggs were as there was not the slightest sign of any attempt at nest building.

The baking powder can came into play here and one egg at a time was passed back until I had all four on a little ledge by me. Then we strung out again and passed them along to safety. After that Monell and I lowered the boy and he got the two birds after some more fly on the wall work.

It was then discovered that I had shot the male bird the day previous. They were shipped to Mr. Batchelor, taxidermist, Indian Lake village, who mounted them.

We had several narrow escapes by the moss on the little ledges slipping off and causing us to slip and we were very glad when it was all over.

We found a Junco's nest with 4 fresh eggs on top of the ledge. It was built into the moss so that if the bird had not flown out from nearly under my foot I should never have found it.

The Hawk's eggs were badly incubated and I had to let them decay before I could remove the chick. I did that by washing out as much as possible, and then filling with water and setting them in a warm place until they tried to walk off. Then I was able to clean them out entirely.

D. H. HAIGHT, New York City.

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERM Y.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Notes from Lake County, Ohio.

I notice in Chapman's Handbook, about the nesting of the Wood Pewee. The material used is similar to that used here, but he says they nest from twenty to forty feet from the ground.

Now here they generally nest from five to nine feet from the ground and rarely as high as twenty, the only place I have ever found them is in an old apple orchard.

May 5, 1896, I took a set of four fresh eggs of the Cardinal from some black-berry bushes three feet from the ground. Nest was composed of leaves, strips of grape vine bark and lined with fine grass. As has been recorded, a set of four is rare, I consider it a very lucky find, for Cardinals are not very plentiful here.

April 30, 1897, I took a set of five fresh eggs of an American Robin from a crotch in a cherry tree, fifteen feet from the ground. Nest composed of usual combination of material.

April 24, 1898, I took a set of seven eggs of the Bluebird from a hickory stub in center of large field. Incubation advanced. Nest composed entirely of fine grass. Chapman records Bluebirds laying from four to six eggs.

April 3, 1898, while searching for Red-tail Hawk's eggs up the Grand river, I found a nest about half way up the bank in a dead pine tree. As the tree looked rather shakey I tried a scheme that had worked successfully before. That is, take a tin can about the size of a one pound baking powder can, punch a hole through the can on both sides, so that when a stick run through will be in center of the can. But a pole long enough to reach to the nest from the tree that you are to climb, punch one end of the pole through the holes cut in the can, (hole must be cut very close to the bottom of can) fix the can in some way, so it can not turn on the pole. Then fill the can one-third full of cotton, hollow the cotton out in the middle so the egg will not roll in the can. Now will steady nerves dip an egg up, with a tight grip on the pole, work it in slowly and carefully. There was a hemlock growing beside of this pine. I climbed the hemlock almost to the very tip and was with the level of the nest, but could not see into it. After poking around with my apparatus I succeeded in getting one egg, similar in color to that of Cooper's Hawk, with three or

four very faint cinnamon-brown marks on it.

April 10th I visited the nest again, a rap on the tree, and to my surprise, off flew Mrs. Red-tail.

I took two more eggs from this nest in the same way. One egg was spotted and blotched sparingly over the entire surface. The other was marked similar, but had a wreath of light cinnamon-brown marks. In this instance the lightest-marked egg was laid first.

RAY DENSMORE,
Painesville, O.

Auction Sale of Minerals, Curios, &c.

Mr. Robert Burnham of Providence, R. I., writes us as follows in relation to his auction sale as advertised in Nov. OÖLOGIST :

"The time from the issue of the OÖLOGIST to the time of opening the bids, Dec. 5th, was so short that more bids have come in since that time than before. For this reason I will continue the sale until Jan. 15, 1899. Tell the readers of the OÖLOGIST to get their bids in as early as possible."

"Next month I shall get up a new list. I will have to, for the way this takes there will be nothing left.

I am at a loss to know which is doing the business—my low reserve prices or the *superiority* of the OÖLOGIST as an *advertising medium*.

Yours truly
ROBERT BURNHAM,

Birds that Hunt and are Hunted.

Life histories of one hundred and seventy birds of prey, game birds and water fowls by Neltjie Blanchan. With introduction by G. O. Shields. New York : Doubleday & McClure Company. 1898. Forty-eight colored plates. Pp. 359. Price \$2.

"The volume before us is a beautiful one, and it may be regarded as one of the triumphs of modern bookmaking that such a handsome volume can be produced at such an astonishingly low price. It is beautifully printed and handsomely bound in green silk cloth, with a rich green top, which has heretofore been largely relegated to the cookbook. We are glad to see, however, that the use of colored edges is coming into vogue. Nothing is more appropriate than a neatly colored edge to match the binding, and some of the effects produced are very artistic, as in the present instance. The system of reproduction used in the plates is most admirable, and while the volume caters in a great measure to the sportsman, it is the hope of the author and editor that the sportsman may learn to hunt more and more each year without guns ; for all true sportsmen are lovers of nature. The time has come when the camera may and should to a great extent take the place of the gun. Several enthusiasts have demonstrated that beautiful pictures of wild birds may be made without taking their lives! We heartily commend this volume to all lovers of nature."

To the above from the *Scientific American* we might add that the words "and ornithologist" should follow "sportsman." The publishers also advise us that the book has already reached its 10th thousand, while its companion volume "Bird Neighbors" by the same author has been so heartily received that 20,000 copies have been issued. They further advise us that "this volume will be sent postpaid to any address on approval, to be paid for if satisfactory or to be returned to them in case it is not wanted after examination." Orders accompanied by cash, sent to the Publisher of OÖLOGIST, will receive the OÖLOGIST 1 year with exchange coupon gratis.

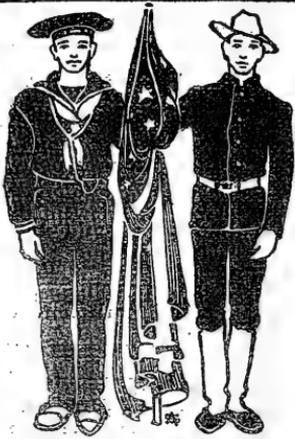


In recognition of THE OÖLOGIST'S 150th issue and also of a New Year, ye editor, notwithstanding his humble unpretentious quarters, grasps the opportunity by the forelock and takes great pleasure in once more jogging the minds of the readers of THE OÖLOGIST that he remains as ever,
Faithfully,

Frank H. Lattin,

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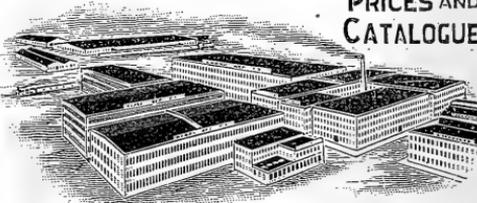
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FOUR DOLLARS will buy 140 varieties of Foreign and Native Woods, or will exchange for woods not in my collection. LOUIS W. HAHN, Silver Creek, N. Y.

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THE OÖLOGIST

have expired, or will expire with this issue. In the future the Publisher requires CASH IN ADVANCE. Hence, if you are one of the delinquent subscribers, your subscription should be forwarded by return mail, if you wish the OÖLOGIST continued to your address.

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THE OÖLOGIST.

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VOL. XVI. NO. 2.

ALBION, N. Y., FEB., 1899.

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"LATTIN" has been having some new photos taken (the first of cabinet size since '82). He would gladly send each of his patrons and old friends a copy, but the expense, and condition of his purse, will not permit. If, however, you wish one sufficiently bad to cover the cost (25 cents) of same, one will gladly be mailed you.

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A good share of species listed in January Oologist still in stock. (Loons all gone.) Your money back if I can't furnish acceptable eggs. Many fine lots are expected soon. I want your name for lists.

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THE OÖLOGIST.

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ALBION, N. Y., FEB., 1899.

WHOLE No. 151

Nesting Habits of Two California Birds.

PILEOLATED WARBLER, *Sylvania pusilla pileolata*. The Western Black-capped Warbler is found breeding quite abundantly along the wooded streams of Santa Clara Co., Calif., but on account of its retiring disposition, it is seldom noticed; unless persistently sought after.

Although I have been collecting in a locality frequented by this bird for the last seven years, I never succeeded in discovering a nest until 1896; but since then I have examined quite a number.

I find, by consulting my note book, that my earliest set was taken on the 29th of April, 1898, and my latest set taken May 29, 1897; at which time I found uncompleted nests and nests containing incomplete sets, which leads me to the conclusion that they rear at least two broods in a season.

The nest is a beautiful little structure composed of leaves, bark-strips, grass and sometimes tules lined with fine dry grass, horsehair or feathers.

It is almost invariably placed in wild blackberry vines, the height varying from 6 inches to 4 feet above the ground. The only exception I have ever found was a nest built in a clump of weeds and nettles two feet from the ground.

The eggs range from 3 to 4 in number, the first set of the season being generally of 4 eggs and the second set of 3 eggs; although on May Day, 1897, I did find a nest containing 5 eggs which at that date were so badly incubated that they could not be blown.

In color the eggs are white or creamy white with a pinkish tinge before blowing and are sprinkled with lilac, laven-

der and reddish brown. In some sets the markings, which vary in size from minute specks to spots the size of a pin head, are in the form of a wreath around the larger end; in others the eggs are thickly speckled all over.

The birds are very tame during the nesting season, protesting vigorously if anyone approaches the nest; their warning cry being quite similar to that of the Yellow Warbler. This is the only note I have ever heard them utter, so I am positive that they do not sing, at least not during the breeding season.

They feed on the various worms, bugs and flies with which the thickets along a stream abound, and it is quite an interesting sight to see one of these little black-capped fellows carrying a worm almost as big as himself to his young in the nest. They are very particular and if an incompleting nest is at all disturbed it will be immediately deserted.

Taken altogether I think that this is one of our most interesting birds if we will take the time to see him as he is in his summer home.

SPURRED TOWHEE, *Pipilo maculatus megalonyx*. This beautiful black and orange Towhee is a common summer resident with us. He is sure to be found in thickets along the bank of a running stream, where his harsh note which resembles the mewing of a cat, may be heard from morning till night.

The nest is quite a bulky structure, closely laid together, and is composed of twigs, leaves and grass, lined with fine dry grass, horsehair and rootlets. It is usually placed in a blackberry thicket, the height differing from 9 inches to 8 feet above the ground.

The eggs are 3 or 4 in number and are of a pinkish white ground color

thickly marked with minute specks of lilac and vinaceous cinnamon. The first set for the season is deposited between the 20th of April and the first of May, the dates varying according to the season.

While out collecting on the first of May, 1897, I found a nest of this species in a blackberry thicket 6 feet from the ground. The bird remained on the nest until I had placed my hand on the edge of it; then she dropped out on the other side, fell to the ground and fluttered off through the bushes dragging her wings and uttering at the same time a plaintive cry. I suppose that this ruse was intended to draw me away from the nest which contained one piped egg and three young birds.

Of course after this display of intelligence I left the youngsters to be a "joy forever" (?) to their mother.

These birds are often trapped and placed in bird-houses where they present quite a striking appearance with their beautiful black and orange plumage. They thrive quite well in confinement.

WM. L. ATKINSON,
Santa Clara, Calif.

Nesting of the Blue-winged Warbler.

This handsome little fellow is probably one of the most common warblers in south-west Connecticut. Unless one is well acquainted with the song, it would rarely be noticed during the breeding season.

They make their appearance here during the first week of May and by the middle of the month most of the birds have started to build their nests and the song can be heard on all sides.

I have found fresh eggs as late as June 5th, and have seen young birds a week old on June 6th.

The female is very hard to flush, often allowing one to touch her with his finger before she will leave the nest.

Dry ground at the edge of woods and not far from water seems to be the favorite site for the nest in this locality.

The nest is built on the ground and is hidden by a clump of blackberry bushes or golden rod and high grass.

All of the nests I have seen were composed of dry leaves, strips of wild grape bark and lined with fine strips of wild grape bark, very fine grass and occasionally a few horse hairs.

In some of the nests a large quantity of leaves were used, making a loose and bulky affair, while in others only a few making a very compact and pretty nest.

From 4 to 5, rarely 6 eggs, of a white-ground color, speckled with burnt umber and seal brown, are laid. I have seen several sets entirely without markings.

These birds, like many others, will frequently return to the same breeding place for several seasons.

I have taken a set 2 years in succession from the same spot and have from 10 to 100 yards distant from last year's nest and again have not seen a bird where the season before there were several pair breeding.

As I am unable to take any notes in the fall, I do not know when *H. pinus* takes leave of us.

JESSE C. A. MEEKER,
Bridgeport, Conn.

The Hooded and Pine Warblers in North Carolina.

The Hooded Warbler arrives generally about the first of April. My notes for 1896-7-8 show the following dates: April 1, 1896, April 6, 1897, and April 10, 1898.

Soon after they arrive they choose their mate. The males arrive a day or more in advance of the females.

Nest building begins in the latter part of April or first of May. On the second day of May I found a nest containing

two eggs. In this case the nest was completed by the last day of April.

The nest is placed in a small bush or reed, all the way from six inches to five feet high. Swampy ground is often chosen as the nesting site, but as often will the nest be found on high ground. The nest is a neat cup-shaped structure, nicely placed in the crotch of some bush or reed, made of fine bark, from a cedar or cypress, leaves and grass, lined with a kind of very fine black moss that is found on the trunks of trees, or the lining may be of hair, some times of grass only.

Three, four and some times five eggs are laid, but only two completes the set some times; this I think must be caused by the first nest having been destroyed. Only one set of five have come under my observation, although that number may be deposited much oftener than we think.

During the incubating season the male is nearly always to be found near the nest, but never have I seen him feed his mate. The female during incubation may be found to be absent from her nest quite often. When off in search of food she utters at regular intervals a chipping that is particularly her own, but which is identical to the call notes, but is not so harsh and quick. The notes of the male cannot be distinguished from those of the female, but usually they are louder, though often low.

Two or more broods are reared in a season. In June nests are as numerous as in May, but the number of eggs are seldom more than three and sometimes only two.

The Hooded Warbler takes its departure in September.

The Pine Warbler; different from the Hooded, the Pine Warbler is a resident, being if anything, more numerous in winter than in summer.

The Pine Warbler begins to build its nest by the latter part of March, or the first half of April. The nest is placed

in a pine from twenty to ninety feet high. Made of almost any material that the bird finds and likes

The following will be found a description of nests taken in 1898.

No. one. Nest placed in a pine 45 feet from the ground; made of grapevine and other bark, cotton string, fine roots and strawberry vines, moss, feathers, grass, weed stalks, leaf stems and spider webs; lined with feathers and hair. Taken April 6th.

No. two. Nest placed in a pine 60 feet high; made of bark, weed stalks, wool, spider webs; grass and fine roots; lined with hair and feathers. Taken on April 23d.

No. three. Nest placed in a pine 55 feet high; made of grape vine bark, skeleton leaves and spider webs; lined with hair and feathers. Taken May 4th.

No. four. Taken on May 7th from a nest placed in a pine 65 feet high; made of bark, weed stalks, fine roots, cotton string and spider webs.

No. five. Taken on May 14th from a nest in a pine 40 feet high; nest made of grass, weed stalks, string, fine roots and moss; lined with feathers and hair.

Of the five nests above described, neither of them was more than two hundred yards from the house where I was living at that time.

Most of them were found by cautiously watching the female as she went to the barnyard after material to line the nest. Even then it sometimes took a good while to find the nest, but once found it was easily found again.

R. P. SMITHWICK.

The Study of Ornithology.

The more we learn about birds the more we like them; there is something fascinating in their flight, and even in their most common habits, which is hard to resist; and in their plumage there is also much to admire, such beau-

tiful colors and delicate tints and often magnificent contrasts, and, as to their songs, in them many have great variation, some of them are exquisite and others harsh, while many have a touching pathos.

Audubon writes that at the sound of the Wood Thrush's melodies, he has fallen on his knees and prayed, then and there, and adds that "This never failed to bring me the most valuable of thoughts, and always comfort, and strange as it may seem to you, it was often necessary for me to exert my will and compel myself to return to my fellow-beings." But then, the surroundings have a great deal to do with the impression of a bird's song, the fresh air, green herbage and clear sky, all bring the mind to that state in which it is the most prepared to receive the song. Sometimes when walking through some silent wood, or resting on a mossy couch, you often expect to hear a song or bird note of some kind, and if you do not, you are wondering at it, for the songs of birds are associated with such a place. This fact was observed by Emerson, when he wrote:

"I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home in his nest at even;
He sings the song, but it pleases not now,
For I did not bring home the river and sky;—
He sang to my ear—they sang to my eye."

Few sciences are so little known to the general public, as ornithology, and the average person would laugh at a man like Audubon and call him a "crank," but if one gets actually interested in the study, you will find that it is uplifting, enobleing, and a lasting benefit. Then it is a recreation and pastime, it sharpens the senses, trains the eye, makes the ear acute and brings back the exhilaration of youth.

But it requires something besides reading to become acquainted with our feathered friends, it requires actual experience, and, as it is impossible to remember all that happens, it is of the greatest importance to take notes, whenever it is possible to do so, and to compare them with others of your own, or with those of other ornithologists, for by this means many valuable facts may be obtained.

Do not collect eggs or skins unless you intend to really make a specialty of it, for if you only intend to amuse yourself by collecting, don't do so, as enough can be learned from books, written by men who have spent their lives in the study of birds, their nests and eggs.

In all things keep your ears and eyes alert, exercise your faculty of observation, and whether an ornithologist or not, do all in your power to save the birds, and try to induce others to follow your example. Don't be afraid of being laughed at because you are not cruei, and above all never take an egg or skin unless you think that you will learn something by it, or that science will be benefited.

To the student of birds, their nests and eggs are very interesting, as is proved by the great number of large collections in existence, for from the time when Sir Thomas Browne, of Norwich, about 1681, began to collect eggs for study, the mania has spread all over the civilized world. I say mania because with comparatively few it is a study, although a branch of Ornithology. Investigations have shown the fact that under the microscope, the eggs of certain families of birds have their own peculiar grain and structure. Many of us have noticed the fact that while the surface of some eggs are smooth and often glossy the surface of others will be quite rough and chalky; the fact is well known but the reason is yet to be discovered. In a large series or collection of eggs, there is exhibited almost

every shade of color; some are tinted with the most delicate colors, and others blotched in a most coarse manner, some spots seemed to have been dyed in the shell, while others are merely touched, so lightly it appears, that it seems possible to wipe the color off.

The microscope and chemistry both afford a wide field for the oologist to work in, and yet we hear the complaint that there is little more to be learned about birds or their eggs; to such is my answer—that the end of ornithological knowledge has not yet been reached, and it will be some time before it is; that there is room for all in this grand science with all its branches, to discover facts both new and wonderful, in all the countries of the world, both civilized and uncivilized.

D. T. KISSAM.
Brooklyn, N. Y.

A Timely Criticism.

At the risk of offending a student much my senior I must take the pen of criticism and wield it pretty freely, trusting to the righteousness of the cause to save the criticism from the waste basket.

In "A Collecting Trip in the Thousand Islands" in July, '98, OOLOGIST, a well known student and writer, under the cognomen of "Picus," makes several statements which deserve handling without gloves. First on this list comes a statement that all hands skinning until midnight had not saved one-third ($\frac{1}{3}$) of the three species of Heron which the party had shot!

Next the statement that three hundred (300) eggs were taken and the confession that "in only a very few instances were positive identifications secured."

From the scientific standpoint comment on such confessions is quite superfluous. Calling the attention of consci-

entious students to them merely, is sufficient.

But from a humanitarian standpoint what scathing rebuke can do justice to such a case. While the impressive words of such men as Hornaday and Chapman are still ringing in our ears warning of the awful manner in which our birds are being exterminated, while students on all hands testify to the depleted and exterminated heronies of the southern swamps, once so abundantly peopled, while true sportsmen not pretending to be naturalists are binding themselves to restrictive rules of shooting and to measures for the protection and preservation of the animal life of our country, here comes along one marching under the banner of ornithology, clothed in the cloak of science, and publicly gives to the ever increasing generation of young students—who are only too easily encouraged in excessive collecting—an account which might put to the blush the worst confession of sport-hunter, game-hog, plume-hunter, or "small boy with gun."

Are we who pretend to learn at nature's feet to be behind the mere sportsmen in this matter. Can we cry for an enquiry into the decreasing bird life with one face while with the other we condone such articles as the one referred to?

Or has the time not come when prompted by every noble instinct, we must protest with out fear or favor against such confessions from our ranks?

Yours Sincerely,

B. S. BOWDISH,

Dansville, N. Y.

Jan. 11, '99.



THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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THE CEDAR WAXWING.

Nesting and Flycatching Habits.

A species of wide distribution and known to students and lovers of birds wherever it occurs. The Cedar bird needs no description here nor need I speak of the irregularity of its coming and going, as its wandering habits are known to all.

I have never seen them here in mid-

winter, but they often appear in early spring while the ground is still covered with snow, and again are not recorded until June.

As a rule the Cedar Waxwing breeds abundantly in this locality each season, there are exceptional years though, when they are only tolerably common, and but few nests are found. They are not particular in the choice of a nesting site—woodland borders, orchards, pasture fields, along the streams, highways and village streets are all favorite nesting localities—in fact their nests are found nearly anywhere where there is trees or bushes, and are composed of almost anything found in the immediate vicinity.

One found in a small spruce at Taplin Pond marsh, with the exception of a few spruce twigs, was composed entirely of a greyish-green moss, which hangs in festoons from the trees on the marsh. A very pretty structure indeed. Another, saddled onto one of the lower limbs of an apple tree by the roadside, was built largely of the nests of the tent caterpillar. Many nests are composed entirely of grasses and weed stems.

Nesting heights range from three to forty feet.

Eggs show considerable variation in color and markings, and a great deal in size and shape; well, you probably have either seen them or read descriptions and measurements again and again. Four or five is the usual number in a set. I have yet to see a set of three, which I had reason to think was complete. And out of the abundance of sets collected and examined, I have seen only one of six that I collected June 22, 1894. The nest was ten feet up in a big poplar and its composition will serve to illustrate what a variety of materials is sometimes used, composed of grasses, straw, weed stems and tops, twigs, roots, twine, nests of the tent caterpillar and one live cocoon; lined with fine grasses, horse hair and a large

piece of old mosquito netting; outside diameter, $5\frac{1}{2}$ inches; inside, $4\frac{1}{2}$ inches; outside depth, $3\frac{1}{2}$ inches; inside, 2 inches.

I took the nest and placed it in a box where in due time the moth was hatched, and I have it preserved with the nest and eggs.

June 5th, is my earliest date for a full fresh set; my latest is dated August 20th; positively not over three and one-half days were occupied from the time this nest was started until the first egg was laid.

Pardon me, dear readers, for all the above on a species so common. Perhaps, though, my observations have differed somewhat from yours. Possibly some young observer has been interested and benefited.

And now for my principal object in writing this article. I will take it for granted that you are acquainted with the food habits of *A. cedrorum* and therefore know that insects form no small portion of its diet.

You may have been an observer of their flycatching habits, and as the days close, have seen them getting on the trees or bushes along some stream, darting out after insects in much the same manner as the Kingbird, Phoebe and other flycatchers. Or perhaps you have seen a flock perched high on some tree top, enjoying the bright morning sunshine, and making circlets after passing insects. I have often seen them take quite long and vigorous flights when practicing their habits, but never until the season of 1891 had I seen them flying around over the creeks and ponds as the Swallows do, catching insects on the wing. It was on August 18th that I first noted this habit. I was standing near the river; a Waxwing flew past, and darting upward from its course, caught an insect; watching it a few minutes, I was surprised to find that it was making a business of catching insects, and was on the wing for that purpose, and that just ahead was another, engaged in the same occupation. I watched them as they flew up and down the stream and around over the mill-pond,

darting right and left, now upward, now downward, occasionally hovering a moment to catch an insect they had missed, sometimes scarcely clearing the surface of the water.

Two days later I saw half a dozen gleaning their evening meal in the same manner; later in the season and also during 1894. I have added so many records of the habit, that I regard it as common. I have failed though to find mention made of this habit in any work or publication to which I have access. Have the readers of THE OÖLOGIST observed this habit as common with the Cedar Waxwing?

BENJAMIN HOAG,
Stephentown, N. Y.

The Worm-eating Warbler.

(*Halmitherus vermivorus*.)

I had always supposed that this Warbler did not breed in this state, for it is not often seen here even in the early spring. But a few seasons since on the 25th of May, a bright warm day, a friend and myself went out hunting for birds and their nests. As we reached a dense part of the wood and on a hill that sloped gently to a small rippling brook, a bird started up from nearly under our feet and flew to a tree near by, then commenced making a great adieu over us. We were almost afraid to move for fear we would step on the nest, after a short search we discovered the little mansion, which was placed under a may apple, in a slight depression of the ground.

We at once recognized the bird to be a Worm-eating Warbler. The nest was composed outwardly of leaves and lined with fine moss, hair and fine rootlets. It contained five fresh eggs, of a cream-white color, with spots of reddish-brown and lavender over the entire surface of the egg, but thickest at the larger end, one of the eggs has much finer spots than the others.

The measurements are as follows: .68x.56, .69x.50, .70x.57, .74x.56, .75x.50. My friend who has been a close observer of the birds of Henry county, Ia. for the last thirty years says, he had never seen or heard of a nest of this Warbler being found in this part of Iowa before. If any one else knows of instances of its breeding in Iowa, I would be pleased to hear from them.

D. L. SAVAGE,
Salem, Iowa.

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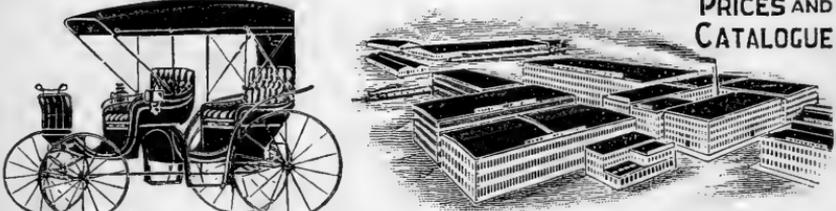
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VOL. XVI. NO. 3.

ALBION, N. Y., MARCH, 1899.

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ACTIVE Solicitors wanted everywhere for "The Story of the Philippines," by Murat Halstead, commissioned by the Government as Official Historian to the War Department. The book was written in army camps at San Francisco, on the Pacific with General Merritt, in the hospitals at Honolulu, in Hong Kong, in the American trenches at Manila, in the insurgent camps with Aguinaldo, on the deck of the Olympia with Dewey, and in the roar of battle at the fall of Manila. Bonanza for agents. Brimful of original pictures taken by government photographers on the spot. Large book. Low prices. Big profits. Freight paid. Credit given. Drop all trashy unofficial war books. Outfit free. Address, H. L. BARBER, Gen. Mgr., 356 Dearborn Street, Chicago. Mtf

WANTED:—A good 4x5 Camera. Can give good western sets. Write at once if you have a camera. Write for list of 1899 takes. WM. A. BOWMAN, Devils Lake, N. Dak.

TO EXCHANGE:—A set of German-silver drawing instruments, board and ruler; black congo silver-mounted cane; silver-plated cup; set of dissecting instruments; seal pocket-book; Steele's Zoology; Steele's Chemistry; Avery's Chemistry; Avery's Physics; Gray's Botany; Robert's Anatomy and Kiddle's Astronomy for Capen's Oology (new) and Davie's Nest and Eggs, 5th ed. (new) or other works on birds and eggs. THOS. F. JUDGE, 2737, Sixth Ave., Troy, N. Y.

FOR SALE:—One dozen eggs of the African Ostrich at 50c per egg. A. O. U. No. 79 1-1, 10c; 86 1-1, 19c; 117 1-1, 19c; 211 1-10, 45c; 214 1-11, 39c; 467 1-4, 18c; 624 1-3, 19c; 713 1-4, 30c; 743 1-8, 49c. I will sell the entire lot for \$6.75, by express at purchasers expense. JAS. O. JOHNSON, Lock Box 550, Southington, Conn.

TO EXCHANGE:—Compound Microscope, power 2500 times, cost \$2.25. Will exchange for Birds vol. 1, 2, cloth bound, or books on birds. Make offer. C. N. DAVIS, Branchport, Yates Co., N. Y.

CAMERA, Kombi, first class condition with full instructions for eggs in sets to list 88. Will be sent postpaid. Send me list of what you can furnish. E. H. SHORT, Albion, N. Y.

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SMALL fruit and berry plants or nursery stock to exchange for field or opera glasses, printing press, desirable eggs, natural history specimens or books. H. S. DAY, Fremont, O.

WANTED:—Back numbers of *Auk* and *American Naturalist* and Jordan's Manual of Vertebrates. I offer eggs, climbers, ornithological books and magazines in exchange. CARSTEN C. SMITH, Decorah, Iowa.

GOLDEN EAGLE 1-3, Sharp-shinned Hawk 1-4, White-tailed Kite, 1-4, etc., etc., for high grade camera or kodak, 4x5, or good double barrel shot gun, 12 gauge. ERNEST ADAMS, 364 S. 9th St., San Jose, Calif.

FOR SALE:—A few incomplete sets of rare birds. Sulphur-bellied f. c., Buff-breasted f. c., Aroz. w. p., Coues' f. c., Lucy's Warbler. R. D. LUSK, Collector, Rosemont, A. T. Mar4t

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FROM Southern Texas! Fine series of Great-tailed Grackle's eggs, 25 first class eggs in sets for \$250 in other sets, our selection. Many common wanted. J. M. & JAMES J. CARROLL, Refugio, Texas

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TO EXCHANGE:—140 different sets of American eggs to exchange for old U. S. Coins. Write for list and terms. J. L. PLATT, Cresco, Ia.

OSPREY for Oct. '96 wanted. Will give good cash or "swap" price. FRANK H. LATTIN, Albion, N. Y.

WANTED:—*Great Divides* for 1894, especially June. *The Archaeologist*. List of good "Dept. Bulletins" (on Natural History) to get. GEO. W. VOSBURGH, Box 307, Columbia, Wis.

WINCHESTER repeating rifle. 32 calibre, model 1873, built to order at cost of \$45. Wanted, camera, field glasses, printing press. C. C. MAXFIELD, Danbury, Conn.

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CALIFORNIA DIAMONDS:— $\frac{1}{2}$ kt, 10c; $\frac{1}{4}$ kt, 20c; $\frac{3}{4}$ kt, 25c; 1kt, 35c. Only an expert can tell them from the real stone. ROBERT BURNHAM, 143 Gallup St., Providence, R. I.

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EGGS FOR EXCHANGE.—Fine sets of following or will sell cheap for cash: 165, 167, 184, 207, 257, 286, 293a, 311, 313, 318, 319, 329, 335, 417, 419, 421, 478a, 487, 508, 512, 513, 591, 593c, 630, 668, 697, 706, 707. THOMAS H. JACKSON, 343 E. Biddle St., West Chester, Pa. D4t

WANTED!—Reliable man for Manager of a Branch Office I wish to open in your vicinity. If your record is O. K. here is a good opening. Kindly mention THE OÖLOGIST when writing. Illustrated catalogue 4 cts. postage. A. T. MORRIS, Cincinnati, O.

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IMPORTANT NOTICE.—We desire to announce that owing to the many improvements made in the current volume of the *Fern Bulletin* the price of sample copies will now be fifteen cents. Purchasers of sample copies may deduct that sum from the regular subscription price when subscribing. The January number contains fourteen articles on ferns, many shorter notes and eight pages devoted to the mosses. Send it free. Address THE FERN BULLETIN, Binghamton, N. Y.

"LATTIN" has been having some new photos taken (the first of cabinet size since '82). He would gladly send each of his patrons and old friends a copy, but the expense and condition of his purse will not permit. If, however, you wish one sufficiently bad to cover the cost (25 cents) of same, one will gladly be mailed you.

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I have just published a pamphlet on "The Scientific Preparation of Bird Eggs" treating fully on the subject from the nest to your cabinet drawer and giving packing directions for mail purposes in selling or exchanging.

It is not for sale on any terms but will be **given away**, postpaid, to everyone sending me the money for any instrument, outfit or book for oölogists or ornithologists, priced in my July, 1895 Bulletin or in this number of OÖLOGIST at \$1 or over.

The Special Outfit offered elsewhere in this magazine at \$2.95 is the best bargain ever offered for the money and with this new pamphlet mentioned above is a **REGULAR BONANZA**, especially designed for beginners.

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Capturing a Live Baby Condor.

READ ABOUT IT IN THE

Bulletin of the Cooper Ornithological Club.

This live Club now prints its own proceedings and all the interesting events in Ornithology from California and the Pacific Coast appear in its columns. The March number, consisting of 20 pages of breezy articles is out. In it you should read about "Audubon's Hermit Thrush in the Sierra Nevada Mountains," by Lyman Belding; "Summer Warblers of Arizona;" "The Rhinoceros Auklet at Catalina Island;" "The Water Ouzel on Pescadero Creek;" besides a long list of other valuable and entertaining papers. Mr. R. C. McGregor describes two new birds from California in the March number.

The January number contained the first definite data on the nesting of the Fulvous Tree Duck and the Santa Cruz Jay. Also a biographical sketch of Dr. Jas. G. Cooper with portrait. You will be *cut off from the West* unless you read the BULLETIN.

\$1.00 per year. Sample copy 20 cents. Address orders for sample copy to the Editor, **C BARLOW**, Santa Clara, Cal. Subscriptions to **D. A. COHEN**, Business Manager, Alameda, Cal.

THE OÖLOGIST.

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ALBION, N. Y., MARCH, 1899.

WHOLE NO. 151

Nesting of the American Woodcock in Southern Wisconsin.

Long and diligently did I search, often creeping on my hands and knees, by the hour stooped low, very, very carefully examining every leaf and bit of grass or weeds, over acres of clearing, which I later found to be the ideal nesting sites and haunts of *Philohela minor*, longing to find a nest, if only an old last year's one, but not until May 11, 1890, was I rewarded, when, while out hunting, with a friend of mine, he caught a young one, and we soon found, what we supposed to be, the deserted nest. My companion persisted in taking the young one home with him and it of course died.

Again in April 15, '91, I found, after a long, tedious search, a set of four eggs, that had been frozen, bleached and broken open, lying in a hollow by the side of an old stump. But not until April 6, 1894, did I find, the long coveted, "perfect set," and perfect set they are too, four as handsome eggs, of any kind, as I have seen.

I had been putting in a half day of hard searching in a piece of Hazel brush, thistles, grass, weeds, brush heaps, etc., which I later termed my Woodcock ranch, without finding any thing, when I thought I would cross the road and look through a strip of small saplings alongside of the road and where I thought I might find "something." I saw a team coming, so I hurried across, jumped over the fence and hurried into the woods, when suddenly, whirr-r-r, just ahead, after watching the bird until it was out of sight, I glanced down, and, could I believe my eyes? oh, no mistake, there they lay, four!!! one—one—o—two—twooo—three

- ee—eee—four—four—FOUR Yes sir ree. four of 'em, no mistake, 'cos I only got four fingers. I dropped to my knees and feasted my eyes on them long and earnestly, studied carefully their position in the nest, the formation and material of the nest, etc., finally I took two in each hand and came home, happy as a kid with a pair of new boots, or perhaps I ought to say in these days of modern improvements (?) a new bike; however happy I was then, I am sorry now to think I left the nest; the nest was simply a few leaves piled up and the pile somewhat depressed at the top in which the eggs laid; it was placed at the foot of some small saplings, would measure probably 6 inches across the depression, which was a half inch or so deep.

The eggs are beauties; three have a rich buff, ground color, one a shade darker than the others; the fourth has a ground color of light cream; the three darkest ones are quite heavily marked with specks, spots of varying shades of dark brown and lilac, thicker on the larger third of the egg; the other is marked the same, but not so heavy; the marking is peculiar. They look as if they had been stood on end and given a rotary movement about one-third of the way around, and the colors applied with a downward stroke of the brush, as the eggs turned. Shape, pyriform; measure, 1.50 x 1.21, 1.56 x 1.21, 1.56 x 1.14, 1.48 x 1.14 inches.

This beautiful set to-day reposes on an artificial nest of leaves in my cabinet, and whenever I show my collection to an interested person I always point out this particular set, which I value highly on account of their rarity, beauty and perfection.

Again on April 26, 1896, I collected a

set of four beautiful eggs of this species. I had went out as usual to my Woodcock ranch early in the morning, to see if I could find a set. It looked as if it might rain, but I well knew that would be a help to me, as the birds would probably be off the nests feeding; if the bird is on the nest it is almost impossible to see them unless they fly. I went diligently at it and looked the whole patch of bushes, thistles, dead grass, brush heaps, etc., over very closely. It began to rain, but I pulled down my hat, buttoned up my coat, put my hands into my pockets up to my elbows, and began to whistle and kept on looking. I just happened to glance down in a likely looking place, when my sight happened to rest on two pretty eggs of the American Woodcock resting in a snug little nest of dead and dried leaves on the ground among the dead grass and brush near the foot of a small shag bark hickory. I knew it was only an incomplete set, so I only looked at them at long range and finally came home, with it settled in my mind to return about two or three days later and get the complement. This I think was on Thursday and I visited the nest again on Saturday. It contained four beautiful eggs, laying points in—a beautiful sight; but I left them as I wanted to get a camera and take a photograph of the bird on the nest, so I came home and next morning I borrowed a camera and with a chum of mine, went out to the nest. I tried first to get one of the birds up close (8 inches from the nest), but I got too close and she flew. Then I set my infernal machine and we lay for hours waiting for the bird to return, but she did not come, so I packed up the nest and eggs and we came home through a shower. We got a little damp, but I was proud of my success, for I expected a visit from a friend, a naturalist, and now I would have two sets to show him of these rare beauties.

This set has a ground color of rich

dark cream; two have a reddish or brownish tint; three are marked very much alike, having the markings distributed all over the eggs, but mostly on the larger half, becoming quite thick on the larger end; the fourth has fewer markings on the smaller half, and about the same as the others on the larger half, but it is formed into a heavy wreath; the markings are fine specks and small dots and large spots and daubs. They are of dark and light umber brown and strong lilac, and a few specks of purple black. The purple seems to be under the other markings. The three that look nearest alike have the peculiar Woodcock egg look about them, the markings being the same as those mentioned in the preceding set. They measure 1.60 x 1.18, 1.60 x 1.16, 1.58 x 1.19, 1.64 x 1.16 inches; form, two elliptical, two oval.

The Woodcock is one of the most interesting birds, I think, that we have, so odd looking, that is when you can see them, for to a casual observer, they are absolutely invisible, even if they move, which they seldom do when watched, until they take flight. They love to frequent low damp places, or a side hill, covered with bushes and trees near some low marshy place, where they can bore for worms, which if you are lucky enough to see them do, you will find very interesting, indeed.

GEO. W. VOSBURG.

Brief Observations on the Raptorial Birds of Refugio Co., Texas.

The following is a condensed synopsis of notes taken in Refugio Co., Texas, during three successive seasons. It is not claimed that the list is complete, and some additions will, in all probability, be made at some subsequent time.

329. *Cathartes aura*. TURKEY VULTURE. The "Buzzard" is a common and constant resident, though excelled

at all seasons in point of numbers by *C. urubu*. Beneficial in its habits it receives protection from men, as well as by law. I cannot agree, however, that it is "semi-" or "partially domesticated," as so many writers express it. Lays two cream-colored eggs more or less blotched with brown. Nesting sites; under clumps of chaparal; in caves in arroya banks; and rarely in hollow trees. Breeding dates April and May.

326. *Catharista urubu*. **BLACK VULTURE** The "Carrion Crow" is the most common member of the Order of Raptores in the county; and like the preceding species receives loyal protection in recognition of its good offices. Nest complement consists of two eggs of bluish-white background with large blotches of deep brown. Readily distinguished from eggs of *C. aura* by larger blotches, bluish-white background, greater size and more elongated form. Nests in hollow trees and on ground under chaparal brush. Breeds from February to May. Immaculate eggs are not rare.

327. *Elanoides forficatus*. **SWALLOW-TAILED KITE**. Very rare. I saw two individuals of this species in May, 1898, sailing leisurely toward the south. These two are the only ones I have ever seen in the county.

329. *Ictinia mississippiensis*. **MISSISSIPPI KITE**. Occurs only as a migrant. Am very sure it does not breed here. Were very plentiful during spring migrations of '98.

331. *Circus hudsonius*. **MARSH HAWK**. Abundant during the winter months and remains until quite late in spring, though I do not think they breed.

332. *Accipiter velox*. **SHARP-SHINNED HAWK**. Not at all common. Have never found it breeding here.

333. *Accipiter cooperi*. **COOPER'S HAWK**. Like foregoing rare, but seen occasionally at all seasons. Think it

breeds, though have failed to find its nest.

335. *Parabuteo unicinctus harrisi*. **HARRIS' HAWK**. Seldom seen at a distance greater than 20 miles from the coast. There it is common. Nest of sticks, compactly constructed, much like a Caracara's in structure, though entirely different in material. Placed near top of chaparal brush or a small tree on prairie. Eggs plain white or faintly marked with light brown, 2 to 4 in number. Early nesters, fresh eggs being found the last week of January. Breeding season extends over several months.

337. *Buteo borealis*. **RED-TAILED HAWK**. The ordinary eastern variety is tolerably common, and is resident. Nests in prairie "mottes," in sparse timber along water courses, or in deeper woods. Lays 3 eggs more commonly than 2. Breeds from first of March through April.

337a. *Buteo borealis krideri*. **KRIDER'S HAWK**. This paler plumaged form is found in greater numbers than the foregoing. Nesting habits I found to be identical to those of *B. borealis* and the eggs indistinguishable. Breeding dates about the same; probably some earlier.

337a. *Buteo borealis calurus*. **WESTERN RED-TAILED HAWK**. Rare. The least common of the three Redtails inhabiting this county.

339a. *Buteo lineatus alleni*. **FLORIDA RED SHOULDERED HAWK**. Not at all common, though occurring sparingly at all seasons.

341. *Buteo albicaudatus sennetti*. **WHITE-TAILED HAWK**. A tolerably common resident. Pre-eminently a Hawk of the prairie. Nest, a rather shallow, wide structure of sticks with little or no lining, placed in top of bush or small tree on prairie 5 to 20 feet from ground. Lays 2 white eggs, obscurely marked. Breeds in March, April and May.

342. *Buteo swainsoni*. SWAINSON'S HAWK. Occurs early as a migrant. A few apparently spend the winter. None breed.

349. *Aquila chrysaetos*. GOLDEN EAGLE. In March '96 I saw a mature bird of this species in a small tree in the edge of a prairie. It was very tame and I rode within a few rods of it before it flew away. Not having a gun I could not take it. The occurrence of this bird here was a surprise to me, but I saw it distinctly; the fully feathered tarsus allaying all doubts. I am perfectly familiar with the bird having seen it many times. I am also familiar with the different phases of *H. leucocephalus* and could not have confused them.

352. *Haliaeetus leucocephalus*. BALD EAGLE. Not very common, though could not be called rare. Feeds eagerly upon the myriads of water fowl resorting here during the winter. Hence, they are to be found in the greatest plenty in the vicinity of lakes, etc. They breed here, placing their enormous nests in the tops of trees varying in height from 15 to 50 feet. Eggs 2 in number. Breed in November.

356. *Falco peregrinus anatum*. DUCK HAWK. Tolerably common winter resident. Preys on birds as large as *Zenaidura macroura*. I have seen it flying with adult birds of this species, the weight of the dove almost dragging it to the ground. Does not occur in summer.

358! *Falco richardsoni*. RICHARDSON'S FALCON. Rare winter resident. Have seen it but a few times.

360. *Falco sparverius*. AMERICAN SPARROW HAWK. Very common in winter though none remain to breed.

362. *Polyborus cheriway*. CARACARA. Common and constant resident, though found in greater abundance in summer than in winter. Breeds commonly. Nest composed chiefly of weed stems, with few sticks in foundation and ab-

solutely no lining. Nest placed in small tree on prairie or in top of chaparral but a few feet up. Eggs two or three in number. Breeding season very extended embracing the months of February, March, April, May and June.

360. *Strix pratincola* AMERICAN BARN OWL. Not common. Formerly bred in caves in arroya banks, but I do not think it does so now. Found one frozen during the winter of '97.

368a. *Syrnium nebulosum alleni*. FLORIDA BARRED OWL. Fairly common resident in all parts of the county, but much more abundant in the deep timber bordering the San Antonio River. Breeds in February and March selecting a natural cavity in a tree in which to deposit the two or three white eggs.

373b. *Megascops asio mecalli*. TEXAN SCREECH OWL. This Owl is rare at all seasons and I have found its nest but once. On April 18, 1898, I flushed one from a natural cavity on upper side of a branch of oak tree and in the hollow found four heavily incubated eggs.

375a. *Bubo virginians subarcticus*. WESTERN HORNED OWL. The most abundant Owl in the county. Constant resident. Breeds commonly, selecting old nests of the *Buteos* and *Polyborus cheriway*, much more often the former than the latter. Seldom in hollow trees. I have found them nesting in prairie mottes, miles from wooded country. Lay 2 or 3 eggs, breeding during the months of January, February and March.

378. *Speotyto cunicularia hypogaea*. BURROWING OWL. Fairly common throughout the year, though more are seen in winter. Some remain to breed, using the holes of the small burrowing mammals for that purpose.

JAMES J. CARROLL,
Refugio, Texas.

THE OÖLOGIST.

A Monthly Publication Devoted to

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TAXIDERMRY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

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Notes on the Louisiana Water Thrush.

This diminutive aquatic species is one of the first summer visitors to make its appearance in our locality, usually arriving about March 20th. With us it is by no means an extraordinary rare visitor. During breeding season specimens may be commonly observed along the river's brink, and up the creeks and small streams leading thereto, which places constitute its chief abodes.

It is decidedly interesting to observe this bird while seeking its prey, as it moves to and fro with the utmost carefulness and ease, giving its head an occasional bob and uttering at intervals its characteristic chic, while in quest of some bug that may be found playing upon the waters or worm basking in the sun along the banks.

Only a short time elapses after its arrival before the important task of nest building is entered upon. This is accomplished in the usual elaborate and systematic manner. After selecting a suitable site in the side of a bank over some stream and very often over a spring or springy locality, a hole of sufficient depth, to hold the nest and eggs with absolute safety, is scratched out, being generally under or over some root that juts out and runs along the bank. This being done, a thick layer of wet decayed leaves stuck together by means of mud is deposited. To this a mass of rootlets with an occasional piece of moss is added, thus forming the lining and completing the nest.

I have, however, in some instances, collected nests which had nothing more than a mass of fine grass for the lining.

The eggs are usually five in number and are covered with very pretty markings.

I have at times collected sets of four, and in one case a set of three with incubation far advanced.

Nest building commences between the 1st and 15th of April.

The earliest set that I have ever taken was on April 18, 1897, with incubation slightly advanced, the latest on May 22, 1895.

One peculiarity with this species, which is attributable to but few others, is its startling and amusing action upon being aroused from the nest.

Tumbling out of the nest it will flutter and roll over and over in the water for several yards down stream, appearing as if its head were severed from its body.

This of course is done to attract the attention of the disturber and to decoy him away from its nest.

The action and general features of this species resemble very closely those of the Spotted Sandpiper.

It is a very handsome and clean bird in appearance.

It usually takes its departure for more favorable localities about August 15th or later.

While searching for nests of this species I was once the perpetrator of a very cruel deed, the circumstances of which I am almost ashamed to relate, but feel it my duty to do so in order to demonstrate to my fellow-collectors the little good that is to be derived from ill-treatment inflicted upon the harmless and helpless creatures of flight.

It was during the early days of my collecting career, when I considered eggs of this bird to be quite rare and I was intent upon securing a set at all hazards. One afternoon about the middle of May, while walking along a small stream running through my father's pasture I inadvertently came upon a nest containing five almost full-fledged young birds. The mother bird, which was feeding its young, soon espied me and tumbling out of the nest she went fluttering down the stream in her usual characteristic manner, an act which commanded very little of my attention. Having often heard that if the young birds were put to death that another brood would be reared, and being utterly chagrined with my find I determined to experiment along this line, believing that a nice set of eggs was lying in store for me.

Gathering up the five fledgelings I walked a short distance off from the nest and began my cruel experiment by snatching their heads off. Four birds being decapitated I became somewhat disheartened, and for some reason or other the fifth specimen managed to fly from my hands, scrambling off to the

thick undergrowth and was not seen thereafter. I went home that afternoon not contented with and proud of my action as one might suppose, but most decidedly to the contrary. It was an action that I will always regret and trust that other collectors, seeing the unfruitful results that accrue from such a cruel undertaking, will discountenance and avoid like demeanor.

My much-desired set of eggs of this bird was very evidently not realized during that season.

W. LINDSAY FOXHALL,
Tarboro, N. Car.

How to Mount a Bird Correctly.

In writing this article, I do not attempt to state the course which every collector of birds should follow, but as I have found this mode of operation a sure one in my own case, I think that beginners can profitably adopt it.

First, after the bird has been killed, plug all shot holes, likewise the mouth and nostrils with pieces of cotton. Then wrap it in a paper cone to keep the feathers in place until you are ready to begin skinning.

Begin work, by placing the bird on the operating board, so that its head will point toward your left hand.

With the handle of your scalpel run a furrow through the feathers on the under side of the bird and then smooth them back on either side with the fingers.

Now with the scissors carefully cut the skin from the sternum to the anus.

This having been done, push, but do not pull the skin from the flesh as far as the knee joints. Separate the leg from the thigh bone. Scrape away the flesh from both of the leg bones and proceed to skin as far as the wings. Repeat this operation and we have arrived at the back.

Here we must be careful not to stretch the skin of the neck, else we

shall have in the end a woeful looking bird.

Very carefully slide this neck skin over the skull and separate the ears from the head. Scoop out the eyes, being careful not to lacerate the balls. Cut a square piece of bone from the rear of the skull and draw out the brains by pulling the neck. If any remain scoop out with the brain spoon.

Turn the skin right side out and shovel in arsenic, or if you use arsenical soap paint the skin with it on the inside.

If dry arsenic is used, having put a plentiful allowance inside of the skin shake it about well. Open the skin and let what remains unattached fall out on a piece of paper. Be sure some arsenic has found its way around the roots of the tail, wing and leg bones as well as into the skull.

The skin having been poisoned the next thing to do is to mount it.

For this purpose take three pieces of annealed wire of a size just large enough to support the weight of the specimen. Cut one piece an inch or two longer than the bird and the other two about three times as long as the legs. Sharpen the ends of these wires with a file.

Take the longest one and bend it upon itself, so as to form a centre upon which to wind the tow. Now wind your tow around this centre until a ball is formed. Shape this ball according to the general form of the body and neck of the bird, whose skin you are preparing. Make it as smooth as possible and be sure that the neck has the right curve and length.

When finished this artificial bird should have about an inch of wire still unused.

With the bird skin in the same position as the dead bird was when you commenced skinning, place this body of tow inside of it, pushing the unused end of wire through the roof of the skull.

Gently draw the skin on each side over the whole form. Run the leg-wires through the soles of the feet along the shank and leg bones into the tow, just where the knee rested in life. Fasten these wires in any way so that the body can not wobble.

Now carefully sew up the incision in the breast, place two artificial eyes in the eye-holes and mount your bird on the stand. Run the ends of the wires protruding from the soles of the feet through the holes made on the stand and clasp them. Pin the pope's nose as well as the wings in place. Smooth the feathers well, fix the specimen in as life-like a position as possible, curve the neck and legs as in nature and your bird is done.

A Few Notes from Oneida Co., N. Y.

Having noticed several articles in the OÖLOGIST from time to time about the nesting of the Wood Pewee, which is one of our common summer residents, I thought that I would also write you a few lines about this little Flycatcher. I notice Mr. Densmore of Ohio saying that this bird seldom builds its nest as high as twenty feet from the ground, usually from five to nine feet. Now here it is different, for out of all of last season's collecting I did not find a nest within twenty feet of the ground, the usual height being about twenty five or thirty feet from the ground. Every nest that I have examined has been saddled upon an extending limb of the butternut or apple tree, the outside being so thickly covered with lichens that it was very difficult to distinguish the nest from the limb upon which it was placed, and were all very neat and compact.

The White-rumped Shrike is another common resident, nesting from April until June. A large field thickly dotted with thorn bushes being their favorite nesting place, in fact the only place in

which I have ever found their nests. The following is a list of the dates of my finds in the past two seasons.

April 20th, '97, one set of four fresh eggs; May 3d, '97, one set of five fresh eggs; May 26th, '97, one set of four slightly incubated eggs; April 30th, '98, one set of four fresh eggs; May 19th, '98, two sets of four and six fresh eggs; June 1st, '98, one set of three, incubation slight; June 3, '98, one set of three, incubation advanced.

May 20th, '98 I took a set of four fresh eggs of the Blue-headed Vireo, the nest being placed about fifteen feet from the ground in a small maple tree. The nest was composed of pine needles and plant down, and thickly lined with fine hair. I also took two sets of four and five fresh eggs of the Spotted Sandpiper.

May 25, 1898 I took a set of four fresh eggs of the Bobolink from a large meadow near here. Also a set of five slightly incubated eggs of the Red-headed Woodpecker from a large hole in a dead tree.

Along the Mohawk river which runs near here is my favorite collecting ground. Its banks are lined with butternut and willow trees both of the dead and live variety, with thousands of small thorn bushes which makes it a good nesting place for the hundreds of Warblers, Vireos, Blackbirds, Woodpeckers and Bluebirds which nest here in the spring. In the middle of the river near here is a small island which is a favorite breeding place of the Spotted Sandpiper. The following is a list of the dates upon which I have found their nests there.

May 20th, '97, one set of four fresh eggs; May 28th, '97, two sets of four and five fresh eggs; June 12th, '97, one set of three, incubation advanced; June 5th, '98, two sets of four fresh eggs each; June 14th, '98, one set of three, incubation slight; June 20th, '98, one set of four, incubation advanced.

I found two sets of American Bittern upon May 28th, '98 and June 12th, '98, but both sets were so badly incubated that it was very difficult to blow them.

C. H. JOHNSTON,
Rome, N. Y.

A Large Set of the Baltimore Oriole.

I thought I would write a few lines about an extra large set of the Baltimore Oriole's eggs, that I found while passing through a large orchard, on May 15, 1898

I observed two Baltimore Orioles building a nest. I noticed that the nest was only half done and so I visited it two weeks later on May 29, 1898. I went up to it and found it contained a beautiful set of seven very small Baltimore Oriole's eggs.

The nest was hung from a drooping limb of an apple tree, about 11 feet high, composed of the usual material—string, dandelion down, yarn, strips of soft bark, etc., and lined with horse hair, etc.

The eggs were very small and they did not have many spots. They were creamy white, spotted, and marked with zigzag lines, and spots of lilac, dark chestnut and black.

Is not this a very large set of Baltimore Oriole's eggs?

J. S. H.
W. Medford, Mass.

I was out hunting February 21st for Great Horned Owl's nests, found one and while I stood watching the old birds I discovered a beautiful albino squirrel, playing about on a large tree with four or five graysquirrels. It was a perfect beauty, between very light silver gray and light cream color, plump and fat with large bushy tail. The Owl's nest contained two eggs but one was cracked so I did not take them.

GEO. W. VOSBURGH,
Columbus, Wis.

NEW PRICES.

Until July 1, 1899, I offer the following goods at prices given, unless present stock becomes exhausted before that time. First orders will be sure to get what they want.

Following by mail, prepaid:

Glass icicles for taxidermists, each	\$.04
Hand vice, reg. pr. 75c. now55
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" " 7 in., now60
Stuffing Forceps, best, Scissor-handled, 12 in., were \$1.75. now	1.25
Best 6½ in. Spring Forceps, now95
Ordinary 6 in. " " " "28
" 5 in. " " " "20
" 4 in. " " " "15
Taxidermists' Scissors, were 75c, now45
Ebony-handled Scalpels, now40
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Spool of fine wire for artificial case work, etc., now07

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Cheap ones for fresh eggs.	
No. 1, diam. 8-100	\$.07
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No. 7, diam. 25-10018
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Best Set Embryo Hooks, consisting of Engraved handle and three sizes hooks, were 75c. now65
Best Curved Embryo Scissors, were \$1.00, now80
Bottle Oölogist Cement for mending damaged eggs. now10
Book of Colored Tissue Papers for using with cement06
Caliper Rule for Measuring Eggs, 12 in., best made, were \$6 00, now	4.50
Following go by express or freight, F. O. B.:	
30 lbs Taxidermists' Clay for making heads, etc., for	1.00

TRAYS FOR EGGS, ETC.

Color, either white or brown.

No. 1, size 1½ x 2 x ¾ in., per 100	\$.55
No. 2, size 2 x 3 x ¾ in., per 10065
No. 0, size 1 x 1½ x ¼ in., per 10040
No. 0, in white only. This is an especially desirable size for single eggs, small shells and fossils.	

CASES FOR EGGS, ETC.

Black walnut finish.

10 x 14 x 3 in	\$.95
12 x 18 x 3 in	1.20

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Geologists' Hammer, 1½ lb	\$.90
" " 2 lb	1.10

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Pine Grosbeak data.....	.35
Ferruginous Rough-leg Hawk, finely marked.....	.75
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SECOND CLASS.

End blown or two holes in one side.

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVI. NO. 4.

ALBION, N. Y., APRIL, 1899

WHOLE No. 153

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

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Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 152 your subscription expires with this issue
155 " " " " " June "
160 " " " " " Nov. "

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"LATTIN" has been having some new photos taken (the first of cabinet size since '82). He would gladly send each of his patrons and old friends a copy, but the expense, and condition of his purse, will not permit. If, however, you wish one sufficiently bad to cover the cost (25 cents) of same, one will gladly be mailed you.

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IMPORTANT NOTICE.—We desire to announce that owing to the many improvements made in the current volume of the *Fern Bulletin* the price of sample copies will now be fifteen cents. Purchasers of sample copies may deduct that sum from the regular subscription price when subscribing. The January number contains fourteen articles on ferns, many shorter notes and eight pages devoted to the mosses. Send for it. Address THE FERN BULLETIN, Binghamton, N. Y.

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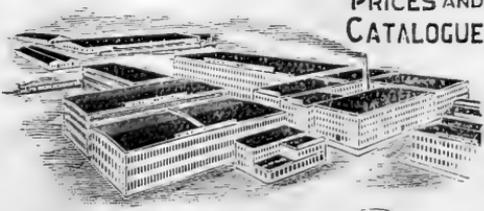
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Many of the sets offered in my HOLIDAY BULLETIN at 1/2 rates are still in stock and any order sent from that list will be good to apply on above combination offer.

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CLIMBING IRONS Have gone up at wholesale and I am obliged to raise my price for strapped pairs from \$1.95 to \$2.10 at which price I will furnish them (best made) by express until further notice.

If you need an Oologist's Outfit don't fail to look up my Special \$2.95 lay out with full directions. Best thing out by all odds. Address everything plainly.

ERNEST H. SHORT, Albion, N. Y.

THE OÖLOGIST.

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ALBION, N. Y., APRIL, 1899.

WHOLE NO. 153

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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Hints on the Scientific Preparation of Birds' Eggs.

First find your eggs. Then identify them, if possible, before taking. If this is impossible, set down with note-book

and pencil and write out in detail every fact you can note in regard to appearance of the bird, situation and composition of nest, etc. In doubtful cases where nest is small collect the nest with eggs.

I am not going to discuss the advisability of carrying a gun. I know many of the best oölogists advise it. In only a few very doubtful cases have I been obliged to use one.

There are several good works on both birds and eggs, and one treating fully of the nests also, so that with careful observations and full notes the shot-gun will seldom be necessary.

Unless eggs are fresh and you have plenty of time you will not care to blow them on the spot. Remember that unblown eggs, on account of their greater weight, require even better packing than blown ones. They dent easily if small and it is a good plan to keep your finger nails well pared down when handling them.

Be sure to wrap them so that they can not slip and strike each other. If the eggs, when held up to the sun, appear uniformly dark except a small spot at one end which will be quite transparent, they are nearly hatched and should never be taken, unless of good size and very desirable.

CHAPTER I.—TREATMENT OF FRESH OR NEARLY FRESH EGGS.

Always have a good assortment of drills as to size. Be sure not to start drilling on small eggs with anything larger than an 8-100 drill. A larger drill is liable to either smash a ragged hole and perhaps crack the egg beyond repair or make a saw-tooth hole. If the egg is especially smooth like those of the Bobolink or has been incubated un-

til very smooth and thin, you must use great caution in starting the drill. Sometimes the egg will not even bear the weight of the drill. In such cases hold the egg so that you can drill horizontally, resting the end of the drill over one finger. A hole the size of a pin-head will do for all fresh eggs less than one inch in diameter. Larger eggs in same proportion.

Hold the tip of the blowpipe just below the hole and blow gently. As soon as a little of the white of the egg is removed take about a half teaspoon of water in your mouth and force this through the pipe when you blow. This will hasten the matter a great deal and will also help to prevent staining small eggs if the yolk breaks. Now rinse your egg with clear water. This is done nicely by using the blowpipe if your egg is small.

The use of a syringe saves time and work on large eggs. After thoroughly rinsing lay on blotting paper or other good absorbent to drain.

Never drain on common paper as it may stick and break a chip out of your egg when you attempt to pick it up. When thoroughly dry mark with your set mark if you are collecting in sets, as nearly every one does now. Then on a blank, prepared for the purpose, (you can get them of any dealer in this line,) write out the most complete data you can, especially complete as to details of nest and nesting site.

Open glass top cases are not desirable for eggs, as many delicate shades of blue fade badly in the light. A tight cabinet is best. Be sure the drawers are amply deep for the size of the eggs you design them for as they will sometimes roll up on end and a close fit may result in an oölogical heart-ache. Also be sure your cabinet is absolutely mouse proof and as near moth proof as possible. Mice spoil every egg they touch and moths weaken the shell by eating out the lining membrane.

Eggs are most handily kept in the pasteboard trays supplied by dealers, (both made up and in the flat,) for this purpose. These can be removed separately and any desired set, emptied out at any time. A light lining of the fine cotton sold for this purpose saves any breakage from the jar in opening and closing the drawer.

Fixed partitions are bad as you are sure to crack some small eggs when trying to remove them.

CHAPTER II.—TREATMENT OF BADLY INCUBATED EGGS.

If not too bad a liberal use of water and plenty of gentle shaking will often suffice. If too bad for this you have two alternatives.

First, the embryo hook. Be sure the hole is large enough for the size of hook you use or you will catch the egg in withdrawing the hook and ruin it. After removing all you can with the blowpipe, carefully insert the hook, attach it to any part of the young bird and draw gently downward. In the softer stages of the embryo this will soon tear it in pieces which can be readily removed with the blowpipe and water. If too bad to separate easily the scissors will be necessary. These are only practicable on large eggs as the hole must be larger and the egg capable of withstanding some strain. By drawing down and snipping off a small piece at a time you can often remove nearly full grown embryos from eggs over one inch in diameter. Be very careful when you come to the head. The fine pointed curved scissors are useful here as they will work well into the egg. In all cases be sure to shake loose by use of water and remove the tough bloody membrane which envelopes the embryo and often remains in the shell. This will often show through if allowed to dry to the shell and also attracts moths.

Second, the use of caustic potash. This is impracticable with thin shelled eggs as it usually makes them too brit-

tle to stand anything. You can often save large heavy shelled eggs when in the most advanced stages of incubation by squirting a strong solution of this solvent into the egg and shaking it up occasionally. In extreme cases it may be necessary to remove one dose and repeat the performance.

In conclusion, never forget the importance of correct identification and complete data and don't ever drill two holes in one egg.

Now a word about packing eggs for mail. If you have only a few small eggs a round tin box will do, but it is best to wrap a strip of pasteboard or the corrugated paper made for this purpose around the box inside the wrapping paper. For large lots cigar boxes are best, but be sure to see that all corners are tight and headline the ends if the cover shuts inside. In very large cigar boxes a partition through the center is desirable, but be sure to nail it well or it is worse than none.

Wrap each egg separately in cotton, the looser in texture the better. Don't use sheet wadding, it is too liable to allow eggs to slip. In any case be sure to wrap in such a way that the egg will not slip out endways. Never lay eggs in loose layers. Pack as snug as is safe. Too loose packing is even worse than too tight. Never wind thread around your eggs. It's all right from your point of view but is a great nuisance to the party who unpacks them, and often results in a few broken eggs in spite of the greatest care.

ONE OF THE CRANKS.

American Crossbills.

I send the OÖLOGIST a few notes on American Crossbills which have been quite common in this village since my arrival. During the latter part of February I noticed several Crossbills feeding in the barnyard where I am staying. In order to pick up the grain on which

the birds were feeding it was necessary for them to twist their heads sideways and lay their bills lengthwise on the ground.

They were common about the village until about the 5th of March after which date I occasionally saw a pair. Thinking that they might possibly breed near here, in some of the coniferous forests, I purposely visited a wooded hill surrounded by marshy woods thickly studded with low spruce, cedar and hemlock.

Half way up the slope I came across a flock composed chiefly of males. They were quite noisy being actively engaged feeding on the cones of a group of spruce trees. I suppose there were 75 of them. I searched in vain for their nests, the only habitation of any note that I came across being two nests in the thick spruce trees. These nests were evidently recently completed and were arched over, the entrance being a hole in the side. They were composed of moss, lichens, grasses and birch bark, bits of these materials hanging from the limb. They may have been squirrels' nests but I was not aware that squirrels built their nests in spring time.

I have never seen a publication containing a description of a Crossbill's nest but I should think that a bird nesting at this date would roof its nest in order to keep out the snow.

I hope to be able to send you some interesting notes on the breeding of the Crossbills, as they evidently do breed here. Hoping that these notes may be of use and that they will draw forth others on the habits of this little known bird, I remain,

Yours truly,

LEWIS M. TERRILL,

Bury, Ont.

[The few nests of the Crossbill that have been recorded were not covered though very warmly built. Notice the early nests of the Prairie Horned Larks also.—ED.]

The Brown-headed and White-breasted Nuthatches—Their Nesting Habits and Other Notes.

The Brown-headed Nuthatch is a common resident in eastern North Carolina, where it builds its nest in stumps that may be situated, either in a field or in the woods.

They begin to dig a cavity for the nest sometimes as early as the 20th day of March, but generally it is about the first of April before the work begins. The nesting cavity is always dug in a dead tree or stump, ranging from six inches to thirty feet in height. Never have I found a nest of this bird in a natural cavity.

A favorite nesting place of this bird is in a tract of forest that was burned over by a forest fire several years ago. This piece of wood is situated near my home, near Merry hill, in Bertie county. On many a spring morning have I wandered thither in search of nests. Hardly had I entered the forest before the greetings of the little Brown-headed Nuthatch reached my ears and setting out in search of their nests I hear them until I leave the wood.

The nest is made of fine bark, fine reed leaves and wool, placed in a cavity from four to ten inches deep and contains from four to six eggs.

Two or more broods may be reared in a season, for often have I seen young birds in June, yet I cannot be positive as to the number of nests that are built, for I have known a pair of birds to build as many as four nests in a season. The first three having been destroyed, they resorted to the top of a dead pine to build the fourth and there reared a brood of young. The nest above mentioned was placed at a greater distance from the ground than any that have come under my observation. It was about sixty feet high. In no other case have I found a nest placed over 30 feet high.

After the nesting season is over they may be seen two or three together in the top of pines prying at the pine-cones after the pine seeds that seem to form a large part of their food.

The White-breasted Nuthatch is not hardly as common as the above species, but is generally distributed throughout eastern North Carolina, so far as my observation extends.

Unlike the Brown-headed, its nest is always placed in a hollow tree, as in a Woodpecker excavation.

I will give a description of the nests from which eggs were taken in 1897, '98.

No 1. April 10, 1897. Nest placed in a hollow sawerwood six feet high, made of bark, wool and hair, containing five slightly incubated eggs.

No. 2. April 29, 1897. Nest placed in a cavity, dug by a Woodpecker, at the height of 20 feet, nest made of fine bark and hair and contained six eggs with incubation advanced.

No. 3. March 28, 1898. Nest placed in a knot hole in a gum tree about 60 feet high. Nest made of bark, leaves and pieces of string, containing six fresh eggs.

No. 4. Nest containing five incubated eggs taken on April 2, 1898. Nest made of fine bark, wool, feathers and hair, placed in a hollow oak about 30 feet high.

No. 5. Set of seven eggs with incubation begun, taken from a nest of fine bark, wool and hair, placed in an old Woodpecker cavity, about 15 feet high. Taken on April 2, '98.

No. 6. April 4, 1898. Five fresh eggs taken from a nest made of fine bark and hair, placed in the hollow of a gum tree, about 50 feet high.

No. 7. April 7, 1898, took a set of five eggs, incubation begun, from a nest of moss, fine bark and scraps of cloth, placed in a hollow limb 26 feet high.

No. 8. Nest made of moss, containing six fresh eggs, taken on April 11th, from a hollow beech 20 feet high. nest

made of moss, bark, wool and cotton.

The White-breasted Nuthatch is a resident remaining with us all through the dreary winter months.

R. P. SMITHWICK,
La Grange, N. C.

The Cliff Swallow.

Petrochelidon lunifrons (SAY).

Although this is one of our commonest birds, I will take the trouble to write about it as I have noticed that it has been neglected together with many others of our common birds.

Ever since I came here, which was in '83, there has been a large colony of these interesting birds breeding in this neighborhood. They used to build their nests under shelves and in little cavities in a cliff on the river about three-quarters of a mile from our house. Although being quite young I used to enjoy watching the birds as they circled around their homes and filled the air with their twittering.

In '88 a large high shed was built on the place and in the following spring the birds forsook their primitive abode and took up quarters among more civilized surroundings in the shed.

Undoubtedly they had many enemies in the way of snakes and varmints that ate their eggs and young and they wanted to be near man's habitation for protection. They built their nests along the rafters, one against another, and some were stuck to the sheeting and some made on top of the plate. The living to the nests was a little hay or straw.

I was unable to study their habits until '93 as I was away to school. That year they arrived March 21 and began to carry mud April 25. It took about five days to build enough of a nest to hold eggs and then the female began laying and the "neck" was made at the pair's leisure. I took fresh eggs on May 9.

In '94 they arrived March 20. On April 15 I observed some of the birds fixing up old nests. On the 23d they began building in earnest.

In '95 I was not here but last year I spent considerable time studying these birds in a more thorough manner than I had the years before. The flock seems to be diminishing as over 300 nests were built the first year and last year only 183. The young birds evidently go off by themselves to breed and do not keep together with their parents. If this is the case these birds are the same ones that built in the cliff 14 years ago and one might venture to estimate how long the birds live

I will copy from my notebook my observations of '96, hoping that they will not prove tiresome to your readers.

On March 25 about 8 o'clock in the morning 10 or 12 birds appeared at the shed, flying in large circles around over the field, and then returning and dashing by the shed taking note, perhaps, of the condition of things. This was kept up for 15 or 20 minutes and after that I saw them no more that day.

The next morning about double the number of birds appeared and they remained a somewhat longer time. In about 10 days the whole flock got to coming and remaining till about 10:30 o'clock.

Then they would go off to feed and return late in the afternoon, going off to roost at sun set. When they commenced coming in large numbers they would fly into the shed and light on the rafters and keep up an incessant twittering

April 22d, they began to carry mud from a water hole 300 yards off, but only a few worked, and they did very little.

A bird on arriving at the water hole would hover a foot or so over a soft spot for a moment and then drop and pick up a mouthful, while it would keep its wings fluttering in an erect position.

23d. A good many of the birds began work at 9:30 a. m., and continued till 10:45. Some of the birds did very little, bringing only four or five mouthfuls and some did a great deal.

24th. No work was done for some reason. All the birds left between 10 and 11 to feed, returning at 5 and staying till sun set.

25th. The birds began work at 10:30, and for three quarters of an hour, there was a perfect stream of them between the shed and the water hole. After that very little was done till about 4 o'clock, during which time most of the birds were off feeding. Work was suspended for the day at 6:30, and they left at sunset.

26th. Work was resumed a few minutes past 9 o'clock. After about an hour, they laid off a little, but throughout the day the work was carried on quite diligently.

27th. Work began at 7:45, and was kept up quite steadily.

28th. They began work at 7:15. After about two hours, a shower came up. Thereupon they suspended operations and flew around high in the air. In the afternoon, after the heat of the day was over, their work continued.

29th. They began work about the same time they did the day before, and were quite diligent all day. Some of the nests were big enough to hold eggs, in fact, all done, except the "neck," but they had not lined any. They did not build the whole structure of the black mud from the water hole, but mixed in streaks of sandy mud, which was brought from the river over a quarter of a mile.

30th. The work was carried on as usual.

During the afternoon a Sharp-shinned Hawk passed by over-head, which caused a great commotion among the birds. They gathered themselves into two flocks of about the same size and one soared to a considerable height in

the direction of the Hawk, while the other flock circled around near the shed. Perhaps the first flock was composed of the males and the other of the females.

Some of the birds had hard luck. After working steadily for two or three days and getting quite a shelf built something would give way and down would come the nest.

But the plucky little fellows never got discouraged, but would start over new.

The average days' work, for a bird was about two hours.

The birds did not line their nests until they were dry, and egg laying then began immediately. The birds lay each day until the complement is complete, which is four or five eggs, generally the former number.

The period of incubation is twelve days and at the age of about eighteen days, the young birds are able to fly. A good many die by falling out of the nests; this last year the loss was at least a fourth. After the young are able to fly, the birds cease their twittering and remain silent. By June, 20th, the last family spread wing and the shed was deserted.

They all left for the south about September 15th.

The birds are fond of the cypress trees along the river for roosts and perching places.

I have seen the boughs loaded with them in the heat of the day pluming themselves after a splash in the water.

The eggs vary considerably in shape, size and coloration.

The ground color varies from buff to white, generally the latter color, spotted with several shades of brown.

One set in our collection is decidedly pyriform in shape.

A series of 61 eggs average 0.82×0.56 , the extremes being 0.92 to 0.76 and 0.60 to 0.50 .

IRVING H. WENTWORTH,
Waring, Texas.

A Ramble In May.

On the 16th day of May in 1897 at four o'clock in the morning I started on a long ramble to Verdox in Albany county or about 15 miles from my home. Arriving at Verdox at about half past six, I started in a ravine toward the Mohawk about two miles away. Starting down the ravine I spied in a large sand bank to the left a Kingfisher's nest, from which I obtained a set of six eggs after much hard digging. The eggs were very much nest-colored, as they were badly incubated.

From the ravine I started off to a small woods to the right, and soon found a Red-shouldered Hawk's nest with two eggs in it. The eggs were very heavily spotted, and incubation had commenced. I also found in this woods a nest of American Crow which I did not climb up to, as I had already duplicate sets of this species.

Going over to a few willows I next obtained a set of seven heavily marked eggs of Chickadee, which were almost fresh. After this find I started for a swamp, and on the way found a set of five eggs of Wilson's Thrush, and an incomplete set of Wood Thrush, which I left.

Just before reaching the swamp met a farmer's boy whom I knew, and he wanted to go with me, which I decided to let him do. We had not gone far before I obtained a set of Mourning Dove, which was the first that I had ever collected. Going a little further the lad stepped on a Woodcock sitting on her nest and four eggs. He broke all the eggs, but did not hurt the bird much as she flew to few berry bushes near by. The eggs were fresh, and I brought the broken shells home with me, and managed to patch up one pretty good specimen. I felt almost sorry that I had visited this swamp at all, as then these birds would have reared their young, and there would have been that many

more of these rare birds in this locality. I spent the rest of the afternoon watching these birds and managed to get quite close to them several times before they flew.

In the fall I again visited the swamp and was glad to find my friends still there. I thought them quite safe, as hunters seldom visit this out of the way place. WILLIAM QUACKENBUSH,
Lansingburg, N. Y.

Nest Building of Cooper's Hawk.

One day early in April, 1898, while I was prospecting for nests of *Roptores*, I came upon a pair of Cooper's Hawks at work building their nest in an oak tree about thirty feet above the ground. I was crawling under a barbed-wire fence that ran through the woods when I heard their "ka, ka, ka," which caused me to look up so suddenly that a twig caught my cap and sent it flying and a barb jabbed me in the back, reminding me to lay low. The nest was about fifty feet away and fearing to disturb the hawks, I remained upon all fours and was an interested observer of their manner of approaching the nest.

I spied the half completed nest just as one of the hawks left it and thought I had been discovered, but an instant later the mate lit upon the nest and arranged a stick.

Their manner of approaching the nest was a very interesting and curious sight. They came through the low woods flying just above the ground three or four feet, with the speed of an arrow, and when within fifteen or twenty feet of the nest-tree they closed their wings with a quick flip and "slid up" to the nest in a graceful curve.

They did not visit the nest together and apparently the one that was away from the nest could see its mate, for no sooner would one of them drop a few feet below and fly away, than the other was on the upward curve. As if to

avoid a collision they left the nest from the north side and approached from the west, in which direction—and only a few rods away—all the material seemed to be obtained.

While at the nest their actions were quick, nervous; and they placed the sticks in several places before satisfied, but they did not remain at the nest more than half a minute.

C. F. STONE,
Branchport, N Y.

More About Wood Pewee's Nest.

I read with interest in the March number of the OOLOGIST Mr. C. H. Johnson's notes from Oneida county, N. Y.

The notes on the Wood Pewee especially attracted my attention. As there is considerable difference in the construction of the nest of the Wood Pewee in Oneida county, N. Y., and Parke county, Ind., I will state it as briefly as possible:

Here the Wood Pewee builds a very thin nest, so thin that the eggs can invariably be seen through the nest which is suspended between the small forks of a drooping beech limb, from four to nine feet from the ground, generally about five or six feet.

I judge about nine tenths of the nests are overhanging some lonesome stream.

Only one nest out of the many I have examined ever contained any lichens whatever.

WINFIELD S. CATLIN,
Annapolis, Ind.

Queer Nesting Sites.

There have been at different times articles published in the OOLOGIST about queer nesting sites. I do not think any of these compare with a nest of the Phoebe found by me on June 15, 1889, at Lake Elmo, Minn.

A friend and I were walking along

the road close to the shore of the lake when we came to a vacant house. Thinking we might find a Phoebe's nest we walked around it, but found nothing. As we were about to depart I saw a Phoebe fly under the eaves of a well house which was back of the building, and there on the guard of the pulley through which the rope ran, to which the small buckets are tied, was a nest. It was made of the material ordinarily used and directly over the middle of the well. If it had not been strongly fastened to the iron guard it would have fallen in.

It contained three eggs of the Phoebe and two of the Cowbird. Incubation was well advanced in the Phoebe's, but the Cowbird's were fresh.

On May 30, 1890, I again visited the place and in the same well found a Phoebe's nest fastened to the side of a board two feet below the surface of the ground. It contained four eggs.

J. M. ARMSTRONG,
St. Paul, Minn.

The Spotted Sandpiper.

In looking over the OOLOGIST for March, page 52, Mr. C. H. Johnston mentions collecting a set of 5 eggs of the above mentioned species.

Is not this an unusual occurrence? I have never found or heard of more than four in a set of this species before.

This is our most common Sandpiper here in Ontario, arriving about the middle of April and fresh eggs may be found after the first week in May until the middle of June. The nest is usually placed in a slight depression in the ground and is composed of a few dry grasses and is often at the bottom of some bunch of weeds or tall grasses. The eggs are laid points together and vary greatly in markings.

In this locality the birds become quite numerous in the fall, especially along the lake shore where they remain for a few days and they disappear about the 15th of September. At this season they become exceedingly fat.

N. HARRY MEEKING,
Port Hope, Ontario.

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The January number contained the first definite data on the nesting of the Fulvous Tree Duck and the Santa Cruz Jay. Also a biographical sketch of Dr. Jas. G. Cooper with portrait. You will be *cut off from the West* unless you read the BULLETIN.

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERM.Y.

VOL. XVI. NO. 5.

ALBION, N. Y., MAY, 1899.

WHOLE NO. 154

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155 " " " " June " "
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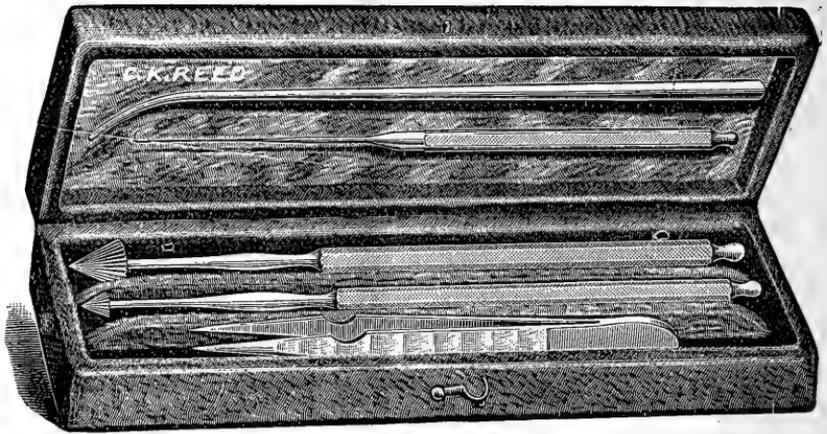
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THE OÖLOGIST.

VOL. XVI. NO. 5.

ALBION, N. Y., MAY, 1899.

WHOLE NO. 154

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Albion, Orleans Co., N. Y.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

With the Birds.

On the morning of April 15th, I started for a small stream about one mile or more from the edge of the town. Before reaching it I was rewarded by find-

ing a nest of the Mockingbird, containing two fresh eggs. The nest was placed in a tree covered with ivy, and had it not have been for the male bird, it is more than likely that it would have escaped unobserved. A well-directed stone sent the female from the nest, which could not be seen until I was within two feet of it.

Passing on toward my destination I could hear the sweet sound of a happy bird, as he was perched on some convenient tree or fence post; it seemed as if life was all pleasant to him, but when I was at the nest he was singing a different tune.

Still walking leisurely on my way I could hear quite plainly the tones as they grew fainter and fainter, until at length they were no longer heard, but were replaced by the songs of White-eyed Vireos, Pine Warblers and Maryland Yellow-throats. As I drew nearer and nearer to the creek, they grew quite plain, and could be heard on every side.

At length I reached Bear Creek and started along the bank, after walking about half a mile, and pounding on every stump that came within my path, a female Bluebird was seen leaving a hole about twelve feet up in a birch stump. On investigation it was found to contain four eggs with incubation about one third.

There's a White-breasted Nuthatch, and I tried in vain to find its nest. As it walks the limbs of a large gum I admire its graceful beauty.

Passing up stream I found a log and walked across. Starting back the way I came, I soon found a Bluebird's nest containing a set of four slightly incubated eggs. The nest rested in a hole dug by a Woodpecker, and was six feet high

in a birch stump, standing by the edge of the stream.

On coming back to the very place on the railroad where I entered the wood, I started for home, and on the way found a Carolina Chickadee hard at work digging a cavity in which to build its nest.

I sat down to watch the bird at work, and found, that, every time it entered the hole, it returned with a chip, and instead of dropping it at the door, as does the Nuthatches and Woodpeckers, it would fly to a maple standing near and then drop it. I watched the diligent worker for quite a time and then returned home, empty handed, but satisfied with any work (?)

I noticed an error in my article in the April number of THE OÖLOGIST. The fourth paragraph reads thus:

"The nest is made of fine bark, fine reed leaves, and wool, placed in a cavity from four to ten inches deep and contains from four to six eggs."

It should read thus:

The nest is made of fine bark, pine seed leaves, and wool, placed in a cavity from four to ten inches deep and contains from four to six eggs.

R. P. SMITHWICK,
LaGrange, N. C.

A Curious Nesting Place.

It some times happens that nests are found in spots and positions that are decidedly foreign to the usual building places of certain birds—in kettles, old boxes and hats, and we now and then have the good luck of coming upon them in such like strange and peculiar retreats.

Although, without much doubt, the English Sparrows (*Passer domesticus*) care less than other birds where they make the nest in which they expect to bring up their brood, still one would scarcely suppose that a pair of these "rats of the air" would ever have

thought of choosing the deserted home of the common wasp as a place for their eggs and young.

On April 6, 1892, while a friend and I were out for an ornithological tramp in the suburbs of the city, it began to grow steadily colder and look as though it soon intended to snow, so we started for home, but soon afterwards the wind shifting and the sun again coming out, we changed our plan and walked along by a creek toward a road, which we knew to be in the woods about two miles off, intending to go home by that way and having walkad some distance, we stopped to rest near one of the numerous gullies, through which a small stream emptied into a large bay near at hand and here, when about to go on again, my eye caught sight of an old, abandoned, oval-shaped wasp's nest. From all appearances it had been built the previous year and since it was a particularly large one, I went up to it and cut it down with the intention of carrying it home with me.

I did not then pay much attention to the affair, but having gone on for about half a mile, I looked at it and noticed that one side was partly torn away, the inside nearly all pulled out and replaced by straw and such other substances as go to make up an ordinary nest. Sitting down we examined the inside nest more closely and found a small entrance to this nest in one side. Putting my hand in this I found, from its shape and lining, that it probably was the nest of the common sparrow. This supposition was confirmed by the fact that on a limb of the same tree, from which I had obtained the nest, there were also a pair of English Sparrows, who, in all probability, had but a half hour before been putting the finishing touches on their summer domicile in this curious structure and which the writer, though not meaning to have done so, had taken from them.

On the way home it became caught in

some brambles and nearly torn in two in my hurry to disentangle it, so there it was left as a good object lesson to me to be more careful of frail things in the future.

This was so strange a site for a bird to select for its nesting place, that it seems well worth recording among the many peculiarities in bird life.

A. L. O. B.,
Rochester, N. Y.

An Ornithological Mixture.

Every ornithologist, at different times in his career, will meet with many strange statements and queries from the irrepressible "small boy" and sometimes from ignorant older people. In the following article I shall endeavor to mix some of the most humorous of these statements with other things ornithological, thus making An Ornithological Mixture.

First the small boy. I was informed the other day by one of the "coming ornithologists" (?) that the Barn Owl does not nest in trees. He told me that the Barn Owl *always* laid her eggs in a barn, and that the Owls which nested in trees were either "White Owls" or "Horned Owls." I could not make him believe that his "Horned Owls" were Screech Owls because he "had never heard them screech."

Another chap told me of a remarkable nest he had once found in a hollow tree, which contained a dozen blue eggs "about as large as a pigeon's with black spots all over them." He wanted to know what kind of eggs they were, and sad to relate, I had to confess my ignorance as to the identity of these remarkable specimens.

Should this article by any means dodge the waste-basket and any reader of it can enlighten me as to the identity of this rare find he will have my undying gratitude for the rest of my days.

Strange to say, when I asked for one

of these eggs; I was informed that they had all, in some unaccountable manner, been broken.

This story may seem strange, but it paled into insignificance when I was asked if I had any "bat's eggs." The lad who asked me this question stated that he knew of a bat's nest "in a sack of pumpkins seeds under the floor of a neighbor's barn," but that the man would not let him get them. I wasted half an hour trying to convince him that bats did not lay eggs and left him then only about half convinced. *

But I must begin to "mix matters," to quote the prize fight editor of some of our leading newspapers. In thinking over my past collecting experiences I recall the first and only nest of the California Cuckoo that I ever found. This was years ago, before I began to collect eggs scientifically. The nest was built in the fork of a willow tree on the bank of a small stream, six feet from the ground and contained *six* eggs. Was this not a large set? The nest was composed of twigs, very much in the same manner as the nest of the Mourning Dove.

On the 1st of April, 1899, while out riding my wheel along a country road I found two Arkansas Goldfinches impaled upon a barbed wire fence. They were fastened side by side, the barb in both instances being passed through the neck just below the base of the skull. This was undoubtedly the work of a California Shrike. Besides small birds I have found many grasshoppers, beetles, lizards and even small snakes impaled in this way. It seems for "pure cussedness" for the birds never return to anything after it is dead.

April 11, 1899, I found a very curious nest of the Arkansas Goldfinch. It is built in a five year old plum tree in our orchard. The nest is hung between two small perpendicular limbs, very much in the manner of the Vireo's, about 12 inches above the fork of a

larger limb. This is the only nest I have ever seen that was built in this manner, the birds almost invariably building the nest in a fork.

Davie states that the California Towhee often lays five eggs. In all my collecting I have found but two sets of five and as they were taken on two consecutive years and in the same locality, I believe that both sets were laid by the same bird. The nest complement, in this location, is generally four; often three. Has any other collector taken sets of five?

Perhaps my plan for blowing eggs will interest some of the readers of the OÖLOGIST. I take a small rubber tube four feet long, fasten a brass blowpipe into one end and my bicycle pump into the other and I am ready for business. The quickness and ease of blowing eggs in this manner cannot be appreciated until it has been tried.

I would make a kick about incomplete data; a small piece of egg shell tacked around a *large hole*, half-blown eggs, etc., if I thought it would do any good, but it has been spoken of so many times that I don't feel disposed to waste paper and ink upon the subject again. It seems there are some collectors who cannot or WILL NOT apply anything that they read.

In conclusion I would like to say that when this paper reaches Albion, N. Y., I am certain that there will be a mixture—most likely with kindlings to start "Ye Editor's" fire.

WM. L. ATKINSON,
Santa Clara, Cal.

* Our correspondent is not the first person who has experienced difficulty in convincing people that "bat's eggs" are LAID ALIVE.—ED.

Brown Creeper.

726. *Certhia familiaris americana*.

Hab. Eastern U. S. breeding from northern border of U. S. northward and in higher mountain districts.

On the 30th of May, 1891, the writer,

in company with a friend, went down the Mississippi River in a boat to Offerman's Island, about ten miles below here on a collecting trip.

We started early and got down there about 7 o'clock.

After securing two sets of Redstart's eggs, one of three and one of four, and finding two nests of the Warbling Vireo—one of which contained one egg and the other just completed, besides several nests of the more common birds which we left, we went down to Horse Island, about a mile further down the river.

The only eggs we got there were a set of six Wren's eggs found in a stump. One of these was rather peculiarly marked, being considerably larger than the others, cream color faintly spotted all over, with a dark ring around the larger end, on the whole resembling eggs of Trail's Flycatcher.

This island is covered with tall trees and has scarcely any underbrush. We only saw a few small birds there. It is a favorite nesting place of the Crow.

On our way back we stopped at Offerman's Island to rest. We walked over to a slough in the center of the island where we heard several Night Herons or "Squawks." We could get a glimpse of them now and then as they gave their dismal squawk from some tall tree in the center. Undoubtedly they breed in there, but we had no way of getting in the swamp to see.

While passing a small point in the island which was covered with dead willows we noticed a good many holes in the trees and stopped to climb up several but found nothing.

When about to leave the island we saw a small bird fly out of an old willow tree and then another which we recognized as the Brown Creeper. Our suspicions being aroused we began a search for the nest and in about five minutes were rewarded by finding it tucked under the bark about ten feet

up. It was made of the usual material and contained three young about three days old. Davie says the eggs of this bird have been taken in North Carolina.

If any of the readers of the OÖLOGIST have found this bird breeding as far south as this, would like to hear of it through the columns of the OÖLOGIST.

HARRY C. MARK,
Davenport, Iowa.

Don't Use Caustic Potash!

"One of the Crank's" advice to beginners in the last OÖLOGIST, contains many good hints, but when he recommends the use of *caustic potash* for badly incubated eggs, he leads me to believe that he must be a "back number crank."

Caustic potash (or soda) is out of date for oölogists' use and has been replaced by *pancreatin*, which is a much better article in many ways. Pancreatin besides softening the embryo quicker and more thoroughly, *does not injure the shell* of an egg, a very important point.

For use, dissolve one drachm "3,000 pancreatin" in one ounce of rain or soft water.

A medicine dropper makes a handy syringe to introduce it into the egg.

All *skin must be cut away* from the edge of blow-hole, which need not be much larger than for fresh eggs, unless incubation is nearly complete, and after blowing out all the liquid, fill the egg with the pancreatin solution. Place eggs in a warm place and you can blow them out clean in from two hours to two days, according to size of egg, incubation and amount of heat applied.

Large eggs, almost ready to hatch, usually have to be treated two or three times at intervals of twelve or twenty-four hours. I have blown three-fourths incubated Chickadees' eggs two hours after applying the ferment, by placing the eggs upon the shelf of a kitchen

range where the temperature was 150° or over.

I would most respectfully suggest, that "One of the Cranks" try the pancreatin method and I'll wager he will never use the caustic potash again.

ISADOR S. TROSTLER,
Omaha, Nebraska.

The Attitude of Whippoorwill When Calling.

Has any of your readers seen a Whippoorwill in the act of uttering its notes? If so, I would like to know if its attitude corresponded to the one I had the fortune to see giving forth its call.

Being on a visit many years ago to a part of the country where original forests were abundant and Whippoorwills were plentiful, I had gone out to the door yard and was standing quietly surveying the situation in the grey light of a moon, obscured sufficiently as to produce no shadows, when one of the birds made a noiseless sweep around me, and dropped on the ground not more than three feet from my feet and commenced calling. It had laid itself upon one side, with the wing of the other side fully expanded, and with every call it flapped that wing. Its head was thrown back and its mouth wide open. It did not appear to use its mouth to modulate the sounds, that being done in or by the throat.

At that nearness it did not appear to be forming words as we pronounce them, the sound of rushing breath predominating, resembling Whi-oo-wheoo, uttered with great force, which one can imitate very closely by keeping the mouth open and using only the throat and plenty of wind.

Even since then when I hear one calling, I wonder if it is lying on its side and flapping its wing? Or was what I saw unusual and accidental? which does not seem to be likely.

J. ALSTON MOFFAT,
London, Ont.

Ornithology in the Rural Districts, or Wonders Will Never Cease. *

A Spring ode. It is owed to the party mentioned in it.

BY NEIL F. POSSON, MEDINA, N. Y.

Say, Mr. Editor:

There is a man in Lyndonville
Who is so wondrous wise,
That I am going to write him up,
And give him an "advertise."
(It won't cost him a cent.)

I got on my wheel the other day
And went down to see the man,
And as much wisdom did I acquire
That I could hardly get back again.
(Couldn't carry so much on my wheel.)

'Tis the birds he knows so much about,—
He has studied them for years,—
And his aptness at identity
Would fill your eyes with tears.
(From laughing).

I am preparing a little list, you know,
Of all birds that are known to occur
Within our county limits;
And so I have aimed to confer.

With all the ornithologists
Who are scattered the county 'round,
And to learn from each observer
What rare birds he has found.

Well, I heard of this man at Lyndonville,
Whom they said was pretty good,—
He had taken many birds that were rare,—
At least so it was understood.
(And don't you think he hasn't!)

And so as I said up there in verse two,
I went down there the other day
To learn what records I might add to my list,
And how much he knew, anyway.
(And say! you just better guess,—WELL.)

I learned a whole lot of things that day
That I didn't know before;
For instance, he found a nest of the Burrowing Owl
Along the Lake Ontario Shore.
(*Speotyto cunicularia hypogæa*. Oh-gee, oh!)

His identity was "positive;"
For the nest was "a hole in the ground."
And the eggs were white, immaculate,
And almost perfectly round.
(Incubation. —"shure.")

I offered him the suggestion
That he had found a Kingfisher's nest;
But he knowingly laughed and wisely remarked
That Kingfishers were confined to the West.
(And he ought to know.)

And then he said that the Sandhill Crane
Was frequently found here,—
In fact, he was tolerably certain
Of seeing a few every year.
(Said he never was cruel enough to shoot any,
though, because they were being exterminated fast enough as it was.)

The Gannet (*Sula bassana*).
Was "common" along the lake;
And also, along the shore, so he said,
He had taken the Kittiwake.
(So he said.)

And then in a marshy woodland
Within his own township of Yates;
He had found two Prothonotary Warblers' nests,
But he didn't have the dates.
(Nor the eggs either, nor either of the parent birds.)

In short, so many rare records he had
That if the A. O. U. found it out,
They would revise their list immediately
And change the whole thing about.
(And I think they ought to, anyway.)

And if I were to attempt to include in my work
All the birds which he said that he took
My list of county birds would make
A most voluminous book.
(With,—say about 489 species enumerated.)

Now the name of this Lyndonvillian,—
This bird *villian*, is Willard H. B——,
And don't by any means fail to see him
If ever you go that town.
(He's better known as Barnum's) (with the side-show, Circassian princess, fat woman, and snake-charmer all thrown in.)

I presume he thought me "dead easy,"
And supposed that I swallowed right down,
All the ornithological news that he told me,—
But not so, my dear Mr. B——.
(“Nay, nay, Pauline.”)

That's all,—my ditty is finished,
Of this man so wondrous wise,
I have done my best to write him up
And give him a free "advertise."
(Goodness knows that advertising is the only thing that will ever bring him to the front.)

* THE OÖLOGIST prints almost anything original and of merit, which is of interest to the ornithologist and oölogist, but is forced to draw the line sharply when it comes to "spring poetry" and to positively refuse to allow anything of that nature appear in its columns, the only exception to this rule is made when our old "Friend Posson," in his vernal migrations, drifts among the blue stockings of Boston—where the spirit of the muse is ever endemic and of sufficient virulence to render one who is naturally weak, both mentally and constitution-

ally, susceptible to its ravages—hence the exception. We do not consider "Friend Posson's" case quite hopeless and can assure the readers of THE OOLOGIST that he still has lucid intervals. In spite of the fact that the following lines accompanied his "ode."—ED.

BOSTON, April 17, 1899.

Editor OOLOGIST:—With the gradual, but none the less sure and certain advance of the balmy spring time, with its much ethereal mildnesses and its soft and coquettish zephyrs in large numbers, the pen of the true poet becomes as uneasy and as active as a New Jersey mosquito on a summer's evening in the vicinity of a hammock. In my own case, I find that

My ever wandering pen
Still gets there just the same,
Although the winter blasts have went
And spring-time days have come.

I have just completed an ode. Enclosed you will find it. I will tell you why I send it to you. The reason is that I want it published in a paper with a large circulation. You will at once see of what a high-class of merit the poem is, and surely such an effort should be printed where it will reach the greatest number of people. I have learned from experience in writing poems about birds, that it doesn't pay to send them to second-rate magazines like *The Auk* or *McClure's* or any of them. They are not educated up to a point where they can appreciate a really meritorious ode. They often publish cheap, unmeaning bits of verse, while they will turn right around and refuse a good poem with much more body to it. Body is what counts. I know what I am talking about, for I have had experience. I now have in my possession a poem which "McClure" sent back to me,—a dandy,—and I would have let him have it cheap, if he hadn't been in such a hurry about returning it. You see he undoubtedly turned it over to one of his office-help to review it, and of course office-help ain't supposed to know. I wouldn't

sell him the poem now for \$5.00, after a trick like that.

I will say this for your magazine—you have never refused to publish a single one of the poems I have sent you and I have sent you a few.) That goes to show that you are able to discern a truly meritorious article.

If you want this I will not ask you anything for it. There is one favor I would like to ask, though. The poem is of a humorous nature, and if you would like to give me something humorous in return, (I see by the OOLOGIST that you have been having some pictures of yourself taken, and if you would like to send me one in return for the ode,) it will be much appreciated.

Very Sincerely,

NEIL F. POSSON.

The Finding of a Hummingbird's Nest.

On June 18, 1898, I went to a large tract of land, covered with rank grass, brush and occasionally a scrub oak, for the purpose of collecting nests and eggs of such species as inhabit those localities. After about two hours of unsuccessful tramping over bogs, stones and large stumps in the hot sun, I determined to go where the heat of the sun was not so great. In a few minutes I decided that I would go to a large grove of stately oaks and poplars which joined the former tract and had been pastured for at least ten years and where the underbrush was about destroyed by cattle and at least walking would be easier. It did not take long to reach the welcome shade of the big oaks under whose spreading boughs I spent some time rolling on the soft grass. After being sufficiently rested I took a stroll through the woods. As I was walking along the path examining the limbs for Vireos' nests, judge my surprise when I saw a tiny, wee, little nest and said to myself, "A Humming-

bird's nest," for I could tell by its size it was nothing else.

I stood for a minute staring at it and scarcely dared to move for fear of losing sight of the nest, for this was the first one that I had seen in situation. Then there was a whirr and buzz and I saw a Hummingbird pass the nest and alight on a dry twig on the opposite side. I immediately identified the the Ruby-throated Hummingbird.

The nest was saddled on a drooping branch of a burr-oak tree, six or seven feet out from the trunk and eighteen feet from the ground. The diameter of the trunk at the base was about ten or eleven inches and consequently was not hard to climb.

By standing on a limb six feet below the one containing the nest I could reach one of its smaller limbs and gradually drew it downward toward me until I could look in the nest. Imagine my delight when I saw its two pure white eggs which were nearly fresh as was afterward proven. The nest was very tightly glued upon the branch and I do not believe any ordinary storm could have dislodged it. It was composed entirely of cotton from the cottonwood tree (poplars) except one small yellow feather and covered on the outside and top of rim with lichens thus making it simulate an irregular growth of wood.

After carefully removing the nest I descended the tree and packed both nest and eggs safely in my collecting box. After bidding the sorrowful parents adieu I retraced my steps homeward. And arriving there without further adventure immediately measured the nest and give its correct size here: .75 in. in depth and .875 in. in diameter inside and 1.13 in. in depth by 1.75 in. in diameter outside. I consider this one of my best finds of the past season.

EDW. W. SPRINGER,

Owatonna, Minn.

REFUGIO, Texas, March 31, 1899.

ERRATA:—In looking over my notes on "Refugio Co., Raptores," in current issue of OOLOGIST, I find that your printer made a slight blunder which I will thank you to correct. The annotation under head of "Duck Hawk" should be under head of *Falco columbaris*, Pigeon Hawk, which in the printed list is entirely omitted. Concerning Duck Hawk, I simply state that it arrives and departs about the same dates as do the ducks. Not seen in summer.

JAMES J. CARROLL.

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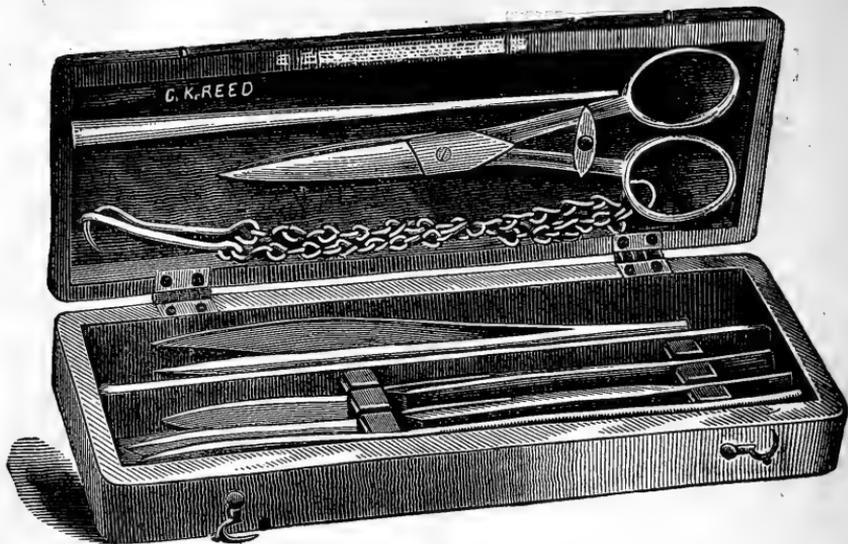
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VOL. XVI. NO. 6-7 ALBION, N. Y., JUNE-JULY, 1899. WHOLE No. 155-6

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
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Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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ed specimen—will be presented the writer of each accepted article.

An apology may be due our readers for the intrusion of the half-tone in this month's issue—make up one to suit yourself and we'll O. K. it. One of the following, however, may suggest itself as appropriately fitting the case:—Hypertrrophied condition of the original's bump of egotism; Just for "auld acquaintance" sake—in many cases extending from the early 80's; A resurrection—after a lapse of nearly four years, passed in oblivion or "innocuous desuetude" as far as the just demands of the OÖLOGIST and its subscribers were concerned. "Pay your money [for a year's subscription to the OÖLOGIST] and take your choice," it's immaterial to us—as long as we get the subscription.

In the future the OÖLOGIST will be sort of a "Review of Reviews" of matters Ornithological and will contain an Index Ornithologicus of all articles published during the preceding month. The scheme begins with this issue and all books relating to Ornithology and the Natural Sciences are briefly mentioned. An extended notice of the more important ones will be made in August issue. The "Index" of all Ornithological articles appearing in American periodicals since January 1 is also printed in this issue—this index, however, is incomplete, owing to the fact that our files are broken in some instances and that two or three important publications are not indexed at all—these discrepancies we hope to remedy in our next issue. This new feature is really an exceedingly valuable one, and one which we trust will be appreciated by the readers of the OÖLOGIST.

Woodpecker Notes for 1898.

During the winter of '96-'97 an occasional Red-headed Woodpecker could be seen in the woods in this vicinity, and I think a few remained all winter. Then on March 9, '97 one was noticed several times in town and on the next day, the 10th, they appeared in numbers being, from then on, present all summer in their usual abundance. Consequently, on March 9 '98 I had my eyes open for the advance arrivals; but none appeared, which however, did not surprise me so very much, though of course, I kept on the look-out for them each day, and made several special trips into their favorite haunts, only to come out at the end of the month without having seen or heard of a single specimen. And not only March but most of April had passed before I could note the appearance of *M. erythrocephalus*. April 29th I jot down in my note book, "Actually saw a Red-headed Woodpecker, while on my way to work and heard one, while coming home, ten hours later." April 30th several were seen and on May 2nd I record them as "back in old time numbers"

On May 3rd, while wheeling along a very rough "mud road", south of town, my attention was drawn to a loud note, certainly familiar, though I could not place it at first. So leaning my wheel against a post, I was soon over the fence and had located my bird, a male Red-bellied Woodpecker; but I also found myself in the presence of a very amusing scene. Seated on a stump, I watched an audacious male Red-head trying to court a female Red-bellied Woodpecker, which he had cornered in an old excavation in a dead portion of a large live elm. The Red-bellied bird stuck her head from the hole every few seconds, where-up-on the Red-head popped around so close that she quickly dodged inward and disappeared; all this time the Red-head was going

through the antics and low chucklings in about the usual manner as when courting one of his own kind. Every now and then the female "Zebra" would call her mate and he, anxious about her, evidently, but not nervy enough to give battle for her sake, would answer immediately and fly into the big tree, only to be at once driven away by Sir *erythrocephalus*. The male *carolinus*, in that loud note which attracted me from the road would frequently call to his imprisoned mate, but she rarely responded to his call. How long this programme was continued I cannot say, for becoming disgusted with the male "Zebra" for not liberating his mate, my amusement passed away and I jumped on my wheel and did likewise. The Red-bellied bird, so imprisoned, was distinctly seen several times, she once coming half way out. She seemed as afraid to venture out as her lord was to tackle his adversary.

On May 12, my friend, Mr. Hugh Jameson, and I collected a set of the Downy Woodpecker which deserves mention for two reasons: first, height from the ground—forty-three feet, in a tall slender, dead ash; second, number of eggs—seven. Perhaps the loss of no other set in my experience so pained me as did the loss of this set, for one of the seven eggs was accidentally broken in removing the set and the remainder were too highly incubated to save. Oliver Davie, in speaking of *D. pubescens*, says, "The nest is constructed seldom more than twenty feet from the ground, usually between ten and fifteen feet, the eggs are four or five, rarely six." A. W. Butler, in his excellent report on the birds of Indiana, says, "They nest in holes in fences, in orchard trees, generally not high up," eggs 3-6. If I remember correctly, Major Bendire states that the nests are from five to fifty feet up and the eggs vary from three or four to six in number. I do not know what other authors state, but if sets of seven of Downy Woodpecker are common, I judge they would have said so. C.

PIPER SMITH, Anderson, Ind.

New Books of 1899 devoted to Ornithology and the Natural Sciences.

The Publisher of THE OOLOGIST will promptly fill orders for all books mentioned, or if preferred, orders may be sent direct to the Publishers.

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- Early Chapters in Science. Mrs. W. Awdry. A first book of knowledge of natural history, botany, physics and chemistry for young people. Ed. by W. F. Barrett. E. P. Dutton & Co., N. Y. 18-348 p., 12 mo., cl., \$2.
- True Tales of the Insects. L. N. Badenoeh. II. by Margaret J. D. Badenoeh. E. P. Dutton & Co., N. Y. 18-255 p., il, 8 vo., cl., \$3.
- Studies in Entomology. H. Meade Bland. The Whitaker & Ray Co., San Francisco. Cal. 3-98 p., il., 8 vo., cl., 75c, pap. 50c.
- Volcanoes, the Structure and Significance. T. G. Bonney. G. P. Putnam's Sons, N. Y. 14-317 p., il., map, 8 vo., cl., \$2.
- The Foundations of Zoology. W. Keith Brooks. The Macmillan Co., N. Y. 8-389 p., 8 vo., cl., \$2.50
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- Animals of To-day. C. J. Cornish. Their life and conversation. New Amsterdam Book Co., N. Y. Il., 8 vo., cl., \$1.75.
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- Field, Forest and Wayside Flowers, with chapters on grasses, sedges and ferns. Maud Going. [E. M. Hardinge.] Untechnical studies for unlearned lovers of Nature. The Baker & Taylor Co., N. Y. 4-411 p., il., 8 vo., cl., \$1.50.
- Glimpses of Nature for Little Folks. Katherine A. Griel. D. C. Heath & Co., Bost. 4-103 p., il., 12 mo., bds., 80c.
- Bird Preserving and Mounting and the Preservation of Birds' Eggs. R. Avis. F. Warne & Co., N. Y. 48 p., 12 mo., pap., 15c.
- Wild Animals in Captivity. Being an account of the habits, food, management and treatment of the beasts and birds at the "Zoo," with reminiscences and anecdotes, by A. D. Bartlett, comp. and ed. by E. Bartlett; imported by C. Scribner's Sons., N. Y. 373 p., il., 8 vo., cl., \$3.
- Reveries and Recollections of a Naturalist. *Edition de luxe*. Published by the author, Oliver Davie, Columbus, O. 7-106 p., por. il., 8 vo., cl., \$2. Ed. limited to 200 copies.
- Our Feathered Friends. Eliz. and Jos. Grinnell. D. C. Heath & Co., Bost. 11+144 p., il., 12 mo., bds., 30c.
- The Cambridge Natural History. S. F. Harmer. V. 9, Birds, by A. H. Evans. The Macmillan Co., N. Y. 16+635 p., 8 vo., cl., \$3.50.
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- Fur and Feather Tales. Hamblen Sears. Illustrated by Frost, Tavernier and Jaccaci. Harper, N. Y. 5+216 p., 8 vo., cl., \$1.75.
- Cries and Call-Notes of Wild Birds. A popular description of the notes employed by our commoner British birds in their songs and calls, with musical illustrations. C. A. Witchell. Imported by C. Scribner's Sons, N. Y. 84 p., 12 mo., cl., 40c.
- Nature Studies in Berkshire. J. Coleman Adams. With il. in photogravure from original photographs by Arthur Scott. G. P. Putnam's Sons, N. Y. 8+225 p., 8 vo., cl., \$4.50.
- The Cost of Sport. F. G. Aflalo. Papers on shooting and fishing in the British Isles and other parts of the world; hunting, racing, trotting, boating, yachting, canoeing, punting, cricket golfing, curling, lawn tennis, polo, archery, cycling, coursing, fal-

- Suggestions for Primary and Intermediate Lessons on the Human Body. Mrs. Ella B. Hallock. A study of its structure and needs correlated with nature study. drawings by D. C. Lithgow. E. L. Kellogg & Co., N. Y. and Chic. 194 p., 12 mo., cl., 75c.
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- Text-book of the Embryology of Man and Mammals. Oscar Hertwig. From the 3d German ed., by E. L. Mark. 2d ed. The Macmillan Co., N. Y. 16—670 p., il., pls., 8 vo., cl., \$5 25.
- The Microscope, its History, Construction and Application. Jabez Hogg. Being a familiar introduction to the use of the instrument and the study of microscopical science. 15th ed. rev. and enl., il. by Tuffen West and other artists. G. Routledge & Sons., N. Y. 704 p., 8 vo., cl., \$4.
- Stories of Animal Life. C. F. Holder. American Book Co., N. Y. 261 p., 12 mo., cl., 60c.
- Harmonics of Evolution. Florence Huntley. The philosophy of individual life, based upon natural science, as taught by modern masters of the law. Published by the author, Chic. 463 p., por., 12 mo., cl., \$2.
- Nature Study for Grammer Grades. Wilbur S. Jackman. A manual for teachers and pupils below the high school in the study of nature. The Macmillan Co., N. Y. 407 p., 12 mo., cl., \$1.
- Wild Life at Home. R. Kearton. How to study and photograph it, il. by photographs taken direct from nature by C. Kearton. Cassell & Co., Ltd., N. Y. 15—188 p., il., 12 mo., cl., \$1.50.
- Text-book of Embryology of Invertebrates. E. Korschelt and K. Heider. Tr. from the German by Matilda Bernard, with additional notes by Martin F. Woodward. V. 2. Phoronidea, bryozoa, ectoprocta, brachiopoda, entoprocta, crustacea, palæostraca. The Macmillan Co., N. Y. 15—375 p., 8 vo., cl., \$3.
- A Guide to the Wild Flowers. Alice Lounsbury. With 64 col. and 100 black and white pls., and 54 diagrams by Mrs. Ellis Bowan, with an introd. by Dr. N. L. Britton. F. A. Stokes Co., N. Y. 17—347 p., il., 8 vo., cl., \$2.50.
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- Handbook to Natural History Charts. K. G. Lutz. Tr. by M. Michaelis, accompanied by 30 plates in colors. Raphael Tuck & Sons Co., Ltd., N. Y. Book, 16 mo., 50c.; 30 plates in portfolio on paper, \$10; mounted on linen in portfolio, \$15.
- In the Acadian Land. Rob. R. McLeod. Nature studies. Bradlee Whidden, Bost. 166 p., por., il., 12 mo., cl., 75c.
- Special Method in Natural Science for the First Four Grades of the Common School. C. A. and Lida B. McMurry. 2d ed. rev. and enl. Public School Publishing Co., Bloomington, Ill. 267 p., 12 mo., cl., 50c.
- The Wilderness of Worlds. G. W. Morehouse. A popular sketch of the evolution of matter from nebula to man and return, and the life-orbit of a star. P. Eckler, N. Y. 246 p., 8 vo., cl., \$1.
- The Bee People. Margaret Warner Morley. Il. by the author. A. C. McClurg & Co., Chic. 4—177 p., il., 12 mo., cl., \$1.25.
- The Characters of Crystals. Alfred J. Moses. An introduction to crystallography. D. Van Nostrand Co., N. Y. 8—211 p., 8 vo., cl., \$2.
- The Prospector's Field Book and Guide in the Search for and the Easy Determination of Ores and other Useful Minerals. H. Stafford Osborn. 4th ed. rev. and enl. H. Carey Baird, Phil. 293 p., 12 mo., cl., \$1.50.
- Aquaria. C. N. Page. A treatise on the food, breeding and care of fancy

- gold fish, paradise fish, etc. Published by the author Des Moines, Ia. 62 p., 16 mo., cl., 50c; pap 15c.
- How to Know the Ferns.** Frances Theodora Parsons. A guide to the names, haunts and habits of our common ferns, il. by Marion Satterlee and Alice Josephine Smith. C. Scribner's Sons., N. Y. 14—215 p., 12 mo., cl., \$1.50.
- Ichthyologia Ohioensis; or, Natural History of the Fishes Inhabiting the River Ohio and its Tributary Streams.** Constantine S. Rafinesque. A verbatim et literatim reprint of the original, with a sketch of the life, the ichthyologic work, and the ichthyologic bibliography of Rafinesque, by R. Ellsworth Call, M. D. The Burrows Bros. Co., Cleveland, O. 8—175 p., por., il., 8 vo., cl., \$4.
- The Silva of North America.** C. Sprague Sargent. A description of the trees which grow naturally in North America, exclusive of Mexico, il. with figures and analyses drawn from nature by C. E. Faxon. V. 12, Coniferæ. Houghton, Mifflin & Co., Bost. 1899 pl., 4 to, cl., \$25.
- Prehistoric Antiquities of the Aryan Peoples.** O. Schraeder. A manual of comparative philology and the earliest culture, tr. by F. V. Jevons from the 2d rev. and enl. German ed., with the sanction and co-operation of the author. Imported by C. Scribner's Sons, N. Y. 486—p., 8 vo., cl., \$6.75.
- Everyday Butterflies.** S. Hubbard Scudder. A group of biographies. Houghton, Mifflin & Co., Bost. 7—39 p., il., 12 mo., cl., \$2.
- American Indians.** F. Starr. D. C. Heath & Co., Bost. 10—227 p., map, il., 12 mo., cl., 45c.
- Outlines of Zoology.** J. Arthur Thomas. 3d rev. and enl. ed. Appleton, N. Y. il., 12 mo., cl., \$3.50.
- The Dawn of Reason; or, Mental Traits in the Lower Animals.** Ja. Weir, jr., M. D. The Macmillan Co., N. Y. 13—234 p., 16 mo., cl., \$1.25.
- The Adhesive Postage Stamps of Europe.** W. A. S. Westoby. A practical guide to the collection, identification and classification, especially designed for those commencing the study. V. 1, Alsace to Ionian Islands. Imported by C. Scribner's Sons, N. Y. 399 p., il., 8 vo., cl., \$3.
- The Microscopy of Drinking-water.** G. Chandler Whipple. J. Wiley & Sons., N. Y. 10—338 p., 8 vo., cl., \$3.50.
- Zoological Results.** Arthur Willey. Based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the years 1895, 1896, and 1897. Pt. 2. The Macmillan Co., N. Y. 121—206 p., 4 vo., cl., \$3.50.
- Nature Study in Elementary Schools.** Wilson. Mrs. Lucy Langdon Williams. First reader. The Macmillan Co., N. Y. 12—253 p., 16 mo., cl., 35c.
- Animate Creation.** Rev. J. G. Wood. Popular ed. of "Our Living World," a natural history, rev. and adapted to American zoology, by Jos. B. Holder, M. D. New cheaper ed. Selmar Hess, N. Y. 6 v., 1904 p., 8 vo., subs., cl., \$27 50.

The Colorado Ornithological Society.

The Colorado Ornithological Society has been organized with twelve charter members. The third meeting was held Saturday, February 4th, in Denver, and the following officers were elected for 1899:

President, Dr. W. B. Bergtold; vice-president, E. J. Oslar; treasurer, Frederick H. Fowler; recording secretary, Howard S. Reed; corresponding secretary, Walton I. Mitchell; executive committee, Dr. Bergtold, W. I. Mitchell, F. M. Dille, A. M. Collett, L. E. Cannon.

Miss Jean Bell of Ripley Park, § Penn. has recently made important additions to her museum by the purchase of the oölogical collections of Mr. Josiah Hooper, Westchester, Pa., Mr. J. W. Preston of Baxter, Iowa, Mr. Isaac S. Reiff of Philadelphia, Mr. H. K. Jamison (deceased) Manayunk, Pa. and a collection of 1000 selected sets from the cabinets of Mr. Samuel B. Ladd, Westchester, Pa.

Charles D. Walcott, Director of the United States Geological Survey, will contribute an article on the United States National Museum to the August number of Appleton's Popular Science Monthly.

Ornithological Periodicals.

Abbreviations at left are used in the Index following to indicate the titles of publications.

The Publisher of the OÖLOGIST will receive subscriptions or furnish single copies at prices quoted for all Journals mentioned below. Back numbers a matter of special correspondence.

- SM APPLETON'S POPULAR SCIENCE MONTHLY. 72 Fifth Ave. New York. Yearly subscription \$5.00; single number 50c.
- BL BIRD-LORE. Englewood, N. J. Bi-monthly, \$1.00 a year; 20c a copy.
- CB BULLETIN OF THE COOPER ORNITHOLOGICAL CLUB. Santa Clara, Calif. Bi-monthly, \$1.00 a year; 20c a copy.
- MB BULLETIN OF MICHIGAN ORNITHOLOGICAL CLUB. Grand Rapids, Mich. Quarterly. 50c a year; 15c a copy.
- AF OUR ANIMAL FRIENDS. Madison Ave. and 26th St., New York. \$1.00 a year; 10c a copy.
- PS POPULAR SCIENCE. 108 Fulton St., New York. Monthly, \$1.60 a year; 15c a copy.
- R RECREATION. No. 19 West 24th St., New York. Monthly \$1.00 a year; 10c a copy.
- SA SCIENTIFIC AMERICAN. 361 Broadway, New York. Weekly, \$3 00 a year; 10c a copy.
- A THE AUK. No. 33 Pine St., New York. Quarterly, \$3.00 a year; 75c a copy.
- MJ THE JOURNAL OF THE MAINE ORNITHOLOGICAL SOCIETY. Bangor, Maine. Quarterly; 25c a year; 10c a copy.
- M THE MUSEUM. Albion, N. Y. Monthly, 50c a year; 5c a copy.
- OI THE OÖLOGIST. Albion, N. Y. Monthly, 50c a year; 5c a copy.
- Os THE OSPREY. 321 4½ Street, Washington, D. C. Monthly; \$1.00 a year; 10c a copy.

- Ages to Which Birds Live, On the Comparative. J. H. Gurnley. Os June.
- Alligators and Crocodiles. C. B. Moore. PS Mch.
- Alligator, Our Florida. I. W. Blake. SM Jan.
- American Ornithologists' Union. List of Officers and Members. A Apr.
- American Ornithologists' Union. Sixteenth Congress of. A Jan.
- Anatidæ of North Dakota, The. Rev. H. K. Job. A Apr.
- A. O. U. Check List, Ninth Supplement to. A Jan.
- Aptochromatism in *Chrysotis leucallanti*. F. J. Birtwell Os Apr.
- Audubon Societies, The (Reports, etc.). BL Feb., Apl., June.
- Anklet at Catalina Island, The Rhinoceros, Jos. Grinnell. CB Mch. Apr.
- Bartram, The Finishing Stroke to. E. Coues. A Jan.
- Bird, (Kingbird) A Valuable. G. E. Mitchell. AF Feb.
- Bird-Day Programs in the Schools, Suggestions for. C. A. Babcock. BL Apl.
- Bird, Five Hundred Men and A. C. F. Holder. AF May.
- Bird Giants, The. C. F. Holder. (California Ostrich Farm). SA June 3.
- Bird-Herd, A. Ernest Ingersoll. AF Mch.
- Bird Life, Incidents in. A. Merrill. MJ Jan., Apr.
- Bird Life in Yates Co., N. Y., Notes upon. C. F. Stone. M Jan.
- Bird Music. F. S. Mathews. PS Apr.
- Bird Protection, Report of A. O. U. Committee on. A Jan.
- Bird Protection, The American Ornithologists Union on. AF Apr.
- Bird Protection versus Sentiment. C. Barlow. CB May June.
- Bird Studies for Children. Isabel Eaton. BL Feb.
- Bird Studies, Winter. BL Feb.
- Birds and Beasts, True Tales of. D. S. Jordan. SM Jan.
- Birds as Botanists. A. L. Lane. MJ Jan.
- Birds as Prognosticators. H. H. Johnson. Os May.
- Birds, Effect of Storms on. SA Apr. 29.

- Birds, Our Winter. Florence A. Merriam. PS Feb.
- Birds, Some of Our Winter. M. [A. Carrier, Jr. Os Mch.
- Birds Unexplained, Odd Actions of. W. B. Davis. Os Mch.
- Birds, With the. R. P. Smithwick. Ol May.
- Bittern Portrait, A Least. E. G. Tabor. BL Apr.
- Blackbird, Home Life of the Yellow-headed. M. A. Jenison. AF July.
- Bluebird, The Passing of the. C. S. Reed. Os Apl.
- Buzzards as Scavengers. C. Hallock. Os Mch.
- Cabin Window, From a. H. W. Menke. BL Feb.
- Caging Birds on the Ethics of Olive Thorne Miller, BL June.
- Camera as an Aid in the Study of Birds. Dr. T. S. Roberts. BL Feb. Apl.
- Camera, Snap Shots with Pen and. E. S. Rolfe. Os Mch.
- Cardinal at the Hub, The. Ella G. Ives. BL June.
- Catbird Study, A. Dr. T. S. Roberts. BL June.
- Chickadee Notes. C. H. Morrell. Os Apl.
- Chimney, Home Life in a. Mary F. Day. BL June.
- Cobb's Island Pictures, Three. Wm. L. Baily. BL June.
- Cobleigh, William S. C. Barlow. CB Jan. Feb.
- Collecting of Birds in Breeding Season Justified? Is the Unlimited. C. Barlow. CB May June.
- Collections and Collectors, 1784-1850, Some Philadelphia. W. Stone. A Apl.
- Colors of North American Land Birds, Evolution of the. Dr. E. Coues. Os Apl.
- Condor, Capture of a California. H. G. Rising. CB Mch. Apl.
- Condor, Pet California. D. A. Cohen. Os Jan.
- Cooper, Dr. James G. W. D. Emerson. CB Jan. Feb.
- Coot, American. A. Brooks. R Jan.
- Cowbirds Eggs, Reception of. E. H. Short. PS July.
- Creepers. Brown. H. C. Mark. Ol May.
- Criticism A Timely (on wholesale collecting birds and eggs). B. S. Bowdish. Ol Feb.
- Crossbills, American. L. M. Terrill. Ol Apl.
- Crow, A Pet. C. F. Stone. Os Jan.
- Cuckoo and Wren Notes. Hannah Rude. PS May.
- Curious Facts about Eggs. C. F. Holder. AF Jan.
- Destruction and Protection of Birds. Dr. E. Coues. Os Apl.
- Destruction of Birds by the Great Cold Wave of Feb. 13 and 14, 1899. A. T. Wayne. A Apl.
- Dickcissel in His Illinois Haunts. I. E. Hess. Ol Jan.
- Dickcissel in Michigan, The. Dr. Morris Gibbs. MB Jan.
- Doves (Mourning), Nesting on the Ground. Alice M. Munger. PS Apl.
- Doves of Florence, The Pet. Edith M. Thomas. AF Mch.
- Duck, Nesting of the Fulvous Tree. A. M. Shields. CB Jan. Feb.
- Duck Notes, Missouri River. I. S. Trostler. Os May.
- Ducks, Nesting of Alaskan. C. Littlejohn. Os Jan.
- Eagle, Capture of a Rabbit by a Golden. Wm. L. Atkinson. CB May June.
- Eagle, Nesting of the Alaska Bald. G. G. Cantwell. Os Feb.
- Egg Collecting—A Protest. A. H. Thayer. A Apl.
- Egg Collecting—Rev. W. F. Henninger Answered. Os May.
- Egg Collecting, The Scourge of. Rev. W. F. Henninger. Os Feb.
- Egg Forger, A Parisian. SA Apl. 29.
- Eggs, Hints on the Scientific Preparation of Birds'. Ol Apl.
- Embalming, Something about. Morris Gibbs, M. D. PS June.
- Emerson, W. Otto. CB Mch. Apl.
- Feather Work of Hawaii, The. SA July 1.
- Field and Study, Notes from. BL Feb., Apl., June.
- Field, Echoes from the (Notes, Items, etc.) CB Mch. Apl.
- Fields, From the Game. R Jan. July.
- Flicker, A Belated Nest of the Northern. C. H. Morrell. MJ Apl.
- Gannets on Bonaventure. Frank M. Chapman. BL June.
- Geese, Hints on the Breeding and Care of. AF Mch.
- Geographical Distribution of Life. Prof. Walter B. Barrows. MB Jan.
- Goldeneye, The American. F. T. Coon. Os May.

- Gourdheads in the Cypress Swamps of Missouri. O. Widman. Os Mch.
- Grebe in Michigan, Pied-billed. W. A. Davidson. MB Jan.
- Grouse, An Hour with Canadian Ruffed. W. E. Woodyear. R Jan.
- Grouse, Nest and Eggs of Sooty. C. W. Bowles. Os Jan.
- Gull, A Historical Notice of Ross's Rosy. J. Murdoch. A Apl.
- Gull, An Account of the Taking of Four Sets of Eggs of the Ivory. A. A. Johnson. CB May, June.
- Gulls and Terns of Sagadahoc County (Me.) H. L. Spinney. MJ Apl. also M Apl.
- Guns and Ammunition. R June, July.
- Hallock, Charles. E. Coues. Os Apl.
- Hawk, Florida Red-shouldered. J. K. Strecker, Jr. PS Feb.
- Hawk in Hamilton Co., N. Y., Nesting of the Duck. D. H. Haight. Ol Jan.
- Hawk, Nest Building of the Cooper's. C. F. Stone. Ol Apl.
- Hawks, A Successful Day with the Duck, H. C. Johnson. CB May, June.
- Honey-Creepers, The Blue. H. C. Oberholser. A June.
- Honey-birds. Dr. E. Murray-Aaron. SA July 8.
- Hummingbird. Nesting of the Rivoli. R. D. Lusk. Os May.
- Hummingbird, Nest of the Blue-throated. G. F. Breninger. Os Feb.
- Hummingbird, Notes on the Rivoli. F. C. Willard. Os Jan.
- Hummingbirds' Nesting, Early. CB Mch., Apl.
- Hummingbird's Nest, The Finding of a. E. W. Springer. Ol May.
- Hummingbirds of Columbia. The. O. Bangs. A Apl.
- Hylocichla, A New. H. C. Oberholser. A Apl.
- Individuality of Birds, The. W. E. Saunders. MB Jan.
- Jay, Nesting of the Santa Cruz. R. H. Beck. CB Jan.-Feb.
- Jay, Nest of Steller's. C. W. Bowles. Os May.
- Jay, the Canada. O. B. Warren. A Jan.
- Jays on Mount Hood; Clark's Crows [Nut-crackers] and Oregon. Florence A. Merriam. BL April-June.
- Jewel, (Ruby-throated Hummingbird) a Winged. S. O. Reese. AF July.
- Junco, Thurber's. H. W. Carriker. Os May.
- Lake County, Ohio, Notes from. R. Densmore. Ol Jan.
- Lark, The Prairie Horned. Rev. P. B. Peabody. Os. Apr.
- Loggerhead, (Shrike) An Acute. L. S. Keyser. AF Apr.
- Longevity of Birds and Other Vertebrates. Dr. T. Gill. Os June.
- Long Island Birds, Notes on. W. C. Braislin, M. D. A Apr.
- Loons at Home. Wm. Dutcher. BL April.
- Maine Ornithological Society, Annual Meeting of. MJ Jan.
- May, A Ramble in. W. Quackenbush. Ol. Apr.
- May, A Walk in. Millie Abbott. PS May.
- May Morning, A. F. H. Kennard. BL June.
- Mexico, New Birds from. E. W. Nelson. A Jan.
- Michigan Ornithological Club, List of Members of the. MB Jan.
- Migration, Nocturnal. O. G. Libby. Os. Apr.
- Migration Tables for April and May. Dr. A. K. Fisher. BL April.
- Mockingbird, Coming of the. W. O. Emerson. OB Mch.-Apr.
- Mount a Bird Correctly, How to. Ol. Mch.
- Names in the A. O. U. Check-List, On Certain Generic and Subgeneric. Dr. E. Coues. Os. May.
- Names, The Spelling of. Wm. Brewster. A Apr.
- Natural History News Items and Notes. R Jan.-July.
- Nature Study in the Philadelphia Normal School. L. L. W. Wilson. SM Jan.
- Nesting Habits of Two California Birds (Pileolated Warbler & Spurred Towhee). Wm. L. Atkinson. Ol. Feb.
- Nesting Place, A Curious. Ol. May.
- Nesting Places, Choice of. C. W. Gross. PS July.
- Nesting Sites, Queer. J. M. Armstrong. Ol. Apr.
- Nest Linings in Winter. C. W. Gross. PS May.
- Nest, The Tragedy of a. Clara C. Smith. Os. May.
- New Mexican Birds, Some Additional. S. S. Wilson. A Apr.
- Nocturnal Flight of Migrating Birds. O. G. Libby. A Apr.
- North Dakota Notes. E. S. Rolfe. Os. Feb.

- Nutcrackers, Clark's Crows and Oregon Jays on Mount Hood. Florence A. Merriam. BL April-June.
- Nuthatches, Nesting Habits of the Brown-headed and White-breasted. R. P. Smithwick. Ol. Apr.
- Observers, For Young. BL Feb.-April-June.
- Old Squaw Shooting. J. Boyd. R. July.
- Oneida Co., N. Y., A Few Notes from. O. H. Johnston. Ol. Mch.
- Oological Favorites. F. S. Low. Ol. Jan.
- Orleans County, N. Y., Some Birds of Unusual Occurrence. N. F. Posson. A Apr.
- Ornithological Mixture, An. Wm. L. Atkinson. Ol. May.
- Ornithology, A Great Work Proposed. Dr. Theo. Gill. Os. Feb.
- Ornithology, Concerning Dr. Gill's Proposed History. Os. May.
- Ornithology in Rural Districts. (Spring Poetry). N. F. Posson. Ol. May.
- Ornithology, The Study of. D. P. Kissam. Ol. Feb.
- Ostriches and an Ostrich Farm. C. F. Holder. SA June 3.
- Ostrich Farming in California. E. Cawston. PS Apr.
- "Our Little Brothers of the Air." S. C. Reese. A. F. June.
- Ouzel Nesting of the Water. J. M. Willard. OB Mch.-Apr.
- Owl, American Mottled. H. E. Miller. PS Jan.
- Owl in Captivity, Habits of the Barn. D. A. Cohen. Os. Jan.
- Owls, Capture and Captivity of Great Horned. M. A. Carriker, Jr. Os. Jan.
- Owls, Habits of Young Short-eared. L. Kumlein. Os. Jan.
- Pancreatin for Eggs Containing Embryoes. I. S. Trostler. Ol. May.
- Pedicates* and *Pocates*. Theo. Gill. A Jan.
- Pelican Island, Florida, A Visit to. L. W. Brownell. Os. Jan.
- Petrel, On the Ohio River Black-capped. J. Lindahl. A. Jan.
- Philippines, Animal Life in the. G. E. Walsh. AF May.
- Phoebe, Nesting Observations on the Black. F. B. Jewett. OB Jan.-Feb.
- Photographing a Bluebird. R. W. Hegner. BL April.
- Photography, Amateur. R. Jan.-July.
- Pigeon Nesting in Santa Clara County, Cal., Band-tailed. Wm. L. Atkinson. CB May-June.
- Pigeon Shooting with Women at the Gun. AF June.
- Pigeons Really Come Back? Have the. R. July.
- Pigeons, Their Ailments and Hints on Breeding. Gordon-Staples, M. D. AF Apr.
- Pigeons, Their Care in Health. Gordon-Staples, M. D. AF Feb.
- Pigeon, The Passenger. J. Manghan. M. Jan.
- Pintail, The. A. Brooks. R. July.
- Plumage, How Birds Change. Witmer Stone. PS July.
- Poultry Breeding Artificially. C. A. Cyphers. PS May.
- Poultry for Pleasure and Profit. Gordon-Staples, M. D. AF June.
- Quail, Gambel's. G. F. Breninger. Os. Feb.
- Raptors, A Day with. E. Adams. CB Mch.-Apr.
- Raptorial Birds of Refugio Co., Texas, Brief Observations on the. J. J. Carroll. Ol. Mch.
- Raven, Nesting of the White-necked. J. H. Clark. Os. Jan.
- Reptiles and Fishes of the West Indies. F. L. Oswald. SM June.
- Robin, A Chapter on the. C. O. Ormsbee. Os. May.
- Robins or Grapes. E. P. Dorr. R. Jan.
- Rookery, My. A. M. Nicholson. Os. Jan.
- Santa Cruz Island, Cal., 1898, Spring Notes on the Birds of. Jos. Mailliard. CB May-June.
- Scoter in North Dakota, The White-winged. E. S. Bryant. Os. May.
- Sea Birds, Eggs and Eggers (Isle of Wight). B. M. B. AF May.
- Seguin Island, Winter Notes from. H. L. Spinney. MJ Apr.
- Shanghai, Winter Birds of. M. S. Ray. CB May-June.
- Skuis and Its Associations, A Case of Old. W. Stone. Os. Mch.
- Snip in Utah, Nesting of the Wilson's. H. C. Johnson. CB Mch.-Apr.
- Sparrow, Description of a New California Song. R. C. McGregor. CB Mch.-Apr.
- Concluded, corrected and brought up to date in next issue.

Two of Our Common Birds.

Purple Martin: Some time in March the Purple Martins reach here from their southern winter home. Their notes are very pleasant and never fail to attract the attention of a lover of the feathered tribe.

Behold how graceful they wend their way, now chasing an insect in its flight. The flight of the Martin is very swift, and when chasing an insect through the air is somewhat irregular, but when at leisure it is exceedingly graceful.

The nest of this bird is always placed in a cavity of some kind. In Bertie county the farmers make boxes with from four to eight rooms each. The box is placed on the end of a pole about fifteen or twenty feet long. Then the pole is raised to a perpendicular position, and secured in place by means of a hole dug in which for the end to rest.

In Lenoir county the Martins build in gourds strung on the limbs of a pole that has been prepared to receive them. Each gourd has a small hole cut in the side, and they seem to make good places for nests.

Nest building begins in the latter part of April. Early in May fresh eggs may be taken.

The number of eggs are four, five, six and sometimes seven. The last number have I seen in only one instance.

The Purple Martins are very noisy, but their notes are so pleasant that they are liked by almost all people. To my ears their notes are much pleasanter than the song of the Mockingbird, and on many a hot day in summer have I sat down in the shade of some tree and spent hours at the time watching the movements and listening to the notes of this bird.

After the breeding season is over the Martins stay with us but a short time, leaving about the last of July. Many may be seen after this date, but the greater number have already left.

Chimney Swift: The Chimney Swift is tolerably common in eastern North Carolina, where it builds its nest in such places as are always chosen by this bird.

I have found and examined several nests of the Chimney Swift, containing four and five eggs, the latter being deposited in most of the first nests of the season, and the former in nests that may have been destroyed. Four may complete the set of the first nest, but I have never found it so.

The quick, irregular flight of this bird, together with its quickly uttered notes, never fails to draw the attention.

The Chimney Swift is generally known by the name of swallow, which is applied to them by almost everybody.

During the last of August and most of September many of these birds may be seen as they leisurely drift southward. Of an evening they may be seen darting here and there after insects. Owing to the migration from the north is doubtless why they are more numerous during the migrating season than in summer.

R. P. SMITHWICK,
Merry Hill, N. C.

A Queer Nesting Site.

May 6, 1893, while passing through a meadow I noticed an old tin can *on the ground* containing a Bluebird's nest with four fresh eggs. The parent was identified. The eggs seemed somewhat lighter in color than usual.

H. T. GREENE, Montclair, N. J.

Last January Mr. H. R. Taylor, Alameda, Cal. transferred a perfect specimen of the egg of the California Vulture to the collection of Miss Jean Bell, Ridley Park, Pa. This egg was collected for Mr. Taylor in San Luis, Obispo Co., Cal., April 26, 1898. The price paid was \$90.00 so we are informed by a disinterested person. This egg and its taking was the subject of a paper read before Cooper Ornithological Club in the winter of '98-99.

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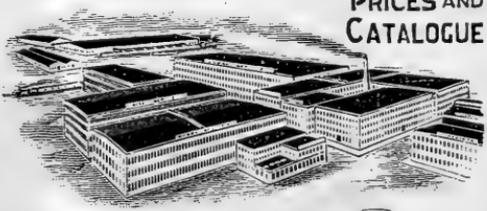
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Important!

The following 16 pages were printed as dated and at that time it was intended that they should be placed immediately in the hands of the OÖLOGIST's subscribers. Owing to this delay ALL OFFERS will be extended until AUGUST 10th.

The "Giant Clam" and "Darts from New Guinea" have been sold as also have the young Birds *in down* offered under "Mounted Birds."

"BARGAINS No. 1 and 2" offered under "Mounted Birds," at \$18.50 and \$16.45 respectively have been broken up, and we will now sell individual specimens from these collections at about one-third regular value. Write wants and receive quotations.

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Faithfully,

FRANK H. LATTIN.

The "July lists" will not be issued until later, doubtless in November.

THE OÖLOGIST,

FRANK H. LATTIN, M. D., Editor and Pubr.,

ALBION, N. Y.

June 15, 1899.

On the following pages I offer many items of special interest to the Ornithologist and Oologist and equally so to the LIVE Naturalist, Teacher and Collector, and at prices which I am sure cannot be duplicated for a long time, In the future I intend to devote the bulk of my time and energy to my profession and as sort of a side issue or hobby I shall undoubtedly continue to publish the OOLOGIST and perhaps handle such books relating to the Natural Sciences as may come my way. I have fully \$5000 locked up in my old business and during the next few months MUST unload regardless of cost or value. We shall continue our business at Chautauqua this season and undoubtedly our exhibit at the Pittsburg Exposition during September and October—personally, I do not expect to be at either for more than a few days.

We are now packing up for Chautauqua and on or about July 1st shall issue a list offering what material we have remaining here at a ridiculously low rate. From Chautauqua (between Aug. 20th and Sept. 1st) we shall have a big stock of Fair and Resort Goods to close out on same basis, and again if at Pittsburg we shall sacrifice the remainder of our stock, about Oct. 15th to 25th (ample time for the Holiday trade.) The OOLOGIST as you may note by inspecting either June or July issues will be greatly improved and will rank as one of the indispensables to the up-to-date Ornithologist, Oologist, Taxidermist and Naturalist.

If YOU are not interested will you please call the attention of some interested friend to my plans. While I need CASH above all other known commodities, I am still open to "swap" propositions if of sufficient size and advantage to warrant my attention. I especially desire "snaps" in any line; Natural History Books (ones relating to Ornithology and Oology in particular); Standard Medical Books published since 1890; and anything of use or value to an up-to-date Physician and Surgeon.

Faithfully, FRANK H. LATTIN.

In my July lists I shall offer hundreds of dollars worth of specimens in all departments and in Conchology shall make some VERY SPECIAL offers in "families" and "job lots" of "odds and ends."

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Starred (*) titles are second-hand copies, but as a rule the inside pages are "good as new." Many are practically new, but previous owners' name has been written within.

The unstarred titles are for new books. In a few instances the covers are slightly shelf-worn. Many volumes and sets cannot be duplicated—hence the necessity of sending your order early. When ordering always state whether you have a second choice, or whether you wish money refunded, in case books ordered have been sold.

Many of the volumes offered in this list are taken from my private library and I offer them for sale: First, because I need the room for other books, and Second, because I need the cash to purchase these "other books." See additional books in future issues of the Oologist.

IMPORTANT! Lack of time and space prevents my listing more books this month. I have hundreds of other publications in stock and can procure anything obtainable. Write your wants.

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Owing to the fact that I am making a most radical change in my business affairs and doing so must have the \$\$, I will for the next Thirty Days offer the following very desirable books and publications at prices never heretofore equalled and at prices which will positively be withdrawn on July 15th on all books remaining unsold. Under this offer all books will be sent by mail, express or freight at purchaser's expense, (will ship in cheapest manner). Cash must accompany all orders. If books wanted are sold money will be returned. The earlier you order the more certain you will be of securing exactly what you want.

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| 37. Allen's Hummingbird 2 N | 94. Black and White Warbler | |
| 38. Ruby-throated " " | 95. Blackburnian Warbler. | |
| 39. Arizona Jay. | 96. Cerulean Warbler. | |
| 40. Blue Jay. | 97. Kentucky Warbler. | |
| 41. Canada Jay. | 98. Prothonotary " 2 NE. | |
| 42. Slate-colored Junco. | 99. Yellow Warbler NE. | |
| 43. Kingbird 2 N. | 100. Bohemian Waxwing. | |
| 44. Belted Kingfisher. | 101. American Woodcock. | |
| 45. Ruby-crowned Kinglet. | 102. California Woodpecker. | |
| 46. Horned Lark. | 103. Red-headed Woodpecker. | |
| 47. Smith's Longspur. | 104. House Wren N. | |
| 48. Mallard 3. | 105. Long-billed Marsh Wren 2 | |
| 49. Meadowlark NE. | 121. Baldpate. | |
| 50. Red-breasted Merganser. | 122. Least Bittern. | |
| 51. Mockingbird. | 123. Bob white. | |
| 52. Nighthawk E. | 124. American Coot. | |
| 53. White-breasted Nuthatch. | 125. Brown Creeper. | |
| 54. Baltimore Oriole N. | 126. Dickcissel 2 N E. | |
| 55. Orchard Oriole N. | 127. Black Duck. | |
| 56. American Osprey. | 128. Purple Finch. | |
| 57. Great Horned Owl. | | |

FOREIGN.

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|---------------------------------|
| 106. Red Bird of Paradise. |
| 107. Cock-of-the-Rock. |
| 108. Mandarin Duck. |
| 109. Black Grouse. |
| 110. European Kingfisher. |
| 111. Blue Mountain Lory. |
| 112. Mexican Mot Mot |
| 113. Golden Oriole. |
| 114. Australian Grass Parakeet |
| 115. King Parrot. |
| 116. Japan Pheasant. |
| 117. Swallow-tailed Ind. Roller |
| 118. Red-rumped Tanager. |
| 119. Resplendent Trogon 2. |
| 120. Yellow-throated Toucan |
| 160. Rose Cockatoo. |
| 161. Nightingale. |
| 162. Double Yellow-head Parrot. |
| 163. Crowned Pigeon. |
| 164. South American Rhea. |
| 165. Black Swan. |

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MOUND BUILDER'S RELICS. We have hundreds of ordinary arrow and spear heads and a few of the more common pieces such as sinkers, drills, scrapers, &c, but have very few of the rare and desirable ones. The following we offer at about one-half regular prices: Pipe from Brant Co., Ont., a very choice specimen, **\$4.90**, prepaid; another from same locality of a more common and unattractive form, **\$1.60**, prepaid; Slate Pendant from Waterloo Co., Ont., prepaid, **55cts**; Hematite Celt from Van Buren Co., Ark., prepaid, only **\$1.20**. Ordinary Stone Axe from Cumberland Co., N. J., prepaid, **\$1.30**. I also have the contents of a cache from Rowan Co., N. C., consisting of about 400 unnotched arrow or spearheads of uniform size and form, about 2½ long, will sell as a whole very reasonable.

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Wood Ibis	75
Least Bittern	20
Bl'k-crowned Night Heron	12
Green Heron	12
King Rail	20
Sora	10
Purple Gallinule	25
Florida Gallinule	10
American Coot	08
Lapwing	20
Ring Pheasant	35
Mourning Dove	03
Red-shouldered Hawk	50
Marsh Hawk	35
Burrowing Owl	20
Florida Burrowing Owl.....	1 00
Road-runner	25
Yellow-billed Cuckoo	10
Black-b'illed Cuckoo	15
Hairy Woodpecker	50
Golden-fr'ed Woodpecker	35
Flicker	03
Scissor-tailed Flycatcher.....	03
Kingbird	03
Wood Pewee	15
Vermilion Flycatcher	75
White-necked Raven	75
American Crow	05
Fish Crow	35
Yellow-billed Magpie	50
Cowbird	03
Dwarf Cowbird	03
Red-winged Blackbird	02
Meadowlark	10
Western Meadowlark	10
Orchard Oriole	05
Bullock's Oriole	05
Purple Grackle	10
Great-tailed Grackle	15
Boat-tailed Grackle	10
House Finch	03
Western Goldfinch	10
Heermann's Song Sparrow	08
Gray-tailed Cardinal	25
Barn Swallow	05
Least Vireo	35
Mockingbird	05
Catbird	02
Brown Thrasher	03
Sennett's Thrasher	03
Curve-billed Thrasher	15
Lomita Wren	50
Bewick's Wren	20
Parkman's Wren	15
House Wren	03
Pigmy Nuthatch	75
Wood Thrush	05
American Robin	03
Gopher	35
Sand Shark	05
Hammerhead Shark	15
Red-leg Turtle	10
Snapping Turtle	10
Alligator	25
Ostrich	1 50
Emeu (20c extra.)	2 00
EGGS IN SETS. Price per set.	
Lapwing 1-4	1 00
Road-runner 1-3	75
Mourning Dove, 1-2	25
Boat-tailed Grackle 1-3	10
Red-winged Blackbird 1-4	05
Orchard Oriole 1-5	25
House Finch 1-4	25

Red-leg Turtle 1 8	75
Wood Ibis 1-3	2 00
Florida Burrowing Owl 1 2	2 00

BIRD SKINS.

Varied Thrush	\$ 75
Redpoll	25
Snowflake	25
Tree Sparrow	25
Cedar Waxwing	31
Blue-fronted Jay	1 00
Blue Jay	50
Chestnut-b'ked Chickadee	75
Brown Creeper	30
Black-and-White Warbler	35
Black th'd Green Warbler	35
Myrtle Warbler	30
Yellow Warbler	30
Indigo Bunting	35
American Goldfinch	30
Red-winged Blackbird	30
Oregon Junco	50
Rusty Song Sparrow	50
Oregon Towhee	50

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" trunculus	15
" saleanus	05
Eburna Japonica	20
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Cypræa moneta	05
Ovulum gibbosum	10
" secale	05
Nerita peleronta, select	05
Trochus (Livona) pica	15
Helix fideles	15
Bulimus Bahamaensis	10
Partula gibba	05
Orthalicus melanocephalus	10
" undatum	25
Liguus fasciata	15
Achatinella implegata	10
" spirizona	10
" olivacea	10
Pythea pyramidata	10
Pisurella barbadensis	10
Chama arcinella	15
Cardium isocardia	15
Tellina radiata	10
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Purple Urchin, select	25
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Lucky Tooth of Cod	05
Hermit Crab in Shell	35
"Eye Stones"	06
Pink Coral, spray	25
Tarpon Scale, doz	25

FOSSILS.

Spirifer varicosa	10
" Oweni	25
Pentremites Godoni	05-10
Anchocrinus bulbosus	25-50
Atrypa reticularis	15
" vitata	05
Helophyllum halli	10-50
Trilobites	25-1 00
Belemnites	10
Fossil Shark Teeth	5, 10
Scaphites nodosus	10, 25, 50, 1 00
Polyp Coral	10, 25, 50

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Pyrope	\$ 05
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Opals, Mexican	15, 25, 35, 50
Red Onyx	10
Black Onyx	10
Crocidolite, Tiger-eye	10, 15, 25
Lapis Lazuli	25
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Confederate State Bill	10
Chameleon in Alcohol	25
Alligator Tooth	5, 10, 15, 25
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Embryo Hook	15
Scissors, curved	50
Brain Spoon	25
Tenaculum	50
Scapel, improved	75
Instrument Case	75
Datas, per 100	30
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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMY.

VOL. XVI. NO. 8.

ALBION, N. Y., AUGUST, 1899

WHOLE NO. 157

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Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 157 your subscription expires with this issue

160	"	"	"	"	Nov.	"
165	"	"	"	"	April	"
170	"	"	"	"	Sept.	"

WANTED:—Good egg cabinet in exchange for same. Will give some fine sets collected by myself in this locality. CHAS. W. BOWMAN, Devil's Lake, No. Dak.

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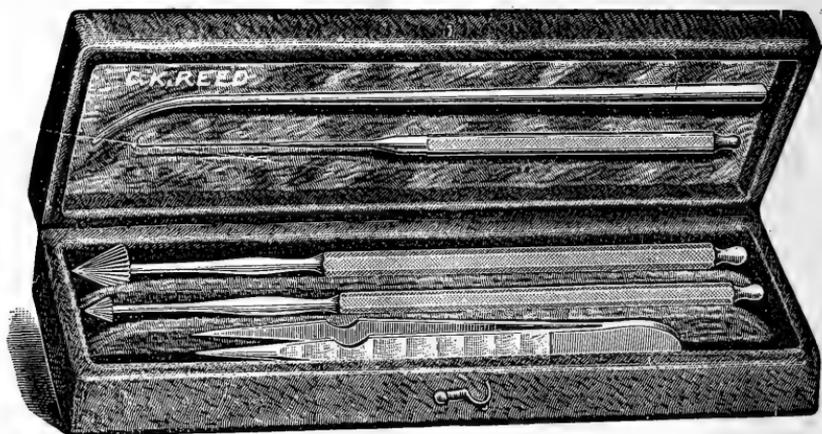
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THE OÖLOGIST.

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ALBION, N. Y., AUGUST, 1899.

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THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Owing to an unusual amount of business during the past month—both mail and at Chautauqua—and our unexpected Toronto exhibit we have found it necessary to omit the "Index Ornithologicus" and notice and reviews of new

books intended for this issue—until next month. All copy intended for September OöLOGIST must be in not later than the 15th prox—and for the October issue by October 1st, sharp.

From Porto Rico—An Old Friend in a New Place.

The tropical sun rose clear and bright and intensely warm on the morning of the 27th of March, and a comrade and myself making our preparations for a days outing walked down through the city of San Juan and engaging a sail-boat for twenty centavos to take us across the bay we were soon on the waters gleaming in the sun and rippling in the refreshing breeze coming in off the ocean.

Off to our right the sun gleamed on the silvery plumage of numerous Terns darting in many a maze of graceful geometrical figures through the air, and every now and then the less graceful form of a Pelican smote the water heavily and almost disappearing after a struggle rising with a few labored flaps of his long wings he gulped his shining, scaly treasure into his capacious pouch and continued his hunt.

After a delightful little sail we were ashore at Catania and proceeded along a road bordered for a mile or more on either side with marshes and swamps. Of the nature of these swamps one can hardly gain an idea without seeing them.

In large part they are thickly grown with bush which grows with many arched stalks at bottom, uniting in one above.

Shallow water and bottomless mud form the lower strata of these swamps.

And this mud—I never saw anything to compare to it in the States. It is a grayish-black and if one has the idea that it is not sticky just let him wade in.

When I shot a King Rail and made a plunge for it clear to the top of my leggings I found it was sticky. After considerable effort on my own part I gave a native boy ten cents to wash that mud out of those leggings.

These swamps besides being the haunt of many Rails are the homes of innumerable Little Blue Herons. In these low bushes they doubtless nest in perfect security from the depredations of man.

At any rate I think it will be sometime before any enterprising collector investigates their haunts.

Our destination, however, was the hills back of these swamps and these once reached my companion fell out. He announced his intention of sitting in the shade while I explored. Back here, shut off from the sea breeze the heat was almost stifling.

These hills rise very abruptly in places perpendicular walls of rock. Filling every bit of soil, seizing upon every crack and cranny in the rock in endless form and variety the tropical vegetation opposes an opposition to the passage of so large a creature as a man that is almost as unyielding as the rock itself, but to smaller creatures it offers a haven of retreat which they are not slow to appreciate.

Here the babel of avian music taxed the ear to identify the individual note, while bird forms constantly new to the collector from the States challenged the admiration.

Two-thirds of the way up the tortuous hillside climb, while I rested below a wall of rock in the now half-foliage concealed rifle pits that but a few months before were intended to pour forth a fire of destruction into the American troops, I heard a familiar bird voice and there above me soared

the old familiar form of the Red-tailed Hawk and from close by his mate soon joined him. I was rather surprised at meeting this old friend here.

Their cries indicated a home close at hand and walking a few steps further sure enough there it was, the typical nest of the Red-tail, fifty feet from the ground on the fork of a large branch, the tree standing on the steep hillside overgrown with vines and the peculiar parasitical growth so common here.

Notwithstanding the difficulty—not to say danger—of undertaking to reach the nest, the thought of so desirable a trophy as a set of eggs of this bird obtained here was not to be put down so grasping the vines and consigning myself to the care of Providence I battled—finally successfully—with the thorns and obstacles. Reached at last, alas! while newly finished no eggs greeted my anxious gaze.

The nest in every respect resembled a typical nest of these birds in the States.

Reluctantly and with difficulty I retraced my way to the ground and determined to pay this home a second visit later. I came away. Unfortunately military duties prevented till too late.

Later I met a young gentleman *Buteo borealis* seated on a wheelbarrow in front of a shop in the city and I at once took a snap-shot as an "illustration" to this unsatisfactory account of an unsatisfactory encounter with an old friend in a new place.

B. S. BOWDISH,
San Juan, Porto Rico.

July 26, 1899.

From the Philippines.

MY DEAR SIR:—I wrote you last December and asked you to stop sending OOLOGIST, until further notice, as my regiment had been ordered to the Philippines and I did not know what my address would be.

I miss your little magazine awfully and must have it. For the last three months I have been chasing natives all over Luzon Island and haven't had a chance to read anything, but we are now resting and are liable to remain pretty quiet, until after rainy season anyhow.

These Islands are a paradise for birds, but on account of the treacherous natives a man in uniform cannot go far from his quarters to make investigations in any line, although I have located a good many very rich fields. In my wanderings I have observed many small birds, with a wonderfully bright plumage, also a species of Eagle which is very common and five species of Hawks. A few days ago we took a town near the border of a river about forty miles north of Manila. This river is fringed with a heavy marsh on either side, swarming with ducks and other water fowl, while here I saw a native coming out of the marsh with a big basket full of duck's eggs. He claimed they commanded big prices in the markets of Manila. These eggs were about the size of our Mallards.

Well, after the war is over I expect to investigate all these joints and will report some to your paper.

It will be very hard for me to work in this country as I have no idea what to expect here and am at a loss to know how to identify my specimens. Do you know of any book giving information on birds of this land? If you do, any information on same would certainly be appreciated.

I helped to go through some Filipino government buildings in a town we took a few weeks ago and found quite an extensive collection of shells and another of birds' eggs, also some large volumes (in Spanish) on the natural history of this island. This shows that somebody has been interested.

You can address me Manila. I am liable to be a hundred miles from there,

but as the army headquarters is there, mail received is sent to the proper places.

Please send me the OÖLOGIST up to date, beginning with January issue

FRANK B. EASTMAN,
San Ferdinand, Philippine Islands.
May 30, 1899.

Unanswered Questions.

Although our advanced ornithologists have satisfactorily explained many of the curious habits of our birds, by their patient researches during the past few years; there still remain many unanswered questions concerning the common traits of various species.

Can any one advance a good reason for the Red-tail's invariable habit of placing a small spray of green hemlock or other green vegetation in their nest, or what charm a piece of snake skin has to the Great-crested Flycatcher?

How, also, are we positively to know what constitutes a set of Cowbirds eggs? In regard to this I wish to state an experience I had this season. On May 14th while following the course of a small stream I discovered two nests of the Phoebe about an eighth of a mile apart. The first contained four eggs of the Phoebe and three of Cowbirds. The second, four of Phoebe and four of Cowbirds. I took the seven eggs of the Cowbirds and compared them. Four were lightly marked, of small size and could not be told apart; the other three were heavily spotted with very fine dots and specks, were much larger and these also had no variations to each other. One nest contained two of each coloration, the other having but one of the darker colored eggs. The question is did two Cowbirds lay the seven eggs, visiting first one and then the other nest? Have I two sets of Cowbirds—one of three and one of four eggs? Who can tell?

Besides the everyday unexplained oc-

currences in bird life, we now and then in our rambles come across something unusual that we would like very much to have explained. The following for example: A willow tree in a swamp was the chosen place for a Green Heron to build its nest this season. Some twelve feet above the ground the tree crotched, forming two limbs, both of which had been broken but had not fallen; the outer branches having caught in other trees, leaving the broken limbs in a horizontal position. One was broken some two feet above the other. On the lower limb I found the nest, containing two young and an incubated egg. Two feet above on the other limb was another egg, kept in place only by the splintering of the broken part. The egg was fresh but somewhat faded from exposure to the weather. Some one explain how the egg came to be in this position! Did the nesting bird, or some other, deposit it there? If a bird—why? This marsh was hardly a place for squirrels—besides an animal would hardly have left it there unbroken.

On a rather cold day last February I was attracted by the actions of a Red-bellied Woodpecker. He was continually visiting an old dead stub, seizing something in his bill, and then flying to a slender dead sapling he would deposit his burden in some slight crevice or hollow. After watching him make numerous trips, I determined to find out what it was he was so industriously moving. Knowing that the articles could be easily dislodged, for he placed his load wherever a resting place could be found in the rough trunk of the sapling, I walked over and gave the tree a vigorous kick. Down came a shower of butternuts. Now can some one tell me what earthly use this bird could have for these nuts—every one of which had been opened and the kernels removed by squirrels? Not a sound nut in the whole. I thought of worms be-

ing in the shells, but they could have been as easily removed in the big tree from whence the bird brought them.

I might also ask why it was that a "cunning" Crow should choose to build its nest, and deposit five eggs, on a scanty wooded hillside and in a tree not two feet from a path where both men and cattle pass. A large woods being less than an eighth of a mile distant.

After all I believe that we love the birds more because we understand their taste so little. Our interest in them would be much less if we could explain all their actions, know all their secrets and read all their thoughts.

E. A. DOOLITTLE,
Painesville, Ohio.

The Pacific Horned Owl.

Bubo virginianus pacificus, (CASSIN).

It was my good fortune in my collecting rambles of this year to "stumble upon" three nests of this species, all on cliffs and, strange to relate, all containing eggs. The female bird was shot in one instance and well seen in the other two. I have found several empty nests that I think belonged to this species—one contained a thriving family of three Western Red-tails on June 10th. Without exception the nests were without lining and all bore evidence of age. In one the eggs were laid on a slight platform of twigs, a slight "fence" being built around them to prevent their rolling off, while in the others the bare ground of the shelf formed the floor of the nest and a substantial rim made of large twigs and feathers surrounded the set. The birds did not flush readily nor did they return to the nest until I had gone out of their sight. All of the nests were in easily accessible places, while a pair of American Ravens (*Corvus corax sinuatus*) chose the most precipitous face of the triangular cliff on which one of the owl's nests was

found. Here in security they raised six young, while the poor owls paid for their lack of foresight by the loss of a fine set of three eggs

One afternoon in May, my note book says it was the 24th, I lay among some sage brush and greasewood on the edge of a cliff watching some sparrows (either *Spizella atrigularis* or *Amphispiza bilineate*) that were feeding near by. My only weapon was a pea shooter or sling shot, but my strong point is patience, so I had great hopes of ultimately getting one for examination. In one of my carefully calculated movements I slid back too far, and suddenly found myself going over the edge of the cliff. I went down perhaps eight feet and "lit" on a shelf about two feet wide and ten feet long. Just as I took a step forward along this ledge a huge brownish-gray owl rose and sailing slowly across the canon lit on a dead oak limb. Here the other bird soon joined the one and I had a fine view of a pair of the rarest of our owls.

At this juncture I "bethought me" of eggs and soon found the nest in a little niche or cave in the cliff. This hole was some 18 inches square and fifteen high, while the floor was flush with the surface of the ledge. It had evidently been the resting place of some boulder in times past; now, however, it held nothing but a few bones, two or three skulls of some rodents, (probably gophers) and a few twigs and bits of bark. Upon or rather among this debris the two pure white eggs were laid. Incubation was of course far advanced, but I succeeded in saving the set with small holes. So much for patience and plenty of water. I tried pancreatin, mercuric chloride and caustic potash to no avail. The eggs are now in my collection and measure 2.12x1.75, 2.18x1.75 inches. A friend of mine considers these rather small for this species, so it might have been a second set. The small number of eggs would also seem to indicate this.

Suffice it to say for the other two sets consisting of two and three eggs and taken on May 25th and 26th respectively that they came from more open nests; that is better and more strongly built of twigs, leaves, corn stalks, etc., etc., and placed on smaller and more inaccessible ledges. In all three cases the eggs were more or less nest stained and all nests contained bones and fur with now and then a feather from some other bird, probably quail or doves. Both of these latter sets were saved only to meet a violent death at the hands of an over-enthusiastic "young oölogist." As long as he confines his depredations to my "scrap box" I do not care, but when it comes to playing ball with the eggs of *Bubo virginianus pacificus*—that don't go.

The birds themselves are not at all scarce and may be heard "hooting" in almost any dark canon during the breeding season. And there is another point—all three of my dates are very late for any sane owl to be housekeeping. Of course the eggs of all three sets were heavily incubated, but even at that they must have been laid not far from the tenth or twelfth of the month. It may yet be proven that our owls at least nest in July. Still this has been a year of late dates—with me at any rate. I took sets of Bullock's Oriole on July 1st, incubation slight; and on July 23, '99, two boys brought me a set of six Virginia Rails varying in incubation from slight to advanced, and a set of California Cuckoos, consisting of two perfectly fresh eggs. These were taken on the Monday previous, making the date July 17th. To-day, August 2d, I took two sets of Costa's Hummingbird, one fresh the other slightly incubated.

But I have turned from my owl story. Only this morning my two foxhounds, "El Colonel" and "Don Juan," while baying through a grove of live oaks flushed a pair of old birds and three young. The day was cloudy and they

seemed to have no difficulty in flying about in the open air.

YECOLOTE GRAUDE,
[H. H. D.] Fullerton, Cal.

My First Trip in '99.

How the singing of the birds makes the hot blood surge through the veins of the school boy egg crank! Well do I remember when I was only a high school lad how I used to look forward to those spring Saturday mornings when I could escape the hardships of school hours and flee to the woods, wander up the deep brook-bottomed gullies that pierce the bluffs at right angles to the river valley, gaze with wistful eye at the Red-tails—Hen Hawks they were then—as they sat secure from all my youthful spoliation on their nests, high up in the dead forks of some mammoth hard maple or black walnut, which more fortunate than its fellows, had escaped the early squatter's axe. Then I would pass on to the broader ravines bordering the green rolling prairie where the Red-shouldered and Cooper Hawks loved to sit on the dead limb of some tree on the very margin of the woods, and preen their feathers in the sunlight or dash after some chipmunk or mouse which had left his nest to drink the clear water just where it bubbled out of the gravel bank. Far over head the dark colored Turkey Buzzard would sail on motionless wing in wide circles, looking for some winter-killed sheep, or Mr. Kinghsheer would trumpet forth to tell his lady that he was having good fishing.

I never was much of an egg collector even in these early days. I would far rather lie under the trees and watch the Red-tails feed their young or hide in some gooseberry thicket, and by imitating the distress note of a young bird, call the Catbirds and Wood Thrushes around me, than go back laden with a basket full of eggs. Yet those days

were rich in the treasures they yielded. Cowbirds' eggs by the tens—why not? Cowbirds laid in other birds' nests. Kingbirds' eggs by twenties—why not? They used to fight other birds. Blackbirds' eggs by the hundred—for they stole corn.

But those days have long since passed away. All my old school-mates have long since given up their interest in birds' eggs, and have turned to the sterner realities of business life, doubtless the tearing of so many pairs of new knee trousers could not be compensated by the meagre return of a day or two in the woods. I, too, have less time to roam the woods than I used to, but I still love, on a bright Sunday afternoon to go out into the groves—for the big timber has been all cut away—and watch the Vireos climb along the branches of the trees and hunt for insects or watch Mrs. Wood Pewee and her family on the dead twig of some moss-grown oak limb.

In those olden days I seldom wandered far from town—two or three miles down the river or along the creek was as far as I dared think of going. A half day in the sloughs was a rarity seldom enjoyed and therefore much appreciated. But now times have changed and what time I can get for egging I spend in the sloughs.

To the uninitiated the idea of slough wading is far from pleasant. To think of plodding through rushes and wild rice, taller than one's head, for a half day at a time, stumbling over bogs and falling into muskrat runs, laboring through great bogs of dead and decaying vegetation which make one's legs itch for days; now dry shod over a bed of moss-grown rocks on a small island and now up to one's arm pits in dark oozy water—there is not much pleasure in all that. Some of these difficulties may be avoided in the larger sloughs by using a boat or in the smaller ponds by wearing wading boots, but the only

way for the real enthusiastic bird lover is to don an old pair of trousers and shoes, sling an old satchel full of cotton batting, a drill and something to eat over his shoulder and bid good bye to dry land and start in. You will get use to it after a while, and the possession of treasures which could never be even seen from a boat will amply repay all the itches and aches and bodily discomforts you had in getting them.

It was with a glad heart that I bade good bye to my friends at the University of Minnesota the evening of the twenty-fifth of May, 1899, after we had taken our last examination, and—as we hoped—passed into the ranks of the senior class. Pleasant as my university life had been, I yearned for the wooded bluffs and the grassy sloughs of my own home, and it was with light heart that I boarded the train the next morning. Something over three hundred university students left Minneapolis on that train, but when it stopped for the night at Jackson they were all gone. My brother met me at the depot and soon told me what plans had been laid for the morrow.

We were up at daylight the following morning and at five o'clock I carefully packed away my gun, Pony Premo No. 6, 4x5 camera, and collecting outfit, not forgetting an ample lunch and wading garments, in the double carriage that was waiting for us, drove to a friend's, and then we were off. There were four of us,—my brother, who prefers dry land to wading sloughs, my friend who was also my wading companion, and the driver, besides myself. Forty-five minutes brought us to our destination, a slough with grassy edges and several acres of open water in the center, but mostly covered with a dense growth of wild rice and now and then thick patches of rushes.

The weather was fine and we were out to enjoy ourselves. The two of us soon donned our wading garments and

began our search for eggs, while my brother and the driver put out the horses and prepared for their more comfortable pastime—fishing on the river. But we will not follow them farther. Suffice it to say that they had fair luck, caught a nice string of pike and bass, and got dinner ready for us all.

This slough, a mile or so wide by four or five long, is divided by two constrictions into three nearly equal bodies, connected by narrow passages of clear running water. As we approached the first body whole flocks of ducks flew up from the ponds along the edges, Blue-winged Teal, Shovellers, Mallards, Pintails and Gadwells, but I was much surprised to see that they were mostly in pairs, for at this time of year—May twenty-seventh—it is unusual to see female ducks far away from their nests. But it was not long before we found the answer. This spring the sloughs were early filled by the melting of the unusual amount of snow, then the ducks came, and finding conditions so favorable large numbers of them tarried with us and began to nest. They made their nests, as they nearly always do here, just in the edge of last year's mowing, but this spring was far rainier than usual, the water in the sloughs rose rapidly and covered the nests, spoiled the eggs, and as a result hundreds of ducks are seen in the sloughs along the road, but they are all in pairs, very few are nesting. During the course of the day we found the nests of two Teals', one Mallard's, one Shoveller's and one Redhead's nests under water.

As we waded along the grassy edge of the slough where the water was about a foot deep, I was agreeably surprised to flush several pair of Wilson's Phalarope. It was a pleasure to see the little fellows run along the shore up to their bellies in water, or swim from bog to bog looking for mud worms. I

saw one probe into the mud and bring up a small white worm,—too dainty to swallow it dirty he shook it around in the water until he had it washed clean, and then he ate it at a single swallow. There were lots of snail shells lying around, but I did not see the Phalaropes eat any snails. We looked for nests but could find none, and as the birds were seen mostly in pairs, they had probably not begun to nest.

Then we walked along the shore till we came to a long mud flat. Here there were a dozen or more Lesser Yellowlegs. Can any one tell me about the Yellowlegs? They come here in the spring, and during April and the first half of May are abundant, then they gradually disappear until by June first very few are to be seen; then about the twentieth of June they begin to reappear, and from the tenth of July until fall are abundant. Where are they from June first to June twentieth? Were these specimens I saw May twenty-seventh males or females? I meant to shoot some of them, but when I returned toward noon they had gone. I would like very much to know where they go. I have never found a nest nor have I heard of a nest found in southern Minnesota.

As we walked through the slough grass we flushed many Rails from their nests. The Soras were abundant, but at this time their nests contained only two or three eggs and so we did not disturb them. We found two nests of Virginia Rails, one had two eggs and the other six. I took the set of six. A King Rail was flushed from an unfinished nest in the water fully two feet deep. I have seen several nests of King Rail, but this is the first one I had seen in more than six inches of water, or in a large slough. Here they usually nest on the very edge of a small grassy pond in a hay meadow. What has been your experience with the King Rail?

After we had walked along the edge

of the slough for a mile or more and had found no nests of any value—we were looking for ducks' nests, but did not find them—we determined to go into deeper water. Accordingly we left the grass and waded among the wild rice. Coots' nests were the first thing we found—hundreds of them we saw that day; some of the nests were just begun, still fresh and green, not even anchored to the rushes or wild rice, while others contained as many as seventeen eggs, and many were hatching. One nest was way out in open water. We could see it from a long way off. The black Mud-hen sat on it until we were within fifteen feet of her, then she slid off into the water and circled around us while we examined her nest. All around the edges of the nest-platform were little red-billed, reddish-quilled, porcupine-looking fellows that would swim and dive as if they were playing hide-and-seek in the water, while the oldest of them could not have been over two or three days' old. In the nest were two little red fellows; one half a day old or so ran and hid in the loose rushes which formed the rim of the nest, the other, just out of the shell, kicked and squirmed around as if he knew something was wrong. In the same nests were half hatched and almost fresh eggs. After I had looked at the nestful of valuables I drew back a few steps and sank into the water with only my nose and eyes out. Mrs. Coot was calling and circling around, but soon became accustomed to me thus hidden and came back to the nest. She began to cluck much like a domestic hen and pretty quick her young ones clambered up the side of the nest and perched about on top of the platform, and great big fellows ten days' or a week old swam up close to the nest. Then I stood up and they all disappeared like a flash. We did not take any Coots' eggs that day, but I felt amply repaid for the time I spent in watching that Coot's nest. The only regret I had was that I couldn't take a picture of the old Coot on her nest and the various sized young ones around her.

Concluded next month.

J. C. KNOX,
Jackson, Minn.

IMPORTANT!

I can still furnish many or most items offered on last 16 pages of June-July OÖLOGIST. The "\$2.75 for \$1 00" Premium Offers hold good until Jan. 1, 1900.

Under "BOOKS FOR NATURALISTS" I can still furnish nearly everything except the ones under "Ornithology and Oölogy," under this heading it is advisable to send list of Wants, first.

"MOUNTED BIRDS" have all been sold—the few mammals in 2d column of this page adv. will be closed out at a *Bargain* to someone.

"BIRD PICTURES" we carry regular and prices and offer holds good until January, 1900 and undoub'edly throughout that year.

"SPECIAL BARGAINS IN SHELLS, EGGS, FOSSILS, &c. we can still furnish as follows:

MITRIDÆ. Sixty-eight (68) species, 95 specimens. The following species are found in this collection. *Papalis, cardinalis, fissurata, scabrinscula, dactylus, nitens* and 62 others. List value \$16.65. My price prepaid only **\$5.55**.

VOLUTA.—Twenty (20) species, 25 specimens, containing *virelens, harpa, hornis, cummingii* and 16 others. List value \$28.20. My price only **\$9.40** prepaid.

OLIVIDÆ.—Fifty-eight (58) species, 72 specimens comprising *maura, julietta, magnifica, porphyria, guttata, cummingii, eburnea, duclosiana* and 50 others. Regular price \$10.85. My price **\$3.90** prepaid.

CONIDÆ.—Seventy-nine (79) species, 85 specimens. **COCCINEUS** (worth \$5.00 net) *tulipa, bandanus, obesus, clavus, nussatella, luzonicus, princeps* and 71 others are in this collection. Regular price \$37.00. My price only **\$14.00** prepaid or without *coccineus* will sell for **\$9.35** prepaid.

CYPRÆIDÆ.—Forty-five (45) species, 55 specimens. Specimens of note are *cinerea, scurra, mauritiana, coloba* and 41 others. Regular price \$11.75. My price only **\$3.95** prepaid.

UNIONIDÆ.—One hundred and thirty-four (134) species (American) 450 specimens. All fresh live specimens. Worth at regular prices fully \$100. Will send the entire collection prepaid for only **\$28.40**.

RARE OLD SILVER COINS of Great Britain.—A collection of 50 pieces from the reign of Henry II (1154) to that of Victoria. The collection contains coins minted during the reigns of twenty-two (22) of Great Britain's monarchs. The collection lists about \$55.00, will sell as a whole for **\$22.50** prepaid.

CONTINENTAL CURRENCY of Massachusetts and New Jersey of 1765-80 from \$1 to \$20. Nine pieces listing at \$1.00 each. Will sell the lot at **\$3.00** prepaid.

BIRDS EGGS SPECIALS.—**No. 2.** A set of 1-3 Wilson's Warblers with nest. Another Maine set with complete data. Only one or two more eggs in this rare set would make it go quick at \$5.00, but the set is as it is and it's yours prepaid for only **\$1.85**. **No. 3** is an egg of the Whooping Crane with sort of an abnormal twisted tip It was collected in Iowa and ought to be worth \$5.00, will sell, however, for **\$2.85** prepaid.

BIRDS EGGS. SETS. This collection contains sets of forty-five (45) species and singles of Alligator, Ostrich and EMEU. The following very desirable sets are found in this collection: Black Skimmer 1-4, Shoveler 1-8, Pintail 1-8, Wood Ibis 1-4, Florida Bob-white 1-14, Red-shouldered Hawk 1-3, Florida Burrowing Owl 1-8, White-crowned Sparrow 1-3, Tree Swallow 1-6, Chickadee 1-6, White-faced Glossy Ibis 1-4, American Avocet 1-4 and 33 others. Catalogue value \$57.80. I will send the collection prepaid for only **\$12.55**.

BIRDS EGGS. SINGLES. A collection of one hundred and fifty (150) species. Among others the following very desirable species are found in this collection: Royal and Caspian Terns, Fulmar, Northern Eider, Wood Ibis, Short-eared Owl, Pileated Woodpecker, Vermilion Flycatcher, White-necked Raven, Rusty Blackbird, Pigmy Nuthatch, *Ostrich*, EMEU and dozens of others. Catalogue value about \$41.00. I will send entire collection prepaid for only **\$9.40**.

FOSSIL COLLECTION. A specially selected collection of Fossils for school used to I sell at \$100. One hundred (100) species and about 500 specimens ranging in value from 5c. to \$1.00 each. A very select and very valuable collection and is largely composed of Fossil Corals, all carefully labeled and prepared, and well worth \$100. My price **\$33.50** prepaid.

I have another collection similar to above put up to sell at \$50.00, 100 species and about 200 specimens which I will send prepaid for only **\$15.75**.

CATALOGUES or rather itemized lists of the specimens contained in the **SHELL, EGG, FOSSIL, COIN** and **CURRENCY COLLECTIONS** offered above will be forwarded upon receipt of 10c per collection; this amount can be deducted from purchase price of collection or will be refunded upon return of list.

EGGS OF THE EMEU. Nothing attracts greater attention in the egg line than the large dark green, nearly black pebbled egg with a lighter ground color of this peculiar Australian bird. Every egg collection would have contained one of these eggs and even the laity would have had them on their "what-nots" or among their "bric-a-brac" had not the price—which has always been \$2.50—been a little too high. We now have a limited supply at only **\$1.20** each prepaid (and according to our premium offer will include a year's subscription to the **OÖLOGIST** with exchange card, gratis, if you wish). This offer ought to close out our Emeu eggs within the next ten days.

MOUND BUILDER'S RELICS. We have hundreds of ordinary arrow and spear heads and a few of the more common pieces such as sinkers, drills, scrapers, &c, but have very few of the rare and desirable ones. The following we offer at about one-half regular prices: Pipe from Brant Co., Ont., a very choice specimen, **\$4.90**, prepaid; another from same locality of a more common and unattractive form, **\$1.60**, prepaid; Slate Pendant from Waterloo Co., Ont., prepaid, **55cts**; Hematite Celt from Van Buren Co., Ark., prepaid, only **\$1.20**. Ordinary Stone Axe from Cumberland Co., N. J., prepaid, **\$1.30**. I also have the contents of a cache from Rowan Co., N. C., consisting of about 400 unnotched arrow or spearheads of uniform size and form, about 2½ long, will sell as a whole *very reasonable*.

NEPTUNE'S CUP or Vase Sponge, *Paterion*, from Tasmania. An odd and curious specimen worth from \$15 to \$20, and we have never offered this specimen for less than \$10 prepaid. It measures 24 in. high and the vase portion is 12 in. in diam. It goes prepaid for only **\$7.60**.

SPANISH CROSS inlaid with straw from an ancient church in Jemez, New Mex. Curio dealers would ask \$5.00 for it, but it's yours prepaid for **\$1.65**.

ORIENTAL PIPE. A double holder (two bowls) for smoking two kinds of tobacco, inlaid with gold, amber mouth piece damaged. I paid \$6.00 cash for it and have been trying to sell it for \$10 for the last six years. It now goes at **\$4.30** prepaid.

AN EGYPTIAN IDOL, carved from stone or lava 1000 or more years ago, represents an elephant or some other animal, measures about 4x2½ in. Secured by a missionary acquaintance from a mummy pit in Egypt and guaranteed genuine. Prepaid only **\$3.15**.

UNIQUE MINERALS.—Ordinary ones such as retail under \$1.00 find ready sale from our Chautauqua stores, but we have a few which we have more for show and offer three of them as follows: No. 1. Native Copper, a beauty from Lake Superior region, prepaid at **\$2.70**, size 2x3 in. No. 2 is a specimen of Quartz from Australia about 1½x3 in., showing 5 deposits of pure Gold, one of which measures ¼x½ in., prepaid at **\$4.80**. No. 3 is a beautiful specimen of Fire Opal from Australia 1½x2 in., attached to original rock, prepaid **\$4.60**.

LARGE CORALS. 1 specimen of the Plate Brain Coral, *Meandrina clivosa*, from Bahamas measuring 22 in. in long diameter (16 in. short) worth \$10; one of true Brain Coral, *Meandrina cerebriformis*, 11 in. diam. worth \$5.00; one specimen of Pineapple Coral, *Perites astraeoides*, 10 in. diam. worth \$3.00, will send the three specimens prepaid for only **\$8.60**.

I WILL EXCHANGE:—Any of the Publications, Specimens, etc., offered on the

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160 " " " " " Nov. " "
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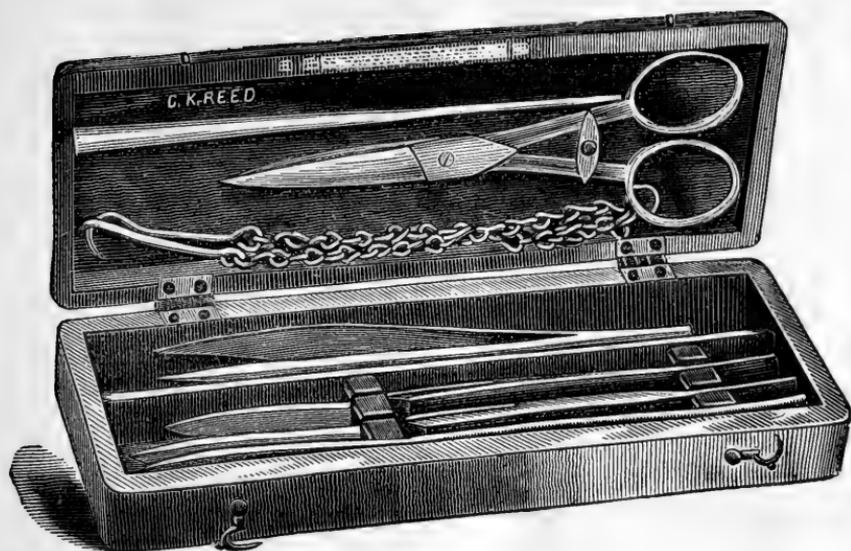


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THE OÖLOGIST.

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ALBION, N. Y., SEPTEMBER, 1899.

WHOLE No. 158

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Notes on some Albino Birds from Maryland, and on Others Inclined to Albinism.

Albinism is "An abnormal condition of plumage with white replacing the ordinary colors to a greater or less extent.

Albinism results from a deficiency or entire absence of pigment in the skin which supplies the coloring of the feathers, and is complete only when all colors are obliterated from the plumage. In birds complete albinism of the plumage is not necessarily accompanied by change of color of the bill, feet, and eyes."—(Ridgeway.)

AMERICAN WOODCOCK. (228.)

(a) Shot June 24, 1884, in Kent Co., by R. D. Coe. General color white intermixed with a few feathers of a lilac, gray color. Eyes pink, feet and bill lighter in color than normal.

BOB-WHITE (289).

(a) The late Dr. G. H. Massamore, of this city told me that about 12 years ago in Kent Co., he saw a white partridge on two occasions when a certain covey of birds was flushed, but so far as he knew no one ever killed it.

(b) Mr. F. H. Hack tells me that a cousin of his owning a farm near Emmittsburg, Frederick Co., had a covey of Partridge on it some years ago in which two of the birds were a pure white color. He would allow no one to shoot them, but they finally disappeared.

CHIMNEY SWIFT (423.)

(a) Killed by Dr. H. H. Hopkins near New Market, Frederick Co. It was a pure white color and had pink eyes.

(b) Also killed by Dr. H. H. Hopkins and was identical in marking with the other. Both killed about July 1889

AMERICAN CROW (488)

(a) Killed by Dr. H. H. Hopkins some years ago in Frederick Co. It was a light bluish color, with pale blue eyes. Dr. Hopkins writes me that it contrasted strongly when seen with its black companions.

(b) Killed by J. H. Fisher Jr., at Ruxton, Baltimore Co. One nail on right

foot was white. Secondaries of one wing slightly splashed across with several white streaks.

(c) The late Dr. G. W. Massamore told me that a friend saw a white crow in Kent Co., a number of years ago.

(d) Seen Feby. 28, 1892, by Mr. Geo. H. Gray in a field in company with other crows which did not seem to be very peacefully inclined towards it. Tail appeared to be entirely white, back and folded wings grayish color, and remaining parts normal.

(e) Mr. Robt. J. Fagan, this city, has a live crow that was captured in Jan., 1896, near Still Pond, Kent Co. I went to his place to look at it and found that he kept a lager beer saloon. The crow had been advertised in one of our daily papers and proved to be quite a drawing card. The entire plumage was a soiled looking white color; the eyes, feet, and bill being of a bluish tinge.

Mr. James Robinson, who captured it, was driving along the country road and saw it feeding with other crows which flew away when he came near them. This one also attempted to fly, but had been injured and was easily captured.

RED-WINGED BLACKBIRD. (498)

(a) A male shot about nine years ago from a large flock at Legoe's Point, Harford Co., by Mr. Wm. H. Bosley. The mounted specimen, which is in his office is mottled with white, black, and brown, the white color predominating to a large extent. Primaries and tail are pure white with the exception of one or two feathers in each, these are black. The red on the shoulders is replaced by a light yellowish pink. Bill, feet, and eyes, black.

(b) I am told that two white blackbirds were seen in a flock of red-winged blackbirds early in 1897, near Relay, Baltimore, Co.

(c) A male was shot Nov. 1, 1896, in Gunpowder River marsh, by Mr. Edw. Reynolds, who fired into a flock and

secured eighteen birds, this one being amongst those secured. Breast, belly, and tail are a dark drab gray color, red patches, on wings paler than normal, eyes black, bill and feet flesh color, primaries and secondaries ecru drab tinged with white, back drab-gray with yellowish streaks running across it. No white or black feathers show in any place.

BALTIMORE ORIOLE. (507)

(a) One in the museum of The Maryland Academy of Sciences, from Frederick Co., is a dirty white color, with the side of head, breast, and belly, tinged with yellow; bill and feet yellow. Eyes (mounted specimen) are black.

RUSTY BLACKBIRD. (509)

(a) March 31, 1893, I shot near Van Bibber, Harford Co., a specimen entirely normal excepting that on the occiput it has about half a dozen white feathers.

PURPLE GRACKLE. (511)

(a) Mr. F. C. Kirkwood tells me that during the summer of 1896, one with a pure white tail remained with others on the farm of Mr. Thomas Pierce, in Dulaney's Valley, Baltimore Co.

TREE SPARROW. (559)

(a) Seen by Mr. F. C. Kirkwood March 1, 1896, in Long Green Valley, Baltimore Co. Description given by him is as follows; "White all over, quill of wing and tail particularly so. Marked as follows: Crown, ochraceous rufus (Ridgeway colors) slightly more restricted than usual, and indistinctly divided in the center. A restricted spot at hind part of auriculars. A small spot on breast. The middle coverts, interscapulars, and a stripe across cervix, ochraceous. Tarsus, toe, and bill, flesh color. Eye, as near as I could see, natural color; it looked black in marked contrast to rest of body."

(b) A female shot by Mr. George H. Gray, April 14, 1894, at Crimea, Baltimore Co. In coloring the crown, back, bill and tarsus are much paler than

normal. Primaries, secondaries, and tail, ashey, with white quills. Feathers of tail very much worn. Eyes black.

FIELD SPARROW. (563)

(a) Killed by Mr. Arthur Resler, Jan. 14, 1891. White Feathers were sprinkled irregularly throughout the normal ones, but the general appearance of the bird was white.

SONG SPARROW. (581)

(a) Shot March 20, 1890, in Montgomery Co., by Mr. Harold B. Stabler. He writes me that it was white with exception of head, wings, and tail which were normal, only being of a lighter hue than usual. Breast was very faintly streaked.

FOX SPARROW. (585)

(a) One in a taxidermist's shop here was shot near Bayview, Baltimore Co. With exception of wings and tail which are normal, the rest of the body is a pure white intermixed with a few brown feathers.

(b) March 10, 1897, in company with Mr. F. C. Kirkwood, I saw a male in a mixed flock of Fox and Song Sparrows, in Anne Arundel Co. We followed it for some time flushing and watching it. It was very wild, and each time it was flushed it would dart off into the bushes. Rump and tail pure white with the exception that two middle feathers of the latter were normal, as was balance of plumage.

WILSON'S THRUSH. (756)

(a) Specimen in the museum of The Maryland Academy of Sciences, this city, was killed some years ago near Middle River, Baltimore County, by Mr. Alex. Wolle. Pale yellowish brown on the back, breast still lighter, belly white. Feet and bill light brown. Shafts of all feathers are white.

AMERICAN ROBIN (761).

(a) White, looks as though it were soiled; head and cheeks grayish, breast and belly dark gray very slightly streaked with brown, but it is almost imperceptible; feet and bill darker than normal, eyes black. Killed in Freder-

ick Co., and now in the museum of The Maryland Academy of Sciences.

(b) Entire specimen mottled all over with white, eyes black, tarsus and bill lighter than a normal specimen.

ENGLISH SPARROW.

It is a very common thing to see this bird with a few white feathers showing in some part of its plumage, and I will only give a few of my numerous records.

(a) One killed in Frederick Co., by Dr. H. H. Hopkins about August 1890, was a pure white all over.

(b) One on Charles Street, Baltimore. I first noticed Oct. 20, 1892, and numerous times, since up to July 1897, when it was last seen. It was always noted in the same block, and on no occasion more than 100 feet from the spot where it was first seen. Head whitish, back and under parts a light shade of brown, the primaries, rump and tail a creamy white. When bird flies from the ground it puts you in mind of a Snowflake.

(c) Jan. 20, 1893, I saw one on Charles Street with one white primary in right wing.

(d) On Charles Street I have several times seen one with several white primaries in left wing.

(e) Oct. 10, 1896, on South Street, Baltimore, one with several white feathers in tail.

(f) July 3, 1896, a male, on Maryland Ave., Baltimore, a soiled white color all over with exception of black spot in breast, and head and tail which were of a brick red color.

WM. H. FISHER, Baltimore, Md.

My First Trip in '99.

CONCLUDED FROM AUGUST OÖLOGIST.

As we kept on we found plenty of nests, but none of them very valuable. Pied-billed Grebes played all around us, but their eggs had no charms for us and they were so wary I could not watch them on their nests. Here was

one other thing, however, that interested me in this part of the slough. The Black Terns were abundant and were just beginning to nest. Now and then a nest was found containing a single egg, but the majority were either empty or just building. I had always before believed that the Black Tern merely hollowed out a nest on a bog and deposited her eggs there, but I was now undeceived. As I was walking along I happened to glance upward and saw a Black Tern with something in her bill. She was coming directly toward me so I dropped down out of sight in a clump of green rushes. Just in front of me was the remains of an old muskrat house now little more than a bog—a capital place for a Tern's nest. Here she alighted and deposited her weed stem on the edge of a little hollow near one edge of the bog, then she flew away again but soon returned with another weed and deposited that. I watched her for half an hour and during that time she made fourteen trips to the nest, bringing material each time and twice her mate came with her. When I left, the nest was not completed, but I think she had quit nest building for that morning. Many of the eggs of this species are laid on a bare bog with no nest at all, but in this instance a nest was made and the materials, which could have been had directly at hand, were brought from a distance.

So far we had taken only three sets of eggs, Virginia Rail one-six and Yellow-headed Blackbird two-four. The Blackbirds nested in the wild rice by the thousands and these two sets were interesting only on account of their color—one was almost uniformly bluish white and the other so heavily spotted as to be almost chocolate colored. But as we passed into the second slough less common birds began to be seen. We first saw a Horned Grebe, but were unable to locate the nest. It was very tame and seemed to regard us with cur-

iosity rather than fear. That was the only Horned Grebe we saw at the slough that day. Away out in the center of the clear water was a dry-grass-covered island of about a half acre; thither we directed our attention, and not without results. The first find was a Canada Goose nest, but the eggs had long since hatched, and we had to content ourselves with the sight of five young goslings about the size of Mallards, playing around their mother as if we were old friends. The mother, however, was far from fearless and stretched and cackled around as if to say that she was not at home to receive company until the first of September, when the open season begins. A pair—probably the same pair—of Geese have occupied that island ever since I can remember, and I have an egg which I took from their nest the twenty-seventh day of March in '94.

It felt good to get out of the water on to the dry land again. But we had not found many eggs yet so we began to tramp the grass to flush ducks. My first find was a fresh set of four dark olive-brown American Bittern's eggs. The old bird flushed from right under my feet, and although I had seen many Bittern's nests before, this looked the fairest of them all, for it was the first one I had ever found. On a little farther a Pintail flushed from a set of ten nearly hatched eggs. I have no Pintail's eggs in my collection, but it was useless to try to save these. How I wished for my camera to get a photo of them, but that, too, could not be had. Meanwhile my friend had flushed a Bittern from a fresh set of three eggs, and had secured a nice set of nine fresh Blue-winged Teal's eggs. We half expected to find a Loon's nest here, but in that we were disappointed.

As we left the island we made for the Night Heronry. As we neared it hundreds of Black-crowned Night Herons rose with loud squawking and flew

away in broken squads toward all points of the compass. Some of them flew about high overhead as long as we stayed in their part of the slough, but the majority settled down in other parts of the slough until we left, when they again rose and came back. We found the nests of the birds with sufficient ease, for we had only to "follow our noses" and we were sure to get there. As we did not care for any sets we did not stay long. We saw hundreds of nests, most of them containing four eggs, many two or three, four with five and one with six. Here and there was a nest containing young, but most of the nests held fresh eggs. Later in the season it is almost impossible to approach the place as the stench is nearly suffocating, and always makes me feel ill.

About ten o'clock the Franklin's Gulls began to return from feeding and we watched them circle overhead and gradually settle in the south end of the slough, so we started to wade down that way. On the way down we saw a Ruddy Duck, but could not find its nest. On a ways farther a Red-head flushed from a nest containing a single fresh egg. Far out in the open water of the center we saw what looked like a lot of bogs—perhaps two dozen of them. We had seen them before so we knew what they were. For four years a colony of American Eared Grebes have nested in the same portion of the slough. We went over towards them and as we got nearer the male Grebes began to swim and dive around us, watching us very closely, but I could not hear them utter a sound. As we got closer the females began to slip off their nests until by the time we got to them they had all left, and males and females had gone off together in a straggling flock and watched us examine their nests. Most of the nests were uncovered, but some of those containing one or two eggs were covered. I have read that Grebes do

not incubate their eggs during the day time, but cover them up and let the warmth of the sun or of the decaying vegetation of which the nests are made incubate the eggs during the hours of daylight. This may be true in some cases, but it is not a universal fact. I have never been able to surprise a Pied-billed Grebe on her nest, but the Horned and Eared Grebes I have frequently seen sitting on their nests, and have approached within a few feet of the latter before they stepped off. The nests of all the Grebes—at least all that breed here—are alike in construction, a floating bog of mud and dead vegetation, loosely yet strongly piled together and so constructed that the eggs may be covered up in a moment's notice. Location seems to be the only distinguishing mark of the nests. The Pied-billed nest singly in small ponds or along the edges of larger sloughs; the Horned Grebe nests singly or in small colonies along the edges of rush-bordered islands in lakes or larger sloughs, while the Eared nests in colonies of not less than six or seven nests and frequently of twenty-five or thirty, in open water in the center of large rushy sloughs. The eggs of the three species look very much alike, bright chalky bluish when fresh laid, gradually approaching deep olive as incubation advances. The number of eggs laid by the Eared Grebe is commonly given as four to eight, but four is the almost universal number here. Of twenty-nine nests examined this spring none contained over four eggs. Last year I found sets of five, and one nest held eight eggs, but four were of different shape than the others and I do not think all eight were laid by the same bird.

As we waded along we accidentally came upon a small colony of Forster's Terns. There were six nests in a radius of two rods, all containing three eggs apiece. The eggs were indistinguishable in size and color from sets of Com-

mon Tern in my collection. The nests were built of light dry rushes "corded up" into a firm platform. They were fully as large, but much lighter than a Coot's nest, and were small at the top and deeply cupped. When the female was on the nest she was entirely hidden from sight, so deeply were the nests cupped. These White Terns were far less pugnacious than the Black Terns. The Black Terns are always noisy and dart down toward you, even striking your head as you near their nest, and their cries may be taken as an index to find their nest—"hot or cold"—as you are near or far from the nest. But the Forster's Tern simply flushed from the nest and then flew around high over head, uttering a few loud rasping cries, but otherwise taking little apparent interest in what was going on beneath. After a time the cries of the females brought the males, and the birds thus reinforced—about a dozen in number now—screamed so loudly that the Franklin's Gulls came over to watch the intrusion.

As it was getting time for us to be thinking of going home, we turned toward the colony of Franklin's Gulls. They were nesting plentifully and most of the nests contained three olive-colored eggs, blotched and speckled with deeper olive brown. We watched the odd birds for a time as they screamed and circled over head, and then we went to shore, packed our eggs, and started for lunch and the carriage. Arrived there, we found lunch ready. My brother had found a Plover's (Bartramian Sandpiper) nest with four fresh eggs and had dug out a Kingfisher's nest with a slightly incubated set of seven. I photographed the Plover's nest and eggs, but the plate fogged and so I was disappointed in the only photo I tried to take.

We got out of our wet, prickly clothes as soon as we could, took a bath in a secluded spot in the clear water of the

creek, put on dry garments, ate our lunch, to which the boys added warm fried bass and hard boiled Coot's eggs, and started for home. The day was not very fruitful in eggs. We did not take many sets—Virginia Rail, one-six; Yellow-headed Blackbird, two-four; American Bittern, one-four, one-three; Blue-winged Teal, one-nine; Redhead, one-one; Eared Grebe, six-four; Forster's Tern, six-three; Franklin's Gull, four-three; Bartramian Sandpiper, one-four; and Kingfisher, one-seven.

But I feel that the time and discomfort spent were amply repaid by the interesting sights we saw and the habits of the various species—all common—noted. I have never aimed at a large collection of eggs, but I have aimed at a collection of nicely prepared sets which I have taken myself and of which I know the complete history.

Next year I hope to spend a week at Heron Lake where I hope to make some more observations—interesting at least to myself—and I hope to take some good photographs, for I aim hereafter to take a photograph of every set I add to my collection.

J. C. KNOX,
Jackson, Minn.

Sooty Grouse.

In my opinion the Sooty Grouse is one of our finest game birds, they are of good size and fine flavor, except in the winter, when they live mostly on fir leaves, at which time they taste very much like them. Two and one-half pounds is a good sized Grouse, but I killed one, a male, that weighed three and one-half pounds. This is the largest one I ever saw.

I took measurements of this bird, which were the following: Length, 21 inches; extent, 29½ inches; wing, 9; tail, 7½; bill, 1; toes, 2½; claw, ¾; head, 2½; the color of eye, orange brown; feet,

light slate; bill, black; comb, orange; over eye, general color, dark, speckled with gray and rusty brown.

They are found along the Pacific coast from California to Sitka, being a common bird in the Willemette valley, still more numerous in the surrounding foot hills and mountains.

In the fall, generally during October; they go up in the large fir trees, where they spend the winter, although I have seen them on the ground a few times in winter.

January 7, 1894, while passing from Dayton to Newberg, I saw a Sooty Grouse on the ground, in the timber, where the snow was gone and it seemed to be feeding. There was several inches of snow on the ground at this time.

I again saw one on the ground, in the timber, January 4, 1895. There was also snow on the ground at this date. February 22, 1895, I saw two on the ground in a stubble field, where they were feeding.

The males commence hooting about the last of February or the first of March. I have kept the date of the first I heard for the past two years. In 1894 I first heard one hooting on March 2d and in 1895 on February 26th.

At this time of year they come lower down in the tree, and are rarely seen both hooting and strutting on the ground or on old logs.

They are very good ventriloquists, but one accustomed to their habits can readily locate them.

While hooting their necks are very much distended, so much so, that they can neither see nor hear.

Although their hooting is mostly done in early spring, I have sometimes heard them as late as July and August.

The earliest date at which I have seen females on the ground was April 8, 1895, at which time I saw four feeding.

Nests may be found in April, May and June. April 14, 1894, I found a

nest with one egg, which I left until April 22d, when I went back expecting to secure a full set, but could hardly locate the spot; saw the shells of two eggs laying a few feet away and after scratching around in the leaves a while I found the nest with five nice eggs in it, which I took. They had been entirely covered up with leaves, either by the owner or the robber, I do not know which.

April 22, 1895, a set of eight fresh eggs collected.

April 29, 1894, a set of seven eggs collected, incubation begun, and on May 5, 1895, I found a nest of eight eggs, which were far advanced in incubation, but I saved them with time and hard work.

Nests are placed on the ground in a hollow, which is made by the bird and lined with leaves or dead grasses.

They are generally found in partially cleared land, under some small pole, bush or fallen tree top; although they may often be found in cleared land and also in the thick timber.

I have found several nests in grain fields, under some small bush or bunch of brier vines.

I have also found them in the thick timber, at the root of a tree or under a fallen tree top.

The eggs are creamery buff, speckled with reddish brown.

The markings are mostly at the larger end of the eggs, but I had one set of six, which had a wreath around the smaller end.

From 5 to 10 eggs are layed, commonly 7 or 8; average size is 1.84 x 1.34.

It takes them about 24 days to hatch. The female does all the incubating, while the male stays up in the fir trees, hooting, and coming down at times to procure food.

As soon as the young are hatched, they leave the nest with the old bird.

While young they live almost entirely on insects and larva; after a while the old bird takes them to the grain fields.

From this time on their principal food is grain, berries and grapes. I have seen them in grape vines and berry patches right by the side of houses.

In the winter they live on fir leaves. In the fall before they go up in the fir trees for winter, the young are very tame. I have seen them sitting on fences along the public road and they would sit there and let a person nearly catch them in their hands before they would fly.

I have also seen them sitting on houses and barns, mostly very early in the morning.

A few years ago a full grown Grouse flew into our dining room, at an open door, and lit on the dining table. Mother shut the door and so the next day he was on the table for dinner.

At one time I caught several young Grouse and put them with a domestic hen. They became very tame and would leave the hen and follow any of us around the yard. They would not stay with the hen and kept running around in the grass until they were all lost.

Some people say that the China Pheasants are killing and driving the Grouse out of the country, but I do not think so, for I have known of several cases where the China Pheasants and Grouse layed in the same nest, and the Grouse was the one that did the setting every time.

I knew of one case where a Grouse hatched and raised 5 young Grouse and 3 Pheasants. After they were old enough I have scared them out of a grain field and the old Grouse with her 5 young Grouse and the 3 young Pheasants would all fly up in an old dead fir tree.

I think the reason why they are becoming scarce in the valley is because they are never satisfied unless they have quite a grove of fir timber for their home, nor are two females satisfied to nest near each other, and as these conditions have become less, from much clearing having been done in the valley, they have mostly all gone to the mountains.

ELLIS F. HADLEY,
Dayton, Oregon.

The Peculiar Prison Bird.

The peculiarity of the prison bird, a feathered beauty of Africa, is that he is the most tyrannical and jealous of husbands, imprisoning his mate throughout her nesting time. Livingstone watched the bird's habits while in Monpour and in his subsequent observations referred to the nest as a prison and the female bird as a slave.

The nest is built in the hollow of a tree through an opening in the bark. As soon as it is completed the mother bird enters carefully and fearfully and settles down in it. Then papa walls up the opening, leaving only just space enough for air and food to pass through. He keeps faithful guard and brings food at regular intervals without fail. The female thrives under her enforced retirement. But if the prison bird is killed or in any other way prevented from fulfilling his duties the mother and her little ones must die of starvation, for she cannot free herself from bondage.

Normally the imprisonment lasts until the chicks are old enough to fly. Then the male bird destroys the barrier with his beak and liberates his family. "It is charming," writes Livingstone, "to see the joy with which the little prisoners greet the light and the unknown world."

Route as Pronounced.

There are numerous excuses for the pronunciation of the word route, and a man may hardly go amiss to choose his own style. Down south they say always rowt. In the north, among the educated classes, we hear root. Here also we hear, lower down, especially among the hyphenated Americans, rut. The Irish, even big folk, say rut. The original Webster gives the pronunciation as rowt, with an admission of root. We have adopted root because of a French leaning. The word rut, meaning a deep track in a roadway, cut by the rim of a wheel, is simply a contraction of route and rout. The Century dictionary says root or rowt, preference for root. We also say routine for routine; why not, therefore, root for route? Rowtine would sound funny.—New York Press.

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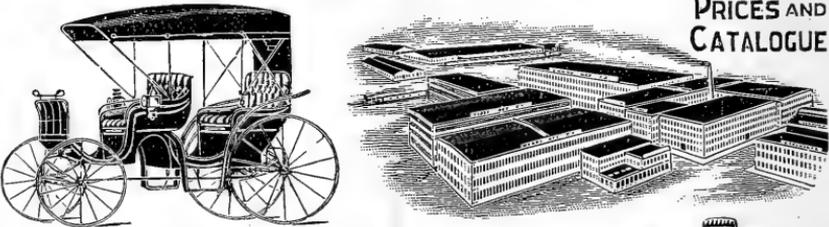
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VOL. XVI. NO. 10.

ALBION, N. Y., OCTOBER, 1899.

WHOLE NO. 159

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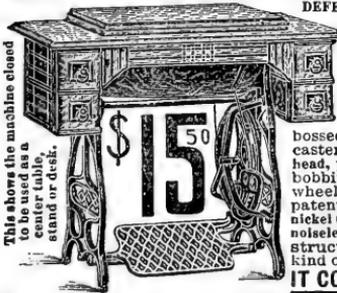
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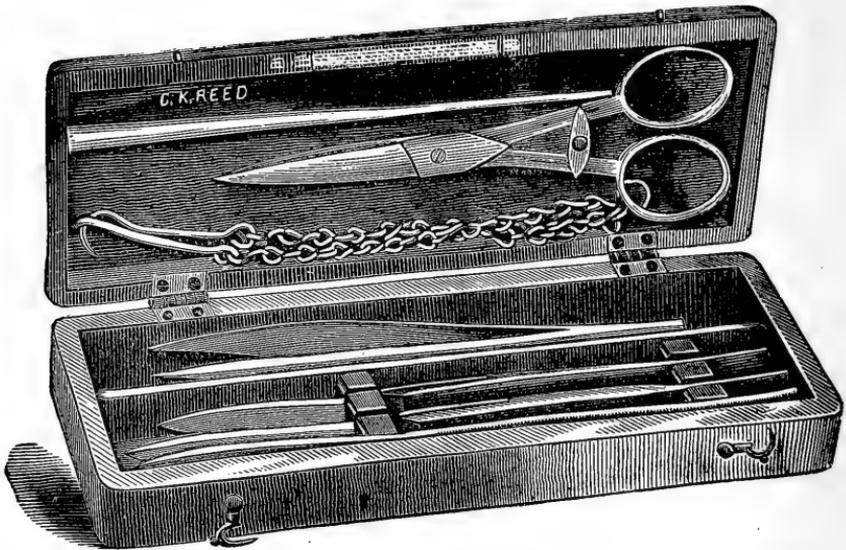
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THE OÖLOGIST.

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FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Red-shouldered Hawk.

To many readers of the Oölogist a paper on the nesting habits of so common a bird will be worth reading, if at all, simply to compare with their own notes on the same subject. Other col-

lectors and bird students, who are without the habitat of the Red-shouldered Hawk, may glean therefrom some bit of knowledge of its life habits, and this advances some apology for its appearance.

The locality which this hawk chooses for its nesting site is usually an oak or chestnut grove, when upland, and a maple grove when in the swamp; never, in any case, far from running stream or swamp, and commonly near to farm buildings. The nest is composed of goodly size sticks, so arranged as to leave a hollow in the center, into which is placed a large quantity of the inner bark of the chestnut tree—a nest which was built this year, and which I have in my den, contains enough of this inner bark to fill a peck measure. Around the outer edge of the nest, on the top, is almost invariably placed a few fresh branches of some species of the evergreen tree. The nest contains no other lining than the inner bark. After incubation begins numerous feathers from the bodies of the parent birds, accumulate in and about the nest, often-times giving it the appearance of a feathered lining; and as incubation advances the feathers cling to the outer ends of the nest-sticks, some nests becoming completely feather-bedecked by the time the young put in an appearance; while in all cases at least a few of the tell-tale feathers are there to proclaim to the trained eye the stage of nidification. The nest measures outwardly two feet across when the situation permits of the nest being built round, though from its location in the crotch of the tree, the nest is not always so built (not measuring extreme single nest-sticks which would frequently add another foot), and varies from eight to

twelve inches in outside depth. The nest cavity is a rounded hollow in the inner bark, eight inches across and three inches in depth. The nest is placed from twenty to sixty feet from the ground, commonly in chestnut, oak or maple trees, with now and again a nest in a pine.

A single pair occupies a whole grove, and has usually three or four nests, building new nests often enough to keep that number in fair condition at all times. Some pairs build new nests more frequently than others; one pair to my knowledge having built three new nests in as many years; another pair repairing old nests during the same period. In my experience, if repeatedly robbed the birds will not resort to the same grove every year, but will skip at least one year in every four. I have never taken sets from the same pair more than three consecutive years. Neither do I believe that this bird always lays a second set, if the first has been taken, for in several instances I have known of the birds remaining in the grove where they had been robbed, during the whole of the season, and making no further attempt at nesting. When, however, they do lay a second set it is deposited about four weeks after the first has been taken. Not shy while nesting they usually abandon a nest which has been disturbed before an egg is laid, but after the first egg is deposited they will not desert. The bird usually utters a sharp cry when one approaches the nesting site, and while the nest is being despoiled, one or both birds may commonly be seen soaring at great height and uttering the sharp cry at intervals.

The eggs lie in the nest without any pretence of regular order, usually from two to four in number. I have never had the good fortune to observe a set of five. Three is the most common number; about every third set containing either two or four eggs. The ground

color is brownish or bluish-white, blotched and spotted with various shades of brown, with sub shell markings of lilac. One egg in each set being frequently free from the heavier blotches and spots, but on close inspection it is often by far the handsomest egg of the set, its tints and shades of color being most delicate. The uncommon marking is a splashy appearance, as if a great lump of coloring had been thrown on, and then quickly spread over the egg. Eggs from different sets taken from the same grove have, ordinarily, the same general characteristics, and are readily interchangeable. When, however, there is any difference, there is a complete difference in detail; all strongly tending to prove that the same pair of birds return year after year to their old sites.

Perhaps it would not be amiss in connection with the foregoing, to give a running tale of a good day's collecting of the eggs of this species in 1898:

My brother and myself were up betimes on the morning of April 17, 1898, and were soon ready to start on our rounds to collect toll from our Red-shouldered Hawks. We had decided to take different routes that we might the more fully cover our territory. My friend, J. D., who though not a collector, has accompanied me on many a trip afield, was to keep me company. On reaching our parting place, with a mutual "good luck," we sought our different sites, to meet at an agreed place some miles further on. We reached our first grove about nine o'clock, two hill-sides well wooded with tall chestnut trees, with here and there a pine shooting its branchless trunk well into the air. Between the two hills trickled the small stream, fed from a maple swamp some distance to the north-west. The nests of '96 and '97 showed no signs of recent habitation, and no new nest was in evidence. Three pairs of *Corvus americanus* had full possession of the grove, and we did not disturb them,

but made our way toward the maple swamp. When near the outer edge we saw our first *Buteo* gracefully glide away, and felt certain that we were near its nest. Slowly picking our way we headed for a clump of maples well in the middle of the swamp. Soon the giving way of a bunch of rock-like moss let us into the morass, and our effort to keep dry being now futile, we pushed on with less care and soon saw the bulky nest up in a tall maple that overhung one of the many canals that meandered through the place. A quick climb brought the four eggs in view. The tape was passed down and the distance from the ground, thirty-six feet, entered in the field book, the eggs let down and safely packed, and we were ready for a new start.

Now toward a wooded tract we bend our way. The heavy wood, the swamps and streams are there as of old, but the search was nearly completed without sight or sound of our quarry, when we reached the tree from which we took a set of *Accipiter cooperi* on April 25, 1897. The nest had not greatly altered in appearance from the previous year, but a feather fluttered from the end of a nest-stick, proclaiming occupancy. It was a hard, dead shin of forty-two feet, and when the nest was reached there was no limb to stand upon, and the tree near the nest took a bad incline compelling one to hold to the under side of the tree with his legs and one hand and remove the eggs with his other hand; but the set of three handsome eggs was a nice reward for the hardest climb of the day.

A cross-country tramp of some miles through woods that had often turned out their sets failed to add to our take, and noon found us with the two sets, beside a fountain of pure water, where we lunched and lounged about for half an hour. We then made direct for a chestnut woods that held sets for us in '93, '94, '95 and '97, and in an gnarled

oak beside an old stone wall we saw the nest, an old one which had been refitted. It was thirty-six feet from the ground and contained a set of three, which were soon transferred to our basket.

The next nest was built between the two main branches of an oak. The branches were about eighteen inches apart, and between them the nest snugly rested on small cross-branches. This is the only nest of this hawk which I have ever seen resting other than in the crotch of a tree, or in the fork of a very large branch. The tree was in a small swamp, completely surrounded by water, and the nest was forty feet from the base of the tree. The three eggs which it contained were wholly different from the set taken from the same nest in '94.

It was now getting late in the afternoon, but we still had to visit another locality to complete our plans. Here again success awaited us. Forty feet up in a live oak, in a wood half a mile long and several rods wide, was the nest, another old-timer, which had been repaired for present needs. Thereon sat the second *Buteo*, which we had seen during the day. She left when we had climbed about a third of the way to the nest, which contained a set of two eggs. As soon as these were packed away we headed for the rendezvous, where we were to meet my brother, and arriving there at nearly the same time he displayed three sets of three eggs each, making an addition to our cabinet for this day's outing of eight sets, with a total of twenty-four eggs. This is our red letter day in the collecting of the eggs of *Buteo lineatus*.

JOHN H. FLANAGAN,
Providence, R. I.

The Sora.

The most abundant species of the Rail family in Michigan, found in both pen-

insulas, is the Ortolan or Sora Rail; also known as the Carolina Rail, and sometimes called the Crake. It is found about sluggish waters, sloughs and the edges of marsh-bordered lakes, where it may be taken from April until late October. In a general way the habits of this species are similar to the other species of Rails.

The nest is frequently placed in such low situations that an inundation sometimes submerges the eggs. If the eggs are only partially covered with water, the old birds—both of whom incubate—stick to the ship and cargo. It is no unusual thing to flush a bird from a nestful of partially submerged eggs and find them warm to the touch, although the marsh water indicated a temperature not greater than 66 degrees Fahrenheit. What must be the reasoning powers of this bird whose temperature registers 100 degrees, if equal to most birds; or what the blind incentive which impells it to patiently sit and wait for the appearance of the downy progeny? How do the eggs hatch when the temperature of the water in which the nest is floating about and which touches the eggs, is not over 70 degrees, and the surrounding aerial temperature is only 80 degrees in the day time and often 20 to 30 degrees lower at night? That many submerged eggs are deserted each year is well known, although many birds are bound to stay and sit if the eggs are above water; and, the farther advanced in incubation a set has become, the stronger the parent birds are impelled to remain and perform their instinctive duty. I have often met with partially submerged nests which contained live embryos, and which later produce young from sets which are partially under water. I have also found this condition in the nest of the Pied-billed Grebe, better known as the Hell-diver or dabchick, and have known the Loon to sit on eggs which lay in over half an inch of water.

The nest of this species is sometimes quite like that of the Virginia Rail, but is generally composed of coarser materials, and I believe is usually of firmer construction. The average number of eggs is nine or ten. Some sets contain but seven eggs, while eleven is the largest number I have found in examining scores of nests. A friend of mine secured fourteen from one nest. Some claim to have found twenty eggs in a nest, but any case of that number was undoubtedly an instance of two hens laying in the same nest. The Sora has the unusual habit of incubating the eggs as soon as they are laid, or nearly so, and I know of but one observation where the eggs (seven in number, in this instance) were all fresh at one time. The laying and incubation being conterminous, or nearly so, it follows that the emerging of the young occupies several days. I have found several eggs in a nest, one or two of which were within a week of being fresh, others in various stages; while a young bird just emerged was resting in the nest, and another a day or two older was running around among the rushes. The Florida Gallinule also has this peculiarity in laying and incubating conterminously, though to a less extent; but the others of the Michigan Rails are all regular in their habits, according to our accepted ideas. Of the American birds with which I am acquainted, there are two other species which possess this peculiarity, and the habit is not regular with these. I refer to the Black-billed and Yellow-billed Cuckoos, two species widely removed from those spoken of above. The two or three eggs of the Cuckoo, which are in a set often varied from four to seven days in hatching, but this variation does not always occur, as I have known all of the young to emerge about the same day.

It is but natural to suppose that the male Carolina Rail assists in the care of the young as the mother sets and brings

the little fellow out slowly; and this is found to be true, as I have seen the black animated fluffy bunches of down pattering after the old man. The young leave the nest about as soon as they are hatched and run among the grass and rushes. A large number of them must become prey for their enemies in the marsh, for, notwithstanding the large sets of eggs laid by all of the members of this family, none of them appear to increase to any extent.

The Ortolan or Sora Rail feeds largely upon the small mollusks of the marsh, and at times many of these minute shells may be found in the crops of the birds. Neuropterous insects, those belonging to the order in which the dragon fly is embraced, form a good share of their food. These insects are aquatic, like the mosquito, in their earlier forms of development. This Rail, like the others, also feeds to a limited extent on vegetable substances, and especially on a particularly kind of seed in late summer, which I have been unable to identify. One authority, Cook, in his "Birds of Michigan," gives reptiles as the food of the Rails. This is undoubtedly incorrect, as I have yet to learn of reliable instances where Rails feed on reptiles, and my readers may readily see that the make-up of these birds does not admit of their tearing snakes, frogs and turtles to pieces. The nearest that these marsh birds come to feeding on reptiles is when an occasional small tadpole is gobbled up. A captive Rail of this species, which I once owned, fed greedily on hashed meat and earthworms. The bird came readily at my approach and after three days in confinement exhibited no signs of fear, and quickly learned to feed from my hand.

This species may be readily told from all the other birds in the family by its yellow-bill, which is sufficient to distinguish it. So far as I can learn the Carolina Rail is not considered a delicacy in the great lake region, and it is rarely

used on the table; but this may be the result of prejudice, and from the fact that enough Rails are rarely shot to prepare for a meal. Most gunners shoot Rails as curiosities and then throw them away. However, along our Eastern seaboard, this species, as well as the King Rail, and also a coast species, the Clapper or salt water marsh hen, is shot in great numbers from New Jersey to Georgia, and is considered as legitimate game, and as well, favorite delicacies with many.

The name Ortolan is from the ancients and as I understand it is applied to the Starling and not to the Rail; but the present day Ortolan of Europe is a bunting, while the Wheatear is often called Ortolan in England. The Sora or Carolina Rail is never seen in the markets of the West or at least to any extent; but in the large city markets it is a common thing to see this and one or two other species.

This Rail like others of the family, departs for southern quarters in early October, and generally after a good series of frosts. The birds may be taken at times, even in November, in the great lake region, and sometimes in December.

M. GIBBS, Kalamazoo, Mich.

The Blue-gray Gnatcatcher.

The Blue-gray Gnatcatcher is a very common bird in Ionia county, Michigan, exactly on latitude 43° 0', although Coues, Davie and Apgar give it as common only south of latitude 42° 0'. Is it probable that the destruction of timber compels them to spread farther north? About here the wood lots have been reduced to from three to ten acres each and yet there are usually from one to three pairs of Gnatcatchers in each lot.

They arrive the latter part of April and by May 10th have begun nest building, this date seldom varies more than

three or four days. In about a week's time the nest is completed.

During this time they are very fearless and unsuspecting and much time I have spent sitting almost directly under their nests while they worked away apparently heedless of everything. In the meanwhile they are every now and then uttering their peculiar chirping notes, which so far as I have observed, no other bird closely imitates.

On entering a piece of woods at the right time in May you will very soon hear the familiar note. It is not very loud at any distance, but can be heard distinctly from twelve to fifteen rods. As one searches for the source of the sound the birds may be seen flitting about gathering nest material or feeding. In a few minutes they have selected some lichens or down and fly away to the nest. If it is not already in sight, its position is betrayed by the tell tale note. I know of no other bird where one is so certain of finding every nest as this, but if the search is delayed a week or until the nest is completed, the search is practically useless; the bird is quiet now, and the nest, like the Hummer's, seems a part of the mossy branch.

Probably 60 per cent. or more of the nests are built in saplings, mostly oak, from ten to forty feet up and generally in a crotch next to the body, though some are built on horizontal limbs a few feet from the body. Some nests are inaccessible, being far out on the small branches of large trees and I have found one nest in an apple orchard near a house.

The number of eggs varies from three to five, usually four or five. I have never found as few as three except when Cowbirds had laid in. Have taken one nest this year with a Cowbird's egg, covered over in the bottom.

The ground color of the egg is bluish-white, speckled with brownish and the average measurement is about .58 x .44.

During incubation the birds are very plucky, though some will leave the nest by simply jarring the tree, but usually the reverse. I have had to resort to pulling the bill or tail before the bird could be induced to leave. In one extraordinary instance the bird kept the nest till it was detached from the tree, carried to the ground and handed to my companion.

I am positive that the birds return to their old haunts, year after year, as one can almost invariably find a nest each year within a few rods of the site of the previous year.

The number of pairs inhabiting each piece of woods, varies little, though there seems to be a gradual increase.

A great many nests are destroyed each year, but the birds speedily set about rebuilding, generally using a considerable part of the old nest in the construction of the new one.

HARRY L. CUTLER,
Saranac, Mich.

A Day on the Marsh.

One pleasant August morning Tad came after me to go collecting on the marsh. We armed ourselves with a twelve guage shotgun apiece and plenty of shells loaded with 12's and 6's. Nor did we forget a good lunch, including a dozen apples and two bottles of Pilsener.

The marsh is some two or three miles from Palo Alto and as we were in no hurry we tramped along leisurely, following the windings of the San Francisco Creek. Along this creek bed, dry except during a few weeks in winter, we always find something in the way of Warblers, Sparrows or Thrushes and an occasional Owl or Hawk.

We first visited a live-oak where we once droye a California Screech Owl from his roosting hole; however no Owls were at home today. The first bird taken was a California Jay in worn breeding plumage.

Until we reached the marsh we found nothing to interest us greatly, although House Finches, Brown Towhees, Horned Larks, Flickers and California Woodpeckers were seen along the way. A noisy family of Bush-tits were exploring the top of an oak and the song of a Yellow Warbler came from the willow thickets. Samuel's Song Sparrows were abundant in the marsh grass. Adults in ragged plumage and young of the year were secured.

Just at the edge of the marsh I saw a long bill stick up followed by a head and a long neck. I was not looking for him but it did not take me long to recognize and secure this California Clapper Rail. Having one we thought best to get another. We always try to get two of a kind, sometimes we take two pair of one species. The best time for these fellows is just at the beginning of ebb tide. Then the Rail begin to run up stream, feeding on the way. Two hunters can work well together by following a tide gut on opposite banks. In this way one or the other will see Mr. Rail as he sneaks in the grass. One man can do nothing as he is sure to drop half his birds on the other shore and to cross is almost impossible on account of the soft deep mud.

The Rail is a heavy flyer, and slow to rise, much preferring to run in the long grass than to risk himself in sight. We put in the remainder of the day after Rail. By four o'clock we were well tired out but had had a good day.

Our most effective work, however, was yet to come. On the way home as we were passing a field, Tad suddenly said: "There is a Tom cat." Well, I have no use for cats and executing a right flank movement I got within thirty steps of the cat before he started for the brush. He got most of a load of sixes. He never smiled again. Further up the creek we saw three more cats, one of which I sent to the land where the small boys cease from troub-

ling the birds and the Audubonists are at rest, I hope.

Taking account when we reached home we found seven Rail, two Partridges, one Dove and two cats (not preserved). We had two splendid meals off the birds and added the skins to our collection.

Those cats made me happy for a week.

I want to repeat what I have already seen in the OÖLOGIST: "Kill the cats." In this mild climate they increase with the rapidity of rats and most of them make an easy living along the creek.

They are both domestic and wild. In town they are good kitty and next day the wildest kind of wild cats. They secure the protection of civilization and the freedom of wild life. We see from one to half a dozen of them every day we go collecting. A cat is able to catch a good many birds in nesting season and if she has kittens to feed the destruction is much greater. One cat I know of has brought in a bird for her kittens nearly every day. I have a Black-headed Grosbeak which I took alive, but wing broken, from a cat. To be sure cats catch some gophers (*Thomomys bottæ*) and are so far a benefit.

I wish it were possible to give some more conclusive evidence on the food of our cats for I must admit my evidence, though strong, is mostly circumstantial. Examination of stomach contents for a hundred or two cats would be a help.

On Guadalupe Island they have probably killed all the Towhees and Short-tailed Wrens. The Petrels are fast going the same way. They are easy prey for the cats who evidently catch them as they enter or leave the nesting burrows. Little piles of half-consumed Petrels were found by us in many places on the island. I don't mean to blame the California cat for this but if you ever visit Guadalupe kill every cat you see and a few more. And around your own locality you will probably be protecting the birds by shooting their enemy, the domestic cat gone wild.

RICHARD C. MCGREGOR.

Frederick.

Frederick was a tame Red shouldered Hawk. One day while working near a swamp I saw a large nest placed in the crotch of a cypress tree. The tree was large and the nest was so high I did not climb to it.

Sometime afterward I passed by that way and to my delight saw a hawk leave the nest. As it was too late for eggs I went home to get an ax to cut down the tree. Soon the towering branches were kneeling to the ground, and as I rushed to the crotch where the nest was placed, my eyes suddenly beheld the downy form of a young hawk. With delight I picked it up and then began to search for another which I found half crushed to death by the limbs of the tree.

Taking the two hawks I started for home. On reaching home I placed the two young birds in a box and went for something to satisfy their appetites, and returned with some meat, but they would not eat it.

In a few days the one that had been wounded by the tree, died and left the comrade to enjoy life as best it could.

Frederick grew very fast and in a few weeks began to walk around and to try to fly. One morning I threw him in the air a few feet, and to my surprise he flew to the fence fifty yards away.

After that he went where he chose and did pretty much as he pleased. His favorite resting place was a small elm in the yard, and when hungry would go there to be fed.

He would eat any kind of small reptile, animal, or insects, and especially was he fond of mice and frogs.

As he grew older he begun to show signs of fight, and would sometimes attack a woman or girl, but never did he try to fight me, he would alight on my head and shoulders at times and utter his plaintive notes when hungry.

Frederick had grown to be quite a large hawk when one day he attacked a cat and drove him from the yard, as the cat was on the fence Frederick fastened his talons in the cat's back, and the cat sent up a wail that seemed to frighten his pugnacious neighbor. The hawk let go his hold and the cat made for the barn as fast as his feet could carry him, after that the cat kept well out of Frederick's way.

While walking in the field one day I saw a Red-shouldered Hawk high in the air, as I watched him fly round in broad graceful arches it dawned on my mind that it might be Frederick. I did not have to wait long before he darted swiftly downward and alighted on a pile of brush not twenty feet from where I stood. "Frederick" I called and his answer came back as clear as if to say, "Here I am."

One morning a few days later ended his career. It was in July that he was shot in the act of catching chickens, but not by the writer.

R. P. SMITHWICK,
North Carolina.

"The Bath."

One of the most essential things in a pigeon loft is a good large bath pan. One about eighteen inches wide and twenty-four inches long makes a very convenient size. Of course if you have a great many birds, it would be best to have two pans.

Every morning the pan should be thoroughly cleaned and fresh water put in. As soon as the bath is over, or rather the birds get through bathing, the pan should be removed to prevent the birds drinking the water. Never let the birds drink and bathe from the same pan, a drinking fountain can be purchased at little cost at any pottery.

It is astonishing how much dirt is removed by a single bath. You can put your water in as clear as a crystal, and when the bath is over, the water that is left is of a milky whiteness, and the surface of it covered with dust from their bodies. This all goes to show the necessity of the bath. If you will allow your birds the free use of the water, you will find that you will have no trouble with lice, and the birds will be healthy and always in true feather.

By F. M. SIMMONS, JR.

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WB THE WILSON BULLETIN, Oberlin, O. Bi-monthly, 50c a year; 10c a copy.

Albino Birds from Maryland and on Others Inclined to Albinism, Notes on Some. W. H. Fisher. Ol Sept.

American Ornithologists' Union, The. J. A. Allen. BL Oct.

American Ornithologists Union—Full page half-tone group of Founders. BL Oct.

Animal Intelligence (Birds). AF Aug, Sept-Oct.

Aptosochromatism as Influenced by Diet, in *Megascops asio*, An Example of. F. J. Birtwell. A Oct.

Audubon's Seal, D. T. A. Tyler. BL Oct.

'Binomials' and 'Trinomials,' The Proper Function of. W. Stone and F. M. Chapman. A Oct.

Bird, A Tame, ("The Story of Little Billy"). C. C. Bascom. BN Jan.

Bird Incidents; Unusual. C. E. Pease. PS Sept.

Bird Life, A Glimpse of Foreign. C. L. Cass MB Apr.

Bird Lore of the Ancient Finns. H. S. Warren. MB Apr.

Bird Protection. R Oct.

Bird Protection. "Circumstances Alter Cases." R. C. McGregor. CB Jly-Aug.

- Birds, A Defense of Some. A. C. Strong. BN May.
- Birds and Caterpillars. C. G. Soule. BL Oct.
- Birds as Pest Destroyers. SM Aug.
- Birds as Shepherds. BN Jan.
- Birds as Weed Destroyers. AF Oct.
- Birds Carry Seeds, How. BN Jan.
- Birds Deceived by Glass. E. A. Harvey. WB Sept.
- Bird Migration. BN Jan.
- Birds of Eastern North Carolina, Notes on Some of the, (Stilt Sandpiper, Louisiana and Black-crowned Night Heron, White Ibis, Anhinga, Florida Cormorant, Parasitic Jaeger, Wilson's Petrel, Worthington's Marsh Wren.) T. G. Pearson. A July.
- Birds of Santa Cruz Island, Additional Notes on the. R. H. Beck. CB Sept-Oct.
- Birds that do not Sing. BN Apr.
- Birds, Two of Our Common, (Purple Martin and Chimney Swift). R. P. Smithwick. Ol June-July.
- Bitterns. C. H. Barlow. MB Apr.
- Bitterns, American—Half-tones of young from nature. BL Oct.
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- Books of 1899 devoted to Ornithology and the Natural Sciences, new. Ol June-July.
- Catbird, "Oliver Twist." I. Mac Lemon. BL Oct.
- Caterpillars Disturbing the Birds. C. H. Morrell. MJ July.
- Catesby Wrought, A Ramble Where. A. H. Norton. MJ July.
- Charity of Bread Crumbs, The. A. C. Steele. BN Mch.
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- Contopus* and Its Allies, A Synopsis of the Genus. H. C. Oberholser. A Oct.
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- Destruction of Bird Life. BN Mch.
- Dogs: In Health and Disease. Gordon Stables. AF Aug, Sep, Oct.
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- Eagle, The. BN Jan.
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- Egg Collecting, Criticism and Editorial. Os Sept.
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- Bird-Day Programs in the Schools, Suggestions for. C. A. Babcock. BL Apl.
- Bird, Five Hundred Men and A. C. F. Holder. AF May.
- Bird Giants, The. C. F. Holder. (California Ostrich Farm). SA June 3.
- Bird-Herd, A. Ernest Ingersoll. AF Mch.
- Bird Life, Incidents in. A. Merrill. MJ Jan., Apr.
- Bird Life in Yates Co., N. Y., Notes upon. C. F. Stone. M Jan.
- Bird Music. F. S. Mathews. PS Apr.
- Bird Protection, Report of A. O. U. Committee on. A Jan.
- Bird Protection, The American Ornithologists Union on. AF Apr.
- Bird Protection versus Sentiment. C. Barlow. CB May-June.
- Bird Studies for Children. Isabel Eaton. BL Feb.
- Bird Studies, Winter. BL Feb.
- Birds and Beasts, True Tales of. D. S. Jordan. SM Jan.
- Birds as Botanists. A. L. Lane. MJ Jan.
- Birds as Prognosticators. H. H. Johnson. Os May.
- Birds, Effect of Storms on. SA Apr. 29.
- Birds, Our Winter. Florence A. Merriam. PS Feb.
- Birds, Some of Our Winter. M. [A. Carriker, Jr. Os Mch.
- Birds Unexplained, Odd Actions of. W. B. Davis. Os Mch.
- Birds, With the. R. P. Smithwick. Ol May.
- Bittern Portrait, A Least. E. G. Tabor. BL Apr.
- Blackbird, Home Life of the Yellow-headed. M. A. Jenison. AF July.
- Bluebird, The Passing of the. C. S. Reed. Os Apl.
- Buzzards as Scavengers. C. Hallock. Os Mch.
- Cabin Window; From a. H. W. Menke. BL Feb.
- Caging Birds on the Ethics of Olive Thorne Miller. BL June; Oct.
- Camera as an Aid in the Study of Birds. Dr. T. S. Roberts. BL Feb. Apl.
- Camera, Snap Shots with Pen and. E. S. Rolfe. Os Mch.
- Cardinal at the Hub, The. Ella G. Ives. BL June.
- Catbird Study, A. Dr. T. S. Roberts. BL June.
- Chickadee Notes. C. H. Morrell. Os Apl.
- Chimney, Home Life in a. Mary F. Day. BL June.
- Cobb's Island Pictures, Three. Wm. L. Baily. BL June.
- Cobleigh, William S. C. Barlow. CB Jan. Feb.
- Collecting of Birds in Breeding Season Justified? Is the Unlimited. C. Barlow. CB May June.
- Collections and Collectors, 1784-1850, Some Philadelphia. W. Stone. A Apl.
- Colors of North American Land Birds, Evolution of the. Dr. E. Coues. Os Apl.
- Condor, Capture of a California. H. G. Rising. CB Mch. Apl.
- Condor, Pet California. D. A. Cohen. Os Jan.
- Cooper, Dr. James G. W. D. Emerson. CB Jan. Feb.
- Coot, American. A. Brooks. R Jan.
- Cowbirds Eggs, Reception of. E. H. Short. PS July.
- Creepers. Brown. H. C. Mark. Ol May.
- Criticism A Timely (on wholesale collecting birds and eggs). B. S. Bowdish. Ol Feb.
- Crossbills, American. L. M. Terrill. Ol Apl.
- Crow, A Pet. C. F. Stone. Os Jan.
- Cuckoo and Wren Notes. Hannah Rude. PS May.
- Curious Facts about Eggs. C. F. Holder. AF Jan.
- Destruction and Protection of Birds. Dr. E. Coues. Os Apl.

- Destruction of Birds by the Great Cold Wave of Feb. 13 and 14, 1899. A. T. Wayne. A Apl.
- Dickcissel in His Illinois Haunts. I. E. Hess. Ol Jan.
- Dickcissel in Michigan, The. Dr. Morris Gibbs. MB Jan.
- Doves (Mourning), Nesting on the Ground. Alice M. Munger. PS Apl.
- Doves of Florence, The Pet. Edith M. Thomas. AF Mch.
- Duck, Nesting of the Fulvous Tree. A. M. Shields. CB Jan. Feb.
- Duck Notes, Missouri River. I. S. Trostler. Os May.
- Ducks, Nesting of Alaskan. C. Littlejohn. Os Jan.
- Eagle, Capture of a Rabbit by a Golden. Wm. L. Atkinson. CB May June.
- Eagle, Nesting of the Alaska Bald. G. G. Cantwell. Os Feb.
- Egg Collecting—A Protest. A. H. Thayer. A Apl.
- Egg Collecting—Rev. W. F. Henninger Answered. Os May.
- Egg Collecting, The Scourge of. Rev. W. F. Henninger. Os Feb.
- Egg Forger, A Parisian. SA Apl. 29.
- Eggs, Hints on the Scientific Preparation of Birds'. Ol Apl.
- Embalming, Something about. Morris Gibbs, M. D. PS June.
- Emerson, W. Otto. CB Mch. Apl.
- Feather Work of Hawaii, The. SA July 1.
- Field and Study, Notes from. BL Feb., Apl., June; Oct.
- Field, Echoes from the (Notes, Items, etc.) CB Mch.-Apl.; Jly-Aug; Sep-Oct.
- Fields, From the Game. R Jan. to Oct.
- Flicker, A Belated Nest of the Northern. C. H. Morrell. MJ Apl.
- Gannets on Bonaventure. Frank M. Chapman. BL June.
- Geese, Hints on the Breeding and Care of. AF Mch.
- Geographical Distribution of Life. Prof. Walter B. Barrows. MB Jan.
- Goldeneye, The American. F. T. Coon. Os May.
- Gourdheads in the Cypress Swamps of Missouri. O. Widman. Os Mch.
- Grebe in Michigan, Pied-billed. W. A. Davidson. MB Jan.
- Grouse, An Hour with Canadian Ruffed. W. E. Woodyear. R Jan.
- Grouse, Nest and Eggs of Sooty. C. W. Bowles. Os Jan.
- Gull, A Historical Notice of Ross's Rosy. J. Murdoch. A Apl.
- Gull, An Account of the Taking of Four Sets of Eggs of the Ivory. A. A. Johnson. CB May, June.
- Gulls and Terns of Sagadahoc County (Me.) H. L. Spinney. MJ Apl. also M Apl.
- Guns and Ammunition. R June, July.
- Hallock, Charles. E. Coues. Os Apl.
- Hawk, Florida Red-shouldered. J. K. Strecker, Jr. PS Feb.
- Hawk in Hamilton Co., N. Y., Nesting of the Duck. D. H. Haight. Ol Jan.
- Hawk, Nest Building of the Cooper's. C. F. Stone. Ol Apl.
- Hawks, A Successful Day with the Duck, H. C. Johnson. CB May, June.
- Honey-Creepers, The Blue. H. C. Oberholser. A June.,
- Honey-birds. Dr. E. Murray-Aaron. SA July 8.
- Hummingbird. Nesting of the Rivoli. R. D. Lusk. Os May.
- Hummingbird, Nest of the Blue-throated. G. F. Breninger. Os Feb.
- Hummingbird, Notes on the Rivoli. F. C. Willard. Os Jan.
- Hummingbirds' Nesting, Early. CB Mch., Apl.
- Hummingbird's Nest, The Finding of a. E. W. Springer. Ol May.
- Hummingbirds of Columbia. The. O. Bangs. A Apl.
- Hylocichla, A New. H. C. Oberholser. A Apl.
- Individuality of Birds, The. W. E. Saunders. MB Jan.
- Jay, Nesting of the Santa Cruz. R. H. Beck. CB Jan.-Feb.
- Jay, Nest of Steller's. C. W. Bowles. Os May.
- Jay, the Canada. O. B. Warren. A Jan.
- Jays on Mount Hood, Clark's Crows [Nut-crackers] and Oregon. Florence A. Merriam. BL April-June.
- Jewel, (Ruby-throated Hummingbird) a Winged. S. C. Reese. AF July.
- Junco, Thurber's. H. W. Carriker. Os May.
- Lake County, Ohio, Notes from. R. Densmore. Ol Jan.
- Lark, The Prairie Horned. Rev. P. B. Peabody. Os. Apr.
- Loggerhead, (Shrike) An Acute. L. S. Keyser. AF Apr.
- Longevity of Birds and Other Vertebrates. Dr. T. Gill. Os. June.

- Long Island Birds, Notes on. W. C. Braislin, M. D. A Apr.
- Loons at Home. Wm. Dutcher. BL April.
- Maine Ornithological Society, Annual Meeting of. MJ Jan.
- May, A Ramble in. W. Quackenbush. Ol. Apr.
- May, A Walk in. Millie Abbott. PS May.
- May Morning, A. F. H. Kennard. BL June.
- Mexico, New Birds from. E. W. Nelson. A Jan.
- Michigan Ornithological Club, List of Members of the. MB Jan.
- Migration, Nocturnal. O. G. Libby. Os. Apr.
- Migration Tables for April and May. Dr. A. K. Fisher. BL April.
- Mockingbird, Coming of the. W. O. Emerson. CB Mch.-Apr.
- Mount a Bird Correctly, How to. Ol. Mch.
- Names in the A. O. U. Check-List, On Certain Generic and Subgeneric. Dr. E. Coues. Os. May.
- Names, The Spelling of. Wm. Brewster. A Apr; D. G. Elliot, A July.
- Natural History News Items and Notes. R Jan. to Oct.
- Nature Study in the Philadelphia Normal School. L. L. W. Wilson. SM Jan.
- Nesting Habits of Two California Birds (Pileolated Warbler & Spurred Towhee). Wm. L. Atkinson. Ol. Feb.
- Nesting Place, A Curious. Ol. May.
- Nesting Places, Choice of. C. W. Gross. PS July.
- Nesting Sites, Queer. J. M. Armstrong. Ol. Apr.
- Nest Linings in Winter. C. W. Gross. PS May.
- Nest, The Tragedy of a. Clara C. Smith. Os. May.
- New Mexican Birds, Some Additional. S. S. Wilson. A Apr.
- Nocturnal Flight of Migrating Birds. O. G. Libby. A Apr.
- North Dakota Notes. E. S. Rolfe. Os. Feb.
- Nutcrackers, Clark's Crows and Oregon Jays on Mount Hood. Florence A. Merriam. BL April-June.
- Nuthatches, Nesting Habits of the Brown-headed and White-breasted. R. P. Smithwick. Ol. Apr.
- Observers, For Young. BL Feb.-April-June.
- Old Squaw Shooting. J. Boyd. R. July.
- Oneida Co., N. Y., A Few Notes from. C. H. Johnston. Ol. Mch.
- Oological Favorites. F. S. Low. Ol. Jan.
- Orleans County, N. Y., Some Birds of Unusual Occurrence. N. F. Posson. A Apr.
- Ornithological Mixture, An. Wm. L. Atkinson. Ol. May.
- Ornithology, A Great Work Proposed. Dr. Theo. Gill. Os. Feb.
- Ornithology, Concerning Dr. Gill's Proposed History. Os. May.
- Ornithology in Rural Districts. (Spring Poetry). N. F. Posson. Ol. May.
- Ornithology, The Study of. D. P. Kissam. Ol. Feb.
- Ostriches and an Ostrich Farm. C. F. Holder. SA June 3.
- Ostrich Farming in California. E. Cawston. PS Apr.
- "Our Little Brothers of the Air." S. C. Reese. A. F. June.
- Ouzel Nesting of the Water. J. M. Willard. CB Mch.-Apr.
- Owl, American Mottled. H. E. Miller. PS Jan.
- Owl in Captivity, Habits of the Barn. D. A. Cohen. Os. Jan.
- Owls, Capture and Captivity of Great Horned. M. A. Carriker, Jr. Os. Jan.
- Owls, Habits of Young Short-eared. L. Kumlein. Os. Jan.
- Pancreatin for Eggs Containing Embryoes. I. S. Trostler. Ol. May.
- Pediocates* and *Poocates*. Theo. Gill. A Jan.
- Pelican Island, Florida. A Visit to. L. W. Brownell. Os. Jan.
- Petrel, On the Ohio River Black-capped. J. Lindahl. A. Jan.
- Philippines, Animal Life in the. G. E. Walsh. AF May.
- Phoebe, Nesting Observations on the Black. F. B. Jewett. CB Jan.-Feb.
- Photographing a Bluebird. R. W. Hegner. BL April.
- Photography, Amateur. R. Jan.-July.
- Pigeon Nesting in Santa Clara County, Cal., Band-tailed. Wm. L. Atkinson. CB May-June.
- Pigeon Shooting with Women at the Gun. AF June.
- Pigeons Really Come Back? Have the R July.
- Pigeons, Their Ailments and Hints on Breeding. Gordon-Staples, M. D. AF Apr.

- Pigeons, Their Care in Health. Gordon-Staples. M. D. AF Feb.
- Pigeon, The Passenger. J. Manghan. M. Jan.
- Pintail, The. A. Brooks. R. July.
- Plumage, How Birds Change. Witmer Stone. PS July.
- Poultry Breeding Artificially. C. A. Cyphers. PS May.
- Poultry for Pleasure and Profit. Gordon-Staples. M. D. AF June.
- Quail, Gambel's. G. F. Breninger. Os. Feb.
- Raptors, A Day with. E. Adams. CB Mch.-Apr.
- Raptorial Birds of Refugio Co., Texas, Brief Observations on the. J. J. Carroll. Ol. Mch.
- Raven, Nesting of the White-necked. J. H. Clark. Os. Jan.
- Reptiles and Fishes of the West Indies. F. L. Oswald. SM June.
- Robin, A Chapter on the. C. O. Ormsbee. Os. May.
- Robins or Grapes. E. P. Dorr. R. Jan.
- Rookery, My. A. M. Nicholson. Os. Jan.
- Santa Cruz Island, Cal., 1898, Spring Notes on the Birds of. Jos. Mailliard. CB May-June.
- Scoter in North Dakota, The White-winged. E. S. Bryant. Os. May.
- Sea Birds, Eggs and Eggers (Isle of Wight). B. M. B. AF May.
- Sequin Island, Winter Notes from. H. L. Spinney. MJ Apr.
- Shanghai, Winter Birds of. M. S. Ray. CB May-June.
- Skins and Its Associations, A Case of Old. W. Stone. Os. Mch.
- Snipe in Utah, Nesting of the Wilson's. H. C. Johnson. CB Mch.-Apr.
- Sparrow, Description of a New California Song. R. C. McGregor. CB Mch.-Apr.
- Sparrow in Massachusetts, The Sharp-tailed. F. H. Brackett. Os. June.
- Sparrow, Nesting of LeConte's. G. F. Dippie. Os. Jan.
- Sparrows, The Names of the Song. E. C. Oberholser. A. Jan.
- Sparrows, The Seaside. F. M. Chapman. A. Jan.
- Spring Migration of 1896 in the San Gabriel Valley. H. A. Gaylord. CB Jan.-Feb.
- Swallow, The Cliff. I. H. Wentworth. Ol. Apr.
- Swift, Nesting of the Chimney. J. K. Strecker, Jr. PS Apr.
- Swift, Unusual Nesting Site of the Chimney. C. H. Morrell. MJ Apr.
- Tern in Los Angeles County, California, Breeding Habits of the Least. A. I. McCormick. CB May-June.
- Thrush, Nesting of Audobon's Hermit. L. Belding. CB Mch.-Apr.
- Towhee, A New Race of the Brown. R. C. McGregor. CB Jan.-Feb.
- Towhee, Spurred. Wm. L. Atkinson. Ol. Feb.
- Traps and How to Make Them (23 illustrations.) R. Acker. R. July.
- Truth *versus* Error. D. G. Elliot and J. A. Allen. A. Jan.
- Turkey Hunt, An Iowa. I. Whitted. R. July.
- Turkey, My First Wild. R. Jan.
- Turtles, Our North-Eastern. A. H. Verrill. PS July.
- Venom of Serpents and Antidote. Angus James. PS July.
- Watching the Parade. (Spring Migration.) L. S. Keyser. AF Feb.
- Water-Thrush, Notes on the Louisiana. W. L. Foxhall. Ol. Mch.
- Warbler in California and Description of a New Race, The Myrtle. R. C. McGregor. CB Mch.-Apr.
- Warbler, Nesting of the Black-and-White. J. W. Jacobs. Os. Jan.
- Warbler, Nesting of the Blue-winged. J. C. A. Meeker. Ol. Feb.
- Warbler, Nesting of the Hermit. C. Barlow. A. Apr., also Os. Mch.
- Warbler Pileolated. Wm. L. Atkinson. Ol. Feb.
- Warbler, Proper Name for. Macgillivray's. W. Stone. A. Jan.
- Warbler Time, In. John Burroughs. BL Feb.
- Warbler, The Worm-eating. D. L. Savage. Ol. Feb.
- Warblers in North Carolina, The Hooded and Pine. R. P. Smithwick. Ol. Feb.
- Warblers of Arizona, Summer Resident. O. W. Howard. CB May-June.
- Waxwing, Nesting and Flycatching Habits of the Cedar. B. Hoag. Ol. Feb.

- Whip-poor-will when Calling, The Attitude of. J. A. Moffatt. Ol. May.
- Wilson, Alex.—“Behind the Wedding Veil.” Julia S. Robins. Os. Mch.
- Winter Birds of Aroostook County, Maine, Brief Observations on Some. A. H. Norton. Mj Jan.
- Woodcock in Southern Wisconsin, Nesting of the American. G. W. Vosburg. Ol. Mch.
- Woodcock, The. A. Brooks. R. July.
- Wren and Cuckoo Notes. Hannah Rude. PS May.
- Wren, Home of the Tule. W. H. Miller. PS Mch.
- Wren's Nests in Odd Places. J. K. Strecker, Jr. PS Apr.
- Wren's Nest, The. E. M. Wilson. AF Apr.

New Books of 1899

- Devoted to Ornithology and the Natural Sciences.
- Stories of Animal Life. C. F. Holder. American Book Co., N. Y. 261 p., 12 mo., cl., 60c.
- Wild Life at Home. R. Kearton. How to study and photograph it, il. by photographs taken direct from nature. by C. Kearton. Cassell & Co., Ltd., N. Y. 15-188 p., il., 12 mo., cl., \$1.50.
- Special Method in Natural Science for the First Four Grades of the Common School. C. A. and Lida B. McMurry. 2d ed. rev. and enl. Public School Publishing Co., Bloomington, Ill. 267 p., 12 mo., cl., 50c.
- Aquaria. C. N. Page. A treatise on the food, breeding and care of fancy
- Bird Preserving and Mounting and the Preservation of Birds' Eggs. R. Avis. F. Warne & Co., N. Y. 48 p., 12 mo., pap., 15c.
- Glimpses of Nature for Little Folks. Katherine A. Griel. D. C. Heath & Co., Bost. 4-103 p., il., 12 mo., bds., 30c.
- Our Feathered Friends. Eliz. and Jos. Grinnell. D. C. Heath & Co., Bost. 11+144 p., il., 12 mo., bds., 30c.
- A review of the above Books and a list of the new ones issued since July first will be given in November OÖLOGIST.
- Outlines of Zoology. J. Arthur Thomas. 3d rev. and enl. ed. Appleton, N. Y. il., 12 mo., cl., \$3.50.

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- 85 Primitive Methods of Drilling, McGuire, 134p, 201 Fig..... 1 25
- 86 Aboriginal Basket-work, Mason, 16p, 64 Pl..... 1 25
- 87 The Human Beast of Burden, Mason, 60p, 54 Fig..... 50
- 88 Cradles of American Aborigines, Mason, 52p, 45 Fig..... 50
- 89 The Ulu, or Woman's Knife, of the Eskimo, Mason, 6p, 21 Pl..... 45
- 90 Aboriginal Skin Dressing, Mason, 38p, 33 Pl..... 1 00
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- 92 Primitive Travels and Transportation, Mason. 358p, 25 Pl, 260 Fig..... 2 00
- 93 The Catlin Collection of Indian Paintings, Matthews, 18p, 21 Pl..... 50
- 94 Eskimo Bows, Murdock, 10p, 12 Pl..... 35
- 95 Indians of the Northwest Coast, Niblack, 162p, 70 Pl, 300 Fig, 2 maps..... 2 00
- 96 Notes on the Ethnology of Tibet, Rockhill, 84p, 52 Pl..... 1 25
- 97 A Study of Primitive Money, Stearns, 38p, 9 Pl, 22 Fig..... 50
- 98 Ethnology of Easter Island, Thompson, 106p, 49 Pl, 20 Fig..... 1 50
- 99 A Study of Prehistoric Anthropology, Wilson, 76p, 20 Pl, 287 Fig..... 1 50
- 100 Minute Stone Implements from India, Wilson, 6p, 2 Pl..... 15
- 101 Ancient Indian Matting, Wilson, 4p, Pl 15
- 102 The Paleolithic Period of the Stone Age, Wilson, 26p, 28 Fig..... 35
- 103 The Swastika, Wilson, 256p, 25 Pl, 374 Fig..... 2 00
- 104 Anthropology at the Paris Exposition in 1889, Wilson, 40p, 7 Pl..... 35
- 105 Antiquity of the Red Race in America, Wilson, 8p..... 15
- 106 Prehistoric Art, Wilson, 340p, 24pl, 325 fig..... 3 00
- 107 Biblical Antiquities, Adler & Casanowicz, 82p, 46pl..... 1 25
- 108 The Kwakintl Indians, Boas, 428p, 51 pl., 215fig..... 3 00
- 109 Chess and Playing Cards, Culver, 278 p, 50pl, 236 fig..... 2 00
- 110 Graphic Art of the Eskimos, Hoffman, 230p, 182pl, 154fig..... 2 50
- 111 Lamps of the Eskimo, Hough, 34p, 24pl, 4 fig..... 65
- 112 The Ontonagon Copper Bowlder, Moore, 10p, 2pl..... 15
- 113 Geology and Natural History of Lower California, Merrill, 26p, 10pl..... 50
- 114 Mineralogical Collections in the National Museum, Tassin, 6p, 1pl..... 15
- 115 The Tongues of Birds, Lucas, 20p, 2pl, 13 fig..... 25
- 116 Taxidermal Methods in the Leyden Museum, Shufeldt, 8p, 6pl..... 25
- 117 Bibliography of North American Invertebrate Paleontology, White and Nicholson, 132p..... 1 00
- 118 The Genus Uncinula, Kelsey, 16p, 10fig 25

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Include following at prices given. Sets with data, number of eggs in each set follows the name. Prices are per set.

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Blue-winged Warbler 4, \$2.00.
Green-wing Teal 10, Prairie Short-tailed Grouse 10, Yellow-throated Warbler 3, at \$1.70.
Mangrove Cuckoo 4, Groove-billed Ani 6, Sooty Grouse 6, Gila Woodpecker 3, Gt. Horned Owl 3, at \$1.45.

Oregon Ruffed Grouse 9, Shoveller Duck 10, Red-spotted Bluethroat 5, Couch's Kingbird 4, Barred Owl 2, at \$1.25.

Wilson's Phalarope 4, Red-bellied Hawk 3, McCown's Longspur 3, Chuck-will's-widow 2, Red-head Duck 9, Eng. Pheasant 13, Fla. White-breasted Nuthatch 3, Plain Titmouse 6, Short-billed Marsh Wren 3, Whip-poor-will 2, Wood Ibis 4, at \$1.00.

Fla. Barred Owl 2, Western Grebe 5, Gt. Horned Owl 2, Eng. Pheasant 10, Pintail 8, Tree Sparrow 3, Audubon's Caracara 2, Sage Thrasher 4, Cassin's Vireo 3, Arctic Towhee 4, White-crowned Sparrow 5, Lomita Wren 5, Violet Green Swallow 6, Oregon Chickadee 7, Brown Creeper 3, Willow Thrush 3, at 75c.

Screech Owl 5, Burrowing Owl 9, Booby 1, Fla. Screech Owl 4, Bendire's Thrasher 3, Mex. Meadowlark 5, Band-tailed Pigeon 2, White-crowned Pigeon 2, Calif. Woodpecker 5, Horned Puffin 1, Turkey Vulture 2, Bob-white 17, Water Thrush 3, Western Gnatcatcher 5, Abert's Towhee 3, White-eyed Towhee 4, Sonoran Redwing 4, Bahaman Redwing 4, Hairy Woodpecker 4, Crissal Thrasher 2, Sonora Yellow Warbler 5, Pileated Warbler 3, Hooded Warbler 4, Black-necked Stilt 4, Am. Avocet 4, Holboell's Grebe 4, at 60c.

Reddish Egret 4, Calif. Screech Owl 4, Merlin 3 (1 egg dam.), Harris' Hawk 3, Audubon's Shearwater 1, Cooper's Hawk 5, Swainson's Hawk 3, Red-tailed Hawk 3, Burrowing Owl 8, Texan Screech Owl 3, Palmer's Thrasher 4, Dunlin 4, Northwest Crow 4, Blue-wing Teal 8, Gt. Black-backed Gull 3, Hermit Thrush 4, Inca Dove 2, White throated Sparrow 4, Green-tailed Towhee 3, Texan Horned Lark 5, Cooper's Hawk 4 (spotted), Farrallone Cormorant 4, at 50c.

Virginia Rail 8, Desert Sparrow Hawk 3, Spotted Crake 4, Sora 12, Cabot's Tern 3, Fla. Nighthawk 2, Cooper's Hawk 4, Am. Eared Grebe 3, Prothonotary Warbler 5, Mex. Crested Flycatcher 5, Rough-wing Swallow 5, Baird's Wren 5, Red-bellied Woodpecker 5, at 40c.

Red-tail Hawk 2, Swainson's Hawk 2, Calif. Jay 5, Roadrunner 5, Belted Kingfisher 5, Richardson's Skua 2, Manx Shearwater 1, Am. Coot 12, Chacalaca 3, Am. Eared Grebe 7, Phainopepla 3, Bobolink 4, White-bellied Swallow 7, Chickadee 7, Wilson's Thrush 5 (eggs all spotted), Western Yellow-throat 4, Oven-bird 5, Ariz. Hooded Oriole 3, Red-bellied Woodpecker 4, Verdin 3, Hooded Oriole 4, Seaside Sparrow 4, Lawrence's Goldfinch 5, Summer Tanager 4, Killdeer 4 (extra fine), at 35c.

Ring Plover 4, Am. Egret 3, Fla. Blue Jay 5, Texan Bob-white 9, European Coot 6, Fla. Grackle 4, Cooper's Hawk 3, Am. Eared Grebe 6, Killdeer 4, Pied-billed Grebe 3, Tree Swallow 6, Calif. Bush-tit 6, Chickadee 6, Red-tail Hawk 2 (an extra heavy marked set but one egg slightly cracked), Chestnut-sided Warbler 4 and nest, Least Vireo 3, Blue Grosbeak 4, Downy Woodpecker 4, Oven-bird 4, Snowflake 2, at 30c.

Fulmar 1, European Blue Heron 3, Texan

Nighthawk 2, Am. Herring Gull 3, Am. Magpie 5, Am. Redstart 4 with nest, Red-shafted Flicker 8, West. Nighthawk 2, Red-tail Hawk 2 (one egg damaged), Spotted Sandpiper 5, Least Flycatcher 4 and nest, Chestnut-sided Warbler 4, Carolina Chickadee 4, Cactus Wren 4, Phainopepla 2, at 25c.

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Roseate Tern 3, Black Skimmer 4, Western Meadowlark 6, Meadowlark 5, Towhee 4, Chimney Swift 4, Scissor-tailed Flycatcher 4, Gt. Tailed Grackle 3, Rose-breasted Grosbeak 5, Black-billed Cuckoo 4, European Tree Sparrow 5, Tree Swallow 3, Am. Redstart 3, Western Robin 4, Loggerhead Shrike 6, Wilson's Thrush 4, House Wren 6, Indigo Bunting 4 and nest, at 15c.

Meadowlark 4, Black Skimmer 3, Indigo Bunting 4, Red-headed Woodpecker 4, Dickcissel 5, Louisiana Heron 3, House Wren 5, Black-billed Cuckoo 3, Bullock's Oriole 4, Samuel's Song Sparrow 4, Red-eyed Vireo 4, Calif. Towhee 4, Rose-breasted Grosbeak 4, Am. Crow 6, at 12c.

Leaches Petrel 1, Baltimore Oriole 5, Black Tern 3, House Wren 4, Red-eyed Vireo 3, Indigo Bunting 3, Rose-breasted Grosbeak 3, Wood Thrush 5, Arkansas Kingbird 4, Arkansas Goldfinch 3, Bi-colored Blackbird 3, Dickcissel 4, at 10c.

Blue Jay 5, Bronzed Grackle 5, Yellow-billed Cuckoo 2, Song Sparrow 4 and nest, Bluebird 4, Wood Thrush 4, House Finch 5, at 8c.

Brown Thrasher 5, Least Tern 2, Bronzed Grackle 4, Red-eyed Vireo 2, Cardinal 3, Mockingbird 4, Lark Sparrow 4, Yellow Warbler 4, Barn Swallow 4, at 6c.

Barn Swallow 3, Brown Thrasher 4, Kingbird 4, at 5c.

Red-wing Blackbird 4, Mourning Dove 2, Blue Jay 3, Catbird 5, Am. Robin 4, Chipping Sparrow 4, at 4c.

All purchases sent prepaid if amounting to 35c or over. 5c. extra if less than 35c.

Orders over \$5.00 5 per cent. discount.

Orders over \$7.50 8 per cent. discount.

SINGLE EGGS. (rarer ones mostly with data). First class.

Prices given are postpaid. On \$5.00 or over a discount of 5 per cent. will be allowed. Over \$7.50 8 per cent.

Cerulean Warbler, Mourning Warbler, Ferruginous Rough-leg Hawk at 75c each.

Short-eared Owl, Sharp-shinned Hawk at 60c each.

Pine Grosbeak, Lead-colored Bush-tit, Fla. Burrowing Owl, Ferruginous Rough-leg Hawk (slightly cracked but finely marked) at 40c ea.

Redpoll (Labrador) Siskin, Wood Ibis, White-faced Glossy Ibis, White-crowned Pigeon, Red-naped Sapsucker, Golden-crowned Kinglet at 32c each.

Cassin's Vireo, Mex. Screech Owl, Southern Hairy Woodpecker, Band-tailed Pigeon, Arizona Cardinal, Lawrence's Flycatcher at 28c each.

Gray Ruffed Grouse, Bendire's Thrasher, Arctic Towhee at 25c each.

Pileated Warbler, Sage Thrasher, Rocky Mt. Screech Owl, Am. Golden-eye, Turkey Vulture (slight crack) Mex. Horned Lark, Groove-billed Ani at 20c each.

Ruddy Duck, Black-necked Stilt, Am. Avocet, Snowy Plover, Tufted Tit, Plain Tit, Western Gnatcatcher at 15c each.

Verdin, Shoveller, Gt. Blue Heron, Fla. Clapper Rail, Western Gull, Royal Tern, Gannet, Marsh Hawk, Red-shouldered Hawk, Mongolian Pheasant, White-fronted Dove, Calif. Woodpecker, Western Nighthawk, Chestnut-colored Longspur, Violet-green Swallow, Ariz. Hooded Oriole, Rusty Song Sparrow at 12c each.

Ruffed Grouse, Spotted Crane, Am. Herring Gull, Ring-billed Gull, English Snipe, Brown Pelican, European Quail, Mex. Ground Dove, Gairdner's Woodpecker, Texas Woodpecker, Ruddy Horned Lark, Texas Sparrow, Gray-tailed Cardinal, Least Vireo, Desert Song Sparrow, Prairie Hen, European Blue Heron, Wilson's Thrush (spotted runt) at 10c each.

Blue Grosbeak, Bewick's Wren, Blue-winged Teal, Mallard Duck, Horned Grebe, Laughing Gull, King Rail, Ring Plover, English Partridge, Mex. Crested Flycatcher, Ash-throated Flycatcher, Lark Bunting, Baird's Wren, Prothonotary Warbler, Prairie Warbler, Grasshopper Sparrow, Seaside Sparrow, Sharp-tailed Sparrow, Bush-tit, Hooded Oriole, Scarlet Tanager, Calif. Thrasher, Oregon Towhee Dwarf Cowbird (runt) at 8c each.

Spurred Towhee, White-eyed Vireo, Burrowing Owl, Kildeer, Downy Woodpecker, Prairie Horned Lark, Chestnut sided Warbler, West. Grasshopper Sparrow, Spurred Towhee, West. Field Sparrow at 6c each.

Am. Eared Grebe, Snowy Heron, Louisiana Heron, Spotted Sandpiper, Am. Magpie, Alder Flycatcher, Boat-tailed Grackle, Cactus Wren, Yellow throated Vireo, Curve-billed Thrasher, Sennett's Thrasher, Lapwing at 5c each.

Long-tail Chat, Little Blue Heron, Black-crown Night Heron, Virginia Rail, Fla. Gallinule, Clapper Rail, Least Bittern, White-wing Dove, Say's Phoebe, Least Flycatcher, Tricolored Blackbird, Wood Pewee, Great-tailed Grackle, Am. Redstart, Bell's Vireo, Calif. Bush-tit, Tree Swallow, Black-headed Grosbeak, Gambel's Sparrow, Swamp Sparrow, Crested Flycatcher, Green Heron at 4c each.

Common Tern, Pied-billed Grebe, Am. Coot, Least Tern, Sora Rail, Bob-white, Texas Bob-white, Red-head Woodpecker, Dwarf Cowbird, Bicolored Blackbird, Meadowlark, Towhee,

Yellow-breast Chat, Painted Bunting, House Wren, Calif. Towhee, Loggerhead Shrike, Dickcissel, Cedar Waxwing, Meadow Pipit, White Wagtail, Rose-breasted Grosbeak, Heerman's Song Sparrow, Arkansas Goldfinch, West. Robin at 3c each.

Blue Jay, Purple Grackle, Bronzed Grackle, Orchard Oriole, Baltimore Oriole, Brewer's Blackbird, Yellow Warbler, Barn Swallow, Cliff Swallow, Bank Swallow, Bluebird, Mockingbird, Vesper Sparrow, West. Lark Sparrow, Cardinal, Am. Goldfinch at 2c each.

Cowbird, Kingbird, Catbird, Brown Thrasher, Robin, Chipping Sparrow, Field Sparrow, Song Sparrow, Red-wing Blackbird, Mourning Dove, Flicker at 1c each.

NEW MINERALS (just in).

Five 5c specimens of any of the following: Autunite, Emory, Graphite Granite, Garnetiferous Granite, Amphibolite, Syenite, Porphyry, Tourmaline, Rose Quartz, Smoky Quartz, Milky Quartz, Labradorite, Flint, Epidote, Williamsite, Leelite, Serpentine, Dolomite, for only 3c each. 10c pieces for only 6c each. All postpaid.

SHOWY SHELLS and CORALS.

Pink Murex, 20c size at 17c.
Black Murex, 25c size at 16c
Goldmouth, 15c size at 9c.
Silvermouth, 20c size at 11c.
Hicolored Murex, 15c size at 7c.
Thorny-nosed Murex, 10c size at 4c.
Thorny Oyster, a few fine ones such as usually sell at \$2.00 to \$3.00 at 65c and \$1.15.
Golden Heart Shell nice ones worth \$1.00 to \$2.00 at 56c and 96c.
Mushroom Coral, not large but fine at only 18c.

Plate Coral 6c to 25c.

SCIENTIFIC SHELLS In collections.

Lot 1—100 var. (small species) prepaid at \$4.75
Lot 2—100 var. (large and small) prepaid at \$6.50.
Lot 3—200 var. (large and small) many rare at \$12.00.

COMBINATION OFFER.—With any order of \$2.50 or over from this list you may include following books at prices given:

"Coues' Key to N. A. Birds" at \$6.58.

"Ridgeway's Manual" at \$6.28.

Davie's "Nests and Eggs" (5th ed.) at \$1.68.

Tryon's "Conchology" at \$6.50.

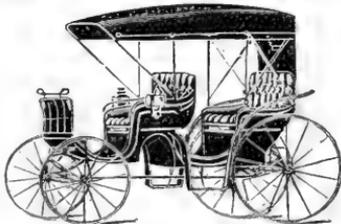
Davie's Taxidermy at \$4.88.

All new and prepaid.

New 4x5 camera to exchange for good sets of eggs with data.

ERNEST H. SHORT, Albion, N. Y.

LARGEST AND MOST COMPLETE BUGGY FACTORY ON EARTH WRITE FOR PRICES AND CATALOGUE



OUR GOODS ARE THE BEST
OUR PRICE THE LOWEST

PARRY MFG. CO. Indianapolis, Ind.



IMPORTANT!

I can still furnish many or most items offered on last 16 pages of June-July OÖLOGIST. The "\$2.75 for \$1 00" Premium Offers hold good until Jan. 1, 1900.

Under "BOOKS FOR NATURALISTS" I can still furnish nearly everything except the ones under "Ornithology and Oölogy," under this heading it is advisable to send list of Wants, first.

"MOUNTED BIRDS" have all been sold—the few mammals in 2d column of this page adv. will be closed out at a *Bargain* to someone.

"BIRD PICTURES" we carry regular and prices and offer holds good until January, 1900 and undoubt'edly throughout that year.

"SPECIAL BARGAINS IN SHELLS, EGGS, FOSSILS, &c. as offered in the June-July and August OÖLOGIST we can still furnish as follows:

MITRIDÆ. Sixty-eight (68) species, 95 specimens. The following species are found in this collection. *Papalis, cardinalis, fissurati, scabrinscula, dactylus, nitens* and 62 others. List value \$16.65. My price prepaid only **\$5.55**.

VOLUTA.—Twenty (20) species, 25 specimens, containing *virelens, harpa, hornis, cummingii* and 16 others. List value \$28.20. My price only **\$9.40** prepaid.

OLIVIDÆ.—Fifty-eight (58) species, 72 specimens comprising *maura, julietta, magnifica, porphyria, guttata, cummingii, eburnea, duclosiana* and 50 others. Regular price \$10.85. My price **\$3.90** prepaid.

CONIDÆ.—Seventy-nine (79) species, 85 specimens. **COCCINEUS** (worth \$5.00 net) *tulipa, bandanus, obesus, clavus, nussatella, luzonicus, princeps* and 71 others are in this collection. Regular price \$37.00. My price only **\$14.00** prepaid or without *coccineus* will sell for **\$9.35** prepaid.

CYPRÆIDÆ.—Forty-five (45) species, 55 specimens. Specimens of note are *cinerea, scurra, mauritiana, coloba* and 41 others. Regular price \$11.75. My price only **\$3.95** prepaid.

UNIONIDÆ.—One hundred and thirty-four (134) species (American) 450 specimens. All fresh live specimens. Worth at regular prices fully \$100. Will send the entire collection prepaid for only **\$28.40**.

RARE OLD SILVER COINS of Great Britain.—A collection of 50 pieces from the reign of Henry II (1154) to that of Victoria. The collection contains coins minted during the reigns of twenty-two (22) of Great Britain's monarchs. The collection lists about \$55.00, will sell as a whole for **\$22.50** prepaid.

FOSSIL COLLECTION. A specially selected collection of Fossils for school used to I sell at \$100. One hundred (100) species and about 500 specimens ranging in value from 5c. to \$1.00 each. A very select and very valuable collection and is largely composed of Fossil Corals, all carefully labeled and prepared, and well worth \$100. My price **\$33.50** prepaid.

I have another collection similar to above put up to sell at \$50.00, 100 species and about 200 specimens which I will send prepaid for only **\$15.75**.

MOUND BUILDER'S RELICS. We have hundreds of ordinary arrow and spear heads and a few of the more common pieces such as sinkers, drills, scrapers, &c, but have very few of the rare and desirable ones. The following we offer at about one-half regular prices: Pipe from Brant Co., Ont., a very choice specimen, **\$4.90**, prepaid; another from same locality of a more common and unattractive form, **\$1.60**, prepaid; Slate Pendant from Waterloo Co., Ont., prepaid, **55cts**; Hematite Celt from Van Buren Co., Ark., prepaid, only **\$1.20**. Ordinary Stone Axe from Cumberland Co., N. J., prepaid, **\$1.30**. I also have the contents of a cache from Rowan Co., N. C., consisting of about 400 unnotched arrow or spearheads of uniform size and form, about 2½ long, will sell as a whole *very reasonable*.

NEPTUNE'S CUP or Vase Sponge, *Paterion*, from Tasmania. An odd and curious specimen worth from \$15 to \$30, and we have never offered this specimen for less than \$10 prepaid. It measures 24 in. high and the vase portion is 12 in. in diam. It goes prepaid for only **\$7.60**.

SPANISH CROSS inlaid with straw from an ancient church in Jemez, New Mex. Curio dealers would ask \$5.00 for it, but it's yours prepaid for **\$1.65.**

ORIENTAL PIPE. A double holder (two bowls) for smoking two kinds of tobacco, inlaid with gold, amber mouth piece damaged. I paid \$6.00 cash for it and have been trying to sell it for \$10 for the last six years. It now goes at **\$4.30** prepaid.

AN EGYPTIAN IDOL, carved from stone or lava 1000 or more years ago, represents an elephant or some other animal, measures about $4 \times 2\frac{1}{2}$ in. Secured by a missionary acquaintance from a mummy pit in Egypt and guaranteed genuine. Prepaid only **\$3.15.**

UNIQUE MINERALS.—Ordinary ones such as retail under \$1.00 find ready sale from our Chautauqua stores, but we have a few which we have more for show and offer three of them as follows: No. 1. Native Copper, a beauty from Lake Superior region, prepaid at **\$2.70**, size 2×3 in. No. 2 is a specimen of Quartz from Australia about $1\frac{1}{2} \times 3$ in., showing 5 deposits of pure Gold, one of which measures $\frac{1}{2} \times \frac{1}{2}$ in., prepaid at **\$4.80**. No. 3 is a beautiful specimen of Fire Opal from Australia $1\frac{1}{2} \times 2$ in., attached to original rock, prepaid **\$4.60.**

LARGE CORALS. 1 specimen of the Plate Brain Coral, *Meandrina clivosa*, from Bahamas measuring 22 in. in long diameter (16 in. short) worth \$10; one of true Brain Coral, *Meandrina cerebriformis*, 11 in. diam. worth \$5.00; one specimen of Pineapple Coral, *Perites astracoides*, 10 in. diam. worth \$3.00, will send the three specimens prepaid for only **\$8.60.**

EGGS OF THE EMEU. Nothing attracts greater attention in the egg line than the large dark green, nearly black pebbled egg with a lighter ground color of this peculiar Australian bird. Every egg collection would have contained one of these eggs and even the laity would have had them on their "what-nots" or among their "bric-a-brac" had not the price—which has always been \$2.50—been a little too high. We now have a limited supply at only **\$1.20** each prepaid (and according to our premium offer will include a year's subscription to the OÖLOGIST with exchange card, gratis, if you wish). This offer ought to close our Emeu eggs within the next ten days.

BIRDS EGGS. SETS. This collection contains sets of forty-five (45) species and singles of Alligator, Ostrich and EMEU. The following very desirable sets are found in this collection: Black Skimmer 1-4, Shoveler 1-8, Pintail 1-8, Wood Ibis 1-4, Florida Bob-white 1-14, Red-shouldered Hawk 1-3, Florida Burrowing Owl 1-8, White-crowned Sparrow 13, Tree Swallow 1-6, Chickadee 1-6, White-faced Glossy Ibis 1-4, American Avocet 1-4 and 33 others. Catalogue value \$57.80. I will send the collection prepaid for only **\$12.55.**

BIRDS EGGS. SINGLES. A collection of one hundred and fifty (150) species. Among others the following very desirable species are found in this collection: Royal and Caspian Terns, Fulmar, Northern Eider, Wood Ibis, Short-eared Owl, Pileated Woodpecker, Vermilion Flycatcher, White-necked Raven, Rusty Blackbird, Pigmy Nuthatch, *Ostrich*, EMEU and dozens of others. Catalogue value about \$41.00. I will send entire collection prepaid for only **\$9.40.**

CATALOGUES or rather itemized lists of the specimens contained in the SHELL, EGG, FOSSIL, COIN and CURRENCY COLLECTIONS offered above will be forwarded upon receipt of 10c per collection; this amount can be deducted from purchase price of collection or will be refunded upon return of list.

I WILL EXCHANGE:—Any of the Publications, Specimens, etc., offered on the three pages of our "\$2.75 for \$1.00" "Premium List" or possibly anything I have in stock or offer for sale for "snaps" in any line; Natural History Books (ones relating to Ornithology and Oology in particular); Standard Medical Books published since 1890; and anything of use or value to an up-to-date Physician and Surgeon or for A No. 1 sets—for the latter we will allow from one-fourth to full rates—depending of course upon the desirability of sets offered and what you can use in return for the same. Send list of what you have and state explicitly your wants, and we will advise you at once our best exchange rate. You can then accept or reject as you may see fit

Address FRANK H. LATTIN, Publisher, Albion, N. Y.

\$2.75 for \$1.

During the balance of '99 I will mail every person sending me \$1.00 for a year's subscription to THE OOLOGIST, their selection from publications, in

July issue, and specimens, &c. mentioned on this page to the amount of \$2.00 and THE OOLOGIST one year, including a card good for one Want, Exchange or For Sale Notice. Make a combination with a friend—you take the premiums, he THE OOLOGIST or vice versa. Subscribers desiring to purchase additional premiums can do so in lots netting 50c or over at one-half prices quoted. Publications can be ordered by number.

Remit in most convenient manner, but do not send sums of \$1.00 or over loose in your letter. All premiums are sent PREPAID. Address all orders plainly and in full.

FRANK H. LATTIN, Publisher, ALBION, N. Y.

BIRDS EGGS.

Pied-billed Grebe.....	\$ 10
Arctic Tern.....	12
Farallone Cormorant.....	50
Wood Ibis.....	75
White-faced Glossy Ibis.....	1 00
Snowy Heron.....	15
Louisiana Heron.....	10
Bl'k-crowned Night Heron.....	12
Green Heron.....	12
King Rail.....	20
Florida Gallinule.....	10
American Coot.....	08
Lapwing.....	20
Ring Pheasant.....	35
Mourning Dove.....	03
Red-shouldered Hawk.....	50
Marsh Hawk.....	35
Cooper's Hawk.....	25
Swainson's Hawk.....	50
Short-eared Owl.....	1 50
Burrowing Owl.....	20
Florida Burrowing Owl.....	1 00
Road-runner.....	25
Yellow-billed Cuckoo.....	10
Belted Kingfisher.....	20
Hairy Woodpecker.....	50
Golden-fr'ed Woodpecker.....	35
Kingbird.....	03
Skylark.....	20
Mexican Horned Lark.....	75
White-necked Raven.....	75
American Crow.....	05
Fish Crow.....	35
Yellow-billed Magpie.....	50
Dwarf Cowbird.....	10
Starling.....	10
Tricolored Blackbird.....	10
Brewer's Blackbird.....	05
Red-winged Blackbird.....	02
Orchard Oriole.....	05
Bullock's Oriole.....	10
Great-tailed Grackle.....	15
Boat-tailed Grackle.....	10
House Finch.....	03
Heermann's Song Sparrow.....	08
Gray-tailed Cardinal.....	25
Barn Swallow.....	05
Least Vireo.....	35
Loggerhead Shrike.....	10
Meadow Pipit.....	10
Catbird.....	02
Sennett's Thrasher.....	10
Curve-billed Thrasher.....	15
Bewick's Wren.....	20
Parkman's Wren.....	15
Western House Wren.....	75
Pigmy Nuthatch.....	08
Wood Thrush.....	05
American Robin.....	03
Sand Shark.....	05
Red-leg Turtle.....	10
Alligator.....	25

FOREIGN.

Rook.....	15
Magpie.....	10

Missel Thrush.....	10
Red Bunting.....	10
Ostrich.....	1 50
Emeu (20c extra.).....	2 00
EGGS IN SETS. Price per set.	
Fulmar 1-1.....	75
Gannet 1-1.....	35
Bl'k-cr'n'd Night Heron 1-4.....	50
Road-runner 1-3.....	75
Mourning Dove, 1-2.....	10
Boat-tailed Grackle 1-3.....	25
Red-winged Blackbird 1-4.....	05
Tricolored Blackbird 1-4.....	50
Orchard Oriole 1-5.....	25
House Finch 1-4.....	25
Red-leg Turtle 1-8.....	75
Wood Ibis 1-3.....	1 20
Florida Burrowing Owl 1-2.....	2 00

INSTRUMENTS, &c.

Egg Drill, 3-32, Eng. hdl.....	25
Egg Drill, 6-32, Eng. hdl.....	60
Blower, nickeled.....	25
Embryo Hook.....	15
Scissors, curved.....	50
Brain Spoon.....	25
Tenaculum.....	50
Scapel, improved.....	75
Instrument Case.....	75
Datas, per 100.....	20
Egg Catalogue.....	10
Exchange Notice (or Coupon) in OOLOGIST.....	25
Advertising in OOLOGIST.....	50-82

SEA CURIOS.

Sea Horse.....	25, 50, 1.00
Porcupine Fish.....	25, 50, 1.00
Precious coral, 1 oz. pkg.....	15
Sea Fan.....	25
Sand Dollar.....	05
Philippian Urchin.....	25
Purple Urchin, select.....	25
Black Starfish.....	25
Acorn Barnacles.....	10
Keyhole Urchin.....	20
Lucky Tooth of Cod.....	05
Hermit Crab in Shell.....	35
"Eye Stones".....	05
Pink Coral, spray.....	25
Tarpon Scale, doz.....	25
Golden Sea Fan.....	1 00
Sea Fern.....	1 00
Mushroom Coral.....	35
Sawfish Saw.....	35

MINERALS, &c.

Pyrope.....	\$ 05
Chialotite Crystals.....	10
Coquina.....	10
"Electric" stone.....	10
Chalcedony Geode, select.....	35
Quartz Geode, select.....	1 00

GEM STONES, small cut and polished semi-precious stones, many suitable for mounting:	
Sard Trilby heart intag- loes.....	10
Opals, Mexican.....	15, 25, 35, 50
Red Onyx.....	10
Black Onyx.....	10
Crocidolite, Tiger-eye.....	10, 15, 25
Lapis Lazuli.....	25
Chalcedony, 3 var. each.....	10
Black Ribbon Agates.....	05
Red Ribbon Agate.....	05
Carnelian.....	05
Assorted dozen.....	.50 1 00

SHELLS.

Murex brandaris.....	\$ 15
" trunculus.....	15
" saleanus.....	05
Eburna Japonica.....	20
Oliva litterata, extra.....	10
Cyprae moneta.....	05
Velum gibbosum.....	10
" secale.....	05
Nerita peleronta, select.....	05
Trochus (Livona) pica.....	15
Helix fideles.....	15
Bulimus Bahamaensis.....	10
Partula gibba.....	05
Orthalicus melanochilus.....	15
" undatum.....	25
Liguus fasciata.....	15
Achatinella uniplicata.....	10
" spirizona.....	10
" olivacea.....	10
Pythea pyramidata.....	10
Fissurella barbadensis.....	10
Chama arcuella.....	15
Cardium isocardia.....	15
Tellina radiata.....	10
Fasciolaria distans.....	10
Melongena corona.....	15
Shell Collection of 40 scientifically named small shells.....	1 00

MISCELLANEOUS.

Arrowheads, 1/2 doz. asst'd.....	\$ 50
Revolutionary Gun Flint.....	15
Dove Shell from British Guiana exhibit at World's Fair, pkg. of 12.....	10
Chinese Horn Nut.....	05
Beetle Nut.....	10
Broken Bank Bill.....	10
Alligator Tooth.....	5, 10, 15, 25
Young Naturalist's Mar- velous Collection, 50 labelled specimens.....	1 00
Chinese Coin.....	05
Mexican Whistle, clay.....	10
7var.unused Cuban Stamps.....	25
Resurrection Plant, Mex.....	10

Wants, Exchanges and For Sales.

(Concluded from first page.)

FOR EXCHANGE SKINS:—A few A1 skins of 379, 381, 411, 471, 482, 504, 505a, 615 646a, 707a, 708, 711, 749, 758 to exchange for A1 sets not in my collection. LEE CHAMBERS, Santa Monica, Cal.

NOTICE:—Good exchange given for many common sets of Flycatchers, Sparrows, Wrens and others. A. E. PRICE, Grant Park, Ills.

WANTED:—Mounted Birds, fine perfect specimens. Send list and prices. Albinos or freaks of any kind particularly desired. J. L. CHILDS, Floral Park, N. Y.

BIRDS EGGS for exchange. I have a few sets of strictly first class eggs to exchange for other sets. Send list and receive mine. J. S. APPLETON, Simi, Ventura Co., Cal.

500 Mounted Birds for sale at a great sacrifice also 100 sets of eggs. Send for lists with prices. J. R. MANN, Arlington Heights, Mass.

4x5 Photographs of Birds, Nests and Eggs to exchange for the same. WM. H. FISHER, 1602 Mt. Royal Ave., Baltimore, Md.

FOR SALE:—First three volumes of the "Osprey" for highest cash offer over \$7. All numbers in fine condition. THEODORE B. PARKER, 36 Beaumont Ave., Newtonville, Mass.

TO EXCHANGE:—Finely blown sets of 587, 601, 410, 703, 633, 652, 573, 746, 666, 522b, 443, 637, 506, 683, 719b, 593c, 594, etc. Can use in series 725, 735, 540, 461, etc. Send list. Also fine collecting revolver for sets. PHILO W. SMITH, JR., Mona House, St Louis, Mo.

WANTED:—To correspond with collectors having first class sets to exchange. I have many rare and common sets to offer, such as A. O. U. 16, 54, 78, 93, 103 106 1, 107, 114, 115, 1, 116, 225, 269, 302, 314, 321, 320a, 365, 377a, 408, 411, 414, 449, 446, 450, 456, 460, 483, 489 and many others. JAMES P. BABBITT, Taunton, Mass.

WANT Mounted Specimens, Nos. 387, 388, 406, 412, 420, 423, 428, 444, 452, 461, 467, 477, 507, 5*4, 517, 528, 529, 546, 560, 581, 587, 604, 611, 613, 616, 627, 628, 631, 652, 681, 683, 687, 698, 721, 724, 727, 735, 755, 759b, 766, in exchange for Nos. 6, 27, 32, 59, 112, 129, 130 pr., 121 pr., 132, 139, 142, 146, 149 pr., 151, 152, 153, 160, 165, 167, 190, 191, 194, 201, 212, 214, 221, 228, 230, 235, 239, 256, 263, 273, 288, 294, 309, 331, 339, 360 pr., 367, 368, 373, 373c, 378, 385, 402, 407a, 409, 421, 448, 458, 478, 481, 509, 511b, 534, 557, 591b, 596, 622b, 632, 683a, 703, 705, 707, 737a, 763, 766. GEO. H. SWEZEY, Bruen Ave., Irvington, N. J.

FOR EXCHANGE:—Jasper Mound Relic. Fossils, War Relics, Old Notes, old time Slave Papers. Wish Copper Cents, Polished Agates, large, also American and Spanish War Relics wanted. H. J. SWENTZEL, 834 W. 6th St., Wilmington, Del.

Am much pleased with my ads. in former OOLOGISTS. Should like to apologize for not answering them all but there were so many I really did not have time. A. E. PRICE, Grant Park, Ills.

WANTED:—Skeletons and Skulls, all kinds, in rough and mounted. Bird and Mammal Skins. Reptiles and Batrachians in alcohol or formalin. Desire correspondents in all parts of United States, Mexico and Canada. Back numbers of papers on Natural History and scientific books wanted. Offer in exchange fifty species finely prepared marine invertebrates in formalin, eastern bird skins, etc. Correspondence solicited. F. P. DROWNE, 20 Benefit St., Providence, R. I. 165

FOR SALE:—Finely marked, full blooded Llewelyn Setter Puppies. Soon old enough to be shipped. Father a first class field dog and mother was broken to hunt nests. W. E. LOUCKS, Peoria, Ill.

EXCHANGE:—A few complete sets of 16, 127, 194, 278, 337b, 342, 360a, 373c, 431, 429, 466, 462, 482, 487, 505a, 620, 707a, 710, 721a, 743a to exchange for any A1 sets not in my collection. LEE CHAMBERS, Santa Monica, Cal.

PUBLICATIONS WANTED.

I want back numbers of the following publications and name the price which I will allow for same payable as designated below.

THE OOLOGIST: I will give 50CTS EACH for the issues of July-Aug., 1886; Jan.-Feb., 1887 (or Dec., 1886 with same attached); June-Sept., 1887; June, 1888; Aug.-Sept., 1888; April, 1889.

25CTS. EACH for March, 1893; March, 1897; May, 1897.

10CTS. EACH for May, 1896; Oct., 1897; Dec., 1897; Jan., 1898 and 5CTS EACH for April, 1899. None others wanted.

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A MONTHLY PUBLICATION DEVOTED TO
OOLOGY, ORNITHOLOGY AND TAXIDERMRY.

VOL. XVI. NO. 11. ALBION, N. Y., NOVEMBER, 1899. WHOLE NO. 160

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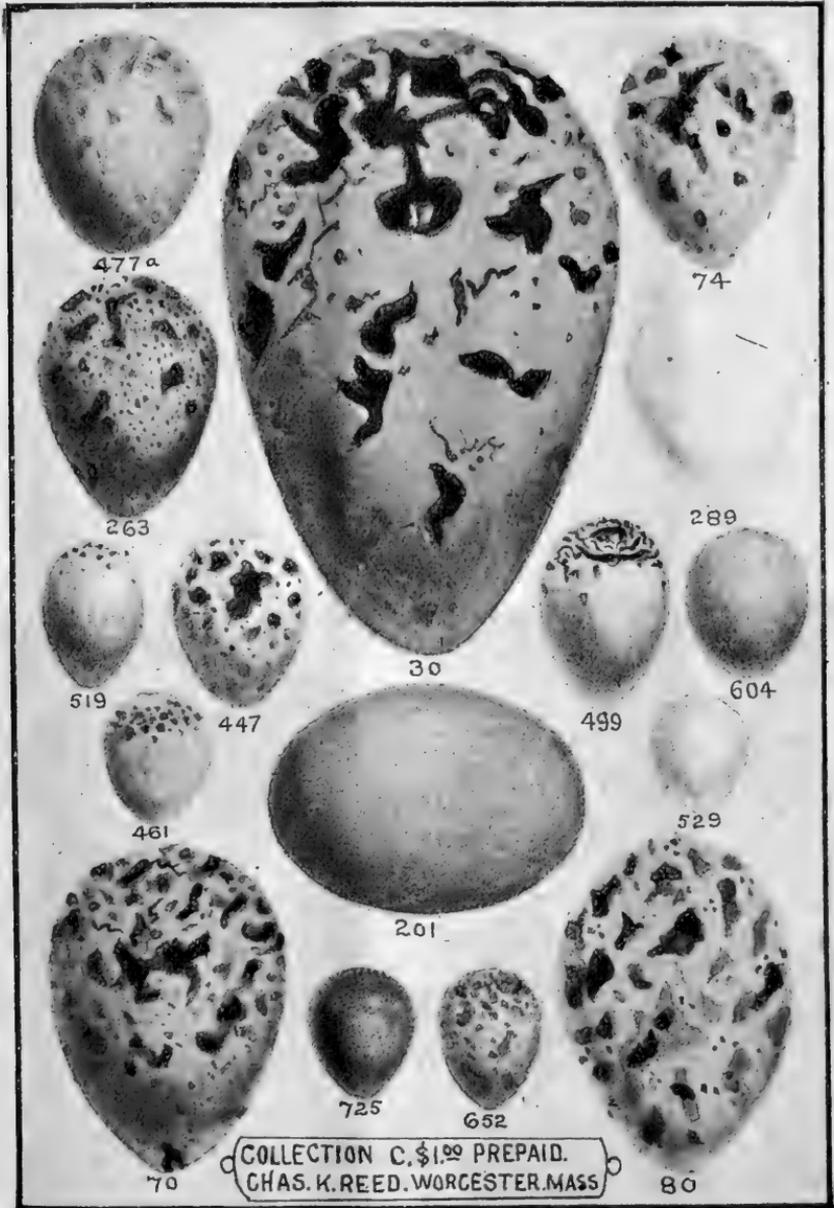
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THE OÖLOGIST.

VOL. XVI. NO. 11.

ALBION, N. Y., NOVEMBER, 1899.

WHOLE NO. 160

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMISTRY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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A July nest of Clay-colored Sparrow. Eggs blotched. Typical set of five eggs, rare.

Birds plentiful further south, are here uncommon; and we have a few breeders that are never seen in Southern Minnesota, except in migration. Few observers, probably, are accustomed to note the Clay-colored Sparrow, in the Middle United States, on its way north; and fewer still, one is confident, are accustomed to identify it, as breeding in Central Minnesota. To most of us, in our earlier years of field study, all the small sparrows seen are chipping sparrows; and that is all there is about it.

Nevertheless, the Clay-colored Sparrow does nest in Central Minnesota,—at least as far south as Minneapolis. I am even inclined to believe, from low-placed nests of a *Spizella*, found in Steele county, Minn., that this sparrow will be found nesting along the southern border of the state. Just here we note the changed character of our northern *ornis*; and realize how big our western states may be. In the Red River Valley, *pallida* almost entirely replaces *socialis*; becoming, moreover,

PRINTED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Clay-colored Sparrow.

The *ornis* of the Red River Valley, in Northern Minnesota, is unique, in many ways.



A July nest of Clay-colored Sparrow. Site, typical. Eggs (4) circled with small spots, not typical.

our commonest sparrow,—and almost our commonest summer bird. One of the most welcome spring-time notes, in the southern locations, is the thrill of the Chipping Sparrow. This note we mostly miss, in the north; it being replaced by the locust-like buzz of the pale northern race; this buzz becoming, with some individuals, most intensely metallic in its timbre.

The tyro cannot mistake the difference in note; but he is unlikely to catch the differences in color. On critical scrutiny, however, he notes the dark superciliary stripe, in *pallida*,—and marks the absence of bright color from the crown. Other differences await his notice. "Chippy" comes, in twos and threes, mainly; and throngs the tree-tops; *pallida* comes, first, a herald or two,—and, next day, whole troops of him; so that, by the second or third day in May, here in Kittson county, every wide expanse of meadowy, brush-land echoes and vibrates, at early morning, with that not unmusical buzz with which *pallida* greets the early day. And *pallida* is a bird of lowly habit. He shuns the larger trees; and feeds and plays amid the lower growth wherein his summer home will be. They that have come to know him thoroughly and fami-

liarily will see him flitting, in troops of six to a dozen or more, from every willow bush and bit of weedy meadow, amid the poplar, burr-oak and willow brush-land that makes up so uniform and so picturesque a feature of the Red River prairies.

By May 25th, in Kittson county, whether it rain or shine, the skilled observer will begin to start these little quaker sparrows from the stretches of weeds and dead grass, among the shrubs, in pairs; and will find, with astonishing ease, the nearly finished nests. His uninitiated companion peers, eagerly, into every budding burr-oak bush; while he, himself, catches, quickly, a half-intuitive certainty of the right spot in which to look; that bit of prone dead grass and weeds, along the margin of that tiny meadow-spot. A foot or two back of where the bird arose will be found the nest,—sometimes. And it will be placed, most frequently, about eight inches up; or, almost as often, a foot or so above the ground; and sometimes even well sunken into the very ground itself. This, however, rarely.

The nesting dates are remarkably uniform. Between the first and the fifth of June, nine-tenths of the nests found will contain eggs that are either fresh, or but slightly incubated; while, a week later, it is unusual to find eggs that are not far advanced in incubation.

The mothers are close sitters, from the first. Curiously enough, the sitting birds habitually feed quite near the dawn; so that a skilled search, at day-break, in a favorable locality, will not flush as many birds, by far, as the same sort of search will do, if made a couple of hours later. During incubation, the birds are very tame. The female flushes very readily; but not until the disturber is but a few feet away. The male is sure to be eyeing one, from the nearest weed-stem or willow top; but neither he nor his mate will make much ado, should one tarry too long, in his nest-examining.

In exact location, the sites vary. The commonest, perhaps, is, a bunch of prone dead grass; by the upper layers of which the nest and eggs are well concealed. Less often, the nest is placed in the crotch of a very small rose, or hack-berry, or "buck-bush;" in cases where these *loca* are well concealed by the surrounding dead or alive vegetation. When the nest is placed upon, or sunken into, the ground, it is generally placed beneath the shelter of a fallen stick or bush; or else at the base of a small willow.

The nests of *pallida* differ, quite, from normal nests of *socialis*. More weed-stems are used, and not so much horse-hair; more of fine grass being usually mingled with the lining. Occasional nests, far out from civilization, will have the lining wholly made of fine dry grass. I have observed, critically, too, few eggs of the Chipping Sparrow to institute a satisfying comparison with those of *pallida*. As a rule, however, the spots on the eggs of *pallida* are paler; and more blotchy. The color often pales into the most delicate cinnamon; with frequent specking of the same, or of darker, colors. The tendency would seem to be toward a rounded outline, in shape. The normal set consists of four eggs. Yet, in 1898, it seemed, from the comparatively small number of nests observed, as if most sets consisted of three. Sets of five are rare.

No bird, in all this region, (which is the chiefest paradise, one would judge, of that arrant *sneak thief*, and vandal, the cow-bird,)—is quite so much parasitically imposed upon as is the Clay-colored Sparrow. One nest, perhaps, in every four, is preyed upon; two, or even three, of the rightful eggs unceremoniously dumped; and one or two of the grey intruders left behind, while madame *pallida* is gone for a breakfast.

The Clay-color lays two broods. Ambition rises in her, with the second. For

she no longer needs the lowly covert of last year's dead grass. The dense leaves of the thorn and the burr-oak are now fully grown, by the end of June; and in them she therefore builds. And now she varies, sometimes, her nesting material; not from choice, however, but from convenience. The bits of weed that she readily finds in latter May, are now concealed by growing plants. She therefore avails herself of hazel and willow twigs, for the foundations of her second nest.

The location is,—naturally,—higher than for the first nests. Average heights are from two feet to eighteen inches above ground. But, in any case, the nests are invariably close concealed.

One point, observed this season, has puzzled me not a little. Out of five nests, found between June 25 and July 15,—all second nests, of course,—two contained five eggs, each. And yet, in 1896, I found but one set of five, out of forty-four; in '97, but one out of thirty-two; and in '98, but one out of sixteen. All birds have their freaks. *Pallida* seems to have as few as any. Yet I have noted two or three; as shown, for example, by one nest found in coarse grass, over water, in a little slough; and by another,—a first nest,—in the very top of a hazel bush, in a thicket, four feet up; this being the most elevated nest I have ever found; and the only nest discovered in a thicket. *Pallida* seems to hate the thickets with a hatred that matches her love for the weedy, willowy meadows.

Almost, it seems, before the exquisite blue eggs are laid, in early June, the little black-downy, orange-mouthed young are squirming in the nests. And, before one can catch his breath, and bring his camera, to catch a picture of those gaping mouths, the streaked fledglings are on the wing. And then, almost before we have grown to feel that the full tide of summer is upon us, it is the first of October; and the last of

the *pallidas* is on his way to the land where winter is unknown.

P. B. PEABODY,
Hallock, Minn.

The Russet-backed Thrush.

(*Turdus ustulatus*.)

Of all the birds which make this locality their summer home my favorite is the Russet-back. He is always associated in my mind with cool woodlands and running streams, where he is much at home in the dense maple and willow thickets and where his short note of protest may be heard by anyone who will intrude upon his haunts.

The Russet-backed Thrushes arrive here from their winter home in the latter part of April. As I reside several miles from their breeding grounds it is impossible for me to give exact dates, but I have noticed them as abundant upon May 1, 1895, May 1, 1897, and April 29, 1898, and I suppose that had I visited the locality a few days earlier in the year I would have noticed a few of them.

In the *Nidologist* for April, 1894, (Vol. I, No. 8), I have noticed a communication from Mr. L. Belding in which he seems to doubt the fact that the Russet-back arrived before the 1st of May. In the year 1892, shortly after I had begun to prepare eggs scientifically and before I began to keep a notebook, I distinctly remember taking two sets of three and one set of four eggs of the Russet-backed Thrush upon the 1st of May. I greatly regret that I have no written account of the occurrence, which is no doubt the earliest "take" of eggs of this species on record.

Soon after their arrival or between the 1st and 10th of May they begin nest building, usually selecting a fork of a small maple or willow tree in a thicket, near to or overhanging a running stream; the height of the nest ranging from

two to twelve feet above the ground.

Sometimes the nest is placed in a blackberry thicket near the body of some large maple or willow tree or in the fork of a large tree near the ground, but always near running water.

The earliest record I have for a set of eggs is May 14, 1896, at which date a set of three slightly incubated eggs was collected from a nest saddled to a horizontal maple limb, 8 feet up. The latest date at which I have taken fresh eggs is June 17, 1899.

A typical nest is composed of leaves, straw, small rootlets and grasses cemented with mud and lined with fine grass and skeletonized leaves, but sometimes for a foundation very curious articles are used. A friend of mine once found a nest at the bottom of which was a large piece of a newspaper and on the 29th of May, 1896, I took a set of eggs from a nest which had for a foundation a large piece of cotton.

After the eggs are all laid the bird sets very closely upon the nest, sometimes allowing a person to touch the edge of the nest before she will leave it. In fact, I recall one nest where the bird was removed by hand before the contents of the nest could be seen.

The eggs are three or four in number and are greenish blue in color marked with spots and blotches of lilac and reddish brown. There is a great variation in the size, shape and markings of different specimens.

As well as I can judge from my observations the period of incubation is about 14 days. When hatched the young grow rapidly; the amount of worms, grubs, beetles and other insects which they consume being something enormous.

In about two weeks they are ready to leave the nest, after which the family party may be seen hopping about through the underbrush until they depart for a warmer clime. I cannot

state the exact date of their departure but think it is somewhere near September 18th

This Thrush is one of the finest songsters it has ever been my pleasure to hear; his full clear note usually being heard in the early morning and late in the evening.

While camping in the Santa Cruz Mts. near Pescadero, San Mateo County, upon the banks of the Pescadero Creek, at an altitude of about 1200 feet, I was agreeably surprised to find the Russet-backs are there in great numbers. Until then I had always thought they were exclusively a bird of the valleys.

It was indeed a pleasure to awake in the early morning and hear their "old familiar" song mingling with the sharp "pe-wit" of the Flycatchers. They would begin singing in the morning about 5 o'clock and continue until 8 o'clock after which time they were silent until about 5 o'clock in the evening; and from that time until far into the night the woods would resound with their clear and beautiful song.

WM. L. ATKINSON,
Santa Clara, Calif.

The Duck Hawk in Lower California.

I will make no pretence of describing

fully the nesting of this elegant falcon, but the fact that oölogists prize its eggs so highly and run such risks in securing them, has tempted me to give a few notes

The islands along the west coast of lower California form an ideal resort for the Duck Hawk. Free from the predatory mammals of the mainland, with abundant food in the nesting sea birds and undisturbed except by the infrequent and casual visits of man, the

only struggle this falcon has is with its own kind. So on these islands of San Geronimo, San Benito, and Natividad we find the Duck Hawk making its nest without any view to protection from animals or man.

The collector, too, must view these islands with delight. Here there is no need for descending over dizzy cliff or climbing tall trees for neither exists. There is scarcely a place where a nest could be placed out of easy reach. Especially is this true of Natividad island where one has little more to do than to pick up the eggs, having found the nest.



The Duck Hawk nests on the island in early spring; in 1898 we found eggs on San Geronimo the middle of March and on Natividad we took fresh and incubated eggs and downy young about the tenth of April.

During our stop this year at the last named island we took some half a dozen sets the first week in March.

The eggs are usually quite accessible; they are placed either on a small shelf of rock or often in a hole or small cave. These holes are natural cavities in the face of some wall or rock not over ten or twenty feet high. Eggs are some times deposited at the summit of a small hill without shelter; we found two, three or four eggs to a set.

The nest is easily located with the help the owners. Take a walk over the island and you will see the bird flying over the nesting site or hear its peculiar warning cry as you get too near. As you come near the nest the female especially becomes more excited; from seeing you she becomes convinced that you are dangerous. Soon she becomes aggressive and dashes at your head from far above descending like a bullet. The cry of this hawk is a short syllable uttered many times in quick succession.

It takes a heavy load to bring them down as they are as tough as iron and full of life. There is no waste meat on them, the muscles are packed and jammed together. The skin is tough and sticks to the flesh like a porous plaster. If the Tern be like a graceful sloop, we may call the Duck Hawk a torpedo boat.

In 1897 Mr. Henry Kaeding took four young from Natividad intending to rear them on our schooner. Two died within a week. The half-tone shows the other two, one of these died on the voyage and the last escaped in San Diego Bay after traveling with us four months.

These birds are fearless and ready to attack anything. One stood off a Setter dog and at another time was about to make meat of a live albatross which we had on deck. In captivity they were fed on birds we had skinned, the softer parts being preferred. On the islands

Cassin's Auklets, Xantus's Murrelets, and Shearwaters are eaten

Wishing to see a thing more clearly our hawk moves his head backward and forward or from side to side, a trick similar to that of the Barred Owl described by Frank Bolles.

Wishing to see a bird overhead, the head is revolved so as to be nearly up side down.

The picture is not so large as I could wish but it serves to show the deep eye, the set of wing, long toes, curved claws and compact body.

RICHARD C. MCGREGOR

Real Estate Owners

Have any of my readers ever heard of extensive owners of real estate among the birds? Well, there are such real estate owners among our feathered friends, that is if you will allow that houses come under the head of reality. Among humans, land and buildings are called real estate, and therefore we may say that the homes of birds are fairly entitled to this distinction, for though the birds do not pay taxes, and as a rule occupy territory that is the property of others, still they are good citizens and do their full share in the development of the country, and assist in the war of extermination which is constantly waged upon insects and other pests. Their pleasing presence and delightful songs, in addition to the worthy work in which they are constantly engaged entitles them to the best building lots in the land, and we should all offer them the most thorough protection which is within our power.

Most species of birds build a single nest for a season in which to rear their young, while many kinds do not make any nest, laying their eggs on the bare ground; and still another division use the discarded homes of other birds for the purposes of housekeeping. In distinction to this class there is the divis-

ion which makes several nests and yet which occupies but one of them with its eggs and young. There are widely separated groups of birds, as the rails and wrens which are given to this habit, while the peculiarity is observable to a lesser degree in the case of a few other species from these two families.

These extra nests are called "cock's nests" in England where the habit has also been observed, as the custom is supposed to be followed by the cock-bird while the hen is setting. But this is by no means always seen in America, as I have repeatedly seen both birds engaged in nest building at the same time; sometimes on the same nest and again on adjacent structures. I have seen over a dozen nests in a group, and all constructed by the same pair of Long-billed Marsh Wrens, and yet not one contained an egg. It is a very common thing to see a pair of House Wrens successively inspect two or three nests of their own collection of partially or fully built homes. These active little midgets are the most pronounced busy-bodies that it is possible to find among our feathered friends, and they are on a move all the time. I have seen them fill five cavities with sticks and other nest material, near our house and most of the nests all ready for the eggs, before depositing an egg, and then occupying the least likely location of the lot. It is not unfair to say that if there were a dozen cavities in the neighborhood, all would be filled by these restless expansionists in their endeavors to enlarge their possessions. One of the queerest features in this curious custom, is that the pugnacious wrens will defend the unoccupied nests from the visitations and encroachments of other birds, and even after the female wren is sitting in the selected cavity, for so persistent are the real estate owners that they will harbor no interference from other birds of the neighborhood. It not infrequently happens that the wren success-

fully defends the cavities from the encroachments of the pertinacious imported sparrow, though if the sparrows once get into the hole it is a sure thing that the preemptors will rear a brood in the cavity.

The Long-billed Marsh Wren constructs its nest among the long rank marsh grass and rushes and in most cases over the water at the edges of lakes and ponds, and these nests are composed entirely of green grass and built in the form of a cocanut. These oddly situated homes are found in numbers among the cattails in suitable quarters in the months of nesting and are very interesting to study, though but few observers have the enthusiasm to wade about in the ooze and water. It frequently happens that a group of a dozen nests are found within a space of no more than a few rods, and only one home in the lot contains eggs, and I have seen and examined over twenty nests made by one pair of birds, but one nest being occupied, and that one not the best looking one by any means; for it often occurs that the pair selects an old last year's nest for the eggs, while the new fresh ones are apparently constructed for the pleasure of building, or for some purpose that we cannot understand. It is quite possible that these extra nests are built by the birds with a view of deceiving prospective spoliators.

On one occasion we found over sixty nests in a marsh, and all made by the six or seven pairs of little wrens that were chattering in the grass or swaying on the rushes, and as if trying to deceive us the midgets would often fly into the mock-nests, but they all kept from the nests which held the eggs while we were present.

M. GIBBS.

Sharp-shinned Hawk.

My first acquaintance with the Sharp-shinned Hawk began in the year 1896. On May 5th I was returning from a trip through the woods and pastures when I came to a piece of hemlock woods with thick undergrowth. I went into them a short distance and sat down on a stump to rest.

While sitting there I noticed a pair of small Hawks (which I called Chicken Hawks) flying from tree to tree uttering sharp cries of *Kitt! Kitt! Kitt!* Before long I saw a nest in a hemlock tree up about 20 feet from the ground. I climbed up and found it contained 2 eggs. Putting them in my pockets I slid carefully to the ground and went home. Two weeks later I went to the woods again and found the Hawks had built a new nest a few rods from the old one and this contained 2 eggs. 13 days after I went again and found another nest containing 2 eggs.

From this experience I made my notes: "Chicken Hawk nests in hemlock trees, nest of hemlock twigs, number of eggs in set two." But on sending one of them with some other eggs to the editor of the OÖLOGIST for identification I found I was mistaken about their being "Chicken Hawks."

In 1897 C. F. Stone collected a set of four May 27 in first piece of woods and I collected a set of five May 17th in another piece of hemlock woods about a mile from this one.

The first of May, 1898, I visited the two pieces of woods and found the Hawks had returned. On May 18th I collected a set of five from first piece of woods and May 28th a set of four from second piece. I collected a second set of four on June 18th from this last pair.

This year I collected a set of five May 1st from second piece and on June 11th collected a second set of four from them. The first pair failed to return.

I have invariably found a stump or

log a few rods from the nest where they eat their prey. I have found feathers of the Robin, Catbird, Song Sparrow, Towhee, Bluebird, Indigo Bunting and several species of Warblers. This year I found by the log the shell of a Bluebird's egg, and a white one which I think was that of the Phoebe.

C. N. DAVIS,
Branchport, N. Y.

Nesting of the Virginia Rail.

On June 12 of this year while looking for Red-winged Blackbirds' nests in a swamp near this city, I stumbled upon a nest of the Virginia Rail. The nest was in a clump of weeds over water about six inches deep and was composed entirely of swamp grasses woven into a sort of platform, the bottom of which was on a level with the water. It was shaded and concealed by some reeds which had been bent over from all sides, forming a sort of roof. As I parted the reeds to examine the clump, the bird, which was on the nest, slid off and ran through a space of shallow, open water to find shelter, thus giving me a good view of her.

The nest contained ten eggs in which incubation was about half over. These eggs were slightly nest stained but withal a very handsome set. In this swamp, and not many yards from this same spot, I took a set of six fresh eggs of this bird a couple of years ago, and I also heard of another nest being found near by containing eight eggs. The swamp is inside the city limits and close to the trolley car track and right on the bank of the river.

F. NORMAN BEATTIE,
Guelph, Ontario.

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I can still furnish many or most items offered on last 16 pages of June-July OÖLOGIST. The "\$2.75 for \$1 00" Premium Offers hold good until Jan. 1, 1900.

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THE OÖLOGIST.

A MONTHLY PUBLICATION DEVOTED TO

OÖLOGY, ORNITHOLOGY AND TAXIDERM.Y.

VOL. XVI. NO. 12.

ALBION, N. Y., DECEMBER, 1899.

WHOLE No. 161

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-third list rates.

What's Your Number?

Examine the number following your name on the wrapper of this month's OÖLOGIST. It denotes when your subscription expired or will expire.

No. 161 your subscription expires with this issue
165 " " " " April, 1900
170 " " " " Sept. "

WANTED:--Sets of 63, 64, 365 and 365 from the Original Collector. Must be first class with full data. Offer sets of 305, 331, 474b, 674, etc. and cash. W. H. BINGAMAN, Grundy Centre, Iowa. Box 307.

OÜLS, Hawks and other eggs to exchange for good Indian relics or good sets hot now in my collection. No singles nor trash wanted, JASPER BROWN, Norway, Iowa.

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WANTED:--Canvas-back and Harlequin Ducks in the flesh or fresh skins. Will pay cash or give good exchange in mounted specimens. WHIT HARRISON, La Crescent, Minn.

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CHOICE SETS of White Pelican, Laughing Gull, Willet, Wilson's Plover, Foster's Tern, Clapper Rail Black Skimmer, Green Heron and many others for sale very cheap. M. T. CLECKLEY, 457 Greene St., Augusta, Ga. 164

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THE OÖLOGIST.

VOL. XVI. NO. 12. ALBION, N. Y., DECEMBER, 1899. WHOLE No. 161

THE OÖLOGIST.

A Monthly Publication Devoted to

OÖLOGY, ORNITHOLOGY AND
TAXIDERMY.

FRANK H. LATTIN, Editor and Publisher,
ALBION, N. Y.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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Some Winter Birds of Yates Co., N. Y.

The winter of 1895 was remarkable for the large numbers of American Crossbills that remained here all winter.

Almost every coniferous woods supported a flock of twenty-five to one hundred birds. They show a decided preference for second growth hemlocks bordering and growing in deep ravines.

Their food consists quite intirely of seeds, which they extract from cones, with wonderful dexterity. I have seen them break off cones and hold them with their claws while extracting the seeds within, but this is a wasteful method, as they do not seem to be able to get but few seeds, for they soon drop the cone and go for another. Their visits seem to be regulated by the supply of cones

Throughout the winters of 1896-7 they were abundant, but none came in 1898.

The White-winged Crossbill is of comparatively rare occurence, the only time that I ever noted them here was on February 23d, when I met a few mingling with the American Crossbills.

On January, 22d, I caught a Cooper's Hawk in a barn and, upon dissection, I found him jam full of English Sparrows, a good deed worth recording.

January 25th I saw a Meadowlark, and on February 16th, a Wilson's Snipe fying about in the storm. Robins were noted throughout the winter.

During the winter of 1896 large flocks of Cedar Waxwings and American Goldfinches were much in evidence.

On December 8, '95, I saw twenty-five Waxwings, and on the 11th, seventy-five sitting quietly in the tops of some locust trees in the street.

On the evening of December 27th, while walking along the lake shore, I was surprised to hear the noisy cries of a Killdeer, whose form I could distinguish gliding about in the moonlight.

Song Sparrows are a regular winter

resident, a few remaining, as it seems to entertain the hosts of Tree Sparrows that come trooping along in October, and remain until late in April.

January 12, '96, was a beautiful winter's day, so I sauntered along the swamp to enjoy the "tinkling bells" from thousands of Tree Sparrows, accompanied by the more alto-like "gipp" of Song Sparrows. While passing through a growth of alders, a shower of about three hundred Redpolls descended into the tree-tops and for a few minutes I enjoyed their subdued twitterings, when they were off as suddenly as they came.

On January 25th I was skirmishing about in the swamp, when I saw a bird dive into the cattails in such a Blackbird-like fashion that I shot it and it proved to be a female Redwing, a rare bird to see in this latitude in mid-winter.

November 23, '96, was a warm spring-like day. I noted two male Redwing Blackbirds, one Bronzed Grackle, a Killdeer, several American Coots and Horned Grebes, also two Pectoral Sandpipers flying over the edge of the marsh.

November 26th I visited a pine-clad ravine and found that the American Crossbills had arrived and with them were several Pine Siskins. I noticed that the Crossbills had a habit of alighting in the bare branches of a big oak tree in a clearing, after a flight up and down the woods.

On December 20th I saw half a dozen Red-breasted Nuthatches in company with a band of Chickadees.

On January 1, '97, I startled a band of Slate-colored Juncos out of a bushy ravine.

March 7th, I had a good chance to observe a flock of about seventy-five Pine Siskins. They were in some coniferous trees bordering a ravine, but soon they flitted into an oak near me, where they sat in a humped-up attitude, uttering a peculiar trill. Soon they be-

gan to drop into the lower branches and finally to the ground, where their actions after food were exactly like the Chickadee's. I sat perfectly quiet on a log, while they flitted all about me, not over six feet away, exhibiting no fear whatever, even when I coughed several times.

The first bird that I saw for 1898 was a male Red-wing Blackbird on January 2d. The next was a Northern Shrike sitting on the top-most branch of a small tree. Hoping to get him I sneaked along, sheltered by a stump fence, but before I got close enough to shoot, he had dived close to the ground and, skimming over the snow-covered field, ascended to the top of a high elm tree.

On January 25th, I was rather surprised to hear the rasping scraping note of a Bronzed Grackle. During the rest of the winter he remained a resident of our town orchards. Nearly every day I heard him sputtering and talking to himself and the English Sparrows.

On February 22d, I went forth in quest of Great Horned Owls' nests. I tramped to a swamp four miles from home. The snow was six inches deep, but on the hills it was drifted to five or six feet. I visited a hollow stump, where the owls nested last year undisturbed, but they were not there. Hearing a gang of noisy crows in a distant part of the swampy woods, I concluded they were entertaining my owl, and as I remembered seeing a Red-tailed Hawk building her nest there in a big elm tree in '96, I started in a round about way to visit it. I saw what appeared to be a stick protruding above the nest, but as I stood about one hundred feet away, wandering and hoping, Mrs. Owl arose with owlish dignity, stepped to the edge of the nest and away she went into the depths of the swampy forest and away I went for the nest. A quick climb brought me to a seat on the limb on which the snow-burdened nest rested. Hidden in the downy lining of feath-

ers I found two fresh eggs. The owl did not come back to inquire "who, who" was there, but I felt like "who, whoing" over my find.

The first gurglings of Song Sparrows are heard sometimes early as February 13th, but usually about February 20th. The song, or rather the remnants of their song, is but a prelude to what it will be in a week. They sit on the highest cattails or fence post and evidently try to sing the full song, but it seems to require practice. The first attempts are made down in the seclusion of weeds and cattails, but as the song improves they mount higher and higher until—there he is perched upon the highest fence post in full blossom of song.

C. F. STONE,
Branchport, N. Y.

The Belted Kingfisher.

One of our most conspicuous and interesting birds is the Belted Kingfisher (*Ceryle alcyon*). He is found throughout North America wherever there is a lake or river of any size and oftentimes he nests far inland where the water courses, if any occur, are extremely small rivulets. His slaty-blue plumage makes him conspicuous wherever found, and not a whit less does his harsh rattling call force itself on one's ears. Besides, he is a fearless fellow, never trying to conceal himself, and for what reason indeed should he? His flesh is so rank on account of his diet of fish that he is not sought by the sportsman, and the small boy with the large gun finds him no easy target on account of his rapid flight. Of course he often perches for minutes at a time, but his eye is always open and no one can approach unobserved to do him harm. His nest, too, is safe from the mischievous small boy, for it is so far back in the high bank that the world-

be destroyer soon tires of his digging and goes home disgusted.

The Kingfisher is very aptly named. He never eats carrion, and so every meal he gets has to be taken from the water. His work seems to be enjoyable for he is always ready for it, and by his extensive practice he becomes so expedient as to deserve his title of King. Along the Great Lakes a few specimens may be seen all winter, and even at that season when the finny tribes are deep down in the warmer water below the surface these skillful fishers make a living. However only a few remain, and until the middle of March the creeks of the north are deserted. Then some fine morning we hear his loud and rapidly uttered call, and we see him fly past up stream as he was wont to do last summer. Except for a slight jerk every dozen strokes his flight is as straight and swift as that of some ducks. Sometimes he keeps within a foot or two of the water, but often when flying up or down a small creek he keeps high up in the air out of danger. When skimming along the surface of a pond he keeps close to the water, but up he goes when a fish is seen. He hovers at a height of 20 or 30 feet, beating his wings regularly like a falcon, then swoops and plunges beneath the surface. Using his wings he dives well, and presently comes up with the struggling fish fast in his claws or beak. He does not always fish, however, in this way, for we often see him perched on a dead limb, fence-post or telegraph wire from which he can get a good view of the body of water near by. In this position he is a true picture of patience, for often nothing comes into view for a long, long time. Then all at once he drops off his perch and flies out quietly over the water. After hovering in the air an instant he makes his dreadful plunge. If he has scared his game he flies off to a distance to see it is quiet; but, if he has failed, back he goes to his

perch and waits for a second chance to try his skill.

In Ontario the nesting season begins early in May, and often in the last week in April we may find fresh eggs. The tunnel which Kingfishers occupy is dug by the birds themselves near the top of a bank generally overlooking water. Along the Great Lakes sometimes the nest is thus a hundred feet above the water, while along small creeks the hole may be in a bank only a few feet high. Even old gravel pits a mile or more from water are sometimes chosen, but in every case the cavity is dug in a soft, sandy spot, where excavation is easy. The entrance to the nest is seldom less than 12 or more than 13 inches from the top of the bank, no matter what may be its height. The birds go back into the earth from four to eight feet according to the kind of soil and the length of time at their disposal, and then the extremity is scooped out large and round. The entrance is often in close proximity to a colony of Bank Swallows, but all seem to get along very peaceably in the same bank. The writer has never seen a nest of the Kingfisher with more than one entrance, nor does he think that such has ever been reported in this locality. Sometimes the tunnel goes in straight for a short distance and then takes a new direction; and occasionally the direction of the whole tunnel is at an angle to the face of the bank. But in the great majority of cases the hole goes in perpendicularly and without a curve.

When collecting one must examine carefully every suspicious looking hole. The presence of cob-web or other foreign substance in the entrance indicates an old nest, but possibly near by is one with a small heap of sand below it. This has been thrown out lately by the birds and we investigate further. Pulling up a dried last year's stalk of the common mullein (*Verbascum thapsus*) which generally grows in such places,

we thrust it into the hole. If the depth is five feet or more we are pretty sure of an occupied nest, but if the weed-stalk touches the end before accomplishing at least four feet we have found a hole which is not completed, or one where the soil has proven too hard for the strength of the birds. If the female is at home she will be loath to leave and may peck at, and hold onto, whatever we may have inserted into her excavation. Sorry will be the inexperienced boy who gets his fingers nipped in this way. He will find that her beak is strong and sharp and he may bear the mark of his encounter with her for many a day. By measuring with our weed-stalk along the top of the bank we find the exact location of the nest and eggs, so we dig down carefully for 10 or 12 inches. When the tunnel at last breaks through, some of the soft mud falls in about the eggs, but if one is careful he may take 20 sets without a single accident. The pure white, nearly spherical eggs are generally seven, one in the middle with the other six around it in a circle. Sometimes six is a complete set, and occasionally eight eggs are found, but almost invariably the number is seven. The eggs of one set are generally uniform in shape and size, the average being 1.35x1.06 inches, but very rarely an exception occurs in which elliptical, oval and ovoid eggs are all found in one set. Nothing resembling a "nest" is ever found, but fish-scales and bones are ejected by the birds in the manner of Owls and other birds of prey, and when incubation is advanced a filthy lot of this stuff is generally found about the eggs. The young are peculiar looking birds because of their exceedingly large heads but a strong skull is absolutely necessary for birds which plunge with such force into the water, and which also burrow their own homes in the banks.

The writer once scared out of their

burrow a couple of young birds which were almost ready to leave the nest. The bank in which they had been hatched looked out over Lake Ontario, and as they were easily tired in their first attempt to fly, they soon dropped into the water. Instinctively they turned right about face, and using their wings as paddles soon made back to land where their wants were soon attended to by the parent birds and the warm rays of "old Sol."

R. W. JOHNSON,
Port Hope, Ont.

Clay-colored Sparrow in Southern Minnesota.

I read with interest an article from the pen of Mr. P. B. Peabody, treating on the nest and nesting habits of the Clay-colored Sparrow, in a recent OÖLOGIST.

Mr. Peabody's statement is true when he says, "Nevertheless the Clay-colored Sparrow does nest in Central Minnesota, at least as far south as Minneapolis."

At my home, here in the northern part of Steele county, state of Minnesota, not farther than fifty miles from the Iowa state line I find this Sparrow breeding.

In the spring migration of 1899 I noticed the Clay-colored Sparrow as common and some could be seen all through the months of May and June, also later, in the vicinity of brush and scattering trees. The last week in May and the first of June I commenced looking for their nests but without success.

On June 5th of the present year I was walking through a pasture right at the edge of a small grove where there were scattering bushes of hazel brush, thoroughly mixed with dead grass. I struck a suspicious looking bush with my walking stick and a small bird flew out which I at first took to be a Chipping Sparrow, but upon

close scrutiny I saw I was mistaken and that the species was the Clay-colored instead. If I had not struck the bush I would have passed by and the nest would have passed unmolested, for I found out afterwards she was a very close sitter, and would allow one to come within a foot of the nest before leaving it. Carefully parting the bushes and grass till I could look in, yes, sure enough, there was the nest and eggs, but hold on, what is that? The villian in the slick form of the Cowbird has already found this well concealed nest and deposited one of those gray monsters in it, which was ready to crowd out or crush the rightful ones. At a second glance I saw there were only two eggs of the Clay-colored Sparrow. As I collect and have only full and complete sets I determined to leave it for a few days. Returning on the 7th following and finding no more eggs had been laid I took possession.

The nest was situated in a small growth of hazel brush where there was an abundance of last year's grass, placed eight (8) inches from the ground, being well concealed with overhanging grass, built of fine dried grass, stems and very slender weed-stalks, lined with fine grass-tops with some white and black horse hairs.

The color of the eggs are light green, spotted all over thinly with reddish-brown and lilac, more so at the larger end. Incubation was far advanced; but with patience I managed to save them. These are a trifle smaller than a set that I have which was collected in N. W. Canada.

EDW. W. SPRINGER,
Owatonna, Minn.

The 1900 Horizon for "The Oologists Association."

Of prospects perhaps the most enjoyable to be looked forward to during the forthcoming year is the proposed meet-

ing of Oölogists, to be held in Washington next Fall. With the steady increase of our membership list a good attendance is promised, and this, our initial meeting, should be one of the greatest interest to the members, and of the greatest benefit to the Association. The exact date and the whereabouts of the meeting will be decided upon immediately, and all members promptly notified of further plans. Washington will probably be the place of the meeting, however. It will no doubt be left with the members to decide.

A printed list of members will soon be forwarded to all in good standing, for the sake of convenience, as also a slight step toward causing a closer touch of members with one another, that one member may know where the others reside. Correspondence among members will probably do much to awaken a warmer fraternal feeling, and no doubt will result in mutual benefit.

It is hoped that during the year the Association will commence to publish reports of value. In fact, this is assured. All members are invited to contribute matter for reports.

When the treasury becomes larger a magazine will probably be published. It is hoped that this may appear soon. However, certainly it is that many reports and publications of an original nature will mark this year as one of progress and life. Let us all take a new and enthusiastic interest in our Association. Send in your notes, correspond freely with your brother members, and seek for new members. Oölogists are few and far between. We need all of the right kind that we can get—help us to get them.

With greetings of the season, and soliciting your close communion in our efforts to bestir the life and enthusiasm which breed and win success, I am,

Very cordially yours,
 JNO. W. DANIEL, JR.,
 Secretary-Treasurer
 "The Oölogist Association,"
 Lynchburg, Va.

The Mockingbird in Central Iowa.

I do not want you to think for a minute that I am giving you here a description in full of the habits of the Mocker, for it would be impossible for me to do so from experience. No, I will ask some southern ornithologist to do that. But I find that Davie gives the range of the Mocker as, "rare or local north of 38°;" so I presume I am justified in attaching some importance to the record of the nesting of this species in south-central Iowa, about 41° 20'.

On May 8, 1898, while rambling through a tract of pasture land divided by osage fences, I started from the hedge, a bird which attracted my closest attention by the striking color-effect of the white-wing markings in its flight. I followed this bird and soon identified it as the Mockingbird (*Mimus polyglottus*). It led me a short distance to an old forsaken orchard—an ideal place for bird-nesting, for the old apple trees were in all stages of growth and decay, and it was sheltered on two sides by tall osage hedges. There my new friend, the Mocker, joined his mate who watched me silently in a guilty, secret-burdened manner; and I soon discovered the secret—an unfinished nest tucked snugly away in a tangle of hedge twigs. Immediately after gaining this knowledge I left the place.

In ten days I returned to the nest and found that incubation had been commenced on three eggs. The female slid silently from the nest at my approach and remained quietly peering at me from the top of the hedge while I despoiled her home. The set, I find from Davie, was typical, as was also the nest.

During the interval between my first sight of the bird and the taking of the set, the male Mocker was seen twice at my home one mile distant and once near the public road one-half mile distant from the nest. He was heard to

sing once and then only briefly; and his song was surely not his best, for, to me, it seemed hardly equal to that of the Brown Thrasher in musical qualities.

Soon after my raid the birds disappeared from this locality and I have often regretted that I did not withstand the oölogical impulse which caused me to take that set. I have visited the place many times since but have not seen a Mockingbird since May, 1898. The Mocker is certainly very rare here and I have very little hope of seeing the species in this place again.

ARTHUR A. JEFFREY,
Indianola, Iowa.

Performers and Singers.

There are many peculiar musicians among the tribes of fur, fin and feather. There are fishes that grunt and sigh; music in their line, and there are singing mice, as everyone has heard about. But it is in the feathered line that we find the greatest variety of musicians and the most entertaining performers. Among the birds we meet operatic singers, chorus jinglers, dirge performers, medley constructors, and as well, band performers, and single performers with all the motions of real players on instruments, many of which are grotesque in the extreme.

Aside from the refined musicians, as the Thrushes and many other small birds and which we all have met with, there are many species which attract us from the oddity of their noises and motions, and though we do not recognize their efforts as music, the noises answer the purpose intended for their requirements. Then it is that the hoarse croak of the Raven and the guttural effort of the Heron are highly appreciated by them as is the exquisite warble of the Warbling Vireos by these delicate birds. Some birds sing as they fly, and this class is large, though the actual musicians of this division, as we

comprehend song, is small. Then there are the birds which sing on the nest while sitting on the eggs. But the strangest musicians are the "song and dance artists" in their vaudeville specialities. I have seen artists in this line go through their performance in fine style. The Prairie Hen is a model in the "song and dance" style of exhibition, and the antics are enough to make an audience laugh. The birds gather in small groups on the prairies and go through a kind of dance—hopping up and down; scuttling about with their feathers bristling, and then the cocks at intervals emit a pleasing reverberating, booming sound, which may be heard for over a mile on a still morning. In the intervals between the dancing and singing there often occurs a free fight, for the birds gather to indulge in a jousting tournament for the benefit of the ladies. These meetings occur in the spring when the birds mate and may last for several weeks.

In the morning the cock Prairie Chicken begins tooting. This sound is produced by the expansion of two sacs at the sides of the head which are inflated at the will of the bird, something after the manner of the bagpipe that the Scotchman plays upon. The bird goes through a variety of motions in emitting these sounds, and in effect and movements to an extent resembles a performer on a wind instrument.

Then there are birds which entertain as they fly, and among them the Trumpeter Swan, which has a peculiar anatomical arrangement for the better expression of its musical efforts. This variation consists of a tortuous course in the windpipe, which passes in a convolution into the bony sternum. This extra length and scope give great resonance to the voice, and the result is such that the star performer is called the Trumpeter. With their long necks stretched out to the full extent these immense birds sweep across the coun-

try and blow their trumpets as the procession passes.

We have a very common performer with us in what is known as the Thunder Pumper, the American Bittern. This odd Heron, which is also known by the names of Indian Hen and Stake-driver, the latter name in allusion to its peculiar notes, is a not rare summer resident in our marshes, where it may be found stalking and singing (?) in the nesting season. The ungainly, long-necked, long-legged bird is a most singular performer and its motions will excite mirth in the observer, while its oddly constructed notes lend an added charm to the noises of the slough.

As we walk through the long, deep marsh grass we hear sounds, apparently issuing from beneath our feet. The chances are against the discovery of the exact spot, but if the bird is detected

the movements are watched with interest. The bird stops in his wading about and drawing himself up in a heap, like a player in "dot leedle Sherman pand," begins a wierd series of notes, unlike the notes of any other bird or beast of my acquaintance. The movements are somewhat comparable to the efforts of a barn-yard fowl in attempting to swallow a tidbit too large for its gullet, and ludicrous in the extreme.

These notes are thunderous and reverberating, and it is in allusion to its sonorous song, together with its movements that it is called "Thunder-pumper," a very good name, for the creature pumps out the sound, so to speak, with each bend of its long neck.

M. GIBBS, M. D.,

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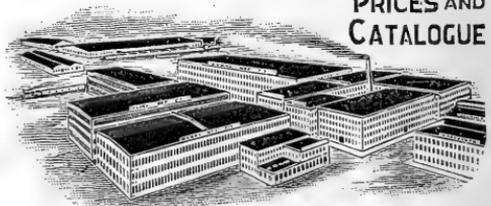
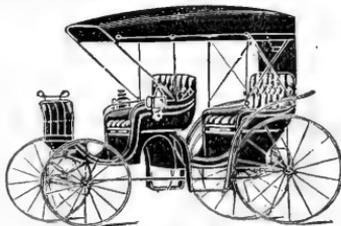
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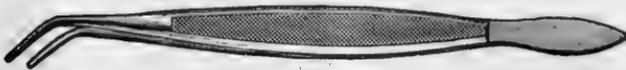
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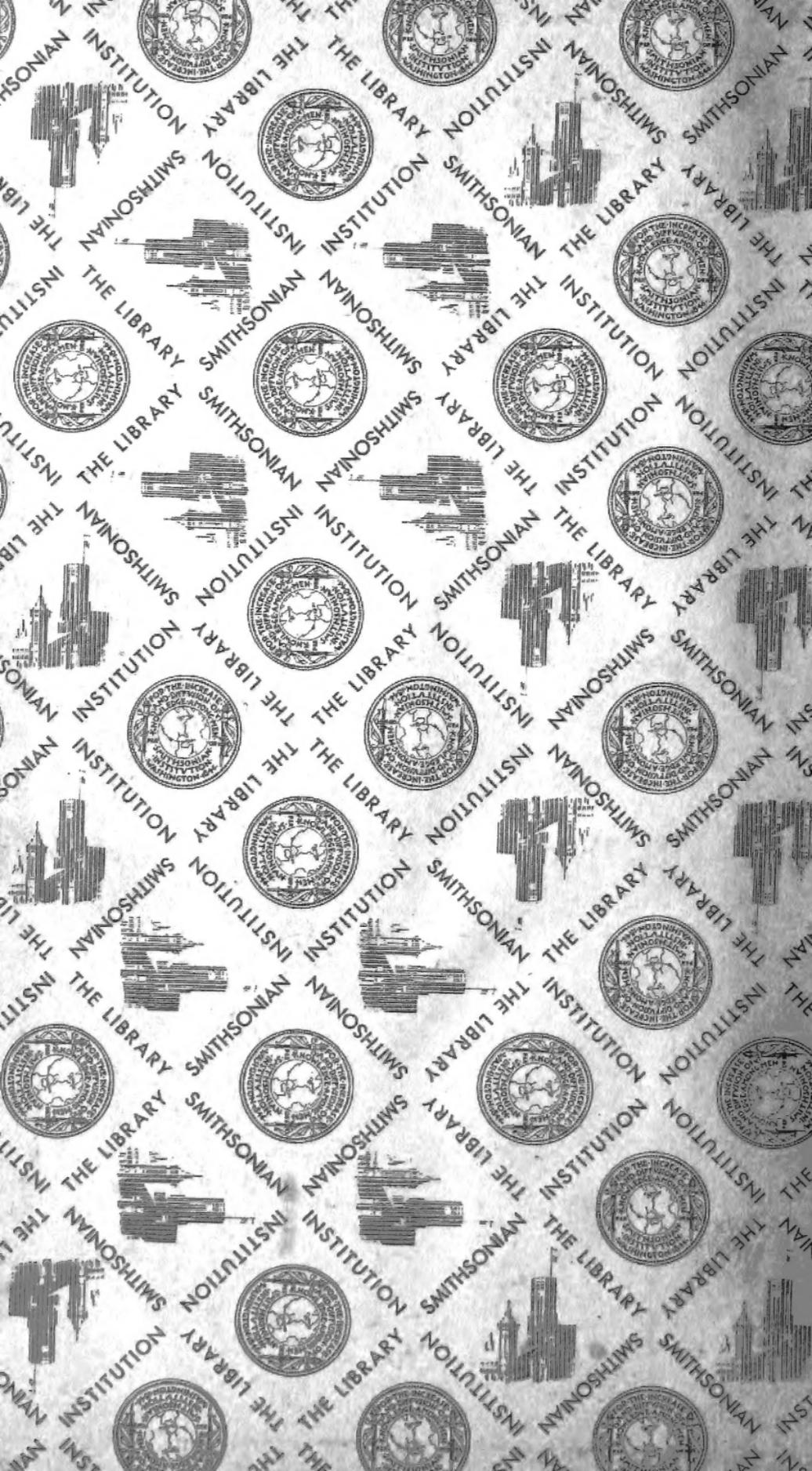
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