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— FOR THE —

STUDENT OF BIRDS,

THEIR NESTS AND EGGS.

—
VOLUME VI.
—

ALBION, N. Y.:
FRANK H. LATTIN, PUBLISHER,
1889.

A. M. EDDY,
PRINTER AND BOOKBINDER
ALBION, N. Y.

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OÖLOGIST.



Monthly.

50c. per Year.

Vol. VI,

ALBION, N. Y., JAN., 1889.

No. 1

Exchanges and Wants.

Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 21 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

IN EXCHANGE for the best offer of eggs in sets. a 22 cal. Ballard rifle; also purely-bred poultry of the following varieties, in trols: White and Brown Leghorns. White and Partridge Cochins. White Wyandottes. White Plymouth Rocks and Silver-penciled Hamburgs. W. J. SIMPSON, 91 Park Row, N. Y. City. 12m2

NOTICE—A 22 cal. rifle, nearly new, for best offer of eggs in sets, or works on ornithology. F. N. McCORMACK, Leigh, on, Ala.

Will exchange any of the "Bargain Lots" listed in this Oölogist for desirable specimens or books on Natural History. What offers? Frank H. LATTIN, Albion, N. Y.

WANTED—To exchange birds' eggs of Utah and other localities, for a photograph outfit. Must be in good repair. Write first. Address Box 655, Ogden, Utah.

I HAVE first-class eggs to exchange. DAVE DOCKERY, Hernand, Miss.

WANTED—A live Alligator, not less than 5 ft. long; a 7 ft. one preferred. Will pay cash. Must be cheap. Address, COLLECTOR, Lock Box 67, Albion, N. Y.

I WILL exchange a nearly new Winchester single shot rifle with reloading tools, 32 cal., for first-class eggs in sets. Make me an offer. H. C. COOK, Potsdam, N. Y.

I WILL exchange one printing outfit complete, cost \$1.50, for best offer of oölogist's instruments received within one month. J. W. P. SMITH-WICK, Sabs souci, N. C.

WANTED—In large quantities, the following Fossils: Belemnites, Fossil Fish, Tribolites (*Calymene senaria*), Pentremites (*pyriformis* or *godoni*), and Shark teeth. Address stating lowest cash or exchange prices, FRANK H. LATTIN, Albion, N. Y.

TO EXCHANGE—First-class eggs in sets with data of, 7, 13, 22, 23, 214, 244, 261, 277, 278b, 282, 320 and nests, 263, 656, 666a, 673, 688, 763, also single eggs for eggs in sets with data and pair of climbers. FRED W. CURTIS, Box 209, Wauwatosa, Wis.

I HAVE first class eggs and Vols. 1, 2, 3, 4 and 7 of the Golden Days to exchange. L. A. DOCKERY, (Care of Miss. (coll.) Clinton, Miss.

FOR THE BEST offer of eggs amounting to \$10 or over, I will give a self-inking press, type and ink. The press alone cost \$10. Offers received until April 1st. MOSES L. WICKS, JR., No. 1 So. Hill St., Los Angeles, Cal.

WANTED—Second-hand books on Ornithology or Natural History, any branch, and Indian Relics (Mound Builders), in exchange for "Job Lots." Address, FRANK H. LATTIN, Albion, N. Y.

END-BORED singles of 7, 10, 12, 23, 51, 68a, 93, 148, 151, 153, 154, 157, 179, 182, 209, 211, 214, 231, 233, 249, 259, 261, 261a, 263, 304, 315, 317, 351, 357, 375, 378, 382, 383, 420, 431, 439, 460, 464, 477, 480, 494, 496, 516, 520, 522, 525, 520, 548, 550, 601, 612, 613, 617, for 1st-class, original sets, with full data, "Ornithologist and Oölogist," for 1887 and 1888, for best offer. A. C. KEMPTON, Riverside, N. B.

I HAVE a few sets of one egg each with data of the Bridled Tern which I will exchange at \$4.00 per egg, for any of the following species. Sept. *Bulwer's* prices: Nos. 2, 4, 41, 51. Warblers any species, 122, 128, Vireos, any, 157, 168, 181, 197, 244, 245, 248, 263, 264, Orioles and Humming-birds, any, 293, 312, 315, 316, 317, 320, 326, 327, 354; 355, 357, 361, 375, 382, 387, 388, 394, 395, and almost any species from 400 to 764 and also for any of the "Wants" mentioned in my other exchange notices of this issue. FRANK H. LATTIN, Albion, N. Y.

Penmanship TAUGHT BY MAIL. Circulars and elegant specimens of penmanship sent for stamp. One dozen cards with your name written in my best hand, 15 cents. Address, C. W. TREAT, Brooklyn, O.

DESIRABLE EGGS! I have for sale eggs in sets of each, with data, of the following species, collected in '88 on Gauling (Galden) Key, Bahamas.
Sooty Tern, \$0.39
Noddy Tern55
BRIDLED TERN 3.50
Sent post-paid at these prices. Identification *positive*. FRANK H. LATTIN, Albion, Orleans Co., N. Y.

BARGAIN LOTS.

We have accumulated a large lot of odds and ends, some of which are very desirable and others not, but in every case they are worth much more than the prices we ask for them. We have packed them up in "Lots" and have commenced to list them in this OOLOGIST at prices, in many cases, less than actual cost to us. At our low rates we cannot send prepaid, but will send by mail, express or freight, securely packed, at purchasers expense. In order that our patrons may know in which way it will be best to have them shipped the weight of each lot is given. As a rule lots under 2 lb will go cheaper by Mail, 2 to 15 lb by Express, and over the latter weight by Freight; in all cases we will ship the way which will be of the least expense to our patrons. If ordered by Mail send one cent per oz. additional for postage.

Address, **FRANK H. LATTIN, Albion, N. Y.**

NO.	DESCRIPTION.	PRICE
1	50 Sand Crab Backs, from Martha's Vineyard, weight 10 oz.	\$0.40
2	120 Sand Crab Backs, 18 oz.	.75
3	12 Sea Spider Backs, weight 4 oz.	.25
5	8 King Crabs, Sea Spider. Egg Case of Periwinkle, 2 Skate Eggs, 3 or 4 shells, &c. poor.	5 oz. .30
9	16 imperfect Brass Blowpipes, 5 oz.	.40
10	Lot of Cool. & Western Spec. Silver Ore, &c., 3 lb.	.30
12	50 Strombus alatus, a fine showy Shell from the Bahamas the lips on this lot are broken or we would not sell for less than \$5.00 these in this lot will retail quick at 5c. each, 4lb.	\$1.00
13	65 Strombus alatus, 5 3/4 lb.	1.25
14	50 Fasciolaria distans. The remarks on lot No.12 apply equally well to this species, 1 3/4 lb.	1.00
15	45 Faciolaria distans, 1 1/4 lb.	.90
17	65 Small Strombus, Fla., 16 E. I. Olive Shells, 2 3/4 lb.	.40
19	7 nests of the Bell's Vireo, and 2 nests of the Blue-grey Gnatcatcher, fine lot 3/4 lb.	.75
21	9 pol. Pearl Plates, Chinese Shells, 2 1/2 lb.	.90
23	20 Little Conchs, 10 Rock Murex and 2 Cones, 10 oz.	.30
26	Lot Mixed Shells for Fancy Work, 1 1/4 lb.	.25
29	9 Sun, 1 Fulgur, and 1 valute Shells, Organ Pipe and Branch Corals, and 1 pint small Brown and White spotted Bivalves for Fancy Work, 2 1/4 lb.	.50
37	60 Showy valves of Pecten irradians, 2 Silver lips, 2 Crab backs, 12 oz.	.50
38	70 Moss Agate Clippings from Rawhide Butte Wyo., 10 oz.	1.00
39	30 Small Carnelians, Lake Pepin, Minn. 3 oz.	.75
42	1 Mammoth and Curious Sponge Bahamas size 8 in. x 12 in., 6 oz.	.50
45	8 Small Sand tubes, 10 Moss Agates, 3 Rattle Snake Rattles, 3 var. Ivory Nuts, 3 dry Tarantulas, 8 oz.	.75
46	16 2d class Nests of the Tarantula or	
	Trap Door Spider, 3 1/8 lb.	1.00
	48 Satin Spar, Gypsum, Talc, Green Qtz., Graphite, Mica Slate, Hornstone, Oebre, 3 Micas, Agate, Marl, Tourmaline Black Mica. &c. 3 3/4 lb.	.50
	57 1000 Guinea Peas or Black-eyed Susans, 1/2 lb.	.50
	58 Chinese Back-scratcher, Curious 17 in. long; Ash-tray of Pearl Shell, Straw-covered; and 6 Coins; all Chinese, 9 oz.	.75
	66 to 70 Each contain a fine 1 in. by 1 in. spec. of the following Mine.als:—Porphyry. Gneiss, Tourmaline, Novaculite, Agatized and Petrified Wood, Talc, Chalcocopyrite, French Sandstone, Serpentine, and Magnesite. 15 oz.	.25
	71 to 78 Each contain 30 var. of the Minerals from the following list, size 1/2 in. by 1/2 in.:—Agate. Quartz, Garnetiferous Granite, Petrified Wood, Conglomerate, Gneiss, Porphyry, Asbestos, Talc, Leelite, Tourmaline, Magnetite, Trap, Graphite, Hematite, Pyrites, Black Mica, Granite, Gypsum, Moss Agate, Garnet, Sandstone, Agatized Wood, Labradorite, Hornblende, Serpentine, Williamsite, Cyanite, Enstatite, Magnesite, Coquina, Limonite, Marble, Tufa, Copper Ore, Flint, Asphaltum, Onyx, 12 oz.	.35
	79 to 83 Each contain 30 var. of same Minerals as in last lots, size 1 in. by 1 in. 2 1/2 lb.	.60
	84 Pkg. of 10 Minerals, 5 Iowa and Mazon Creek Fossil Ferus, 4 Mica, Hematite, 3 Drusy Qtz., 1 each of Caingorum, Qtz. Xtals, Tufa, Lithomarge, Corundum, Green Feldspar, Andalusite, Enstatite, Blk. Mica, Asbestos, and Chalcedony, 3 1/2 lb.	.60
	88 10 oz. Creip, 5 oz. White Lily, 5 oz. White Rose leaf, and 8 oz. small White Bivalve Shells. The entire lot is a splendid assortment of White Shells for fancy work, 2 1/4 lb.	1.00
	89 2000 Small Flat E. I. Snail Shells, quite pretty, 1 lb.	.50
	102 10 Nam. Minerals, 6 Clusters of Gypsum Xtals, 24 Halite from Sy. acuse, N. Y., 3 Psilomelane? 3 1/2 lb.	.40



THE



OÖLOGIST.

Monthly.

50c. per Year.

Vol. VI,

ALBION, N. Y., JAN., 1889.

No. 1

Breeding Habits of The Bridled Tern.
(*Sterna anosthata.*)

By C. J. MAYNARD.

Just to the eastward of Andros Island, one of the Bahamas, on the extreme outer edge of the reef, lie the Grassy Keys. These are three small Islands, the largest of which cannot be above a half mile in length by only a few hundred yards across.

South of these islets lie a large chain of keys known as the Washerwomen. There are something like sixty of these islets in all, including the smallest sizes, for they vary in area from the smallest point of jagged rock, wave-washed during winter storms, and in summer affording a scanty breeding ground for small colonies of Least Terns, to high rocky keys, embracing ten or twelve acres.

As remarked, these keys rise from one reef which borders Andros; and consequently they lie directly on the margin of that remarkable estuary of deep water that nearly divides the great Bahama Banks in twain, which is known as the Tongue of Ocean.

This group of islands stretches from the Grassy Keys southward for some thirty or forty miles, thus extending far beyond the southern extremity of Andros; consequently the lower islets are in a very exposed situation, and as the tide sets directly across them from east to west, and *vice versa* during ebb and flow, causing a heavy sea, even during comparatively calm weather, they are considered quite dangerous, and, with the exception of a few spongers who occasionally land on them, are seldom visited by man.

We passed the night of May 5 1884, in lying at anchor in our little vessel under one of the Grassy Keys; but early the next morning found us beating down the long stretch of Washerwomen Keys. In tacking we came close to several of the larger islets; near enough to see the Sooty and Noddy Terns sitting on their nests, but refrained from landing, as we were desirous of reaching the southernmost of the line. At last the man at the masthead reported that there was no land in sight beyond the key which we then had under our lee; and satisfying myself, by ascending the ratlines, that there was nothing in the shape of land between us and Cuba, which would not then have been but fifty miles away, I ordered the skipper to haul in for the last Washerwomen Key, and in a few minutes we were lying in a little harbor under the high rocky cliffs.

In a moment our faithful crew had the boat over the side, and propelled by stout arms, we soon landed on the surf-beaten rocks. As I stepped ashore a cloud of birds, consisting of Frigate Birds, Sandwich, Royal, Sooty, Noddy and Bridled Terns, rose with deafening clamor from the naked top of the rocky key.

A hasty survey of the place soon convinced me that the numerous birds were not as yet breeding, when my attention was attracted by my dog, who always accompanied me. She was pointing at a cavity beneath a huge rocky slab. As I approached, a Bridled Tern scrambled out, dashed past the dog, and with a scream, rose into the air only to fall dead on the rocks, for, suspecting that she was breeding, I shot her,

and stooping down, guided by my dog's nose, I soon discovered her single egg. This was my first specimen, but later, both on the more northern Washerwomen, on Galden Key and on the Ship Channel Keys, I found several other eggs. The time of breeding with this species, when undisturbed is about the middle of May, and the eggs are invariably deposited under rocky slabs, often so far under that they could not be reached with our arms. Unlike the Sooty and Noddy Terns, this species is quite shy and only in one or two instances was I enabled to capture the bird on the nest. Then I came upon the bird suddenly, without its having been aware of my approach.

The eggs of the Bridled Tern are, on an average, smaller than those of the Sooty, and are not usually as pinkish nor as coarsely spotted, but vary somewhat in this respect. Out of some twenty specimens which I collected, only four or five were as large as the smallest Sooty, and about the same number were coarsely spotted, and only two or three were of the decidedly pinkish shade seen in the ground color of the Sooty Tern.

The Bridled Terns are not uncommon on the isolated outer keys of the Bahamas, but, owing to the comparatively inaccessible character of the rocky islets which they frequent, the eggs will probably never be common in collections.—*The Young Ornithologist*.

Wood Thrush and Brown Thrasher in West Virginia.

Wood Thrush, (*Hylocichla mustelina*): This bird, common here during Summer, frequents tracts of low woods, and is very shy and their nests are very hard to find. It was my good fortune, last season, to secure two nests of this Thrush each containing four eggs.

One nest, found May 22nd, contained four eggs, three of them being spotted; this nest, placed on the upright crotch of a swamp oak, two feet from the ground, was composed of leaves and grasses, and lined

with mud and fine rootlets. The bird sat on the nest until I approached within arms-length of her when she left it and alighted on a bush a few rods distant, from where she watched me very attentively only giving an occasional hiss of alarm. The eggs are dotted all over with small black spots the size of a pin head; they are of the usual size measuring 1 x .75 inches.

Late in the evenings and early in the mornings of early spring and summer, this bird's song may be heard in some lonely woodland like the soft notes of a flute or the tinkling of silver bells; this is, in my estimation, the sweetest songster among North American Birds. It has been, aptly termed, "Flute-bird".

Brown Thrasher, (*Harporhynchus rufus*). Of all our spring birds none can excel in power of song our common Brown Thrasher or "Mocking-bird." During the early days of spring he may be seen, perched on some bush pouring forth his soul-stirring notes in one continued strain, and he does not stop at once either, but continues his song hour after hour. I've sat for hours listening to this wonderful mimicker, wondering how long it would take him to split his throat, and I have never tired either and think I never shall. There doesn't seem to be a bird or an animal beyond his powers of mimicry. The scream of the hawk, the chirp of the sparrow and the warbling notes of *V. gilva* are all familiar notes of this great mimicker.

It is very common here during the breeding season and its nests can be found almost anywhere, old log heaps, brush piles, fence rows, thickets of grape vines and thorn bushes all being nesting places of this bird. Nests are also occasionally found on the ground at the foot of a bush: the nests are generally composed of twigs, sticks and leaves, and lined with rootlets, horsehair and a few feathers; but when nests are found on the ground they are simple depressions, lined with rootlets. The eggs, laid here, in May and June are from four to six in number and are greenish-white thickly marked with reddish-brown dots, averaging in size 1 x .80 inches with variations both in

size and color. An egg in my collection, of the usual color, measures 1.30 x 1 inches. This was found June 21 1886 in nest containing one other egg of the usual size; on blowing found egg was rotten.

T. S., White Sulphur Springs, W. Va.

An Unusual Nesting Site; Peculiar Eggs.

Did the readers of the OOLOGIST ever hear of a Catbird building her nest in a tree. In the summer of '85 as I was walking across an old orchard I spied some sticks and twigs protruding from a natural cavity in a dead apple tree. As I approached the spot a Catbird flew from it. The nest contained four eggs, unmistakably those of the *G. carolinensis*. The birds had filled up a cavity almost 9 in. deep with the usual bulky nest. This is one of the most remarkable departures from their usual style of nesting that has fallen under my notice but I as have other collectors often found singularly deformed eggs of various species. One of the most remarkable of these is an egg I obtained from a boy who brought it to me for identification last summer (1887). This was found under a small tree containing a nest with three others. It is of the usual lateral diameter but its length is exactly $2\frac{1}{2}$ times. Another peculiar instance fell under my notice in the summer of 1885. I found a nest containing four eggs of the Catbird. Two were of the common size, one was almost as large as a Robin's egg and the other was perfectly round and hardly larger than a pea! The large one had an almost imperceptible embryo forming, the others were perfectly fresh. This circumstance was commented upon by a friend as follows. "That bird had only material enough for four eggs. She made a mistake in making the first too large and so had to retrench on the other." Who can offer a theory?

W. N. C., Biddeford, Me.

From Western North Carolina.

TO THE EDITOR OF THE OOLOGIST:

I see articles in your highly esteemed and interesting magazine from almost every other southern State, except North Carolina. Now you must not infer from this that we are wanting in bird life. On the other hand, there are few States richer endowed with the feathered tribe. Here in the western part, near Morganton is as good a field for the oologist as he could desire.

Thrushes, Bluebirds, Nuthatches, Warblers, Vireos, Swallows, Finches, Grosbeaks, Tanagers, Orioles, Crows, Jays, Cuckoos, Doves and Woodpeckers are quite abundant; American Quail are plentiful both in the hunting and breeding seasons; Ruffed Grouse are rare; they breed here though. Among the rarer birds are found the Nighthawk, Whip-poor-will, Owls, Hawks, Kildeer, Kingfisher and some Herons. There are also a few Wild Turkeys, but I have never found them breeding; I have an egg, that was said to have been taken near here. I collected 3 sets of Ruby-throated Hummingbird last season: also a Whip-poor-will. Turkey Buzzards breed on the bluffs near the Catawba River: the nests and eggs are very difficult to get to and I have not been rewarded yet with a set of my own collecting. In and around M. on a summer day can be found as many nests as at any other place, I think.

The English Sparrow has within the last three years became an abundant resident; it now surpasses any other bird in numbers. Baltimore Oriole is also common, but it is only recently that I have been able to capture any of their eggs. I got a beautiful set in June last, by means of the apparatus described in the Oct.-Nov. OOLOGIST by A. A., Germantown, Pa. It is not the easiest thing in the world to accomplish this; it requires a steady hand. Hoping your many readers may find something interesting in these lines, I remain

Yours Oologically,

J. A. B., Morganton, N. C.

Birds of Broome Co., N. Y.

It has often occurred to the writer, that if one person in each county should write an article for the OOLOGIST on the kinds, number and habits of the birds of his locality, the whole would form a very comprehensive ornithology of the United States. This would be of no little value to the readers of the magazine, by enabling them to compare the birds of their locality with those of any other; and it would also aid in settling some of the problems concerning the migrations of birds.

In hopes that our ornithologists and oologists may be stimulated to take up the work, the following is submitted:

Broome county is rather a poor field for the ornithologist. Owing to the absence of any large body of water, very few aquatic birds are seen within its limits. Geese, Ducks, Loons, etc. are occasionally found in fall and spring when they stop to rest and feed, but go beyond the bounds of our county to breed. Again, farther south, the valley of the Susquehanna forms a natural highway for the migrating birds; but here the valley extends nearly east and west and the birds have left it for a straighter course northward: therefore we are not visited by so many rare migrants as other favored localities. Our unfavorable position, however, does not deter the more common birds from visiting us each year, and their lack of rarity is well made up by their abundance.

Of the Thrushes, the Robin and Wilson's Thrush are the most common and about equal in numbers; after them come the Brown Thrush and Catbird, both quite common; the Wood Thrush is somewhat rare; and the Hermit occurs only as a migrant. The Bluebird is quite common in all parts of the county, and rather outnumbers the Robins.

Chickadees are common at all seasons of the year; Nuthatches and Brown Creepers not so plenty; the Red-bellied Nuthatch is a migrant with us. Two other very common spring and fall migrants are the

Kinglets; for a week or two after their arrival every wood is full of them. The Golden-crowned leads his brother, the Ruby, in point of numbers.

We have the House Wren for a summer resident, and the Marsh Wren for a migrant. The Winter Wren also occurs occasionally.

The most common Warblers are the Summer Yellowbird, Golden-crowned Thrush, Maryland Yellow-throat, Redstart, Yellow-breast Chat, and the Cape May, Black-throated Blue, Black-throated Green, Black and yellow and Black and white Creeping Warblers. The first five, only, are summer residents.

Of Vireos, we have the Red-eyed, White-eyed, Warbling and Yellow-throated. The first is the most common.

Cedar Waxwings are common, appearing even in the winter when they feed on the frozen apples which still hang on the trees.

Except in a few favored localities, the Barn and Cliff Swallow do not breed in this county. The leading representative of the tribe here, is the Bank Swallow. The White-bellied Swallow is also becoming quite common; it nests in bird-houses and holes in trees.

The Sparrows which occur as summer residents, are named in the order of their abundance, as follows:

English, Song, Bay-winged, Chipping, Field, Savanna and Swamp.

As migrants we have the White-throated, White-crowned, Tree and Fox-colored Sparrows. The White-throated Sparrows generally migrate in company with the White-crowned which they greatly outnumber.

The Purple Finch is somewhat erratic in its migrations; some seasons it is found in large numbers and at others very few are seen. It breeds sparingly in this county.

The American Goldfinch and the Snow Bunting are very common; the one in summer, and the other in winter; in fall and spring they are often seen at the same time. The Black Snowbird occurs in spring and fall, but does not stay with us in winter unless the weather is very mild.

In uplands the Chewink is common and

also the Indigo Bunting; the latter seems to be increasing in numbers here.

Our Starlings, named in the order of their abundance, are Red-winged Blackbird, Meadow Lark, Purple Grackle, Bobolink, Baltimore Oriole, and Cowbird.

The Crow is very common, especially in spring and autumn, when large flocks assemble here. In the more retired parts of the county, Blue Jays are plenty; during the winter they are often seen on the outskirts of the towns, probably in search of food.

The Shore Lark is most common in fall and spring; a very few remain in the county till July. They probably breed here.

The most abundant Flycatchers are the Kingbirds, followed closely by the Pewee then comes the Wood Pewee, Great Flycatcher and Least Flycatcher.

We have one representative of the Hummingbirds, Ruby-throated. Chimney Swifts are very common and are often found nesting in barns like the Barn Swallow. Both the Whip-poor-will and the Night Hawk occur; the latter in the greatest numbers.

Except the Flicker, the Hairy and Downy Woodpeckers are the most common of their tribe. The Red-headed Woodpecker is not very plenty. During the migrations we have the Yellow-bellied and Red-bellied Woodpeckers; the former is the more common.

The Kingfisher is common along streams, in the banks of which it nests. The Black-billed Cuckoo is quite common; the Yellow-billed species occurs rarely if at all.

Owls are somewhat rare, though the Saw-whet, Screech and Horned Owls may be found in the deeper woods.

Among the Hawks, the Sparrow Hawk is the most common. We have also, the Fish, Marsh, Red-tailed and Red-shouldered Hawks.

The Mourning Doves are very common and are frequently shot by hunters who mistake them for Wild Pigeons. Quails are seldom seen, but the Ruffed Grouse is a common resident. The Green Heron is

very common, and the Great Blue Heron frequently occurs.

The Killdeer, Woodcock and Snipe are not very common. The Spotted Sandpiper is abundant along water. During migrations a few Rails are found, but I believe none stay to breed.

WILLARD N. CLUTE,

Binghamton, N. Y.

Black-capped Chickadee.

On the 13th of last May my brother and I started out on a hunt for oological specimens. We tramped about four or five miles without finding anything worth taking. Then we came to a large piece of woods where we found a blue jay's nest in a small oak tree. It contained one egg. We then tramped around a little, until we came to a part of the woods that was all swampy. It looked a first class place for eggs. As we stood looking around, I saw a black-capped chickadee fly to an old elm stub about three feet high and three inches in diameter. It disappeared in a small knot hole near the top. we crossed over to it, by jumping from one log to another. As I was anxious to obtain a set for my collection, but when we got there we found they were only building. Both birds were very tame, as they would almost let us touch them. I visited the nest again on the 21st, as I happened to be that way and found it contained a beautiful set of six eggs. They were creamy white, covered with pink spots, thickest on the large end, they average about 21-32 x 15 32. I also took the nest, as I collected nests as well as eggs. I think there is as much, if not more to be learned from the nest than the eggs. It was composed of a layer of green moss then a thick layer of some wooly substance and lined with a thick coating of gray squirrels' hair forming a very warm and comfortable dwelling.

T. W. B.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
 Sample Copies, - - - - - 5c each.
 The above rates include postage and premium.

ADVERTISING RATES

Single insertion, 20 cents per line, nonpareil.

	1 mo.	3 mo.	6 mo.	1 yr.
Five lines.	1 00	2 50	4 00	6 00
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1/2 column.	7 00	17 50	28 00	42 00
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FRANK H. LATTIN,
 ALBION, Orleans Co., N. Y.

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Jottings.

To EDITORS AND PUBLISHERS:—We will send THE OOLOGIST one year, without premium, to any editor or publisher who will give it a notice, favorable or otherwise, and send us a marked copy of his paper containing the same.

It is now high time for Southern oologists to obtain their Great Horned Owl eggs for '89, providing they desire them of their own collecting. About the middle of February is the time for collectors in the latitude of the Middle and New England States to be on the alert.

OLIVER DAVIE'S EGGS. Just as this issue of the OOLOGIST goes to press, we have purchased Mr. Oliver Davie's entire stock of

eggs. A complete catalogue of this collection both of sets and singles will be printed in the Feb. OOLOGIST and will be offered at much less than their real value. We predict a big scramble among collectors after them. The time will come when the name of "Davie" will rank among oologists with that of Audubon and Wilson. What will be the value of the specimens that has aided him in compiling his great work at that time?

On January 3d, ye editor noted the first Horned Lark for 1889. We reprint the following from the YOUNG OOLOGIST of Feb. 1885:

On January 22d, a bitter cold day, brisk west wind, mercury at or near zero, we recorded our first Horned Lark for 1885. Once, twice, thrice we thought we recognized his welcome notes, the last call being to much for us, we started in search of our early visitant. We soon found the little fellow, only a few rods from our office door, running and skipping merrily over the frozen ground, now and then picking up a stray seed, apparently, in spite of the cold, enjoying himself as heartily as if it was a warm, sunny day in April. On Dec. 1st, 1884, while going to West Kendall, we saw four of these birds; we have observed them every month since last February; can we not soon have them recorded as an occasional winter resident in Western New York?

Although we endeavored to make our PREMIUM LIST very plain, it appears that to many it is a puzzle, difficult to unravel. Many have the idea that all offers were limited to the 1st of this month. How they could come to this conclusion, we are at loss to understand; for right beneath the date line on the first page we say in bold-face type "The offers made in this List will hold good until Jan. 1st, 1890." A year hence. Others have written to find out whether they can purchase extra premiums or not; while others have sent us the amount named for postage only, for extra premiums, expecting to receive an article in return worth from 50c. to \$1.00, while the amount they have sent is only sufficient to pay Uncle Sam for carrying the parcel from Albion to their P. O. Where and how such ideas and instructions can be found

we fail to find; but, we do find on the 2d page, which is devoted to instructions, a full one-half column, heavily leaded so as to make it conspicuous:

“Remember that any Premium No. mentioned in this PREMIUM LIST will be sent you with the OOLOGIST for '89 for only 50c.; or if you have already subscribed [or do not wish to subscribe] for the OOLOGIST you can purchase any premium desired at any time during the year for 35 cents. In either case the amount named for postage, packing and additional must be sent extra.”

And we also say across the top of *twenty-two* other pages, “The OOLOGIST and any premium on this page, 50 cts. Premium alone 35 cts. Postage, packing and additional, extra in either case.” And then again we fully illustrate by giving an example on page 3, right beneath the egg cut.

Peculiar Egg of *Corvus Frugivorus*.

On April 22nd, 1886, while out collecting near Wolfville, Nova Scotia, I took a set of Crows eggs which present some peculiarities which I thought some of your readers would be interested in. The nest was situated in the very top of a large spruce tree, their most common choice in this locality, and composed of the usual materials. The eggs were four in number and present so many variations that I describe each separately:

No. 1. Measures 1.71 x 1.15; the background has a decided greenish tint, which shows plainly through the small dots and specks of brownish-black with which it is uniformly scattered.

No. 2. Measures 1.71 x 1.15; the background is much lighter than in the preceding, giving a pure blue. The markings are in large blotches, looking as if dirty water had been sprinkled over it, and are several shades lighter than No. 1.

No. 3. Measures 1.74 x 1.16; and resembles No. 2 both in background and markings, although the latter are more numerous and the whole shade is darker.

No. 4. Measures 1.79 x 1.20; the back-

ground is a light sky-blue, and much the shade of that usually seen in a freshly blown Bluebird's egg. The markings are peculiar; consisting of one large four-sided blotch, about .25 x .15, and three smaller ones on the large end, of almost pure black color, and about a dozen fine specks scattered around them; the greater part of the egg is entirely unmarked, with the exception of a few lines, so dim as hardly to be seen; something like those on the eggs of the Red-winged Blackbird.

Although I have taken many sets, I have never seen an egg similar to No. 4. What say you?
 AYE CAYF.

The Turkey Buzzard.

This is not a very clean bird, but for usefulness he surpasses all others. The good quality of the Buzzard, as no doubt you know, is to remove the offal which is lying about. Around one of these putrid carcasses you can see a great number of these birds devouring the flesh with great relish. The Buzzard is also noted for his flight. It is a beautiful spectacle to behold these birds flying in their circuitous routes on a clear day beneath the azure sky, and no landscape is complete without him.

Unlike other birds when on the wing he scarcely moves his wings but with perfect ease remains on high.

They congregate in large numbers to roost and in some dead pine, pass through the land of Nod. The nest is situated on the ground, in rotten logs and stumps. Two eggs are generally the complement, but here is often only one in the nest. The eggs are yellowish white, spotted with brown and purple.

C. W., York Sta., Ala.

Late Nesting of the Grass Finch.

I see in the OOLOGIST of Dec., a note from V. H. L., Potsdam, N. Y., stating that he found a nest of the Grass Finch, on the 6th day of Aug with fresh eggs.

I found, on the 23d of Aug, '88, a nest of the Grass Finch with three perfectly fresh eggs. I am inclined to think that the Grass Finch lays three sets a season.

M. D. C., Austin, N. H.

Black and Yellow-billed Cuckoos.

In the OOLOGIST for 1888 I have noticed but few articles on the Yellow and Black-billed Cuckoos. Are they not worthy of mention? The past season I have found two sets of each. Although not rare finds, it always gives me pleasure in finding their nests, and studying their ways.

The first that I found was that of the Black-billed. It was placed on the horizontal branch of a thorn apple tree about 15 ft. from the ground. It was very frail, and contained one egg and a young bird about a week old. The mother bird was very anxious as to what would be the outcome of my observations, but I at last left her "Monarch of all I survey" and she was satisfied.

About a week later we had a severe storm and I heard from a friend that the nest was blown down, and the young killed. Foolish bird! I wonder if she took the lesson and built her nest lower another time.

The next nest was that of the Yellow-billed, and contained only one egg. I left the egg a week, but when I returned there was only that one there. Incubation was well nigh complete. Was this not a small set? I am positive it was complete; 1st because I had watched the nest from the beginning; 2nd, because it was in a very retired piece of woods, and not near a highway where collectors might abound. This nest was only one foot from the ground and was simply a platform of sticks.

On July 16th I took a set of two eggs of Black-billed. The nest was made of grass, and was placed in a thorn bush. Incubation was nearly complete.

The last set taken was that of the Yellow-billed and contained four eggs. Incubation was nearly complete. The nest was the best I have seen, and was placed in a clump of hazel bushes about four feet from the ground.

The Black and Yellow-billed Cuckoos are great insect devourers. I think they devour more insects than *any* insect devouring birds. Some writers say they prey on the eggs, and sometimes the young of

other birds. Grant it. Is not the great work they do in devouring those hairy, spiny caterpillars (not so much sought after by other birds) a sufficient reason for their protection? The habits of the two birds are very much alike as far as I have observed. Their feeding grounds are grassy swales, willow swamps, tamarac marshes and damp tracts. I have found the favorite breeding haunts to be the interior of woodlands, small groves, thorny trees and bushes and wooded banks of strams.

Hoping to hear from others on the habits of these two birds, and also the time and range of breeding. I am,

Oologically E. C., Wauwatosha, Wis.

Notes from an Alabama Collector.

Doubtless your readers would like to hear from this state, and as I have not seen many articles from this part of the country, I take the liberty of sending you some gleanings from my note book.

My first set collected was a Turkey Buzzard's, placed on the ground under a pile of oak limbs.

April 2nd. Set of 5 eggs of the Black-capped Chickadee; situated in an old stump about ten ft. high.

April 6th. Brown-headed Nuthatch with 6 eggs.

April 20. Brown-headed Nuthatch, two Bluebird's nests and a Mocking-bird's with 4 fresh eggs. Mocking-birds are very common here. This season I found about twenty of their nests, but would not take but a very few.

April 27. Cardinal Grosbeak, 3 fresh eggs. I have found about twelve nests of this bird, and three eggs was the number that each contained.

May 8th. Blue Jay's nest, in an oak about fifteen feet from the ground.

May 11. Brown-headed Nuthatch, four eggs slightly incubated, also a Blue Jay's nest containing four eggs.

May 14. Acadian Flycatcher, 2 fresh eggs; nest situated on the extremity of a limb, also a Summer Red-bird's nest containing four fresh eggs.

May 25. Two sets of Cardinal Grosbeak also a Wood Thrush's nest.

May 26. Great Crested Flycatcher's nest, made of pine needles, wool, feathers and a snake skin, and placed in a Martin box.

May 29. Chimney Swift's nest also collected a set of Bachman's Finch. The nest was placed near a branch in the midst of weeds.

June 7th. Yellow-billed Cuckoo's egg in a Wood Thrush's nest, and, same date, a Yellow-breasted Chat's nest, containing 4 fresh eggs.

June 9th. An Amer. Quail's nest with 17 eggs fresh.

June 13th. Brown Thrasher and a Yellow-breasted Chat's nest containing 4 fresh eggs, about 4 ft. from the ground.

June 14th. Logger-head Shrike's nest with four fresh eggs placed in a small oak tree about 15ft. from the ground.

June 17th. Yellow-shafted Flicker, six fresh eggs. These eggs were very small, no larger than a Red-head's.

June 24th. Summer Red Bird's nest with 2 eggs, also a Yellow-billed Cuckoo's with 3 eggs slightly incubated.

June 28th. Carolina Wren, 4 fresh eggs placed over the door in an unoccupied house.

The above are some of the sets I collected during the season of '87. I found a number of others, but did not take the eggs.

C. W., York Sta., Ala

The Critic!
Carolina Parakeet.

TO THE EDITOR OF THE OOLOGIST:

An article in the Oct. and Nov. No. of the OOLOGIST, 1888, entitled "Carolina Parakeet" and devoted more particularly to the nesting habits of this rare species, engaged my attention while perusing the last interesting number.

Undoubtedly the writer, who signs himself "T. S., Clarinda, Iowa," is a well-meaning collector, and honest in his convictions; but is certainly far from correct in stating that the Parakeet breeds

in Iowa. Many articles creep into the OOLOGIST, as with many other natural history papers, that are not only highly improbable, but I am sorry to say, simple emanations of untruthful collector's brains. Witness an article on the nesting of the Bald Eagle during the last year or so in which the writer describes the eggs as equal in size to goose eggs, whereas they are less than one-fourth of the cubical dimensions.

This little criticism is not intended to apply to the editor of the OOLOGIST, as it is impossible for him to supervise each article. Many other papers are, unfortunately, the exponents of equally ridiculous fabrications, readily detected by experts in the various branches of science, but unfortunately, too often believed by the inexperienced. In conclusion allow the writer to say to all young donators to the columns of any paper never deviate from the truth; never fabricate. Be sure that you know your lesson before you attempt to impart it to others. In other words, "Be sure of your identification and then stick to your text." This, from one who has studied our birds over twenty years, may suggest, at least accuracy in description and identification.
Nov. 20, '88. SCOLOPAX, Kalamazoo, Mich.

Bank Swallows at Picnic Point.

These little fellows are very common on very near all the small lakes in Wisconsin. A very large colony of them has taken possession of the cliffs on Picnic Point overlooking Lake Mendota.

They arrive here about the middle of April. The old ones use the same nest year after year; but the young, when they begin to breed, make new nests. Their nests are made by burrowing in the side of the cliff until they get a hole about two feet deep and large enough for the bird to enter. At the end of this hole is placed a number of downy feathers and dry grasses, on which are laid anywhere from three to six white eggs. They leave here about the 1st. of September.

F. S. B. N., Madison, Wis.

Notes, Queries and Information from and for our Correspondents.

E. L. K., Millford, N. H. The bird you call Wilson Tern, is No. 686, Common Tern.

J. D. S., Guilford, N. Y., writes, that in his vicinity the Chimney Swift builds its nest more frequently in barns than in chimneys.

H. B., Bangor, Me.—We furnish a good set of Taxidermist's instruments for \$2.00.

J. M., Paola, Kan, would like to learn the correct name of a bird known in his locality as the "Milk Bird."

A. M. L., Northford, Conn., would like to know if the Loon ever breeds in his State.

H. C. P., Lane Co., Oregon, would like the address of some reliable assayer.

C. B. C., Odin, Ills., requests some reader of the Oologist to inform him through its columns, the difference between the White-rumped and Loggerhead Shrike; he finds it impossible to distinguish one from the other.

T. S., Sing Sing, N. Y., asks if Cuckoo eggs are very often spotted? and adds that he has a Black-billed Cuckoo's egg which has a very distinct band of dark green spots around the larger end, and large blotches of green (a shade lighter) on the smaller end [Cuckoo eggs are frequently if not usually marbled as you describe.—Ed.]

Conundrums.

Why is a Quail like a Chinaman? Without the q there would be a nail (wail).

What is the difference between a sportsman and an oologist? One empties his shells through the side and the other through the end.

Why is a Wood Pewee building its nest like an old roper taking his gin-fizz? They both have a lichen (likin') for it.

Why is a quarry laborer like an oologist? Both are skillful with the drill.

Why is a fall from a tree like a bee? Both have a sharp termination.

Why is Lattin like a rice-pudding? Because without eggs he would be miserable.

What is the difference between Lattin and the boy at the head of the class? One eggseels and the other sells eggs.

What hymn should an oologist sing on finding a last year's Hawk's nest? Nothing but Leaves.

When is a bird not a bird? When its a building.

Why is a Pelican like a gas man? They both carry large bills.

Why is an oologist like a man with the catarrh? They both "Hawk."

Why is h the oologist's favorite letter? Because without it his shells would be sills.

Why is an unknown set of eggs like a stranger at the bank? Both must be identified.

Why is C so useful to oologists? Because without it, how can they form their collections?

How many straws go to make a bird's nest? None; they are all carried.

Why should you be a happy oologist? Because (yo)u are always in luck.

Why is oology like a game of poker? There should be a limit.

Why is g never spherical? Because it is always in egg-shaped.

What language calls to mind birds' eggs? Lattin.

When is a highwayman like a bird? When he's a rob'in'.

When is an egg like a student? When it goes to Latin.

When is egg like a murderer? When it is spotted.

V. H. L., Potsdam, N. Y.

114	2 Large Conch, 2 Valves E. I. Clam, 1 Pyralia (large), 5 Naticas, 20 Sun Shells, 1 Abalone, 2 Chinese and 2 Japanese Ear Shells, 9 Moss Crosses, 1 Shell and Moss Vase, 1 Branch Coral, 25 lb.	.90
115	95 Second-class Resurrection Plants, 2 1/2 lb.	.95
116	29 Second-class Abalone or Haliotis Shells 8 1/2 lb.	1.00

—INDIAN RELICS—

126	6 Small Knives, assorted sizes, 4 oz.	.30
127	12 Ass'd Arrow Heads, 5 oz.	.75
128	6 Knives, well assorted, 3 oz.	.40
129	2 War Club Heads, 6 oz.	.40
131	31 assorted Arrow Heads, 1 lb.	.50
134	3 large Spear Heads, (slightly imp.) and 1 broken one, 8 oz.	.40
135	6 Spear Heads (1 rotary), half imp, 8 oz.	.60
136	25 Arrow Heads, mostly small war points 8 oz.	.75
137	2 small Club Heads and 5 pcs. used either as Knives or Scrapers 7 oz.	.50
138	1 Agate Drill, 6 Flint Spear Heads and 16 Arrow Heads (a few rare forms) The spec. in this lot are broken but at least 2/3 of each spec. remains 15 oz.	.75
139	10 finely assorted Knives 15 oz.	1.00
140	3 extra fine Knives 5 oz.	.75
141	6 small Knives 5 oz.	.50
142	12 small Bhd and War Points 3 oz.	.40
143	4 good Knives 9 oz.	.75
144	20 pieces, doubtless, used as Knives or Scrapers 1 1/4 lbs.	.75
145	20 Spear Heads, part of them slightly imperfect 1 1/2 lbs.	1.10
146	80 Arrow Heads 2 lbs.	2.00
147	116 Arrow Heads 2 1/2 lbs.	2.50
149	30 large Arrow or small Spear Heads 27oz.	1.50
150	15 small Knives 7 oz.	1.00
151	11 medium Knives 12 oz.	1.25
152	11 notched Scrapers 4 oz.	1.25
153	15 Scrapers 8 oz.	1.25
154	125 broken pieces of Arrow Heads, Spear Heads, Knives etc., of Flint, Jasper etc. (various forms of barbs or notches well illustrated) 3 lbs.	1.25
155	1 large Axe, 3 small Axes, 2 Hammer Stones, 18 Spears &c., 6 other pcs. all broken, 11 1/2 lbs.	.50
158	1 fine Axe, broken and mended, 1 small Axe, 1 unmaned pc, 3 lbs.	.75
159	3 Axes, 2 1/2 lbs.	.75

All the above Relics are from the Mounds of the Ohio Valley. And also Lots No. 182 to 189.

160	5 half shells <i>Venus mercenaria</i> from Ind. Shell Heap Casco Bay, Maine, 5 oz.	.30
161	3 fine shells <i>Buccinum</i> , same as Lot 160, 4 oz.	.30
162	6 <i>Natica</i> , same as 160, 4 oz.	.30
163	1 Leg Bone from Ind. Grave, Mich. fine, 15 in. long, 8 oz.	.35
164	2 13 in. Bones same as 163, 12 oz.	.30
166	28 pcs. Arrow-heads, Huron Co., O.	
12	Arrow-heads, Ga. 1 Red Jasper Arrow-head, Ala. 1 lb.	.60
167	23 Arrow-heads &c. and 2 Knives, Mich., 14 Arrow-heads, Va., 3 pcs. pottery, O., 6 spec. named Minerals and Fossils, 2 lbs.	.75
169	30 Arrowhead Chips, Mich. 16 pcs. marked pottery, So. Car. 40 Arrowheads, Spears, &c., of Quartz, Jasper, &c., Ga. 2 1/4 lb.	1.00

170	3 Arrowheads, Pa., 80 Arrowheads, Spears, &c., Ga., 3 Minerals, 2 1/4 lb.	1.50
171	1 War Club head, Ind., 3 Knives, Ga.	
33	Arrowheads, &c., Ga., 2 1/4 lb.	.75
172	3 Me. Minerals, 2 pcs., Ind. Bones, 6 extra serrated Arrowheads without base, 4 imp. Spears, 12 imp. Arrowheads, 3 imp. Knives, Ohio, 2 1/4 lb.	.90
174	1 fine flint Drill with point broken, 1 good Flint Chisel, 1 very fine Knife, Ohio, 3 oz.	.80
175	55 imp. Spearheads, Tenn. 3 lb.	1.25
176	85 fair Arrow-heads, Tenn., 2 3/4 lb.	2.00
177	12 fair Spear heads, Tenn., 11oz.	1.00
178	12 " " " 15 oz.	1.00
179	12 " " " 15 oz.	1.00
180	12 " " " 15 oz.	1.00
181	5 Spears and 6 Knives, Tenn., 11 oz.	1.00
182	2 fine Knives, 1 large scrape., 1 Hoe, 7 oz.	1.50
184	30 rude implements from Southern Ind., used for War Club heads, Knives, Scrapers, &c. 3 3/4 lb.	2.00
185	20 Knives, Scrapers, &c., 2 or 3 War Club heads, 10 broken pcs., Ind., 2 3/4 lb.	1.50
186	10 unnotched Scrapers, 6 notched Scrapers, Ind., 6 oz.	1.25
187	4 bunts and 4 com. Arrow-heads, 1 notched and 1 unnotched Scraper, 1 Knife, Ind., 6 oz.	.75
188	An assorted lot of Knives, Scrapers, &c., 30 pcs 2 1/2 lb.	1.50
189	40 pcs. same as lot 188, 2 3/4 lb.	2.00

MISCELLANEOUS

190	4 dark Sand Dollars, 15 fine White Sand Dollars, 1 imp. Key hole Urchin, 4 imp., Dollars, 6 oz.	.50
191	1 Scriptogram Copying Stamp, complete, surface of stamp imp., but will work cost \$1.35 13 oz.	.50
192	16 advertising Electrotypes will set 80 inches, single column ads. contain cuts of over 20 articles—A bonanza for an Amateur printer, 9 3/4 lb.	1.50
193	20 Pleiocene Fossils <i>Saccivora rugosa</i> , Maine, 3 oz.	.40
194	A very fine collection of Iowa Fossils, Carboniferous, 18 pcs., a fine assortment of Ferns, Plants, Sea Weeds, &c., 4 lb.	2.50
195	Another collection same, 12 pcs. but not as fine as last lot, 2 1/4 lb.	1.00
196	Same as 195, 11 pcs., 2 1/2 lb.	.75
197	Same—17 spec, mostly Ferns 2 1/4 lb	.75
198	40 red and black Glass Beetles, gilt legs and trimmings, 1 in. body good for Taxidermists, 7 oz.	.75
199	1 Crinoid Root and 1 Stem, 4 pcs. Fos. Shark teeth, 1 pol. Fossil Coral, Ia, 14 oz.	.35

BARGAIN LOTS.

[Continued from page 71.]

SECOND CLASS BIRD'S EGGS

Some of the spec. in the following lots are only slightly imp., while others are decidedly so, but in either instance we guarantee them to be worth more than our prices, we have exercised care and have taken considerable pains in packing them and think they will go safely without breakage, but as we are clearing out our 2ds we will not duplicate broken specimens.

200 12 Brewer's Blackbirds, 12 Catbirds
2 Bluebird, 3 var. of Turtle, 12 Flickers, 2
2 Bluebird, 1 elongated and 1 very curio.
pyriform shaped spec. of Hen fruit, 11 oz. 60
201 15 Brewer's Blackbird, 7 Flicker, 20
Catbird, 20 Bluebird, 1 Canary, 10 oz.60
202 20 Catbird, 20 Bluebird, 2 Purple
Grakle, 2 O. Oriole, 1 Marsh Wren, 3 Cliff
Swallow, 10 Robin, 1 Gt. tailed Grakle, 10 oz. 60
203 40 Catbird, 10 Quail, 6 Blue Jay, 10
oz.70
204 1 Zenaida and 1 White fronted Dove,
1 Screech Owl, 3 Mourning Dove, 6 Quail,
9 Blue Jay, 10 Brown Thrasher, 11 King-
bird, 9 oz.1.00

In the following Lots we have used Ridgway's No.'s in place of printing the names of the species.

205 9 Eng. Sparrow, 22 Bluebird, 18 Cat-
bird, 2, 480; 4, 261; 5, 378; 1, 242; 2, 278a;
4 Starling, 9 oz.75
206 1 ea. of 193a, 149, 226, and 236;
2 ea. of 267, 254, 251; 6, 93; 4, 11; 6, 248;
5, 12; 14, 22; 20, 153, 9 oz.1.50
207 1 ea. of 27, 193a, 51, 42, 135, 257,
259, 24b, 237a, 361, 146; 2 ea. of 170, 60;
4 ea. of 312, 320, 5 oz.1.25
208 2 of 258; 6, 271; 7, 315; 12, 214; 4, 7;
1, 157; 12, 154; 7, 231; 9, 151, 10 oz.75
209 1 each of 1, 24, 152, 36, 193a, 316,
183, 207, 217, 201, 202, 97, E. S., 135, 143,
181, 68, 182, 77, 42, 123, 114, 32, 61b; 2
of 27; 3 of 52, 4 oz.2.00
210 3 of 24; 4, 12; 12, E. S.; 4, 151; 13,
211; 5, 261; 2, 13; 2, 214; 11, 157; 3, 320;
2, 41; 3, 304; 2, 289; 2, 261a; 3, 244; 4, 326;
1 ea. of 193a, 170, 143, 231, 231a, 315, 93,
149a, 274, 1, 10 oz.1.25
211 3 of 22; 2, 23; 7, 214; 2, 151; 6, 231a;
9, 157; 1 ea. of 21, 24, 41, 181, 13, 498,
6 oz.70
212 7 of 261a; 11, 304; 2 ea. of 289, 1, 12,
7, 277; 1 ea. of 264, 7a, 11, 244, 6 oz.50
213 3 of 151; 3, 306; 5, 326; 10, 315; 9,
231; 1 ea. of 301, 274, 272, 123, 198, 320,
214, 211, 22, 23, 93, 5 oz.70
214 16 Black-crowned Night Heron, 23
Louisiana Heron, 1 Reddish Egret, 8 Little
Blue Heron, 14 White-crowned Night
Heron, 5 Snowy Heron, 1 Green Heron, 2

Alligator, 1 Dove, 1 Cormorant, 2 Tern, 1
Avocet, 4 Skimmer, 3 American Eared
Grebe, 20 Laughing Gull, 5 Am. Flamingo,
5 Gannet, 45 Am. Herring Gull. To any
one wanting a "bushel" of large eggs,
many of which are nearly first-class, will do
well to obtain this Lot. 10 $\frac{1}{2}$ lbs.7.00

215 35 2nd-class eggs from Sweden;
mostly unnamed, 11 oz.50

216 40 unnamed eggs, many 1st-class
ones, chiefly from Australia. Had we not
lost the names, many of the eggs in this
lot would be worth 25c ea. 10 oz.1.25

217 10 La Plata Dove from So. Am.
1 Thick-billed Vireo, Bahamas, 3 European
Wren and 1 Chiffchaff. Eggs in this lot
nearly if not all 1st-class. 4 oz.1.50

218 The following are from India: 3
Pied Mynah, 2 Bank Mynah, 1 Common
Mynah, 3 Corby, 3 Striated Bush Babbler,
2 Weaverbird, 1 Tern. 2 Cockadella from
So. Am., 1 of the "famous" Yucatan Jays,
and a runt Hen. most of the spec. in this
lot are 1st-class. 10 oz.2.00

Minerals.

The following lots are all good specimens
and the reason for closing them out is that
we have not the time to attend to our
Mineral department as we wish, and shall
close out most of our stock:

225 7 $\frac{1}{2}$ lbs. Tremolitic Talc, Jeff. Co.
N. Y.60
226 2 lbs. Quartz and 2 lbs. Smoky
Quartz in Calcite, Ct., $\frac{3}{4}$ lb Jasper Congloma-
te, 1 lb Pyrite, Mo.; $\frac{1}{2}$ lb Obsidian, Lip.
Isles; 1 $\frac{1}{2}$ lbs. Sphalerite and Calcite, N. Y.;
 $\frac{3}{4}$ lb. Magnetite, Pa.; 1 lb. Mica, Hematite;
 $\frac{1}{3}$ lb. Calcite, Saxony; 10 $\frac{1}{2}$ lbs.80
227 1 $\frac{3}{4}$ lb. Magnetite, N. Y.; 1 $\frac{1}{2}$ lb. Mica,
Conn.; 1 $\frac{1}{2}$ lb. Calcite, Pa.; 2 $\frac{1}{4}$ lb. Pearl Spar.
N. Y.; $\frac{1}{2}$ lb. Albite, Ct.; 1 lb. Calcite, Mo.;
2 lbs. Amphibole, N. Y.; $\frac{3}{4}$ lb. Oolitic Iron,
Tenn.; 11 $\frac{1}{4}$ lb.1.00
228 3 $\frac{3}{4}$ lbs. Gypsum, Mich.; 3 $\frac{1}{2}$ lbs.
Maecasite, Ill.; 2 lbs. Galena and Fluorite,
Ky.; 3 $\frac{1}{4}$ lbs. Hematite, Ky.; 13 lbs.90
229 1 $\frac{3}{4}$ lbs. Gypsum, Nova Scotia; 4 $\frac{1}{4}$ lbs
Hematite, Pa.; 1 lb. Selenite, N. Y.; 3 lbs.
portions of Geodes, Ia.; 9 $\frac{3}{4}$ lbs.60
230 2 $\frac{1}{4}$ lbs. Pectolite, N. J.; 6 $\frac{1}{2}$ lbs.
Barite, N. Y.; 1 $\frac{1}{2}$ lbs. Limonite, Pa.; 1 $\frac{1}{2}$ lbs.
Anhydrite, N. S.; 11 $\frac{1}{2}$ lbs.1.00
231 5 lbs. Mica, N. H.; $\frac{1}{4}$ lb. Nickle Ore,
Pa.; $\frac{1}{2}$ lb. Barite, Eng.; $\frac{1}{4}$ lb. Barite, Ct.;
 $\frac{1}{2}$ lb. Agate, Brazil; 6 $\frac{1}{2}$ lb.1.00
232 2 lbs. Pear Spar, Eng.; 4 lbs. Calcite,
N. Y.; $\frac{1}{2}$ lb. Cannel Coal, Eng.; 2 $\frac{1}{4}$ lbs.
Williamsite, Pa.; 1 $\frac{1}{2}$ lbs. Albite, Ct.;
10 $\frac{3}{4}$ lbs.1.00
233 4 $\frac{3}{4}$ lbs. Calcite on Hematite, Pa.;
3 $\frac{1}{2}$ lbs. Heavy Spar, Ct.; 1 $\frac{1}{2}$ Peacock Coal,
Pa.; 1 lb. Fluor Spar, Eng.; 10 $\frac{1}{2}$ lb.60

THE OOLOGIST.

234 4½ lbs. Indurated Clay, Md.; 4 lbs. Apophyllite, N. J.; ½ lb. Picrolite, Md.; ¾ lb. Alabaster, N. S.; 9½ lbs. 1.00

235 ½ lb. Aragonite, Black Hills; 4½ lbs. Dolomite, N. Y.; ¼ lb. Dawsonite, Can.; 6¾ lbs. Stilbite, N. J.; 12½ lbs. 1.00

236 11 lbs. Chromite, Md. 90

237 contains over 250 spec. of over 60 minerals from all parts of the world; mostly fragments. Have not counted any that is not at least ½ in. greatest extent. Labeled 4¼ lbs. 2.00

Lots 238 to 245 are all from the Black Hills. If you obtained them direct, the freight alone would cost more than our price.

238 4 lbs. Tufa, Petrified Moss; 5½ lbs. Glassy Quartz; 10 lbs. 1.00

239 8 lbs. Pink, White Gypsum. 80

240 3 lbs. Pyrites, 1½ lbs. Carbonate Ore, 2½ lbs. Silver Ore, 1 lb. fragments, 1 lb. Barites; 10 lbs. 1.00

241 7¾ lbs. Tin bearing Ore. 1.00

242 13½ lbs. Black Tourmaline. 1.25

243 5 lbs. Dendrites, (Forest Rock); 2¼ lbs. Quartz; 7½ lbs. 85

244 4½ lbs. Petrified Wood 75

245 1 lb. Garnets in Schist, 1½ lbs. Gold Ore, 2¼ lbs. Galena; 4½ lbs. 60

246 50 Pebbles of Agate, Carnelian, Jasper, Sard, Chalcedony, &c., from W. Iowa, 14 oz. 40

247 2 lbs. mixed lot spec. unnamed, mostly Colo. ½ lbs. Red Ochre, Me.; 1½ lb. spec. of Dendritic, form curious, Ia.; ½ lb Cairngorum, Pks. Pk.; 3 lbs. Rock Mt. Minerals; 1 lb Hematite, Elba; 8½ lbs. 75

248 2 lbs. Carbonate Ore. Colo.; 3½ lbs. Copper Pyrites, Arizona; 3½ lbs. Gold-bearing Ore (so called at Denver); 9½ lbs. 1.25

249 12½ lbs. of Ore Composed of Galena, Pyrites, Silver, &c., Colo 1.25

250 1 lb same as last lot, but surface covered with Quartz Xtals: 4 lbs. Mica, Va.; 3 lbs. Massive Golden Ochre, Colo.; 8¼ lbs. 1.00

251 9 lbs. Bog Iron, Mt. Katahdin, Me.; 4 lbs. Pet. Palm, Petrified Forest, Colo.; 13 lbs. 1.00

252 A 9 lb. spec. of Botryoidal Limonite, Mt. Kat.; 6 lbs. Pet. Palm, Colo.; 15 lbs. 1.25

253 5 lbs. Copper bearing ore, New Mexico 75

254 5 lbs. Copper bearing ore, N. M., 75

255 4½ lbs. of Rocky Mt. Min. con. pkts. lined with Qtz. Xtals. 3 lbs. Botryoidal Limonite, 8 lbs. 75

256 6½ lbs. Bog Iron, Me., 3½ lbs. Pet. Palm, Colo. 10½ lbs. 80

257 8 lbs. Dendritic Rock broken in 200 pcs. Colo., ½ lb Wavellitic Rock, Ark; 8½ lbs. 50

258 1½ lbs., 20 spec. Steatite showing

Actinolite, N. H.; 1½ lbs. Electric Stone; 1¼ lbs. Granite, N. Y.; 1lb Tremolite, Ct.; 12 labeled small spec. 5½ lbs. 75

259 2½ lbs. Limonite, Ky.; 1lb Bronzite, Pa., Spec. ea. Antonite, Wernerite, Columbite, Beryl, Garnet in Albite, 5 lbs. 50

260 10 showy small spec. Gypsum Xtals, spec. ca. of Pink Calcite, Hornstone, Microline, Horneblende Schist, Chalcedony, Cyanite, Pet. Palm and Wood, Williamsite, Blue Calcite, Hematite, 3 Tufa, Chalcocopyrite, Bronzite, Magnetite Xtals, 3 lbs. 1.00

261 1 lb Silicified Wood, 1 lb Chalcocopyrite, ½ lb Hematite, Specular Iron, 2 fine Datolite, 5 rare min., label lost, 14 named mineral spec. good, 4¼ lbs. 1.00

262 2 Granite, Epidote, Microline, Dendrite, Tufa, Tremolite. Polished Agate, 2 pes. Geodes, 2 Chalcocopyrite, Mica Schist and 2 lbs. Fragments fine for Laboratory, Minerals or fancy work, doubtless 50 diff. minerals in the lot, 6 lbs 90

263 4½ lbs. Granite, 3 var., Vt. and N. H., 1¼ lbs. Verde Antique, 2 lbs. Pyrites, ½ lb. Mica Schist; 5 lbs. Mica, Black Hills; 13 lbs. 1.25

264 2 lbs. Magnetic Iron; 2 lbs. Indurated Clay; ¾ lb. Feldspar; 1¼ Calc Spar, Black Hills; Petoskey "Agate"; ½ lb. Clippings, 7 lbs. 60

265 3½ lbs. Sphalerite and Siderite; ¾ lb. Conglomerate; 1½ lbs. Pearl Spar, Eng.; 1 lb. Limonite. 1 lb. Peacock Coal; 2½ lbs. Copper Pyrites; ½ lb. Barite, ½ lb. Fragments; ½ lb. Pet. Wood, Fos. Coral, Ia.; 12 lbs. 1.00

266 1¼ lb. Copper Ore, L. S.; 3¼ lbs. Cannel Coal, Ky.; 3¼ lbs. 50

267 2 Asphalt, 4 Qtz. Xtals, Hematite, 2 Pyroxene, Williamsite, Marcasite, 2 Smoky Qtz., Amethyst, Tufa, Smoky Selenite, 2 Blk. Mica, Cummingtonite, Switz. Xtals, Sil. Wood; fine lot: 1¼ lbs. 75

268 Chalcocopyrite, Pumice, Chalcedony, Halite, 2 Datolite, 2 Calcite, 2 Sodolite, Microline, Qtz. Xtal, Fluorspar, ¾ lb. mixed spec.; 1¾ lbs. 60

269 Contains a 10c spec. of each, Fluorspar, Cumberland, Eng.; Quartz Crystal, Hot Springs, Ark.; Chalcedony Geode, Tampa Bay, Fla.; Native Lodestone Magnet Cove, Ark.; Amethyst, Thunder Bay, L. S.

The following are all polished specimens:
Carnelian, Brazil; Moss Agate, Brazil; Onyx, Germany; Clouded Agate, Brazil; Labradorite, Labrador; Crocodolite or Tiger Eye, So. Africa; Bird's Eye Coral, Iowa; Fish Egg Coral, Iowa; we mail this lot prepaid. 1.00

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FOR TEN GTS. I will send sample of sand used in making glass, from South Jersey's famous pit. A. H. WILSON & Vineland, N. J.

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J. F. LECLARE, Nurseryman, Brighton, N. Y.

EUROPEAN EGGS,

Cheap to Close Out.

English Partridge 5c each; Chucker Partridge 8c; French Partridge 10c; Barbary Partridge 18c; Lesser Kestrel Hawk 16c; Rook 6c; Whinchat 6c; Skylark 6c; Great Crested Grebe 10c; Little Grebe 8c; Mediterranean Gull 10c; Red-backed Shrike 6c. Orders under \$1.00, send 10c extra for postage.

W. RAINE, Walton St., Toronto, Canada.

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Very fine cases of South American Lepidoptera, framed in fine cherry frames. 12m2

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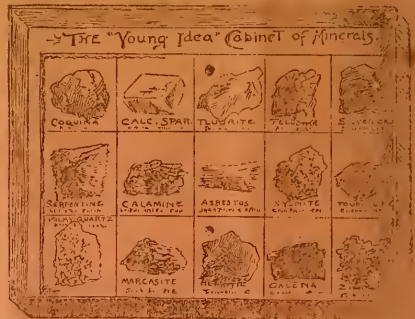
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There is no manual on collecting objects of natural history that has met with the success which has been accorded to this work, and there are probably few Naturalists in the country who have had the wide field of experience in collecting in all departments of natural history that the author of this book has had, thus few are better fitted for the work which he has accomplished.

The book contains 125 pages, is printed on heavy paper, amply illustrated with ten plates which contain 23 figures, and is finely bound in cloth. Price post-paid \$1.25

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Complete line of Minerals, Fossils, Shells Indian Relics and Curiosities of all kinds always on hand.

Chinese Chopsticks, 11 inches long, 10 c. a pair. Rolled plate Sea Bean watch charm, 25 cents. Small Shark teeth beauties, 5c. each.

Garnet Sand, rare occurrence, per vial 10 cents. Marine Algae, 5 c.. 8c. and 10 c. per card. Purple Sea Urchins, rare, 10 c.

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H. MYERS,

Dealer in Native and Foreign Bird Skins,
Chatham, Ont., Canada.

SEND FOR LISTS.

WANTED.—To sell my collection of side-blown Birds' Eggs for \$10.00. For further particulars, address.
D. BIGGAR, Fulton, Wis.



Your name and address will be inserted in any department, 1 month for 10 cts. ; 3 months, 25 cts. ; 6 months, 40 cts. ; 1 year, 75 cts. Should you desire to have your name printed in more than one department, one-half of these rates will be charged for each additional one.

Live collectors will not be long in observing the importance of keeping their names standing in this Directory. Collectors and dealers desiring to make sales, purchases or exchanges will not only write to the parties whose names appear in this directory for their wants, but will also keep them posted on "bargains" that they may have for sale cheap; publishers having papers etc., that would be of interest to the persons whose names appear in this Directory, will recognize the importance of placing samples etc. in the hands of *Live Collectors* and will act accordingly.

We can as yet make no statements but we shall not be surprised to hear from collectors that receive as high as *Fifty Letters*, Postals, Circulars, Samples etc. from having their names inserted *one time* at a cost of only **10 CENTS** in this Directory.

Address, THE OOLOGIST, Albion, N. Y.

Bird's Eggs.

- J. Warren Jacobs, Waynesburg, Pa.
- C. O. Trowbridge, Framingham, Mass.
- Ernest D. Murdoch, Oak's Corners, Ontario Co., N. Y.
- S. A. Taft, Aiken, S. C.
- Fred Corless, Los Gatos, Cal.

Bird Skins.

- H. Myers, Chatham, Ont., Canada.
- Jesse F. Craven, Holley, N. Y.

Taxidermy.

- Geo. T. Guelf, Brockport, N. Y.

Insects.

- H. J. Twiggs, Somerville, Augusta, Ga.

Shells.

- J. A. Singley, Giddings, Lee Co., Texas.

Minerals.

- Leo Mahler, No. 238 E. 39th St., New York, N. Y.

Fossils.

- Homer D. Hill, Morris, Ills.

Indian Relics.

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THE OOLOGIST.

Vol. VI,

ALBION, N. Y., FEB., 1889.

No. 2

A Red-headed Family.

"Ce'tingly I ken, ce'tingly seh," said my Cracker host, taking down his long flint-lock rifle from over the cabin door and slipping his frowzy head through the suspension-strap of his powder-horn and bullet-pouch. "Ce'tingly, seh, I ken cyarry ye ter wha' them air birds had their nestis las' yer."

I had passed the night in the cabin, and now as I recall the experience to mind, there comes the grateful fragrance of pine wood to emphasize the memory. Corn "pones" and broiled chicken, fried bacon and sweet potatoes, strong coffee and scrambled eggs (a breakfast, indeed, to half persuade one that a Cracker is a *bon vivant*) had just been eaten. I was standing outside the cabin on the rude door-step. Far off through the thin pine woods to the eastward, where the sun was beginning to flash, a herd of "scrub" cattle were formed into a wide skirmish line of browsers, led by an old cow, whose melancholy bell clanged in time to her desultory movements. Near by, to the westward, lay one of those great gloomy swamps, so common in Southeastern Georgia, so repellant and yet so fascinating, so full of interest to the naturalist, and yet so little explored. The perfume of yellow jasmine was in the air, along with those indescribable woody odors which almost evade the sense of smell, and yet so pleasingly impress it. A rivulet, slow, narrow and deep, passed near the front of the cabin with a faint, dreamy murmur and crept darkling into the swamp between dense brakes of cane and bay-lashes.

"Ye-as, seh, I ken mek er bee-line to that air ole pine snag. Hit taint more'n half er mile out yender," continued my host and volunteer guide, as we climbed the little wormfence that inclosed the house; "but I allus called 'em air birds woodcocks; didn't know 'at they hed any other name; allus that 'at a Peckwood wer' a leetle, tinty, stripeddy feller; never hyeard er them air big

ole woodcocks a bein' called Peckwoods."

He led and I followed into the damp, moss-scented shadows of the swamp, under cypress and live-oak and through slender fringes of cane. We floundered across the coffee-colored stream, the water cooling my India-rubber wading-boots above the knees, climbed over great walls of fallen tree-boles, crept under low-hanging festoons of wild vines, and at length found ourselves wading rather more than ankle-deep in one of those shallow cypress lakes of which the larger part of the Okefenokee region is formed. I thought it a very long half-mile before we reached a small tussock whereon grew, in the midst of a dense underbrush thicket, some enormous pine trees.

"Ther'," said the guide, "thet air snag air the one Sorter onter tother side ye'll see the hole, 'bout twenty foot up. Kem yer, I'll show hit ter ye."

The "snag" was a stump some fifty feet tall, larkless, smooth, almost as white as chalk, the decaying remnant of what had once been the grandest pine on the tussock.

"Hello, yer"! Hit's ben to work some more since I wer' yer' las' time. Hit air done dug another hole!"

As he spoke he pointed indicatively, with his long, knotty fore-finger. I looked and saw two large round cavities, not unlike immense auger-holes, running darkly into the polished surface of the stump, one about six feet below the other, the lower twenty-five feet above the ground. Surely it was no very striking picture, this bare, weather-whitened column, with its splintered top and its two orifices, and yet I do not think it was a weakness for me to feel a thrill of delight as I gazed at it. How long and how diligently I had sought the home of *Campyphilus principalis*, the great king of the red-headed family, and at last I stood before its door!

At my request, the kind Cracker now left me alone to prosecute my observations.

"Be in ter dinner?" he inquired as he

turned to go.

"No; supper," I responded.

"Well, tek cyare ev yerself," and off he went into the thickest part of the cypress.

I waited awhile for the solitude to regain its equilibrium, after the slashing tread of my friend had passed out of hearing; then I stole softly to the stump and tapped on it with the handle of my knife. This I repeated several times. *Campephilus* was not at home, for if he had been I should have seen a long, strong, ivory-white beak thrust out of the hole up there, followed by a great red-crested head turned sidewise so as to let fall on me the glint of an iris unequalled by that of any other bird in the world. He had gone out early. I should have to wait and watch; but first I satisfied myself by a simple method that my watching would probably not be in vain. A little examination of the ground at the base of the stump showed me a quantity of fresh wood-fragments, not unlike very coarse saw-dust, scattered over the surface. This assured me that one of the excavations above was a new one, and that a nest was either building or had been finished but a short while. So I hastily hid myself on a log in a clump of bushes, distant from the stump about fifty feet, whence I could plainly see the holes.

One who has never been out alone in a Southern swamp can have no fair understanding of its loneliness, solemnity and funereal sadness of effect. Even in the first gush of Spring (it was now about the sixth of April) I felt the weight of something like eternity in the air, not the eternity of the future, but the eternity of the past. Everything around me appeared old, sleepy and musty, despite the fresh buds, tassels and flower-spikes. What can express dreariness so effectually as the long moss of those damp woods? I imagined that the few little birds I saw flitting here and there in the tree tops were not so noisy and joyous as they would be when, a month later, their northward migration should bring them into our greening Northern woods. As the sun mounted, however, a cheerful twitter ran with the gentle breeze

through the bay thickets and magnolia clumps, and I recognized a number of familiar voices; then suddenly the gavel of *Campephilus* sounded sharp and strong a quarter-mile away. A few measured raps, followed by a rattling drum call, a space of silence rimmed with receding echoes, and then a trumpet-note, high, full, vigorous, almost startling, cut the air with a sort of broadsword sweep. Again the long-roll answered, from a point nearer me, by two or three hammer-like raps on the resonant branch of some dead cypress-tree. The king and queen were coming to their palace. I waited patiently, knowing that it was far beyond my power to hurry their movements. It was not long before one of the birds, with a rapid cackling that made the wood rattle, came over my head, and went straight to the stump, where it lit, just below the lower hole, clinging gracefully to the trunk. It was a superb specimen, the female, and I suspected that she had come to leave an egg. I could have killed her easily with the little sixteen-gauge breech-loader at my side, but I would not have done the act for all the stuffed birds in the country. I had come as a visitor to this palace, with the hope of making the acquaintance I had so long desired, and not as an assassin. She was quite unaware of me, and so behaved naturally, her large gold-amber eyes glaring with that wild sincerity of expression seen in the eyes of but few savage things.

After a little while the male came bounding through the air, with that vigorous galloping flight common to all our woodpeckers, and lit on a fragmentary projection at the top of the stump. He showed larger than his mate, and his aspect was more fierce, almost savage. The green-black feathers near his shoulders, the snow-white lines down his neck, and the tall red crest on his head, all shone with great brilliancy, whilst his ivory beak gleamed like a dagger. He soon settled for me a question which had long been in my mind. With two or three light preliminary taps on a hard heart-pine splinter, he proceeded to beat the regular woodpecker drum call, that long rolling

rattle made familiar to us all by the common red-head (*Melanerpes erythrocephalus*) and our other smaller woodpeckers. This peculiar call is not, in my opinion, the result of elasticity or springiness in the wood upon which it is performed, but is effected by a rapid, spasmodic motion of the bird's head, imparted by voluntary muscular action. I have seen the common Red-head make a soundless call on a fence-stake where the decaying wood was scarcely hard enough to prevent the full entrance of his beak. His head went through the same rapid vibration, but no sound accompanied the performance. Still, its resonance in the wood that the bird desires, and it keeps trying until a good sounding-board is found.

It was very satisfying to me when the superb King of the Woodpeckers, *pic noir a bec blanc*, as the great French naturalists named it, went over the call, time after time with grand effect, letting go between trials one or two of his triumphant trumpet-notes. Hitherto I had not seen the *Campephilus* do this, though I had often heard what I supposed to be the call. As I crouched in my hiding-place and furtively watched the proceedings, I remember comparing the birds and their dwelling to some half-savage lord and lady and their isolated castle of mediæval days. A twelfth century bandit nobleman might have gloried in trigging himself in such apparel as my ivory-billed woodpecker wore. What a perfect athlete he appeared to be, as he braced himself for an effort which was to generate a force sufficient to hurl his heavy head and beak back and forth at a speed of about twenty-eight strokes to the second!

All of our woodpeckers, pure and simple, that is, all of the species in which the woodpecker character has been preserved almost unmodified, have exceedingly muscular heads and strikingly constricted necks; their beaks are nearly straight, wedge-shaped, fluted or ribbed on the upper mandible, and their nostrils are protected by hairy or feathery tufts. Their legs are strangely short in appearance, but are exactly adapted to their need, and their tail-feathers are tipped with stiff points. These features are

fully developed in the *Campephilus principalis*, the bill especially showing a size, strength and symmetrical beauty truly wonderful.

The stiff pointed tail-feathers of the woodpecker serve the bird a turn which I have never seen noted by any ornithologist. When the bird must strike a hard blow with its bill, it does not depend solely upon its neck and head; but, bracing the points of its tail-feathers against the tree, and rising to the full length of its short, powerful legs, and drawing back its body, head and neck to the farthest extent, it dashes its bill home with all the force of its entire bodily weight and muscle. I have seen the ivory-bill, striking thus, burst off from almost thirty-hard dead trees fragments of wood half as large as my hand; and once in the Cherokee hills of Georgia I watched a pileated woodpecker (*Hylotomus pileatus*) dig a hole to the very heart of an exceedingly tough, green, mountain hickory tree, in order to reach a nest of winged ants. The point of ingress of the insects was a small hole in a punk knot; but the bird, by hopping down the tree tail foremost and listening, located the nest about five feet below, and there it proceeded to bore through the gnarled, cross-grained wood to the hollow.

Of all our wild American birds, I have studied no other one which combines all of the elements of wildness so perfectly in its character as does the ivory-billed woodpecker. It has no trace whatever in its nature of what may be called a tameable tendency. Savage liberty is a prequisite of its existence, and its home is the depths of the woods, remotest from the activities of civilized man. It is a rare bird, even in the most favorable regions, and it is almost impossible to get specimens of its eggs. Indeed, I doubt if there are a dozen cabinets in all the world containing these eggs; but they are almost exactly similar in size, color and shape to those of *Hylotomus pileatus*, the only difference being that the latter are, upon close examination, found to be a little shorter, and, as I have imagined, a shade less semi-transparent porcelain white, if I

may so express it.

The visit of my birds to their home in the stump lasted nearly two hours. The female went into and out of the hole several times before she finally settled herself, as I suppose on her nest. When she came forth at the end of thirty or forty minutes, she appeared, exceedingly happy, cackling in a low, harsh, but rather wheedling voice, and evidently anxious to attract the attention of the male, who in turn treated her with lofty contempt. To him the question of a new egg was not worth considering. But when she at last turned away from him, and mounting into the air, galloped off into the solemn gloom of the cypress wood, he followed her, trumpeting at the top of his voice.

Day after day I returned to my hiding-place to renew my observations, and, excepting a visitation of mosquitoes now and then, nothing occurred to mar my enjoyment. As the weather grew warmer the flowers and leaves came on apace, and the swamp became a vast wilderness of perfume and contrasting colors. Bird songs from migrating warblers, vireos, finches and other happy sojourners for a day (or mayhap they were all nesting there, I cannot say, for 'I had larger fish to fry'), shook the wide silence into sudden resonance. Along the sluggish little stream between the cane-brakes, the hermit-thrush and catbird were met by the green heron and the belted kingfisher. The snake-bird, too, that veritable water-dragon of the South, was there, wriggling and squirming in the amber-brown pools amongst the lily-pads and lettuce.

At last, one morning, my woodpeckers discovered me in my hiding-place; and that was the end of all intimacy between us. Thenceforth my observations were few and at a long distance. No amount of cunning could serve me any turn. Go as early as I might, and hide as securely as I could, those great yellow eyes quickly espied me, then there would be a rapid and long flight away into the thickest and most difficult part of the swamp.

I confess that it was with no little debate that I reached the determination that it was

my duty to rob that nest in the interest of knowledge. It was the first opportunity I ever had had to examine an occupied nest of the *Campephilus principalis*, and I felt that it was scarcely probable that I should ever again be favored with such a chance. With the aid of my Cracker host, I erected a rude ladder and climbed up to the hole. It was almost exactly circular, and nearly five inches in diameter. With a little axe I began breaking and hacking away the crust of hard outer wood. The cavity des ended with a slightly spiral course, widening a little as it proceeded. I had followed it nearly five feet when I found a place where it was contracted again, and immediately below was a sudden expansion, at the bottom of which was the nest. Five beautiful pure white eggs of the finest old-china appearance, delicate, almost transparent, exceedingly fragile and, to the eyes of a collector, vastly valuable, lay in a shallow bowl of fine chips; but in breaking away the last piece of wood-crust, I jerked it a little too hard, and those much coveted prizes rolled out and fell to the ground. Of course they were "hopelessly crushed," and my feelings with them. I would willingly have fallen in their stead, if the risk could have saved the eggs. I descended ruefully enough, hearing as I did so the loud cry of *Campephilus* battling around in the jungle. Once or twice more I went back to the spot in early morning, but my birds did not appear. I made minute examination of the rifled nest, and also tore out the other excavation, so as to compare the two. They were very much alike, especially in the jug-shape of their lower ends. From a careful study of all the holes (apparently made by *Campephilus*) that I have been able to find and reach in either standing or fallen trees, I am led to believe that this jug-shape is peculiar to the ivory-bill's architecture, as I have never found it in the excavations of other species, save where the form was evidently the result of accident. The depth of the hole varies from three to seven feet, as a rule, but I found one that was nearly nine feet deep and another that was less than two. Our smaller woodpeck-

ers, including *Hylotomus pileatus*, usually make their excavations in the shape of a gradually widening pocket, of which the entrance is the narrowest part.

It is curious to note that (beginning with the ivory-bill and coming down the line of species in the scale of size) we find the red mark on the head rapidly falling away from a grand scarlet crest some inches in height to a mere touch of carmine or dragon's blood on crown, nape, cheek, or chin. The lofty and brilliant head-plume of the ivory-bill, his powerful beak, his semi-circular claws and his perfectly spiked tail, as well as his superiority of size and strength, indicate that he is what he is, the original type of the woodpecker, and the one pure species left to us in America. He is the only woodpecker which eats insects and larvæ (dug out of rotten wood) exclusively. Neither the sweetest fruits nor the oiliest grains can tempt him to depart one line from his hereditary habit. He accepts no gifts from man, and asks no favors. But the pileated woodpecker, just one remove lower in the scale of size, strength and beauty, shows a little tendency towards a grain and fruit diet, and it also often descends to old logs and fallen boughs for its food, a thing never thought of by the ivory-bill. As for the rest of the red-head family, they are degenerate species, though lively, clever and exceedingly interesting. What a sad dwarf the little downy woodpecker is when compared with the ivory-bill! and yet to my mind it is clear that *Picus pubescens* is the degenerate off-shoot from the grand *campephilus* trunk.

Our red-headed woodpecker (*M. erythrocephalus*) is a genuine American in every sense, a plausible, querulous, aggressive, enterprising, crafty fellow, who tries every mode of getting a livelihood, and always with success. He is a woodpecker, a nut-eater, a cider-taster, a judge of good fruits, a connoisseur of corn, wheat and melons, and an expert fly-catcher as well. As if to correspond with this versatility of habit, his plumage is divided into four regular masses of color. His head and neck are crimson, his back, down to secondaries, a brilliant

black, tinged with green or blue in the gloss; then comes a broad girdle of pure white, followed by a mass of black at the tail and wing-tips. He readily adapts himself to the exigencies of civilized life. I prophesy that, within less than a hundred years to come, he will be making his nest on the ground, in hedges or in the crotches of orchard trees. Already he has begun to push his way out into our smaller Western prairies, where there is no dead timber for him to make his nest-holes in. I found a compromise-nest between two fence-rails in Illinois, which was probably a fair index of the future habit of the red-head. It was formed by pecking away the inner sides of two vertical parallel rails, just above a horizontal one, upon which, in a cup of pulverized wood, the eggs were laid. This was in the prairie country between two vast fields of Indian corn.

The power of sight exhibited by the red-headed woodpecker is quite amazing. I have seen the bird, in the early twilight of a summer evening, start from the highest spire of a very tall tree, and fly a hundred yards straight to an insect near the ground. He catches flies on the wing with as deft a turn as does the great-crested fly-catcher. It is not my purpose to offer any ornithological theories in this paper; but I cannot help remarking that the farther a species of woodpecker departs from the feeding-habit of the ivory-bill, the more broken up are its color-masses, and the more diffused or degenerate becomes the typical red tuft on the head. The golden-winged woodpecker (*Colaptes auratus*), for instance, feeds much on the ground, eating earth-worms, seeds, beetles etc.; and we find him taking on the colors of the ground-birds with a large loss of the characteristic woodpecker arrangement of plumage and color-masses. He looks much more like a meadow-lark than like an ivory-bill! The red appears in a delicate crescent, barely noticeable on the back of the head, and its bill is slender curved and quite unfit for hard pecking. On the other hand, the downy woodpecker and the hairy woodpecker, having kept well in the line of the typical feeding habit,

though seeking their food in places beneath the notice of their great progenitor, have preserved in a marked degree an outline of the ivory-bill's color-masses, degenerate though they are. The dwarfish, insignificant looking *Picus pubescens* pecking away at the stem of a dead iron-weed to get the minute larvæ that may be imbedded in the pith, when compared with *Campephilus principalis* drumming on the bole of a giant cypress-tree, is like a Digger Indian when catalogued in a column with men like Goethe and Gladstone, Napoleon and Lincoln.

I have been informed that the ivory-bill is occasionally found in the Ohio valley; but I have never been able to discover it north of the Cumberland range of mountains. It is a swamp bird, or rather it is the bird of the high timber that grows in the low wet soil; its principal food is a large flat-headed timber-worm, known in the South as *borer* or *saw-worm*, which it discovers by ear and reaches by diligent and tremendously effective pecking. A Cracker deer-stalker whom I met at Blackshear, Georgia, gave an amusing account of an experience he had had in the swamps. He said:

"I had turned in late, and got to sleep on a tussock under a big pine, an' slep' tell sunup. Wull, es ther' I laid flat er my back an' er snorin' away, kerwhack sumpen tuck me in the face an' eyes, jes' like spankin' er baby, an' I wuk up with er gret chunk er wood erocross my nose, an' er blame ole woodcock jest er whangin' er way up in thet pine. My nose hit bled an' bled, an' I hed er good mint er shoot thet air bird, but I endn't stan' the expense er the thing. Powder'n' lead air mighty costive. Anyhow I don't s'pose 'at the ole woodcock knowed 'at hit'd drapped thet air fragment onto me. Ef hit'd er 'peared like's ef hit wer' 'joyin' the joke any, I wud er shot hit all ter pieces ef I'd er hed ter lived on turpentine all winter!"

Of the American Woodpecker there are more than thirty varieties, I believe, nearly every one of which bears some trace of the grand scarlet crown of the great ivory-billed king of them all. The question arises, and I shall not attempt to answer it, whether the

ivory bill is an example of the highest development, from the downy woodpecker, say, or whether all these inferior species and varieties are the result of degeneracy? Neither Darwin nor Wallace has given us the key that certainly unlocks this very interesting mystery.

The sap-drinking woodpeckers (*Sphyrapicus*), of which there are three or four varieties in this country, appear to form the link between the fruit-eating and non-fruit-eating species of the red-headed family. From sipping the sap of the sugar-maple to testing the flavor of a cherry, a service-berry or a haw-apple, is a short and delightfully natural step. How logical, too, for a bird, when it has once acquired the fruit-eating habit, to quit delving in the hard green wood for a nectar so much inferior to that which may be had ready bottled in the skins of apples, grapes and berries! In accordance with this rule, *M. erythrocephalus* and *Centurus carolinus*, though great tipplers, are too lazy or too wise to bore the maples, preferring to sit on the edge of a sugar-trough, furtively drinking therefrom leisurely draughts of the saccharine blood of the ready tapped trees. I have seen them with their bills stained purple to the nostrils with the rich juice of the blackberry, and they quarrel from morning till night over the ripest June-apples and reddest cherries, their noise making a Bedlam of the fairest country orchard.

The woodpecker family is scattered widely in our country. In the West Canadian woods one meets, besides a number of the commoner species, Lewis's woodpecker, a large, beautiful and rare bird. The California species include the Nuttall, the Harris, the Cape St. Lucas, the white-headed and several other varieties, all showing more or less kinship to the ivory-bill. Lewis's woodpecker shows almost entirely black, its plumage givng forth a strong greenish or bluish lustre. The red on its head is softened down to a fine rose-carmine. It is a wild, wary bird, flying high, combining in its habits the traits of both *Hylotomus pileatus* and *Campephilus principalis*.

In concluding this paper a general de-

cription of the male ivory-bill may prove acceptable to those who may never be able to see even a stuffed specimen of a bird, which, taken in every way, is, perhaps, the most interesting and beautiful in America. In size, 21 inches long, and 33 in alar extent; bill, ivory-white, beautifully fluted above, and two and a half inches long; head-tuft, or crest, long and fine, of pure scarlet faced with black. Its body-color is glossy blue-black, but down its slender neck on each side, running from the crest to the back, a pure white stripe contrasts vividly with the scarlet and ebony. A mass of white runs across the back when the wings are closed, as in *M. erythrocephalus*, leaving the wing-tips and tail black. Its feet are ash-blue, its eyes amber-yellow. The female is like the male, save that she has a black crest instead of the scarlet. I can think of nothing in Nature more striking than the flash of color this bird gives to the dreary swamp-landscape, as it careers from tree to tree, or sits upon some high skeleton cypress-branch and plies its resounding blows. The species will probably be extinct within a few years.*—MAURICE THOMPSON, in *The Library Magazine*.

*Since writing the foregoing, I have made several excursions in search of the ivory-bill. Early in January, 1885, I killed a fine male specimen in a swamp near Bay St. Louis, Mississippi; but was prevented, by an accident, from preserving it or making a sketch it.

The Raptorial of Michigan.

BY MORRIS GIBBS, M. D.

There are known in our State, either, as residents, transients from the north or south, winter residents and stragglers. Thirty species in this order; over twenty-five of these are well known; one, the European Buzzard, has only once been discovered, and several are only rarely recorded. There are also several species and races recorded by some catalogues, which the writer has considered hardly tenable in this list.

It may be of interest to those interested

in geographical distribution, to that state Michigan lies nearly within forty-one and two-thirds to forty-seven and one-half degrees north latitude, and eighty-two and one-half to ninety, west longitude, thus admitting of the visitation of several northern species unknown to more southern localities.

My own observations have been taken in sixteen counties, and cover the space embraced from the southern tier of counties to our northern boundary. In addition to personal notes the writer is somewhat indebted to much as a score of published lists, covering a period since 1839, many of which however, are somewhat misleading. The assistance of Messrs. B. F. Suke and K. Wilhelm is thankfully acknowledged for valuable notes on the breeding habits of several species; I am also indebted to others.

CATHARTIDÆ.

The American Vultures.

Carthartes aura (LINN). Turkey Vulture. A straggler from the south. It is not probably found nesting in the State; but to this I cannot attest. Twenty years ago this bird was unknown within our boundaries and is not embraced in any of the earlier lists of Michigan birds. The first specimen that I have knowledge of was taken in VanBuren county, in 1872, latitude 42° 20' north. Since then specimens have been occasionally taken, generally during July and August.

During the last two years the species has appeared almost common in localities and as many as seven were observed feasting from the carcass of of an unfortunate sheep. From the apparent familiarity of most of the specimens observed, it is probable that they came from those regions where, as scavengers, they are never molested. One bird was picked up alive, un wounded, and nearly all were easily approached and shot.

During the past summer, stock was well up in Turkey Buzzards, and many specimens were brought me for which fabulous prices were asked. The birds were deemed rare and rated accordingly; but two or three

exhibitions of that peculiar vulturine habit of disgorging the food, convinced me that I did not want a varied assortment of skins.

It is impossible to say whether this bird will become abundant in the future, but reasoning from the climate and various causes not inviting to this family of birds, I should say not. As yet, I have not heard of the appearance of this species beyond the 44° north latitude, but it may readily be conjectured that the tireless wings of this rapidly soaring ghoul may have taken it to our northern confines.

Birds have been taken in the months of April, May up to the 15th, July, August and September. Once two birds were taken in this county in July, which had only quitted home and mother during the past month, and the imperfect quills suggested that they were Michigan birds; a view that was to be disproved by the manner in which they scared away when liberated. Over the Indiana line, less than 100 miles from here, this species is plentiful, showing that a few miles may make a vast difference even with birds endowed with great endurance and expanse of wing.

FALCONIDÆ.

Vultures, Falcons, Hawks, Eagles etc.

Elaeoides forficatus (LINN.). Swallow-tailed Kite. First mentioned by Hon. D. D. Hughes, in his valuable Mss. notes on Michigan birds, to which I have had success. W. H. Collins, the Detroit Ornithologist and Taxidermist, writes me: "One specimen taken seven miles from the city in the summer of 1878, now in the museum of the Detroit Scientific Association."

The Wild Turkey.

It is impossible for me to treat this subject properly, from lack of observation; but, perhaps, what little can be said may interest some.

This now rare game bird may still be found in some of the Eastern States, but he doesn't appear on every occasion. The writer caught a glimpse of one the past

fall, but was obliged to content himself with that.

The locality visited was in the Piedmont region of Va., about 35 miles from the city of Washington, D. C. Here quite large flocks are to be found in the 'old field' woods, which stretch away for miles, broken only by occasional deserted clearings. The timber is pine, broken by hard wood on knolls an along streams.

The natives of this region wage successful war on this noble game in early autumn from 'blinds' erected near favorite feeding grounds. The writer counted 20 of these structures in a day while hunting. Some few of the backwoodsmen still set log-traps; with what success I do not know.

Taken altogether, the "bird of Thanksgiving" has a hard time of it. From the time when his mother hides her speckled treasures from the mink and raccoon till he falls before the rifle or shot gun of the hunter, he is beset by snares and dangers of all kinds.

Wet weather thins the flocks of young birds, as does also the "varminis." When a little larger, he is lured to an early death by the call of the hunter from the blind, but should he survive the perils of two or three seasons, what gamier bird steps the woodland? Monarch of the flock, his call is obeyed as he treads the fragrant pine needles, always alert for hidden danger be it fox or hunter. At a near approach he rises and sails or runs as fast as his long legs will carry him to a safe retreat. Lucky the hunter whose quick and steady hand and eye can bring him down. It is not all who are thus gifted. Some must be content with grouse, quail, rabbits or squirrel until experience has taught its lesson.

The boundless woods and pure air give the hunter a pleasant sensation which is appreciated by those who have felt it, and a tremendous appetite is the usual result of a day's turkey hunting.

Come down from your snowy North and Western plains and hunt with us in the pine forests of the Old Dominion for *Meleagris gallopavo americana*.

A. B. F., Bennings, D. C.

Birds of Iowa.

The Academy of Natural Sciences, of Davenport, Iowa, has recently issued in volume V of its proceeding, an annotated catalogue of the birds of Iowa, by Charles R. Keyes and H. A. Williams, M. D. This is a welcome contribution to the *ari-fauna* of the Upper Mississippi valley; and those interested in ornithology, especially Iowa students, will be delighted to peruse the pages of this much needed publication. About 270 species of birds are enumerated, but as stated in the introductory the list makes no pretension to completeness. It is to be remembered, however, that no species are entered upon "authority;" every entry having an authentic material basis in the cabinets of the authors. The latter fact is indeed significant; and it would be well for all those contemplating the preparation of a work of this kind to bear this consideration in mind; that it is far more preferable and infinitely more valuable, to have a faunal catalogue of any region, however limited, based upon authentic specimens, rather than to include also species "said" to have been observed, even though the latter may, and all probability do, occur in that particular region. In the former instance, even though the list may not be as full as desirable, it is always important for reference; while in the latter case, all included "probable occurrences" tends to cast shadows of suspicion as to the accuracy of the whole enumeration. This important feature of having a material basis for the Iowa list, coupled with the then long familiarity with Iowa's *ari-fauna* and the conscientious accuracy of the authors, make the Annotated Catalogue of the Birds of Iowa especially valuable to working ornithologist.

The authors of the list have even gone further—thanks to their generosity and thoughtfulness for less favored workers—and issued reprints; 50 pages neatly inclosed in covers. Copies may be had on application to the senior author, whose address is Des Moines, Iowa.

Brewster's Linnet.

Editor OOLOGIST: Perhaps it will be of interest to your many readers to learn that on March 20th 1888, Jesse Craven, while collecting redpolls shot a Brewster Linnet, the same being in company with the redpolls, in the vicinity of the town of Sweden, near the line between Orleans and Monroe County, the specimen being a female answering in description correctly according to Ridgways Birds of N. A., which is as follows: above olive brownish, streaked with dusky, the rump tinged with pale sulphur yellow beneath whitish, tinged with dull buffy or pale fulvous on chest, the sides and lower tail coverts streaked with dusky, wings with two pale fulvous bands across coverts, quills and tail feathers narrowly edged with pale sulphur yellow, length 5.5 wing 2.75; tail, 2.25. these measurements are as nearly right as I could get them from the skin, as I did not see the bird before it was skinned, the skin is now in his collection. I believe the latest record of this bird to be in 1870, if any one has a later record we should like to hear from them through the OOLOGIST.

F. C. L., Holley N. Y.

Am. Long-eared Owl.

This decidedly nocturnal bird is quite plentiful in this locality, where it arrives from the south about the middle of February. Its favorite haunts are dark swampy woods; especially tamarac swamps. Out of these retreats it is seldom if ever seen during the light of the day.

On account of its retiring habits, I have had but few opportunities to observe its movements. All I can say is that about the middle of April 5 to 7 eggs may be found averaging about 1.65 by 1.34 and as is the case of nearly all Owls' eggs, white. This species generally constructs its own nest; but a deserted squirrel's or woodmouse's is often occupied. Although its food consists principally of mice, squirrels etc., it makes sad havoc among the young warblers and other nestlings of the neighborhood.

J. C. W., Jr., Detroit, Mich.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

FRANK H. LATTIN, — ALBION, N. Y.

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

TERMS OF SUBSCRIPTION.

Single Subscription. 50c per annum.
Sample Copies, 5c each.
The above rates include postage and premium.

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

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Jottings.

This is the last number of the OOLOGIST that will be sent to 1888 subscribers unless they have or will renew their subscription.

We mail with this issue another copy of our Premium List; will our friends please hand it, if not wanted for their own use, to some one whom they think it might interest.

That '88 prize article competition will be decided in time to announce the result in next OOLOGIST *positively*. The fortunate competitors will receive good interest for the delay.

"The Naturalists' Directory" as printed on the cover page we predict, will prove a great success. Wide-awake collectors will

not fail to have their names enrolled at once. In order that they will give the Directory a trial, we will, in March OOLOGIST *only*, insert their names in any department, for only 5 cents, and 3 cents for each additional branch. If by the 1st of July next this investment has not paid back principal and interest at the rate of 500 per cent, your money will be refunded.

Many write us desiring to exchange specimens for a year's subscription to the OOLOGIST. For 75 cents worth of first class specimens, birds' eggs preferred, we will send the OOLOGIST for '89. No premium can be selected with this offer.

It must be distinctly understood that all subscriptions, received during '89 must begin with Jan. issue and in reply to many inquiries, we will say that after Feb. 1st we will send the OOLOGIST free for '89 to any one purchasing anything we advertise to the amount of \$2.00 or over.

Should you desire any of Davie's eggs you must order at once.

The prices in our Sept. '88, *Bulletin* will hold good through '89.

Scarcely a mail comes in but what we receive one or more letters without signature. From Feb. 1st. until Aug. 1st, we do not receive less than *fifty* and sometimes *over one hundred* letters a mail. How we can fill orders without the names of the writers attached, we *are* at a loss to understand. We are now waiting for collectors from the following places to call us "frauds" and like pet names in order that we may forward a package of goods ordered, which we cannot, owing to the fact that they did not sign their names to their order: New Haven, Vermont, \$1.53
Kalamazoo, Mich., 1.35
West Chester, Pa., 1 00

The last letter came last summer, and the writer must feel quite resigned to the fate of his dollar, for we have never heard any complaint.

Nearly all of the Bargain Lots mentioned in Jan. OOLOGIST remain unsold. At the prices named they are true *bargains*; if you want any speak quick.

Delays:—A few premiums we have been obliged to delay a few days before forwarding to our patrons, but the only delays of importance are to those desiring Premium No. 20, Foreign Eggs. We have been expecting an importation since Jan. 1st. but as yet it is not here; we can promise them by Feb. 15th, without fail. A few delays have occurred on prems. 132 and 133, but if our friends in ordering from this list will name substitutes, no delays will occur.

The "Critic" Criticised.

TO THE EDITOR OF THE OOLOGIST:

While looking over the January issue of your magazine, my attention was drawn to an article by Scolopax, criticising the statement made by me in the May OOLOGIST, of last year, to the effect that the eggs of the Bald Eagle were about equal to those of a goose in size.

I think that I am only doing myself justice in replying and giving my authority for that "emanation of an untruthful collector's brain" (as he calls it).

When I wrote the article in question I had never seen an eagle's egg, although I had frequently seen and attempted to shoot the birds; so, when I came to that part of my description, I was obliged to refer to some work on Ornithology, and as I had the good fortune to possess a copy of "The Birds of North America," by Theodore Jasper, A. M., M. D., which contains a description and colored engraving of over seven hundred species of our birds, I naturally supposed that I had good authority to back me up, and as Mr. Jasper stated in his description of this eagle, page one, second column, that the eggs were two in number, and about the size of those of a goose, I took it for a fact and unhesitatingly subscribed to it; but I must say that the geese in Michigan are either very large or possess capacities for laying extraordinarily

large eggs, if one of their productions is four times as large in cubic contents as the Bald Eagle's egg now in my collection, although it is only an average specimen.

As to the other statements made in my article, I will refer Scolopax to at least four reliable persons in this town, if he desires, to prove them true.

Although I am much younger at the business than Scolopax, yet I think that I have as much true love for the Science as he can possibly have and that I have just as deep an ambition to be truthful and reliable.

I would suggest to Scolopax that he take his own advice and be sure that he knows a collector is untruthful before he attempts to assert it.

H. C. COOK, Potsdam, N. Y.

TO MR. S.

In reply to your article in the January number of this paper. I would request you to refer to Davie's Key 2nd edition, also to Histories of Page and Lucas Counties and Geology of Iowa. Each of the above named gives a list of birds including the Carolina Parakeet. In saying this I do not deviate from the truth; I dislike to use hard words, but I am a little inclined to think that Mr. S. of Kalamazoo, Mich., is "off of his base." In saying that the Parakeet does not breed in Iowa, he contradicts some of the best authorities in the United States. Mr. Davie, in giving the habitat, thus says: Hab. Southern States, up the Mississippi Valley to the Missouri region, west to Arkansas and Indian Territory. Recently Kansas, Nebraska, Iowa etc.; formerly strayed to Ohio, Pennsylvania and New York; but of late has receded from the Carolinas; still abundant in Florida. Mr. S. should know that the real truth cannot be contradicted by mere negative.

Yours truly

T. S., Corning, Iowa.

ED. OOLOGIST:

Dear Sir: In regard to article in last No. of THE OOLOGIST in regard to the Carolina Parakeet, written by the gentleman of Kalamazoo, Mich:

I would like to ask if he is positive that the bird named does not nest in Iowa? Coues in his "Key to N. A. B." gives this bird from the southern states, up the Mississippi Valley to the Missouri regions, W. to Arkansas and the Indian Territory; recently Kansas, Nebraska, Iowa etc.

I can but indorse the advice given to young collectors, and contributors, yet I think he is a little too severe in his judgment of them. He should remember that we were all young once, and that discretion and accuracy only come with hard study and years of experience. I know there are articles written and circulated that contain a great deal of untruth, but I can not believe that the writers mean to prevaricate. I think that if the older and more experienced ornithologists would take hold with us, and give us a few articles now and then that it would help in a great measure to throw light on some of the obscure points wherein some few of us have erred.

Very truly yours.

L. O. Dart, Litchfield, Minn.

It seems to me that "Scolopax" himself made a misstatement in the Jan. OOLOGIST, when he said that an egg of the Bald Eagle was one-fourth the cubical dimensions of a Goose Egg. According to Davie the dimensions of an egg of the Bald Eagle is 3 in. by 2 in.; now according to "Scolopax's" statement would not his goose eggs be rather large?

W. E. Pratt Lake Forest, Ills

A Record than cannot be Beaten.

I noticed in the January OOLOGIST that a Horned Lark had been recorded by the editor, Jan. 3.

This record I can eclipse, as I was much surprised and pleased to record a Horned Lark on the morning of January 1st. I have also seen, this month (Jan.), a Tree Sparrow and a Northern Shrike.

I think the Horned Lark must be resident here, as I have observed it during every month of the year except December, and have found two nests, both in April, 1888.

NEIL F. POSSON, Medina, N. Y.

Albino Eggs of Bluebird.

In looking over the OOLOGIST for the past few years, I notice albino "eggs" of different species of birds occasionally spoken of, and thinking a mite from me on this subject would not come amiss, I give the following bit of my experience:

I have a set of pure white eggs of the Bluebird, taken from a small box nailed to the side of a corn-crib, May 6th, 1886, near Frankfort, Kan. The eggs, five in number, are of the average size and shape; the nest was like others I have seen, and the birds which I saw at a distance of only a few feet, were exactly like others of the same species, with the exception that the female had lost all of her tail feathers, probably the work of old Tabby.

This same pair (which I knew by the "tail mark" of the female) completed a set of four blue eggs in about a month from the time I took the white set, and in the latter part of July they again layed and brought forth young. This time three blue eggs.

From these few observations I feel positive that "albino eggs" are only freaks, and that one bird is as apt to lay them as another, and the only thing that strikes me as being peculiar, is this; that a Bluebird either lays an entirely white or an entirely blue set, whereas, other birds, when they do lay an "albino," it is only one or two while the rest of the set are of the normal color.

This will answer W. J. S., in Dec. OOLOGIST, at least as far as I am able.

D. B. R., Beattie, Kan.

'88. THE OOLOGIST. '88.

We have a few complete sets of the OOLOGIST for 1888 left, unbound. Price 50 cents. Order quick if you want a set.

Address, The OOLOGIST, Albion, N. Y.

Oliver Davie's Eggs.

—To Whom it may Concern.—

Davie to Hill.

Columbus, Ohio, Sept. 18, 1888.

Owing to the lack of time I have abandoned the idea of publishing a Natural History catalogue, and have transferred my entire business in this line to Mr. Geo. F. Hill, whom I can heartily recommend to the confidence of my patrons.

He has, likewise, in his possession my entire stock of eggs, numbering several hundred species, a great many of which are very rare. Any orders entrusted to him will receive prompt and careful attention.

OLIVER DAVIE.

Hill to Lattin.

Columbus, O., Jan. 16, 1889.

Having closed out my Natural History business, I have transferred my entire collection of birds' eggs to Mr. Frank H. Lattin of Albion, N. Y. The collection comprises, also the noted collection of Oliver Davie, which I had in my possession and numbers a great many rare species.

Mr. Lattin is a gentleman whom I can heartily recommend to the confidence of collectors who do not already know him, and any order entrusted to him will, I am sure, receive careful attention.

GEO. F. HILL.

A Valuable Present to the Largest Purchasers of Davie's Eggs.

Our stock of birds' eggs is the largest in this Country; and we are really very much overstocked. It was not because we needed them that we came in possession of the Davie Eggs, but as Mr. Hill had embarked in other business, and offered them to us on such liberal terms, we could not resist the temptation of writing him to send them along, but it was with an understanding that he should not ask us for his pay for 60 days, and *within that 60 DAYS we are going to sell the entire collection.* Of course we cannot do this without the help of our oological friends, and to secure their aid we have placed the prices at about one-half what specimens from the cabinets of so noted an oologist as Oliver Davie, had our lot to bring at an auction sale. We feel certain that every Oologist will order at once, at least a few sets or specimens from this noted collection, many of which were used in preparing Mr. D's great work

\$45.00 WORTH OF EGGS IN SETS FREE! \$45.00!

we have concluded to show that we appreciate the efforts of our oological friend in assisting us in disposing of this collection by making the largest purchasers presents of the following valuable eggs:

To the person sending us the largest amount of money for Davie's Eggs, either sets, singles or nests on or before March 15th 1889, we will give a beautiful set of two eggs of the Bald Eagle.

To the second largest purchaser a set of one egg of the Bald Eagle.

To the third and fourth largest purchasers each a set of one egg of the Bridled Tern.

To the fifth and sixth largest purchasers each a set of 5 eggs of the Horned Grebe.

To the seventh to tenth largest purchasers each a set of one egg of the American Flamingo.

To the eleventh to fifteenth largest purchasers each a set of one egg of the Noddy Tern.

To the sixteenth to twenty-fifth largest purchasers each a set of one egg of the Sooty Tern.

To the twenty-sixth to the fortieth largest purchasers each a set of three eggs of the Least Tern.

To the forty-first to the sixtieth largest purchaser each a set of two eggs of the Mourning Dove.

Conditions.

The winner of the 1st prize must purchase at least \$10.00 worth of the Davie Eggs; 2nd to 4th prizes, at least \$5.00 worth; 5th to 25th prizes, at least \$2.00 worth; 26th to 40th, at least \$1.00 worth; 41st to 60th, at least 50cts worth. To compete for these prizes only orders for the Davie Eggs will count. Orders can be mailed at any time between Feb. 1st and March 15th. Prizes will be awarded March 25th and announced in April Oologist. Should a person send a dozen or more orders between Feb. 1st and March 15th it will be the total sum of all these orders that will count in the competition. In case two or more persons should send the same amount the earliest order will rank first.

All eggs will be carefully packed in strong tin or wooden boxes, and sent by mail or express at our risk and (on orders of \$1.00 or over) expense. Make remittances in most convenient manner.

DISCOUNTS. Owing to our very low prices we can make only 5 per cent on an order of \$10.00 and 10 per cent on an order of \$25.00 over.

Address Plainly, **Frank H. Lattin.**

Albion, Orleans Co., N. Y.

EGGS IN SETS.

All prices are for the complete set as described.

Orders under 30 cts. must contain 5 cts. additional and under \$1.00 10 cts. additional, for postage and packing.

In all cases you must name additional sets that you can use as substitutes in case the ones ordered have been sold. In case this is not done we will take equally desirable sets from our stock to fill the order, or money will be refunded.

Abbreviations.

To condense the list, the following abbreviations have been used:

ch	chipped holes
dc	data complete
dnc	data not complete
F. C. O. and fco.	Franklin Co., Ohio
L. I.	Long Island N. Y.
N.	nest accompanies set
nd.	no data
O.	Ohio
S. G. P. C. or sgpc.	San Geronimo Pass, Cal.
?	set not complete
?	questionable

1-2	Wood Thrush, 3, nd.	\$.10
3-5	Wood Thrush, 4, coll. by Oliver Davie, Franklin Co., O., dnc.	.25
6-7	Wood Thrush, 5, coll. O. Davie, Franklin Co., O. dnc.	.30
8	Russet-backed Thrush, 4, Cal. nd.	.45
10-11	Catbird, 3, F C O ? nd.	.06
12-13	Catbird, 4, F C O ? nd.	.08
14-16	Brown Thrasher, 3, F C O ? nd.	.09
17	Bluebird, 4, F C O ? nd.	.08
18	Rocky Mt. Bluebird, 5, New Mexico de.	.60
19	Blue-gray Gnatcatcher, 4, S G P C dc.	1.00
20	Blue-gray Gnatcatcher, 5, S G P C dnc.	1.00
21	Black-crested Flycatcher, 2, S G P C dc.	1.00
22	Black-crested Flycatcher, 2, ch S G P C dnc.	.60
23	Black-crested Flycatcher, 2, second-class. S G P C dnc.	.50
24-25	Blue-gray Gnatcatcher, N 3, S G P C nd.	.65
26	Ground Tit, 2, snc S G P C dc.	1.50
27	Tufted Titmouse, 4, Clinton Co., Ind dc.	2.00
28	California Bush-tit, 5, S G P C dnc.	.70
29	Cal. Bush-tit 5, snc S G P C dnc.	.60
30	Cactus Wren, 3, S G P C dc.	1.50
31	Carolina wren, 5, coll by O. Davie, F C O dnc.	1.50
32	House Wren, 4, (1ch) Waterloo, Ind dc.	.20
33	Swainson's Warbler, N 3, Ogeechee Swamp, Ga., a fine and desirable set of this rare species.	7.00
34	Swainson's Warbler, N 1, (original set con. 2), Chatham Co. Ga.	3.50
35	Yellow Warbler, N 2, F C O dnc.	1.10
36	Yellow-breast-Chat, 3, O. Davie, F C O dnc.	.50
37	Yellow-breast-Chat, 3, F C O ? nd.	.25
38	Yellow-breast-Chat, 2, F C O ? nd.	.18
39	Am. Redstart, 3, O. Davie, F C O dnc.	.40
40	Am Redstart, 2, nd.	.25
41	California (?) Shrike, 5, San Jose, Cal., dc.	.50
42	California (?) Shrike, 5, S G P C dc.	.50
43	Cedar Waxwing, 3, Lake Co., Ill. dc.	.50

44	Purple Martin, 3, snc St. Law. Co., N. Y. dc.	.45
45	White-bellied (Tree) Swallow, 4 snc, St. Law. Co. N. Y. dc, eggs dirty.	.50
46	Summer Redbird, 3, Athens Co. O. dc.	.75
47	House Finch, 4, Haywards Cal. dc.	.25
48-49	House Finch, 5, S G P C dc.	.25
50-51	House Finch, 4, S G P C dc.	.20
54-55	Am. Goldfinch, N 4 nd.	.25
56-57	Arkansas Goldfinch, N 4 S G P C dc.	1.00
58	Lawrence's Goldfinch, 5 (3 ch) S G P C dnc.	.75
59	Lawrence's Goldfinch, N 1 S G P C nd.	.40
60	Grass Finch, 4 snc St. Law. Co. dc.	.20
61	Sharp-tailed Finch, 2 snc, Mass. dc.	.75
62	Field Sparrow, 2, F C O nd.	.08
63	Field Sparrow, 3 F C O nd.	.10
64	Field Sparrow, 3 snc F C O nd.	.09
65	Song Sparrow, N 5, nd.	.15
66	Cal. Song Sparrow, 3, Marlon Co., Cal. dc.	.25
67	Cal. Song Sparrow, 3, near San Francisco dnc.	.20
68	Heermann's Song Sparrow, 5, Riverside, Cal. dc.	.60
69	Rusty Song Sparrow, 4 (1 ch) Oregon dnc.	1.00
70	Spurred Towhee, 4, s g p c dc.	1.00
71	Spurred Towhee, 4, s g p c dnc.	.75
72-73	Canon Towhee, 4, s g p c dc.	.60
74	Canon Towhee, 2 snc, s g p c dc.	.30
75	Cardinal Grosbeak, 2, Sav. Ga. dc.	.15
76	Blue Grosbeak, 2 snc, Forsythe Co. N. C. dc.	.80
77	Nonpareil, 5, Sav. Ga. dc.	.60
78	Black throated Bunting, 4 snc. col. by O Davie, f c o dc.	.50
79	Orchard Oriole, 3 snc, f c o dc.	.18
80	Baltimore Oriole, 5, f c o dc.	.35
81-83	Bullock's Oriole, 4, s g p c dc.	.50
84-87	Bullock's Oriole, 5, s g p c dc.	.60
88-89	Bullock's Oriole, 6, s g p c dc.	.75
90	Purple Grackle, 3 snc, L. I. nd.	.10
91-93	Purple Grackle, 4 snc, L. I. nd.	.15
94-95	Purple Grackle, 5, L. I. nd.	.20
96-97	Bronzed Grackle, 5, f c o dc.	.25
98	Prairie Horned Lark, 5, Jasper Co., Ia dc.	1.00
99	Kingbird, N 3, f c o dnc.	.20
100	Arkansas Kingbird, 3 snc, sgpc dc.	.20
101	Arkansas Kingbird, 4, s g p c dc.	.40
102	Cassin's Kingbird, 4, Riverside, Cal. dc.	1.50
103	Ash-throated Flycatcher, 5, s g p c dc.	1.00
104	W. Yellow-bellied Flycatcher, N 3, Santa Clara Co., Cal. dc a beautiful set.	1.00
105-107	Trall's Flycatcher, 3, fco nd.	.35
108	Trall's Flycatcher, 4 (1ch) fco nd.	.45
109-112	Trall's Flycatcher, N 2, fco dnc.	.35
113-114	Anna's Hummingbird, N 2, sgpc dc.	1.50
115	Chuck-wills-widow, 2, Tampa Fla dc.	3.00
116	Western (?) Night-hawk, 2 Beattie Co. Kan. dc.	.80
117	Downy Woodpecker, 4, Green Co. O. dc.	.75
118	Red-bellied Woodpecker, 5 Lee Co. Tex. dc.	1.00
119	Red-headed Woodpecker, 4, col. O. Davie fco dc.	.75

120 Red-headed Woodpecker, 3, fco nd.....20
 121 Red-headed Woodpecker, 4, nd.....30
 122 Red-headed Woodpecker, 5, fco nd.....40
 123 Flicker, 4, O. nd.....20
 124 Red-shafted Flicker, 4, sgpc nd.....40
 125 Red-shafted Flicker, 5, sgpc nd.....50
 126 Belted Kingfisher, 5, snc L. I. nd.....80
 127 Road-runner, 5, sgpc dc.....1.00
 128 Yellow-billed Cuckoo, 3, fco nd.....35
 129 Am. Barn Owl, 4 snc, S. Paula, Cal. dc..1.00
 130 Western Horned Owl, 2, Poweshiek Co., Ia. dc.....3.00
 131 Am. Hawk Owl, 7 (1ch) Labrador, dc. The data for this set gives Labrador as the locality, but as it comes through a German dealer, we think it can be set down as the European species.....7.00
 132 Duck Hawk, 2 (limp) snc, Greenland dc (obtained through German dealer).....3.00
 133 Western Red-tail Hawk, 2, Cala? nd hand-some specimens.....1.50
 134 Red-tail Hawk, 1snc, Mid. Co. Ct. dc.....75
 135 Swainson's Hawk, 2, Los Angeles, Cala. dc.....1.50
 136 Bald Eagle, 1, Cape Sable, Fla. dc.....4.00
 137 Bald Eagle, 2, Cape Sable, Fla. dc.....7.50
 138-139 Mourning Dove, 2, San Diego, Cal. dc..08
 140 Ground Dove, 2, Chatham Co., Ga. dc.....50
 141 Ground Dove, 2, Ga. nd.....40
 142-143 Chachalaca, 2, Starr Co. Tex. dc.....3.00
 144 Ruffed Grouse, 12 (limp) snc, Newton Ia. dc.....1.25
 145 Oregon Ruffed Grouse, 6, Coos Co., Oregon dc.....2.50
 146 Texan Quail, 14, Lee Co., Tex. dc.....1.50
 147 Chestnut-bellied Scaled Quail, 12, Tamaulipa, Mexico dc.....6.00
 148 Wurdemaun's Heron, 3, Cape Sable, Fla. dc.....4.00
 149 American Egret, 4, Tampa, Fla. dnc.....1.00
 150 Snowy Heron, 3snc, Tallahassee, Fla. dc.....45
 151 Snowy Heron, 4, Tampa, Fla. dc.....60
 152 Reddish Egret, 3snc, Tampa, Fla. dc.....85
 153 Louisiana Heron, 3, Jeff. Co., Tex. dc.....30
 154 Louisiana Heron, 4, Tampa, Fla. dc.....40
 155 Little Blue Heron, 4, Jeff. Co., Tex. dc....40
 156 Little Blue Heron, 4, Tampa Fla. dc.....40
 157 Green Heron, 3, Tybee, Is. dc.....30
 158 Green Heron, 4snc, L. I. nd.....30
 159-162 Black-crowned Night Heron, 3, L. I. nd.....30
 163-165, Bc. Night Heron, 3snc, L. I. nd.....25
 166 Bc. Night Heron, 4snc, L. I. nd.....35
 167-168 White-crowned Night Heron, 4, Jeff Co., Tex. dc.....1.25
 169 Glossy Ibis, 4, Russia dc.....1.00
 170 Golden Plover, 4, Iceland dc.....1.50
 171 Golden Plover, 4 (1ch), Scotland dc.....1.25
 172 Ringed Plover, 4, Iceland dc.....60
 173 Ringed Plover, 3, England dc.....50
 174 Piping Plover, 4, So. Car? nd.....1.50
 175 European Woodcock, 4, Sweden dc.....5.00
 176 English Snipe, 3snc, Eng. dc.....75
 177 Willet, 4, Beau, Co., S. C. dc.....1.25
 178 Long-billed Curlew, 4, England dc.....2.00
 179 Red-breasted Rail, 9, Sav., Ga. dc.....1.25

180 Sora Rail, 4 Comal Co., Tex. dc.....20
 181 Sora Rail, 13snc, Hen. Co., Minn. dc....1.25
 182 Whooping Crane, 2, (2 small holes in side) Iowa dc.....2.00
 183 Am. Flamingo, 1, Bahamas dc.....75
 184 Mallard, 10, Lapland dc.....1.50
 185 Pintail, 7 (2ch), Lapland dc.....2.00
 186 Widgeon, 7, Iceland dc.....1.50
 187 Shoveller, 8, Russia dc.....2.00
 188 Blue-winged Teal, 11 (1ch), Devil's Lake, Dak. dc.....3.00
 189 Am. Golden-eye, 7, Russia dc.....5.00
 190 Am. Golden-eye, 5 (1ch), Iceland dc....4.00
 191 Eider, 4, Finland, dc.....1.25
 192 Am. Sheildrake, 10, Norway dc.....5.00
 193-194 Am. white Pelican, 1, Gt. Salt Lake dc.50
 195 Brown Pelican, 3, Tampa, Fla. dc.....75
 196 Fla. Cormorant, 2, snc, Tampa dc.....50
 197 Brandt's Cormorant, 4, Farralone Is. dnc 1.25
 198 Am. Anhinga, 4, Tampa, Fla. dc.....1.00
 199 Gaucet, 1, Bird Rocks dc.....25
 200 Glaucous Gull, 2, Greenland dc.....1.50
 201 Gt. Black-backed Gull, 2, Sweden dc.....75
 202 Western Gull, 3, Farralone Is. dc.....1.00
 203 Herring Gull, 2snc, Eng. dc.....50
 204 Am. Herring Gull, 2, St. Law. Co., N. Y. nd.....35
 205 Ring-billed Gull, 3 (1crk) Benson Co., Dak. dc.....75
 206-207 Ring-billed Gull, 3, Benson Co., Dak. dc.....90
 208 Franklin's Gull, 3, Heron Lake, Minn. dc.....2.25
 209 Gull-billed Tern, 3snc, Hog Is., Va. dc....60
 210-215 Common Tern, 2, L. I. N. Y. dc.....10
 216-219 Fulmar Petrel, 1, Iceland dc.....50
 220 Leach's Petrel, 1, Grand Menan dc.....20
 221 Western Grebe, 4, Devil's Lake, Dak. dc 1.00
 222-223 Western Grebe, 5, Devil's Lake, Dak. dc.....2.25
 224 Am. Eared Grebe, 4, Cal. dnc.....1.00
 225 Black-throated Diver, 1snc, Lapland dc..1.00
 226 Razor-billed Auk, 1, Finland dc.....25
 227-229 Tufted Puffin, 1, Farralone Is. dc...1.25
 230 Cassin's Auk, 1, Farralone Is. dc.....3.00
 231 Black Guillemot, 2, Grand Menan dnc...40

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The figures in the first column at the left, give the number of 1st-class single eggs in the collection. The second column, the number of 2d-class ones.

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20 2 Wood Thrush.....04
 3 Russet-backed Thrush.....09
 4 11 Robin.....02
 31 5 Mockingbird.....05

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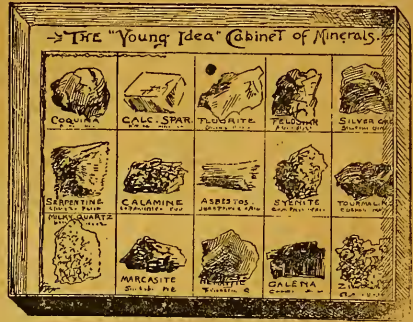
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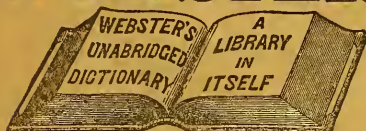
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Monthly. 50c. per Year.

Vol. VI, ALBION, N. Y., MARCH, 1889. No. 3

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Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

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WANTED—The addresses of Wisconsin young ornithologists and oologists. REUBEN M. STRONG, Wauwatosa, Milwaukee Co., Wis.

25 GARNETS for every perfect Indian arrowhead, or 35 for every spearhead and 5 for every shark's tooth. FRED S. WHITTAKER, Chestnut Hill, Phila., Pa.

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OLIVER DAVIE.

Hill to Lattin.

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- To the fifth and sixth largest purchasers each a set of 5 eggs of the Horned Grebe.
- To the seventh to tenth largest purchasers each a set of one egg of the American Flamingo.
- To the eleventh to fiteenth largest purchaaers each a set of one egg of the Noddy Tern,
- To the sixteenth to twenty-fifth largest purchrsers each a set of one egg of the Sooty Tern.
- To the twenty-sixth to the fortieth largest purchasers each a set of three eggs of the Least Tern.

To the forty-first to the sixtieth largest purchaser each a set of two eggs of the Mourning Dove.

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Abbreviations.

To condense the list, the following abbreviations have been used:

ch.....	chipped holes
dc.....	data complete
dnc.....	data not complete
F. C. O. and fco.....	Franklin Co., Ohio
L. I.....	Long Island, N. Y.
N.....	nest accompanies set
nd.....	no data
O.....	Ohio
S. G. P. C. or sgpc.....	San Gorgonia Pass, Cala.
snc.....	set not complete
?.....	questionable

1-2	Wood Thrush, 3, nd.....	\$.10
3-5	Wood Thrush, 4, coll. by Oliver Davie, Franklin Co., O., dnc.....	.25
6-7	Wood Thrush, 5, coll. O. Davie, Franklin Co., O., dnc.....	.30
8	Russet-backed Thrush, 4, Cala. nd.....	.45
10-11	Catbird, 3, F C O ? nd.....	.06
12-13	Catbird, 4, F C O ? nd.....	.08
14-16	Brown Thrasher, 3, F C O ? nd.....	.09
18	Rocky Mt. Bluebird, 5, New Mexico dc.....	.60
19	Blue-gray Gnatcatcher, 4, S G P C dc.....	1.00
20	Blue-gray Gnatcatcher, 5, S G P C dnc.....	1.00
21	Black-crested Flycatcher, 2, S G P C dc.....	1.00
26	Ground Tit, 2, snc S G P C dc.....	1.50
27	Tufted Titmouse, 4, Clinton Co., Ind dc.....	2.00
28	California Bush-tit, 5, S G P C dnc.....	.70
30	Cactus Wren, 3, S G P C dc.....	.50
31	Carolina wren, 5, coll. by O. Davie, F C O dnc.....	1.50
32	House Wren, 4, (1ch) Waterloo, Ind dnc.....	.20
33	Swainson's Warbler, N 3, Ogeechee Swamp, Ga., a fine and desirable set of this rare species.....	7.00
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37	Yellow-breast-Chat, 3, F C O ? nd.....	.25
38	Yellow-breast-Chat, 2, F C O ? nd.....	.18
39	Am. Redstart, 3, O. Davie, F C O dnc.....	.40
40	Am. Redstart, N 2, nd.....	.25
41	California (?) Shrike, 5, San Jose, Cal., dc.....	.50
42	California (?) Shrike, 5, S G P C dc.....	.50
43	Cedar Waxwing, 3, Lake Co., Ill. dc.....	.30
44	Purple Martin, 3, snc St. Law. Co., N. Y., dc.....	.45
45	White-bellied (Tree) Swallow, 4 snc, St. Law. Co. N. Y. dc, eggs dirty.....	.50
46	Summer Redbird, 3, Athens Co. O. dc.....	.75
47	House Finch, 4, Haywards Cala. dc.....	.25
50-51	House Finch, 4, S G P C dc.....	.20
54-55	Am. Goldfinch, N 4 nd.....	.25
56-57	Arkansas Goldfinch, N 4 S G P C dc.....	1.00
58	Lawrence's Goldfinch, 5 (3 ch) S G P C dnc.....	.75
59	Lawrence's Goldfinch, N 1 S G P C nd.....	.40
60	Grass Finch, 4 snc St. Law. Co. dc.....	.20
61	Sharp-tailed Finch, 2 snc, Mass. dc.....	.75
62	Field Sparrow, 2, F C O nd.....	.08
63	Field Sparrow, 3 F C O nd.....	.10
64	Field Sparrow, 3 snc F C O nd.....	.09
65	Song Sparrow, N 5, nd.....	.15
66	Cal. Song Sparrow, 3, Marion Co., Cala. dc.....	.25
67	Cal. Song Sparrow, 3, near San Francisco dnc.....	.20
68	Heermann's Song Sparrow, 5, Riverside, Cal. dc.....	.60
69	Rusty Song Sparrow, 4 (1 ch) Oregon dnc.....	1.00
70	Spurred Towhee, 4, s g p c dc.....	1.00
72	Canon Towhee, 4, s g p c dc.....	.60
73	Cardinal Grosbeak, 2, Sav. Ga. dc.....	.15
76	Blue Grosbeak, 2 snc, Forsythe Co., N. C. dc.....	.80
77	Nonpariel, 5, Sav. Ga. dc.....	.10
79	Orchard Oriole, 3 snc, f c o dc.....	.18
80	Baltimore Oriole, 5, f c o dc.....	.35
81-83	Bullock's Oriole, 4, s g p c dc.....	.50
84-87	Bullock's Oriole, 5, s g p c dc.....	.60
88	Bullock's Oriole, 6, (1ch) s g p c dc.....	.65
90	Purple Grackle, 3 snc, L. I. nd.....	.10
91-93	Purple Grackle, 4 snc, L. I. nd.....	.15
94-95	Purple Grackle, 5, L. I. nd.....	.20
96-97	Bronzed Grackle, 5, f c o dc.....	.25
98	Prairie Horned Lark, 5, Jasper Co., Ia dc.....	1.00
99	Kingbird, N 3, f c o dnc.....	.20
100	Arkansas Kingbird, 3snc, sgpc dc.....	.20
101	Arkansas Kingbird, 4, s g p c dc.....	.40
102	Cassin's Kingbird, 4, Riverside, Cal. dc.....	1.50
103	Ash-throated Flycatcher, 5, s g p c dc.....	1.00
104	W. Yellow-bellied Flycatcher, N 3, Santa Clara Co., Cala. dc a beautiful set.....	1.00
107-107	Trail's Flycatcher, 3, fco nd.....	.35
108	Trail's Flycatcher, 4 (1ch) fco nd.....	.45
115	Chuck-wills-widow, 2, Tampa Fla dc.....	3.00
116	Western (?) Night-hawk, 2 Beattie Co. Kan. dc.....	.80
117	Downy Woodpecker, 4, Green Co. O. dc.....	.75
118	Red-bellied Woodpecker, 5 Lee Co. Tex. dc.....	1.00
119	Red-headed Woodpecker, 4, col. O. Davie fco dc.....	.75
120	Red-headed Woodpecker, 3, fco nd.....	.20
121	Red-headed Woodpecker, 4, nd.....	.30
122	Red-headed Woodpecker, 5, fco nd.....	.40
123	Flicker, 4, O. nd.....	.20
124	Red-shafted Flicker, 4, sgpc nd.....	.40
125	Red-shafted Flicker, 5, sgpc nd.....	.50
126	Belted Kingfisher, 4, snc L. I. nd.....	.65
127	Road-runner, 5, sgpc dc.....	1.00
128	Yellow-billed Cuckoo, 3, fco nd.....	.35
130	Western Horned Owl, 2, Poweshiek Co., Ia. dc.....	3.00
131	Am. Hawk Owl, 7 (1ch) Labrador, dc. The data for this set gives Labrador as the locality, but as it comes through a German dealer,	

we think it can be set down as the European species.....7.00

133 Western Red-tail Hawk, 2, Cala 2nd hand-some specimens.....1.50

134 Red-tail Hawk, 1snc, Md. Co. Ct. dc.....75

135 Swainson's Hawk, 2, Los Angeles, Cala dc.....1.50

136 Bald Eagle, 1, Cape Sable, Fla. dc.....4.00

137 Bald Eagle, 2, Cape Sable, Fla. dc.....7.50

138-139 Mourning Dove, 2, San Diego, Cal. dc......08

140 Ground Dove, 2, Chatham Co., Ga. dc.....50

141 Ground Dove, 2, Ga. nd.....40

142-143 Chachalaca, 2, Starr Co. Tex. dc.....3.00

144 Ruffed Grouse, 12 (limp) snc, Newton Ia. dc.....1.25

145 Oregon Ruffed Grouse, 6, Coos Co., Oregon dc.....2.50

146 Texan Quail, 14, Lee Co., Tex. dc.....1.50

148 Wurdemann's Heron, 3, Cape Sable, Fla. dc.....4.00

149 American Egret, 4, Tampa, Fla. dnc.....1.00

150 Snowy Heron, 3snc, Tallahassee, Fla. dc.....45

151 Snowy Heron, 4, Tampa, Fla. dc.....60

152 Reddish Egret, 3snc, Tampa, Fla. dc.....85

153 Louisiana Heron, 3, Jeff. Co., Tex. dc.....30

154 Louisiana Heron, 4, Tampa, Fla. dc.....40

155 Little Blue Heron, 4, Jeff. Co., Tex. dc.....40

156 Little Blue Heron, 4, Tampa Fla. dc.....40

157 Green Heron, 3, Tybee, Is. dc.....30

158 Green Heron, 4snc, L. I. nd.....30

159-162 Black-crowned Night Heron, 3, L. I. nd.....30

163-165 Bc. Night Heron, 3snc, L. I. nd.....25

166 Bc. Night Heron, 4snc, L. I. nd.....35

167-168 White-crowned Night Heron, 4, Jeff Co., Tex. dc.....1.25

169 Glossy Ibis, 4, Russia dc.....1.00

170 Golden Plover, 4, Iceland dc.....1.50

171 Golden Plover, 4 (1ch), Scotland dc.....1.25

172 Ringed Plover, 4, Iceland dc.....60

173 Ringed Plover, 3, England dc.....50

175 European Woodcock, 4, Sweden dc.....5.00

176 English Snipe, 3snc, Eng. dc.....75

177 Willet, 4, Beau, Co., S. C. dc.....1.25

178 Long-billed Curlew, 4, England do.....2.00

179 Red-breasted Rail, 9, Sav., Ga. dc.....1.25

180 Sora Rail, 4, Comal Co., Tex. dc.....40

181 Sora Rail, 13snc, Hen. Co., Minn. dc.....1.25

182 Whooping Crane, 2, (2 small holes in side) Iowa dc.....2.00

184 Mallard, 10, Lapland dc.....1.50

185 Pintail, 7 (2ch), Lapland dc.....2.00

186 Widgeon, 7, Iceland dc.....1.50

187 Shoveller, 8, Russia dc.....2.00

188 Blue-winged Teal, 11 (1ch), Devil's Lake, Dak. dc.....3.00

189 Am. Golden-eye, 7, Russia dc.....5.00

191 Eider, 4, Finland, dc.....1.25

192 Am. Sheldrake, 10, Norway dc.....500

195 Brown Pelican, 3, Tampa, Fla. dc.....75

196 Fla. Cormorant, 2, snc, Tampa dc.....50

197 Brandt's Cormorant, 4, Farralone Is. dnc 1.25

200 Glaucous Gull, 2, Greenland dc.....1.50

201 Gt. Black-backed Gull, 2, Sweden dc.....75

202 Western Gull, 3, Farralone Is. dc.....1.60

203 Herring Gull, 2snc, Eng. dc.....50

204 Am. Herring Gull, 2, St. Law. Co., N. Y. nd.....35

206-207 Ring-billed Gull, 3, Benson Co., Dak. dc.....90

208 Franklin's Gull, 3, Heron Lake, Minn. dc.....2.25

209 Gull-billed Tern, 3snc, Hog Is., Va. dc.....60

210-212 Common Tern, 2, L. I. N. Y. dc.....10

216-218 Fulmar Petrel, 1, Iceland dc.....50

221 Western Grebe, 4, Devil's Lake, Dak. dc 2.00

222-223 Western Grebe, 5, Devil's Lake, Dak. dc.....2.25

224 Am. Eared Grebe, 4, Cal. dnc.....1.00

225 Black-throated Diver, 1snc, Lapland dc.....1.00

227-229 Tufted Puffin, 1, Farralone Is. dc.....1.25

230 Cassin's Auk, 1, Farralone Is. dc.....3.00

231 Black Guillemot, 2, Grand Menan dnc.....40

Single Eggs.

The figures in the first column at the left, give the number of 1st-class single eggs in the collection. The second column, the number of 2d-class ones.

The prices quoted are for a single 1st class specimen of the species named.

Where we have 2d-class specimens, we will sell them for *one-half* these prices.

Orders under 30c must contain 5c. and under \$1.00, 10c. additional for postage and packing. Over \$1.00 will be sent prepaid.

Always name additional specimens that can be used as substitutes in case we should be out of those most desired at the time of receiving order. In case this is not done we will take equally desirable specimens from our stock to fill the order or will return your money.

15 Wood Thrush.....04

4 11 Robin.....02

20 Mockingbird.....05

7 3 Catbird.....02

12 3 Brown Thrasher.....03

4 Cal. Bluebird.....10

1 1 Phainopepla.....40

10 5 Blue-gray Gnatcatcher.....18

4 Chickadee.....08

1 Least Tit.....15

5 Cactus Wren.....12

1 Carolina Wren.....20

2 Long-billed Marsh Wren.....04

4 Prothonotary Warbler.....35

1 Golden-winged Warbler.....50

8 2 Parula Warbler.....18

2 Oven Bird.....12

10 7 Yellow-breast Chat.....08

8 Redstart.....10

5 W. Warbling Vireo.....15

1 Blue-headed Vireo.....40

1 1 White-eyed Vireo.....12

3 Bell's Vireo.....12

4 White-rumped Shrike.....07

8 Cliff Swallow.....02

10 Barn Swallow.....02

5 Scarlet Tanager.....18

9 3 House Finch.....05

5 6 Am. Goldfinch.....06

1 2 Ark. Goldfinch.....30

2 1 Gambel's White-crowned Sparrow.....18

7 3 Chipping Sparrow.....02

4 3 Field Sparrow.....03

12 6 Song Sparrow.....02

2 Chewink.....08

3 Spurred Towhee.....20

4 Canon Towhee.....20

9 Cal. Brown Towhee.....08

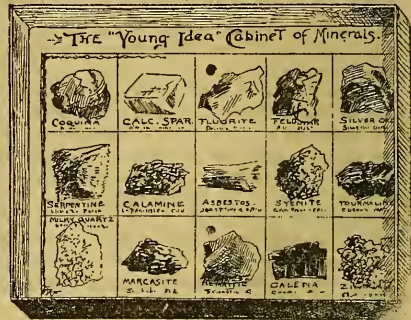
8 4 Cardinal Grosbeak.....04

12	3	Indigo Bunting.....	.07
16	6	Cowbird.....	.02
20	4	Red-winged Blackbird.....	.02
	4	Meadow Lark.....	.10
	8	W. Meadow Lark.....	.10
	3	Orchard Oriole.....	.05
	5	Baltimore Oriole.....	.05
	5	Bullock's Oriole.....	.10
10		Purple Grackle.....	.04
11		Florida Grackle.....	.10
11		Bronzed Grackle.....	.04
15	6	Crow.....	.05
	5	Florida Crow.....	.20
	1	Black-billed Magpie.....	.20
	4	Blue Jay.....	.04
	2	Cal. Jay.....	.18
	6	4 Kingbird.....	.03
	5	Ark. Kingbird.....	.06
	1	Ariz. Crested Flycatcher.....	.60
	2	Great-Crested Flycatcher.....	.12
	4	6 Pewee.....	.02
	1	Wood Pewee.....	.08
	8	4 Trall's Flycatcher.....	.12
10		Red-headed Woodpecker.....	.07
45	3	Flicker.....	.03
	6	Red-shafted Flicker.....	.10
	3	Belted Kingfisher.....	.16
	4	Road-runner.....	.15
	2	Yellow-billed Cuckoo.....	.10
	2	Cal. Screech Owl.....	.50
	3	Western Great Horned Owl.....	1.50
	1	1 Duck Hawk.....	2.00
	1	Sparrow Hawk.....	.30
18	1	Fish Hawk; Osprey.....	.40
	1	Cooper's Hawk.....	.20
	2	Red-shouldered Hawk.....	.40
	2	Swainson's Hawk.....	.75
	4	Turkey Buzzard.....	.40
15		Mourning Dove.....	.02
36		California Quail.....	.10
	6	Great Blue Heron.....	.20
	7	Louisiana Heron.....	.08
42		Black-crowned Night Heron.....	.10
	1	White-crowned Night Heron.....	.30
	2	Killdeer.....	.15
	1	Wilson's Plover.....	.20
	2	English Snipe.....	.20
	9	Clapper Rail.....	.06
	1	Purple Gallinule.....	.25
	5	Florida Gallinule.....	.08
	5	Mallard.....	.15
	2	Florida Cormorant.....	.20
95	7	Common Tern.....	.04
	5	1 Roseate Tern.....	.08
	1	Black Tern.....	.10
	1	1 Red-throated Diver.....	.80
	3	Puffin.....	.20
	1	Pigeon Guillemot.....	.40

1	Summer Redbird.....	.20
2	Am. Goldfinch.....	.5 to 10
2	Arizona Goldfinch.....	.12
1	Yellow-winged Sparrow.....	.15
1	Field Sparrow.....	.05
1	Song Sparrow.....	.05
1	White-eyed Towhee.....	.25
1	Blue Grosbeak.....	.20
3	Indigo Bunting.....	.15
1	Nonpariel.....	.20
3	Red-winged Blackbird.....	.10
2	Orchard Oriole.....	.20
1	Crow Blackbird.....	.15
1	Scissor-tailed Flycatcher.....	.20
1	Pewee.....	.05
1	Wood Pewee.....	.10
4	Trall's Flycatcher.....	.10

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Birds' Nests.

In the Davie collection were the following nests, most of which are very fine. At the prices quoted they are shipped at purchaser's expense: as they are very light a dozen or more can be sent almost anywhere east of the Mississippi River at from 25 to 50c.

If ordered by mail, add 5c additional for postage and packing on each nest, except Red-winged Blackbird for which you must add 10c and Crow Blackbird 20c; all others 5c.

The number at right tells the number of nests we have in stock; and the price is per single nest. Order quick.

Always name substitutes:

2	Phainopepla.....	\$.15
2	Parula Warbler.....	.20
2	Yellow Warbler.....	.10
1	American Redstart.....	.10
1	Warbling Vireo.....	.15
1	Red-eyed Vireo.....	.10



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THE OOLOGIST.

Vol. VI,

ALBION, N. Y., MARCH, 1889.

No. 3

Brief Directions for Making a Bird or Mammal Skin.

BY ERNEST E. THOMPSON, TORONTO.

MATERIALS. 1, a sharp knife; 2, a pair of stout scissors; 3, needles and thread; 4, a pair of forceps; 5, a supply of fine hard wood sawdust or else corn-meal; 6, arsenical soap or else pure dry arsenic; 7, cotton-wool for small specimens, and tow, oakum or fine dry grass for large ones (never use hair, feathers or animal substance); 8, benzine; 9, plaster-of-paris; 10, powdered alum; 11, labels; 12, three or four sizes of wire.

CLEANING. The benzine is used with plaster of paris mixed to a creamy consistency, to remove grease from the feathers or fur; it should be well rubbed into the affected place and then allowed to dry, after which the plaster may be shaken off.

Blood, may be removed with a sponge and tepid water, drying the feathers or fur at first with blotting paper and then with sawdust, shaking and working them till dry.

MEASUREMENTS. Many of the best collectors make no measurement from the fresh bird. Others take the length, that is the distance between the tip of the beak and the end of the longest tail feather, the body being moderately stretched; also the extent which is the distance from tip to tip of the outstretched wings. The length is always a desirable item.

A **MAMMAL** should always be measured when fresh, giving first the length which is the distance from the tip of the tail bone to the tip of the nose, moderately stretched; and length of tail, for which the tail is raised at right angles to the back, one end of the rule or dividers being firmly placed on the animal's back at the root of tail, the other at the tip. The exact weight of a mammal is also of value.

SKINNING A BIRD. A bird of medium

size, as a Robin, is best to begin on, and supposing the specimen to have been cleaned of blood and grease, as above directed and to have been measured, begin by plugging the throat with cotton wool, then slit the skin along the breast bone to the vent, taking care to cut no more than the skin; separate the skin from the body toward the leg, always sprinkling the flesh with sawdust as fast as it is exposed; when each leg is exposed, cut it off near the body, leaving it still attached to the skin; in like manner having pushed the skin from the body about the tail, cut through the tail bones so that the part in which the tail feathers grow shall be separated from the body and attached to the skin; skin up the back till the wings are reached, cut these off next the body and push the skin up over the neck, turning it inside out as it is taken off; shortly after the head is reached the ears will be found to pin the skin to the skull, a little practice will show how easily these may be drawn out with the dry tip of the thumb; presently the eyes are reached and these must be carefully cut clear of the eyelids and the skinning carried on to the base of the bill (in ducks, divers, woodpeckers and some others the head is too large to come through the skin of the neck, so that it is best to cut the neck off as soon as the base of the skull is reached, then after pulling the head out straight, cut a slit down the nape and skin the head through it, carefully stitching it up afterwards); now with four decided cuts of the scissors remove the lower half of the brain pan and the back half of the palate; this frees the body and also renders easy the removal of the brains. Care must be taken not to destroy the jaw-bones or their hinges; remove the eyes, the tongue and the flesh of the head; next press back the skin on each wing so as to expose two joints; remove the flesh and fat; treat the legs in the same way, skinning them to the commencement of the scaly

portion; clear the skin and tailbone of flesh and fat.

Now paint every interior part with arsenical soap or else sprinkle with powdered arsenic; draw the legs and wings back into their places; put a cotton plug into each eye-socket; make a piece of cotton into a long roll about the size of the bird's neck, force one end tight into the skull and let the rest hang; now proceed gently to work the skull back through the skin to its natural position, taking care that the neck is not pulled out too long; place the wings in position and fill the body neatly with cotton and sew it up; put a little cotton into the throat through the beak and tie the beak shut with a thread through the nostrils; cross the legs, tie the labels to them, and after preserving and arranging the feathers with a needle, adjusting the eyes, wings etc., lay the skin away to dry in either a bed of cotton or a paper cylinder.

Many bird-skinners do not put anything in the skull till after it is returned to its place, but thrust the cotton up afterwards with the pliers. Others again use a stick of the size of a match for the neck, first wrapping it with cotton wool; a stick of suitable size is necessary in the necks of all birds larger than a Robin, but in smaller birds it is unnecessary and difficult to manage.

Many operators tie the wing bones together and wrap both leg and wing bones with cotton before replacing, but these also are unnecessary in small birds.

A specimen is improved by having the tail half spread. Remember always that a dead bird is the perfect model for a skin.

MAMMAL SKIN. In general a small mammal should be cleaned and skinned in the same way as a bird, but the skull should be completely and carefully removed; the tail bone should be drawn out of the tail; poison every part with dry arsenic or else with a mixture of four parts of arsenic to one of powdered alum, working it well into the tail and feet; put a wire in the tail, of as large a size as will enter the tip; and having filled and sewn up the body

as in birds, and sewn up the mouth, lay the animal on a board, draw the forefeet forward, soles down, close to the head and even with each other, use a pin if they will not remain so without; similarly draw the hind feet back, soles up; arrange the fur, the ears and tail neatly and set it away to dry.

The skull should be partly cleaned, but with care so that no bones are broken; it should then, after having been dried, either be tied to one foreleg, or else marked with a number corresponding to that on the label.

Muskrats, beavers and others require the tail to be cut open and skinned for the basal portion at least, otherwise it will not draw out completely.

Rabbits, wildcats and foxes require a strong wire in each leg in addition to the bones to give them strength and rigidity.

Skin all specimens as soon as possible after death. Never pack the skins till dry.

SEXING. The sex of a bird is determined by dissection. After carefully removing the bowels, there will be seen in the *male* bird, next the backbone, above the kidneys, two round yellowish-white bodies as large as beans, in the Robin during springtime, but much smaller in fall and winter. In the *female* these are replaced by an irregularly shaped mass of tiny eggs of various sizes, very large in the breeding season, but in winter reduced in size so as to be readily discernible.

LABELLING. A specimen without a label is of very little value, often of none at all to a scientific collector. The label should *always* record the date, sex and locality of the specimen; it is also desirable that the length, stomach contents, condition, and name of the collector (the person who vouches for the date and locality) should be recorded but the first three are the important items.

In birds tie the label to both feet; in mammals tie it to one fore foot.

The Owl.

A BOY'S COMPOSITION.

Wen you come to see a owl cloce it has offie big eyes, and wen you come to feel it with your fingers, wich it bites, you fine it is mosely feathers, with only jus meat enuf to hole 'em to gether.

Once there was a man thot he would like a owl for a pet, so he tole a bird man to send him the bes' one in the shop, but wen it was bro't he lookt at it and squeezed it, and it diddent sute. So the man he rote to the bird man and said, I'll keep the owl you sent, tho' it aint like I wanted, but wen it is wore out you mus' make me a other, with littler eyes, for I s'pose these eyes is number twenties, but I want number sixes and then if I pay you the same price you can afford to put in more owl.

Owls has got to have big eyes cos tha has to be out a good deal at nite a doin bisnis with rats and mice, wich keeps late ours They is said to be very wise, but my sister's young man he says any boddy could be wise if they would set up nites to take notice.

That feller comes to our house jest like he used to, only more, and wen I ast him wy he come so much he said he was a man of sience, like me, and was a studyin arithogaly, wich was birds. I ast him wot birds he was a studyin, and he said anjils, and wen he said that my sister she lookt out the winder and said wot a fine day it had turn out to be. But it was a rainim cats and dogs wen she said it. I never see such a goose in my life as that girl, but Uncle Ned, wich has been in ol parts of the worl, he says they is jes that way in Patty-gonny.

In the pictie alphabets the O is some times a owl, and some times it is a ox, but if I made the picters I'de have it stan for a oggur to bore holes with. I tole that to ole gaffer Peters once wen he was to our house lookin at my new book, and he said you is right, Johnny, and here is this H stans for harp, but who cares for a harp, wy dont they make it stan for a horgan? He is such a ole fool.

A Crow Quandary.

The remark of J. O. S., in the December OOLOGIST, that in his locality, the Crow "is undoubtedly becoming less abundant each year," suggests an interesting subject for investigation; for it is generally supposed that the Crow can "hold his own" anywhere.

Here the gradual disappearance of the Crow is not so evident; on the contrary, they seem to be increasing, and the large flocks, which, with him are "things of the past," sre eminently things of the present.

All through the months of October, November and December, flocks are seen here almost daily, migrating in a leisurely manner toward the south. By the first of January, most of the migrants have disappeared and only the resident Crows remain; but about the first of March the van of the large flocks may be again looked for.

Since, in the last few years, the Crows have seemingly increased here, the decrease in J. O. S' locality may be occasioned by the gradual removal to some other point; and the increase here, be attributed to the same cause.

A change, similar to this, was noticed in the nesting habits of the Crows here, during 1887-8. In '87 nests were very common and many eggs were taken; but in '88, although there were as many Crows about, they had evidently taken warning by their experience of '87, and scarcely a nest was found.

The migration of the Crows south in autumn has given rise to some puzzling questions. Why do some Crows migrate while others do not? It has been suggested as an explanation of this question, that it is the females, and perhaps the young males, who migrate, and that only the old males stay all winter in their summer haunts; but this has not been proved.

I should be pleased to hear from our oologists in regard to the Crow's northern range in winter and also how far south the large flocks go.

WILLARD N. CLUTE, Binghamton, N. Y.

Birds of Macon County, Ga.

EDITOR OOLOGIST:

I saw a suggestion in your last issue that it would be of benefit to the student of birds to have some knowledge of the birds in each county or section. I think, myself, it is a good idea and will act upon it.

This county, Macon, is about 40 miles south of the center of Georgia. Is hilly in some parts, but no mountains. Flint River fringed by wide swamps, divides it.

I know but little of our swamp species, having had no opportunities for investigations.

Bird life is abundant and varying in upland and bottom. The nesters are many. The Mockingbird, Blue Jay, Brown Thrasher, Catbird, Eng. Sparrow and Bluebird are abundant at all seasons. The Turkey Buzzard and Carrion Crow are also quite common. The Summer Redbird, Cardinal, Yellow-shafted Flicker, Loggerhead Shrike, Bobwhite, Crow, Mourning Dove, Sparrow Hawk and Red-bellied Woodpecker are common at all times of the year. During the winter, Robins, Field Larks, Blackbirds and many Sparrows are very abundant. Several varieties of Ducks frequent the rivers and creeks. The more abundant kinds are Summer and "Green-head" with some Teal. No Robins nest with us. A few Larks and Blackbirds and probably some of the sparrows remain through the spring.

About the 1st of April the Martins, Bank Swallows, Kingbirds and Chimney Swifts appear and are soon very abundant. During the spring and summer at any time of the day in almost any spot one can see a Bee-Martin on some high perch, darting down for flies and twittering frequently.

I give some extracts from my notes in 1888:

- Mar 29. Saw 1 Bank Swallow
 " 30. Heard of several Black Martins.
 April 1. Saw one or two Bee Martins.
 " 2. Saw a Black Martin.
 " 4. Saw, to-day, first Chimney Swift; 6 or 8 circling and twittering in the sunshine.

Bee Martins are becoming common; have seen but few Bank Swallows as yet, and one Purple Martin. Yesterday and to-day have been quite warm, and nesting will begin in earnest soon.

I saw on the 2nd, partially completed nests of Thrasher, Mocker and Shrike. C. B.— took an egg of the Turkey Buzzard several weeks ago. Robins have all gone, I think; saw one Sunday afternoon and think I've heard one or two since. The Sparrows are still plentiful. Doves have have been mating for several weeks, but Quail are still in small scattered covies. Snipe have lately been scattered all over the country, frequenting ditches, ponds etc.

Mockingbirds are making day and night sweet with song and I suppose they are all building their nests now.

I am told that Red-headed woodpeckers have been here several days. Except the egg mentioned above, I know of none taken yet.

This is an exceptionally warm day for the first week of April as was yesterday also. Peaches are through blooming. Oaks have put out considerably; in fact, spring is upon us.

April 5. Heard the first Wood Pewee to-day. These birds are abundant here in spring and summer months.

April 7. Took a walk out back of Mr. F's house this morning; could hear three or four Mockingbirds singing "in full tilt" at at one time.

Apr. 8. Found nest and three eggs of Cardinal; fresh. First set of season.

Apr. 9. Took set of 5 Loggerhead Shrike. 1 has a ring of spots at small end; balance, as usual.

Apr. 10. Took set of 2 almost fresh eggs of Turkey Buzzard. Found in a cave near here. They are beauties; one don't find such every day.

Apr. 14. I took, to-day, set of 5 Red-bellied Nuthatch (?). Found nest in a snag in the middle of a large pond. The eggs measure .62 x .45, .62 x .46, .60 x .45, .60 x .45, .60 x .44.

Apr. 16. Took set of Tufted Titmouse

Measure, .66 x .54, .67 x .55, .67 x .57, .70 x .55; fresh.

May 1. Ricebirds come *en masse*, Leave 12th and 13th. Some stragglers later.

June 2. Took set 3 Redbird. Set 3 and nest Wood Pewee in a typical site. The nest was situated in a small fork at the end of a long, horizontal limb, 40 feet from the ground.

Found a nest and one egg (rotten) of Carolina Wren.

This large nest was placed on the top of a large, freshly cut pine stump, about 4 ft. high and almost flat on top. It was a very strange place for a nest; absolutely no shelter and in the middle of "new ground" field. I would have decided the nest was placed there by some person, but it was fitted to the wood too nicely for that.

There was lots of green moss used in its construction and some pine straw.

The birds here noticed lately as very abundant are the Mockingbird, Kingbird, Wood Pewee, Bluebird, Catbird, Eng. Sparrow, Blue Jay, Sand Martin, Chimney Swift.

Abundant:—

Red-head Turkey Buzzard, Carrion Crow, Flicker, Cardinal, Purple Martin.

Common:—

Wood Thrush, House Wren, Thrasher, Night Hawk, Chuck-wills-widow, Logger-head Shrike, Crested Flycatcher, Common Crow, Mourning Dove, Quail.

Tolerably Common:—

Sparrow Hawk, "Bluedarter," Marsh Hawk, Cooper's Hawk, Screech Owl, Wild Turkey, Ruby-throated Hummingbird, "Josee," Orchard Oriole, Red-wing Blackbird. There are many more, mostly rarer.

Aug. 1. Heard of some Ricebirds in fall plumage.

J. LEE EDWARDS.

Conundrums

FOR THE OOLOGIST.

When does a person, going to bed, resemble an oologist?—When he is going again (egging).

If an oologist drop a fresh egg, what does it fall against?—His will.

Why don't a bird lay two eggs at once?—Because she don't want to (two).

When is the letter "e" like the yolk of an egg?—When it is surrounded with sh-e-ll.

Why is the hat of the Chicago belle like a bird?—Because it is completely covered with feathers.

When is a game rooster like an oologist?—When he uses his spurs.

When is an Oriole's nest like a leaf?—When it hangs from a branch.

What kind of a bird sets the longest?—A stuffed bird.

When is an oologist's blow-pipe not a blow-pipe?—When it is (a miss) amiss.

What bird lays the most eggs?—The female, of course.

When is a bird like a hungry tramp?—When he is after grub.

Why is a Chipping Sparrow like a horse? Because they cannot get along without hair or h(air).

What is the difference between a rolling stone and a Pheobe?—One gathers moss and the other doesn't.

When does an egg resemble a colt?—When it is broken (broke in)

When a bird lays one egg why does she lay another?—Because she wants to (two).

F. W. S., Pokepsie, N. Y.

Carolina Wren.

(*Thryothorus ludovicianus*.)

This is the most abundant wren here during the breeding season. It even surpasses the House Wren in numbers. Its song, also is far sweeter. I have found their nests in all sorts of places, such as the following: Holes in trees, piles of lumber, out houses, rock walls and even in thick bushes near the ground. There seems to be no place where it will *not* build.

The nest is coarsely constructed of grass, hay, leaves, roots, feathers, and lined with hair and fine moss. It is generally covered over the top like an Eng. Sparrow's, with a hole in the side to admit the bird.

The eggs are pink, or flesh colored, spotted all over with a rich reddish brown nearly always forming a ring at the large end. The number varies from 4 to 8. Size, .75 x .60.

J. A. B. Mergantown, N. C.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

---BY---

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

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

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
Sample Copies, - - - - - 5c each.

The above rates include postage and premium.

ADVERTISING RATES

Single insertion, 20 cents per line, nonpareil.

	1 mo.	3 mo.	6 mo.	1 yr.
Five lines,	1 00	2 50	4 00	6 00
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1/2 column,	7 00	17 50	28 00	42 00
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FRANK H. LATTIN,
ALBION, Orleans Co., N. Y.

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Jottings.

All prices quoted in Sept., '88 *Bulletin* will hold good for '89. If you have not a copy write for one.

At the time of going to press the report on the prize article contest has not been received from the judges.

Jesse Craven, of Holley, N. Y., writes us that the "Brewster's, Linnet," described by F. C. L. in last *Oologist* was the Pine Siskin.

Parties desiring eggs or nests for Easter decoration or souvenirs had better obtain some of the Bargain Lots that are offered in this issue; also the cheaper eggs and the nests offered in the Davie collection.

The Naturalists' Directory is bound to be a success. We know of one collector that made an even \$5.00 from a single exchange that was made from having his name in last issue. Not a bad investment?

Our 10c coupon offer given in the *Premium List* does not guarantee you to receive the *Oologist* by the 10th of each month, but is a forfeit which we will pay if the *Oologist* is not mailed by the 10th of each month. Feb. issue was mailed Feb. 8th.

At the low prices which our Bargain Lots are offered, collectors can make selections from a lot for their own collection which would cost much more to purchase at retail and then have duplicates enough left to either sell or exchange with other collectors for twice the amount the lot will cost them at our prices.

Davie's New Key, 3d edition, is expected almost daily. If not mailed before the next issue of the *Oologist* we shall have another letter from friend D—. The delay must be aggravating to our patrons, but nevertheless we will *guarantee* them to receive good interest on their investment, and if Mr. Davie continues to add page after page of interesting matter as he is now doing, it will be only the advance subscribers that will be able to obtain a copy at the low price of \$1.00.

Davie's eggs are going off rapidly, but nevertheless every purchaser will receive a prize that will prove quite acceptable and will well repay them for sending in their orders. From present outlook, we think a \$15 order will come pretty close to the 1st prize, and that there will not be competitors enough to take the 5th to 25th prizes and also that an order of only \$3.00 or \$4.00 will take the 5th or 6th prize. It will prove a big investment to any collector to send in a \$2.00 order. There will not be competitors enough to take the balance of the prizes. It will pay collectors to

send in their orders at once, even if for only 50c. Remember that every order mailed on or before March 15th is counted in the competition.

Collecting Experience.

BY "AVIS."

I thought that a few notes of the collecting experience in the summer of '88 from an active oologist might prove interesting to the readers of the OOLOGIST and so was prompted to write this article.

One of rarest sets (in this neighborhood) taken by the writer, was one of the Black Snowbird, (*Junco hyemalis*). I was coming home across the fields after a long day's jaunt, tired, but rich in oological specimens, when a leaden hued bird flew from a bush in front of me, which, upon scrutiny; was found to contain a neat nest, familiar to me as one this species from the many envious glances cast on one, which, with the clutch, adorned a rival collection. I took a close look at the bird to make very sure and then at a magnificent set of 5 little brown-spotted eggs reposing in the grass-lined cavity. That was the only set I have ever secured. I have often seen the birds during nesting season; I also found five sets of Chestnut-sided Warbler and two sets of Brown Thrasher, which makes four nests of the latter noted in this locality by me. The only other species I will note is the Green Heron (*Butorides virescens*) My friend and collecting companion, W. C., and myself found a herony on Wood Island, from which we got eight sets and have obtained forty, had we been so disposed. The nests were placed at altitude of 8 to 40 ft.; average 25. We noted 13 nests placed in bushes, mostly old ones, however. The eggs are too well known, to require description, but I can assure the reader that it was a sufficiently joyful occasion for me, at least, when I took the first set of four great beauties from the rough tenement in which they reposed; and, hoping the readers of the OOLOGIST all success during the coming season, I close this brief article.

Saco, Me.

A Red-tail Hawk's Nest.

On the 27th of last April, ('88), while walking through some heavy woods, I noticed a nest in a large oak tree with something like a tail sticking over the side. As hitting on the tree with a fence rail did not produce any result, I fired at the nest, when immediately a Red-tail Hawk flew off, so I knew there must be something there.

With the aid of climbers, I was soon up to the nest, which was, as usual, a large mass of twigs, lined with moss. It was about two feet in circumference and contained one egg. When I shook this to see if incubation had commenced, it cracked; and afterwards, in blowing, I found that the egg was rotten.

This seems very strange to me, as I don't remember ever having seen any other bird sitting so determinedly on a rotten egg.

Can any of the readers of the OOLOGIST offer an explanation?

W. E. P., Lake Forest, Ill.

The Story of a Tame Crow.

While passing through a piece of woods in the spring of 1887, the writer discovered a nest containing five young crows, one of which he brought home for a pet.

During the first few weeks of our acquaintance, Grip (he was named after Dicken's famous raven) divided his time pretty evenly between squaking and eating. His appetite was simply marvelous: he never seemed to have enough: after he had been filled so full that the last pellet of meal was not quite out of sight, he would still quiver his wings and feebly call for more.

When Grip became fully feathered and had learned to fly, he was taught to come when called and alight on hand or shoulder; on his appearance he was generally rewarded with something to eat, and when hungry he often took this method of making his wants known.

When Grip had learned to forage for himself he spent many hours in the garden picking up ants, spiders and other insects; he liked earth-worms the best of all and the writer's appearance, hoo in hand, was

always sure to call him from any business he might be about. If, as sometimes happened, his morning meal of worms was not forthcoming, he would go the place where they were generally dug, and caw till someone took the hint and dug them for him. He would always go out of his way to kill the big hairy caterpillars but was never known to eat one.

He was greatly delighted when given a Sparrow and generally carried it around with him for several days before devouring it. Like an Owl, he always threw up the feathers and other indigestible parts.

If given more food than sufficed for his present needs, he invariably had a hard time to conceal it, and would sometimes spend hours poking it into one place after another and cackling to himself about it. When a suitable place was found, the food was secreted and Grip would take himself off, not beyond sight of the place, however, for if anyone moved toward the spot, Grip would be there before him and with exultant cries bear the prize off to a place of greater safety.

When thirsty, Grip would fly to the kitchen faucet and caw till the water was turned on, when he would squat in the sink and allow it to drop into his open bill; if the water happened to be running too swiftly for this, he would stand on the edge of the sink and take little bites of the water as it fell.

Like all other crows, Grip early developed a mischievous disposition. He was soon master of the dog, cat and chickens and drove them about whenever he pleased; he liked particularly to tease the cat and would tweak her tail at every opportunity. On wash-days he amused himself by pulling the clothes-pins from the line, or walking on the clean clothes with muddy feet; this amusement soon got him into trouble, for the neighbors began to complain, and he was deprived of his liberty on such days.

When peas were to be shelled for dinner Grip was always on hand to pick up and hide any that might fall to the floor. His choice of hiding-places for anything not eatable, was in the writer's pockets or down

his back. He loved to alight on anyone's shoulder with a nail or other small article which he would drop down their back and then fly off before they were aware of his intentions. If he found anyone reading on the perch, he would, if allowed, take a nap on their shoulder or amuse himself by tugging at buttons or exploring pockets for small articles which he would try to poke into one's ears or up one's sleeve.

When the pansies began to bloom, Grip was often found busily picking the blossoms which he hid under the nearest plantain leaf or in the cracks of the sidewalk; it did little good to drive him from the beds, for as soon as the coast was clear he would go back again; but when satisfied in his own mind that he had picked enough he would leave the beds of his own accord.

Grip was an object of terror to small boys whom he would follow about pecking at their legs until they were glad to run away; for grown persons he generally showed more respect, and restricted hostilities with them, to marching along behind them; sometimes he varied the monotony of this, by sitting quietly among the maples along the street until a person appeared, when he would swoop down upon them with his loudest *caw*, and then fly off greatly pleased with the fright he had occasioned.

Among the few words he could articulate he evidently gave the preference to "hello," saying it with many variations of the tone to suit the occasion. He would sit on the fence and tease the dog by a succession of queer barks, ending the performance with "Hel-o-o?"

As autumn approached, Grip absented himself for longer and longer periods; several times he was found in the company of his wild relations. One day late in the fall he disappeared again and was never seen after. We have often wondered whether he was shot or whether he went off with the wild crows; but since he had been seen with his wild friends, the latter supposition is probably the correct one.

WILLARD N. CLUTE, Binghamton, N. Y.

BARGAIN LOTS.

We have accumulated a large lot of odds and ends, some of which are very desirable and others not, but in every case they are worth much more than the prices we ask for them. We have packed them up in "Lots" and have commenced to list them in this OOLOGIST at prices, in many cases, less than actual cost to us. At our low rates we cannot send prepaid, but will send by mail, express or freight, securely packed, at purchasers expense. In order that our patrons may know in which way it will be best to have them shipped the weight of each lot is given. As a rule lots under 2 lb will go cheaper by Mail, 2 to 15 lb by Express, and over the latter weight by Freight; in all cases we will ship the way which will be of the least expense to our patrons. If ordered by Mail send one cent per oz. additional for postage. Always name other Lots that you can use in case we have sold the ones ordered.

Address, **FRANK H. LATTIN, Albion, N. Y.**

NO.	DESCRIPTION.	PRICE
1	50 Sand Crab Backs, from Martha's Vineyard, weight 10 oz.	\$0.40
2	120 Sand Crab Backs, 18 oz. ....	.75
3	12 Sea Spider Backs, weight 4 oz. .25	
5	8 King Crabs, Sea Spider. Egg Case of Periwinkle, 2 Skate Eggs, 3 or 4 shells, &c. poor.	5 oz. .30
10	Lot of Colo. & Western Spec. Silver Ore, &c., 3 lb. ....	.30
12	50 Strombus alatus, a fine showy Shell from the Bahamas the tips on this lot are broken or we would not sell for less than \$5.00 these in this lot will retail quick at 5c. each, 4 lb.	\$1.00
14	50 Fasciolaria dist ins. The remarks on lot No. 12 apply equally well to this species, 1 3/4 lb.	1.00
21	9 pol. Pearl Plates, Chinese Shells, 2 1/2 lb. ....	.90
23	20 Little Conchs, 10 Rock Murex and 2 Cones, 10 oz. ....	.30
29	9 Sun, 1 Fulgar, and 1 valute Shells, Organ Pipe and Branch Corals, and 1 pint small Brown and White spotted Bivalves for Fancy Work, 2 1/4 lb. ....	.50
42	1 Mammoth and Curious Sponge Bahamas size 8 in. x 12 in., 6 oz. ....	.50
46	16 2d class Nests of the Tarantula or Trap Door Spider, 3 1/8 lb.	1.00
48	Satin Spar, Gypsum, Talc, Green Qtz., Graphite, Mica Slate, Horustone, Ochre, 3 Micac, Agate, Marl, Tourmaline Black Mica, &c. 3 1/4 lb. ....	.50
68 to 70	Each contain a fine 1 in. by 1 in. spec. of the following Minerals:—Porphy. Gneiss, Tourmaline, Novaculite, Agatized and Petrified Wood, Talc, Chalcopyrite, French Sandstone, Serpentine, and Magnesite. 15 oz. ....	.25
74 & 78	Each contain 30 var. of the Minerals from the following list, size 1/2 in. by 1/2 in.:—Agate, Quartz, Garnetiferous Granite, Petrified Wood, Conglomerate, Gneiss, Porphyry, Asbestos, Talc, Leelite, Tourmaline, Magnetite, Trap, Graphite,	
	Hematite, Pyrites, Black Mica, Granite, Gypsum, Moss Agate, Garnet, Sandstone, Agatized Wood, Labradorite, Hornblende, Serpentine, Williamsite, Cyanite, Enstatite, Magnesite, Coquina, Limonite, Marble, Tufa, Copper Ore, Flint, Asphaltum, Onyx, 12 oz. ....	.35
79 to 83	Each contain 30 var. of same Minerals as in last lots, size 1 in. by 1 in. 2 1/2 lb. ....	.60
84	Pkz. of 10 Minerals, 5 Iowa and Mazon Creek Fossil Ferns, 4 Mica, Hematite, 3 Drusy Qtz., 1 each of Caingorum, Qtz. Xtals, Tufa, Lithomarge, Cornundum, Green Feldspar, Andalusite, Enstatite, Blk. Mica, Asbestos, and Chalcedony, 3 1/4 lb. ....	.60
88	10 oz. Creip, 5 oz. White Lily, 5 oz. White Rose leaf, and 8 oz. small White Bivalve Shells. The entire lot is a splendid assortment of White Shells for fancy work. 2 1/4 lb.	1.00
89	2000 Small Flat E. I. Snail Shells, quite pretty, 1 lb. ....	.50
102	10 Nam. Minerals, 6 Clusters of Gypsum Xtals, 24 Halte from Syacuse, N. Y., 3 Psilomelane? 3 1/8 lb. ....	.40
—INDIAN RELICS—		
126	6 Small Knives, assorted sizes, 4 oz. ....	.30
128	6 Knives, well assorted, 8 oz. ....	.40
133	25 Arrow Heads, mostly small war points 8 oz. ....	.75
137	2 small Club Heads and 5 pcs. used either as Knives or Scrapers 7 oz. ....	.50
138	1 Agate Drill, 6 Flint Spear Heads and 16 Arrow Heads (a few rare forms) The spec. in this lot are broken but at least 3/4 of each spec. remains 15 oz. ....	.75
139	10 finely assorted Knives 15 oz.	1.00
141	6 small Knives 5 oz. ....	.50
142	12 small Bird and War Points 3 oz. ....	.40
143	4 good Knives 9 oz. ....	.75
144	20 pieces, doubtless, used as Knives or Scrapers 1 1/2 lbs. ....	.75
145	20 Spear Heads, part of them slightly imperfect 1 1/4 lbs.	1.10
146	80 Arrow Heads 2 lbs.	2.00
147	116 Arrow Heads 2 1/2 lbs.	2.50
149	30 large Arrow or small Spear Heads 27oz. 1.50	
150	15 small Knives 7 oz.	1.00
151	11 medium Knives 12 oz.	1.25
152	11 notched Scrapers 4 oz.	1.25
153	15 Scrapers 8 oz.	1.25

154	125 broken pieces of Arrow Heads, Spear Heads, Knives etc., of Flint, Jasper etc. (various forms of barbs or notches well illustrated) 3 lbs.....	1.25
158	1 fine Axe, broken and mended,	
1	small Axe, 1 unnamed pc, 3 lbs.....	.75
159	3 Axes, 2 $\frac{3}{4}$ lbs.....	.75
	All the above Relics are from the Mounds of the Ohio Valley. And also Lots No. 182 to 189.	
160	5 half shells <i>Venus mercenaria</i> from Ind. Shell Heap Casco Bay, Maine, 5 oz.....	.30
161	3 fine shells <i>Buccinum</i> , same as Lot 160, 4 oz.....	.30
162	6 <i>Natica</i> , same as 160, 4 oz.....	.30
163	1 Leg Bone from Ind. Grave, Mich. fine, 15 in. long, 8 oz.....	.35
164	2 13 in. Bones same as 163, 2 oz.....	.30
169	30 Arrowhead Chips, Mich. 16 pcs. marked pottery, So. Car. 40 Arrowheads, Spears, &c., of Quartz, Jasper, &c., Ga. 2 $\frac{1}{4}$ lb.....	1.00
170	3 Arrowheads, Pa., 80 Arrowheads, Spears, &c., Ga., 3 Minerals, 2 $\frac{1}{4}$ lb.....	1.50
171	1 War Club head, Ind., 3 Knives, Ga.	
33	Arrowheads, &c., Ga., 2 $\frac{1}{2}$ lb.....	.75
172	3 Me. Minerals, 2 pcs., Ind. Bones, 6 extra serrated Arrowheads without base, 4 imp. Spears, 12 imp. Arrowheads, 3 imp. Knives, Ohio, 2 $\frac{3}{4}$ lb.....	.90
174	1 fine flint Drill with point broken, 1 good Flint Chisel, 1 very fine Knife, Ohio, 3 oz.....	.80
175	55 imp. Spearheads, Tenn. 3 lb. 1.25	
176	85 fair Arrow-heads, Tenn., 2 $\frac{3}{4}$ lb 2.00	
177	12 fair Spear heads, Tenn., 11oz. 1.00	
179	12 " " " 15 oz. 1.00	
180	12 " " " 15 oz. 1.00	
181	5 Spears and 6 Knives, Tenn., 11 oz.	1.00
182	2 fine Knives, 1 large scrape, 1 Hoe, 7 oz.....	1.50
184	30 rude implements from Southern Ind., used for War Club heads, Knives, Scrapers, &c. 3 $\frac{3}{4}$ lb.....	2.00
185	20 Knives, Scrapers, &c., 2 or 3 War Club heads, 10 broken pcs., Ind., 2 $\frac{3}{4}$ lb 1.50	
186	10 unnotched Scrapers, 6 notched Scrapers, Ind., 6 oz.....	1.25
188	An unsorted lot of Knives, Scrapers, &c., 30 pcs 2 $\frac{1}{2}$ lb.....	1.50
189	40 pcs. same as lot 188, 2 $\frac{3}{8}$ lb.....	2.00

MISCELLANEOUS

190	4 dark Sand Dollars, 15 fine White Sand Dollars, 1 imp. Key hole Urchin, 4 imp., Dollars, 6 oz.....	.50
192	16 advertising Electrotypes will set 80 inches, single column ads. contain cuts of over 20 articles—A bonanza for an Amateur printer, 9 $\frac{3}{4}$ lb.....	1.00
193	20 Pleiocene Fossils <i>Saxicora rugosa</i> , Maine, 3 oz.....	.40

194	A very fine collection of Iowa Fossils, Carboniferous, 18 pcs., a fine assortment of Ferns, Plants, Sea Weeds, &c., 4 lb....	2.50
195	Another collection same, 12 pcs. but not as fine as last lot, 2 $\frac{3}{4}$ lb.....	1.00
196	Same as 195, 11 pcs., 2 $\frac{1}{8}$ lb.....	.75
197	Same—17 spec, mostly Ferns 2 $\frac{1}{4}$ lb 75	
198	40 red and black Glass Beetles, gilt legs and trimmings, 1 in. body, good for Taxidermists, 7 oz.....	.75

SECOND CLASS BIRD'S EGGS

Some of the spec. in the following lots are only slightly imp., while others are decidedly so, but in either instance we guarantee them to be worth more than our prices, we have exercised care and have taken considerable pains in packing them and think they will go safely without breakage, but as we are clearing out our 2ds we will not duplicate broken specimens.

200	12 Brewer's Blackbirds, 12 Catbirds 2 Bluebird, 3 var. of Turtle, 12 Flickers, 2 Bluebird, 1 elongated and 1 very curio. pyriform shaped spec. of Hen fruit, 11 oz. 60	
201	15 Brewer's Bl'kbird, 7 Flicker, 20 Catbird, 20 Bluebird, 1 Canary, 10 oz.	60
203	40 Catbird, 10 Quail, 6 Blue Jay, 10 oz.....	.70

In the following Lots we have used Ridgway's No.'s in place of printing the names of the species.

205	9 Eng. Sparrow, 22 Bluebird, 18 Catbird, 2, 480; 4, 261; 5, 378; 1, 242; 2, 278a; 4 Starling, 9 oz.....	75
206	1 ea. of 193a, 149, 226, and 236; 2 ea. of 267, 254, 251; 6, 93; 4, 11; 6, 248; 5, 12; 14, 22; 20, 153, 9 oz.....	1.50
207	1 ea. of 27, 193a, 51, 42, 135, 257, 259, 24b, 237a, 361, 146; 2 ea. of 170, 60; 4 ea. of 312, 320, 5 oz.....	1.25
208	2 of 258; 6, 271; 7, 315; 12, 214; 4, 7; 1, 157; 12, 154; 7, 231; 9, 151, 10 oz.....	.75
209	1 each of 1, 24, 152, 36, 193a, 316, 183, 207, 217, 201, 202, 97, E. S., 135, 143, 181, 68, 182, 77, 42, 123, 114, 32, 61b; 2 of 27; 3 of 52, 4 oz.....	2.00
210	3 of 24; 4, 12; 12, E. S.; 4, 151; 13, 211; 5, 261; 2, 13; 2, 214; 11, 157; 3, 320; 2, 41; 3, 304; 2, 289; 2, 261a; 3, 244; 4, 326; 1 ea. of 193a, 170, 143, 231, 231a, 315, 93, 149a, 274, 1, 10 oz.....	1.25
211	3 of 22; 2, 23; 7, 214; 2, 151; 6, 231a; 9, 157; 1 ea. of 21, 24, 41, 181, 13, 498, 6 oz.....	.70
212	7 of 261a; 11, 304; 2 ea. of 289, 1, 12, 7, 277; 1 ea. of 264, 7a, 11, 244, 6 oz.....	.50
215	35 2nd-class eggs from Sweden; mostly unnamed, 11 oz.....	.50
217	10 La Plata Dove from So. Am. 1 Thick-billed Vireo, Bahamas, 3 European Wren and 1 Chiffchaff. Eggs in this lot nearly if not all 1st-class. 4 oz.....	1.50

Minerals.

The following lots are all good specimens and the reason for closing them out is that we have not the time to attend to our Mineral department as we wish, and shall close out most of our stock:

225 7½ lbs. Tremolitic Talc, Jeff. Co. N. Y.60

226 2 lbs. Quartz and 2 lbs. Smoky Quartz in Calcite, Ct.; ¾ lb Jasper Conglomerate, 1 lb Pyrite, Mo.; ½ lb Obsidian, Lip. Isles; 1½ lbs. Sphalerite and Calcite N. Y.; ¾ lb. Magnetite, Pa.; 1 lb. Mica, Hematite; ¼ lb. Calcite, Saxony; 10½ lbs80

227 1¾ lb. Magnetite, N. Y.; 1½ lb. Mica, Conn.; 1½ lb Calcite, Pa.; 2¼ lb. Pearl Spar, N. Y.; ½ lb. Albite, Ct.; 1 lb. Calcite, Mo.; 2 lbs. Amphibole, N. Y.; ¾ lb. Oolitic Iron, Tenn.; 11¼ lb.1.00

228 3¾ lbs. Gypsum, Mich.; 3½ lbs. Maacassite, Ill.; 2 lbs. Galena and Fluorite, Ky.; 3¾ lbs. Hematite, Ky.; 13 lbs.90

229 1¾ lbs. Gypsum, Nova Scotia; 4¼ lbs Hematite, Pa.; 1 lb. Selemite, N. Y.; 3 lbs. portions of Geodes, Ia.; 9¾ lbs.60

230 2¼ lbs. Pectolite, N. J.; 6½ lbs. Barite, N. Y.; 1½ lbs. Limonite, Pa; 1½ lbs. Anhydrite, N. S.; 11½ lbs.1.00

231 5 lbs. Mica, N. H.; ¼ lb. Nickle Ore, Pa.; ½ lb. Barite, Eng.; ¼ lb. Barite, Ct.; ½ lb. Agate, Brazil; 6½ lb.1.00

232 2 lbs. Pear Spar, Eng.; 4 lbs. Calcite, N. J.; ½ lb. Cannel Coal, Eng.; 2¾ lbs. Williamsite, Pa; 1½ lbs. Albite, Ct.; 10¾ lbs.1.00

233 4¾ lbs. Calcite on Hematite, Pa.; 3½ lbs. Heavy Spar, Ct.; 1½ Peacock Coal, Pa.; 1 lb. Fluor Spar, Eng.; 10¼ lb.60

234 4½ lbs. Indurated Clay, M.I.; 4 lbs. Apophyllite, N. J.; ½ lb. Picrolite, Md.; ¾ lb. Alabaster, N. S.; 9½ lbs.1.00

235 ½ lb. Aragonite, Black Hills; 4½ lbs. Dolomite, N. Y.; ¼ lb. Dawsonite, Can.; 6¾ lbs. Stilbite, N. J.; 12½ lbs.1.00

236 11 lbs. Chromite, Md.90

237 contains over 250 spec. of over 60 minerals from all parts of the world; mostly fragments. Have not counted any that is not at least ½ in. greatest extent. Labeled 4¼ lbs.2.00

Lots 238 to 245 are all from the Black Hills. If you obtained them direct, the freight alone would cost more than our price.

238 4 lbs. Tufa, Petrified Moss; 5½ lbs. Glassy Quartz; 10 lbs.1.00

239 8 lbs. Pink, White Gypsum80

240 3 lbs. Pyrites, 1½ lbs. Carbonate Ore, 2½ lbs. Silver Ore, 1 lb. fragments, 1 lb. Barites; 10 lbs.1.00

241 7¾ lbs. Tin bearing Ore.1.00

242 13½ lbs. Black Tourmaline.1.25

243 5 lbs. Dendrites, (Forest Rock); 2¼

lbs. Quartz; 7½ lbs.85

244 4½ lbs. Petrified Wood75

245 1 lb. Garnets in Schist, 1½ lbs. Goll Ore, 2¼ lbs. Galena; 4½ lbs60

246 50 Pebbles of Agate, Carnelian, Jasper, Sard, Chalcedony, &c., from W. Iowa, 14 oz40

247 2 lbs. mixed lot spec. unnamed, mostly Colo. ½ lbs. Red Ochre, Me; 1½ lb. spec. of Dendritic, form curious, Ia.; ½ lb Cairngorm, Pks. Pk.; 3 lbs. Rock Mt. Minerals; 1 lb Hematite, Elba; 8½ lbs.75

248 2 lbs. Carbonate Ore. Colo.; 3½ lbs. Copper Pyrites, Arizona; 3½ lbs. Gold-bearing Ore (so called at Denver); 9½ lbs.1.25

249 12½ lbs. of Ore Composed of Galena, Pyrites, Silver, &c., Colo.1.25

250 1 lb same as last lot, but surface covered with Quartz Xtals: 4 lbs. Mica, Va.; 3 lbs. Massive Golden Ochre, Colo.; 8¼ lbs.1.00

251 9 lbs. Bog Iron, Mt. Katahdin, Me.; 4 lbs. Pet. Palm, Petrified Forest, Colo.; 13 lbs.1.00

252 A 9 lb. spec. of Botryoidal Limonite, Mt. Kat.; 6 lbs. Pet. Palm, Colo.; 15 lbs.1.25

253 5 lbs. Copper bearing ore, New Mexico75

254 5 lbs. Copper bearing ore, N. M.75

255 4½ lbs. of Rocky Mt. Min. con.pkts. lined with Qtz. Xtals. 3 lbs. Botryoidal Limonite, 8 lbs.75

256 6½ lbs. Bog Iron, Me., 3½ lbs. Pet. Palm, Colo. 10½ lbs.80

257 8 lbs. Dendritic Rock broken in 200 pcs. Colo., ½ lb Wavellitic Rock, Ark; 8½ lbs.50

258 1½ lbs., 20 spec. Steatite showing Actinolite, N. H.; 1½ lbs. Electric Stone; 1¼ lbs. Granite, N. Y.; 1lb Tremolite, Ct.; 12 labeled small spec. 5½ lbs.75

259 2½ lbs. Limonite, Ky.; 1lb Bronzite, Pa., Spec. ea. Antonite, Wernerite, Columbite, Beryl, Garnet in Albite, 5 lbs50

260 10 showy small spec. Gypsum Xtals, spec. ea. of Pink Calcite, Hornstone, Microline, Horneblende Schist, Chalcedony, Cyanite, Pet. Palm and Wood, Williamsite, Blue Calcite, Hematite, 3 Tufa, Chalcocopyrite, Bronzite, Magnetite Xtals, 3 lbs.1.00

261 1 lb Silicified Wood, 1 lb Chalcocopyrite, ½ lb Hematite, Specular Iron, 2 fine Datolite, 5 rare min., label lost, 14 named mineral spec. good, 4¼ lbs.1.00

263 4½ lbs. Granite, 3 var., Vt. and N. H., 1¼ lbs. Verde Antique, 2 lbs. Pyrites, ½ lb. Mica Schist; 5 lbs. Mica, Black Hills; 13 lbs1.25

264 2 lbs. Magnetic Iron; 2 lbs. Indurated Clay; ¾ lb. Feldspar; 1¼ Calc Spar, Black Hills; Petoskey "Agate"; ½ lb. Clippings, 7 lbs.

- 265 3½ lbs. Sphalerite and Siderite; ¾ lb. Conglomerate; 1½ lbs. Pearl Spar, Eng.; 1 lb. Limonite, 1 lb. Peacock Coal; 2½ lbs. Copper Pyrites; ½ lb. Barite, ½ lb. Fragments; ½ lb. Pet. Wood, Fos. Coral, Ia.; 12 lbs. 1.00
- 266 1¼ lb. Copper Ore, L. S.; 3¼ lbs. Cannel Coal, Ky.; 3¼ lbs. 50
- 267 2 Asphalt, 4 Qtz. Xtals, Hematite, 2 Pyroxene, Williamsite, Marcasite, 2 Smoky Qtz., Amethyst, Tufa, Smoky Selenite, 2 Blk. Mica, Cummingtonite, Switz. Xtals, Sil. Wood; fine lot: 1½ lbs. 75
- 268 Chalcocopyrite, Punice, Chalcedony, Halite, 2 Datolite, 2 Calcite, 2 Sodalite, Microline, Qtz. Xtal, Fluorspar, ¾ lb. mixed spec.; 1¼ lbs. 60

We can furnish duplicates of Lots No. to 274, inclusive.

269 Contains a 10c spec. of each, Fluorspar, Cumberland, Eng.; Quartz Crystal, Hot Springs, Ark.; Chalcedony Geode, Tampa Bay, Fla.; Native Lodestone Magnet Cove, Ark.; Amethyst, Thunder Bay, L. S.

The following are all polished specimens:

- Carnelian, Brazil; Moss Agate, Brazil; Onyx, Germany; Clouded Agate, Brazil; Labradorite, Labrador; Crocidolite or Tiger Eye, So. Africa; Bird's Eye Coral, Iowa; Fish Egg Coral, Iowa; we mail this lot prepaid 1.00
- 270 Contains a 25c specimen of each mineral named in Lot 269, by Express. 2.25
- 271 Contains a 50c specimen of each mineral named in Lot 269, by Express. 4.00
- 272 Contains a \$1.00 specimen of each mineral named in Lot No. 269, by Ex. . 7.50
- 273 Contains a \$2.00 specimen of each Fluorspar, Fossil Coral, Amethyst, Crocidolite, Carnelian, Onyx and Labradorite; by Express. 8.00
- 274 Contains a \$4.00 spec. of each Fluorspar, Amethyst, Crocidolite, Carnelian, Onyx and Labradorite; by Express. . 18.00
- 275 Contains a \$10.00 specimen of each Carnelian Agate, Brazil; Black-stripe. 1 Agate or Onyx, Brazil; Amethyst, Brazil; Mammoth single Crystal of copper-colored Calcite from a pocket in a mine in Mo.; a very choice Chalcedony Waterstone from Uruguay; by Freight or Express, 40.00

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RATES:

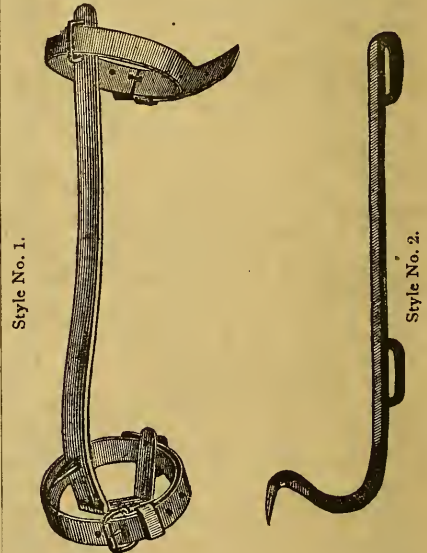
- Single or first Specimen, - 10 cts.
- Second to tenth Specimen, - 3 cts. each.
- Eleventh Specimen and over, - 2 cts. "

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THE OOLOGIST.

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Trays, 4 sizes,.....	05
Cotton for lining trays and cabinets six samples, 2 grades, 4 colors.....	03
Gummed Labels, useful for any business, 10 styles,.....	03
Tags, 4 styles,.....	02
Datas, Labels and Blanks, sheet of 20 Samples,.....	02
Checking List, contains names and numbers, both Ridgeway's and A. O. U.,.....	02
Cork, 3 grades,.....	03
Insect Pins, 8 sizes,.....	03

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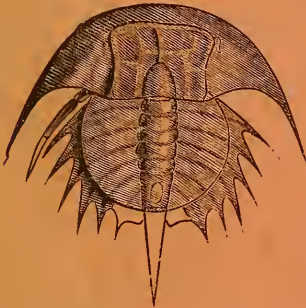
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First-class single eggs of Golden Eagle, 5.75; Richardson's Owl, 1.00; American Scoter, 1.00; Red-throated Diver, .70; Glaucous Gull, .50; European Hawk Owl, 1.20; Barrow's Golden Eye, .55; American Water Ongle, .50; Brown Creeper, .45; and Whistling Swan, 2.20, with full data. Sets of the above also. Seed for full list. Coite K. Woodruff, Hotel Bahmoral, Montreal, Canada.

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Catbird, Bluebird, Flicker, Pewee, Cliff Swallow, Robin, Mourning Dove, English Sparrow, Brown Thrasher, Kingbird at only.....	1c each
Brewer's Blackbird,.....	.02
Quail,.....	.04
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White-crowned Night Heron,.....	.10
Alligator,.....	.10
Am. Avocet,.....	.20
Am. Eared Grebe,.....	.15
Black Skimmer,.....	.04
Laughing Gull,.....	.08
Am. Herring Gull,.....	.08
Gannet,.....	.10
Am. White Pelican,.....	.20
Am. Flamingo,.....	.25

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FRANK H. LATTIN, Albion, N. Y.

THE

OOLOGIST.

Monthly.

50c. per Year.

Vol. VI,

ALBION, N. Y., APRIL, 1889.

No. 4

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

WANTED.—Sets with data in exchange for single eggs over one hundred varieties to select from. Send lists. C. W. TREAT, Brooklyn, O.

WANTED.—Live Cocoons of *Attacus Luna* and *Chrysalids* of N. A. Lepidoptera. W. J. SIMPSON, 91 Park Row, N. Y. City.

WILL EXCHANGE specimens of any kind for good collections of postage stamps. OOLOGIST, Albion, N. Y.

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Collectors receive as high as Fifty Letters, Postals, Circulars, Samples etc. from having their names inserted our time at a cost of only 10 CENTS in this Directory.
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SEWANEE, TENN., MARCH 19th, '89.

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Yours Truly,
F. E. Shoup.

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- H. W. Davis, North Granville, N. Y. my
- L. W. Nichols, Jr., Richmond, Ills. m3
- Coite K. Woodruff, Hotel Balmoral, Montreal, Can. m3
- R. B. Trouslot, Rooms 15 & 16, Humboldt Block, Kansas City, Mo. 3m
- C. W. Treat, Brooklyn, Ohio.
- L. D. Richards, Kirkwood, Wis.
- M. D. Cooper, Antrim, N. H.
- Colburn & Lake, No. 1938, 14th St., Wash ngton, D. C.
- Will A. Moore Box 661, Norwalk, O.
- F. E. Shoup, Sewanee, Tenn. A3
- Mylo E. Ryan, Box 106, Rouses Point N. Y.
- E. B. Peck, Brockport, N. Y.

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Wofford Brown, 123, 3rd St., Parkersburg, West Va.

Mylo E. Ryan, Box 106, Rouses Point, N. Y.

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DAVIE'S EGGS.

It has been deemed advisable to offer the few remaining eggs at the following greatly

Reduced Rates

Which range from 10 to 50 per cent less than previous quotations and will average over 25 per cent.

\$20.00 Worth of Eggs

IN SETS

FREE!

We have concluded to show that we appreciate the efforts of our oological friends in assisting us in disposing of this collection by making the largest purchasers presents of the following valuable eggs:

To the person sending us the largest amount of money for Davie's eggs, either sets, singles or nests on or before May 15, 1889, we will give a set of one egg of the Bald Eagle.

To the second largest purchaser a set of 1 egg of the Bridled Tern.

To the third largest purchaser a set of 4 eggs of the Horned Grebe.

To the 4th and 5th largest purchasers each a set of 1 egg of the American Flamingo.

To the 6th and 7th largest purchasers each a set of one egg of the Noddy Tern.

To the 8th to 10th largest purchasers each a set of 1 egg of the Sooty Tern.

To the 11th to 15th largest purchasers each a set of 2 eggs of the Black Tern.

To the 16th to 25th largest purchasers each a set of 2 eggs of the Mourning Dove.

Conditions.

The winner of the 1st to 3rd prizes, must purchase at least \$5.00 worth of the Davie eggs; 4th to 10th prizes, at least \$2.00 worth; 11th to 25th at least 50 cts. worth. To compete for these prizes only orders for the Davie eggs will count. Orders can be mailed at any time between Apr. 1st and May 15th. Prizes will be awarded May 25th and announced in June Oologist. Should a person send a dozen or more orders between Apr. 1st and May 15th it will be the total sum of all these orders that will count in the competition. In case two or more persons should send the same amount the earliest order will rank first.

All eggs will be carefully packed in strong tin or wooden boxes and sent by mail or express at our risk and (on orders of \$1.00 or over) expense. Make remittances in most convenient manner.

Address Plainly

FRANK H. LATTIN,
Albion, N. Y.

EGGS IN SETS.

All prices are for the complete set as described.

Orders under 30 cts. must contain 5 cts. additional and under \$1.00 10 cts. additional, for postage and packing.

In all cases you must name additional sets that you can use as substitutes in case the ones ordered have been sold. In case this is not done we will take equally desirable sets from our stock to fill the order, or money will be refunded.

Abbreviations.

To condense the list, the following abbreviations have been used:

ch.....	chipped holes
dc.....	data complete
dnc.....	data not complete
F. C. O. and fco.....	Franklin Co., Ohio
L. I.....	Long Island, N. Y.
N.....	nest accompanies set
nd.....	no data
O.....	Ohio
S. G. P. C. or sgpc.....	San Geronia Pass, Cal.
snc.....	set not complete
?.....	questionable
1-2 Wood Thrush, 3, nd.....	\$.08
3-5 Wood Thrush, 4, coll. by Oliver Davie, Franklin Co. O., dnc.....	.18
6-7 Wood Thrush, 5, coll. O. Davie, Franklin Co. O. dnc.....	.22
8 Russet-backed Thrush, 4, Cal. nd.....	.35
10-11 Cabird, 3, F C O ? nd.....	.04
12-13 Cabird, 4, F C O ? nd.....	.06
14, 16 Brown Thrasher, 3, F C O ? nd.....	.06
19 Blue-gray Gnatcatcher, 4, S G P C dc.....	.70
21 Black-crested Flycatcher, 2, S G P C dc.....	.75
26 Ground Tit, 2, snc S G P C dc.....	1.15
27 Tufted Titmouse, 4, Clinton Co., Ind dc.....	1.25
28 California Bush-tit, 5, S G P C dnc.....	.60
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43 Cedar Waxwing, 3, Lake Co., Ill. dc.....	.25
44 Purple Martin, 3, snc St. Law. Co., N. Y. dc.....	.35
45 White-bellied (Tree) Swallow, 4 snc, St. Law. Co. N. Y. dc, eggs dirty.....	.35
46 Summer Redbird, 3, Athens Co. O. dc.....	.60
47 House Finch, 4, Haywards Cal. dc.....	.18
50-51 House Finch, 4, S G P C dc.....	.15
51-55 Am. Goldfinch, N 4 nd.....	.20
56-57 Arkansas Goldfinch, N 4 S G P C dc.....	.75
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59 Lawrence's Goldfinch, N 1 S G P C nd.....	.30
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61 Sharp-tailed Finch, 2 snc, Mass. dc.....	.55
62 Field Sparrow, 2, F C O nd.....	.06
63 Field Sparrow, 3 F C O nd.....	.08
64 Field Sparrow, 3 snc F C O nd.....	.07
65 Song Sparrow, N 5, nd.....	.12
66 Cal. Song Sparrow, 3, Marion Co., Cal. dc.....	.20
67 Cal. Song Sparrow, 3, near San Francisco dnc.....	.15
68 Heermann's Song Sparrow, 5, Riverside, Cal. dc.....	.60
69 Rusty Song Sparrow, 4 (1 ch) Oregon dnc.....	.75
70 Spurred Towhee, 4, sgpc dc.....	.30
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1	Field Sparrow.....	05
1	Song Sparrow.....	05
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Our regular prices are quoted on the last page (78) and in the Sept. *Bulletin*, following.

Remember we send you any egg we advertise at $\frac{1}{2}$ the prices quoted. For example, at this reduction you can purchase eggs of the Wood Thrush for 2c; Robin, 1c; Mockingbird, $2\frac{1}{2}$ c; etc., etc. throughout the list. This offer applies to all single eggs except Ostrich, Emeu and Cast of Great Auk. These eggs and eggs of any species when desired in sets with original data, we can allow only 25 per cent. discount from prices quoted.

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Orders amounting to less than \$1.00 cannot be accepted at this great reduction.

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THE OOLOGIST.

Vol. VI,

ALBION, N. Y., APRIL, 1889.

No. 4

The Raptores of Michigan.

BY SCOLOPAX, KALAMAZOO, MICH.

Elaeus leucurus (VIEILL.) White-tailed Kite; Black-shouldered Kite.

This is a rare species as a Michigan bird and I feel uncertain about recording it here, but cannot well ignore the species when it is entered in lists of Michigan birds.

Dr. H. A. Atkins, an observer for over a quarter of a century at Locke, Ingham Co., Mich., wrote me shortly before his unfortunate taking off, that this species was "a rare summer resident" in his neighborhood. A. B. Covert, of Ann Arbor, this State, in his list "Birds of Washtenaw County, Mich.," says: "A very rare straggler from the south; two specimens taken." It is on these authorities that I embrace this species in this list.

Circus hudsonius (LINN.) Marsh Hawk; Marsh Harrier; Harrier.

This is an abundant species in many sections of the State where suitable territory can be found. In many quarters of Michigan, forests are too dense and large, and where clearings do exist, the nature of the surface is not of that character appreciated by the Harrier. However, locality seems to have much to do with the preference of the birds, entirely aside from the nature of the surface. For example, there are many sections of our State where the surface is apparently exactly suited to the Marsh Hawk, where an individual is never or rarely seen. This bird was embraced by Dr. Sager in his pioneer list of Michigan birds in 1839, and has been recorded by nearly all lists since. Thus far, no lists or authority from the upper peninsula, that I can learn of, lists this species, nor did I find it there. It, however, is found undoubtedly, at least to a limited extent north of the Straits of Mackinaw as it is found in the British possessions.

March 10 is my earliest recorded arrival

in the southern part of the State, and the birds generally are not seen before the 15 or 20 of that month and sometimes, in late seasons, I believe even later. Our first knowledge of their presence as well as our last record of them about November 10, is by seeing one sailing across a field with that gentle undulating motion so characteristic of the species. Perhaps it is a marshy tract over which the the new arrival wends his way, and this more probable if the mercury is much below the freezing point, from the reason that the small mammals are moving earlier in the spring than those of the dry upland fields, and especially are they more active on a cold day than their relatives of greater altitudes. I have especially noted that this bird when inclined to hunt about the fields and uplands, invariably selects southern slopes of hills in cold weather, thereby gathering a greater harvest than would be found on the northern slope, where the small mammals keep within their holes. About May first to tenth the birds begin to pair, that is, go through all of the extravagant manifestations of the spring alliance, usually common to birds in this quarter. I am aware that the Raptores are generally supposed to be mated for life, and do not doubt it, but certain I am that birds that I have observed, of several different species of hawks are given to great demonstrations each spring. At this time the male makes a peculiar cry or scream and is not infrequently answered by the female. The scream uttered is a *ky yi*, something like a small dog's alarm when alarmed, and is almost continuous for a minute or so by turns. The note is less harsh than that of any of the hawks. The scream is not uttered while the bird hunts.

The nest is placed, always, so far as I am able to learn, in a marsh on a hummock of from one to three feet elevation above the surrounding surface. Generally a good deal of water has to be waded through

often two feet deep, in order to reach the eggs. The nest is hollowed more than the structures of most of the hawks, and varies in size, probably from the additional material added, as the nest may be occupied several successive years. The eggs, four, five or six in number, more often five, are usually laid about May twentieth, and are of a dirty light blue color and not rarely blotched with obscure markings of brown. Many writers speak of the eggs as blotched in the majority of instances. This is, however, I think more from their inability to distinguish between natural markings and those acquired from contact with the wet grass composing the nest. The eggs closely resemble those of the Cooper's Hawk; are not always distinguishable even by an expert. The eggs of this species, as also of those of Cooper's Hawk are not rarely palmed off on the unsuspecting as eggs of the Goshawk *A. atricapillus*, and I should advise all to beware of impostures of this nature.

Accipiter velox (WILS.) Sharp-shinned Hawk.

This species is not known to many collectors in many parts of our State during summer, and is in fact, I think, only transient in spring and fall south of 43 degrees north latitude. In only one case have I heard of the species breeding in the State. This apparently almost invariable migration throughout northern tiers of counties, may, perhaps, be a result of an oversight on the part of our collectors, but it is hardly probable, as we are acquainted with the habits of species of the raptors much less common than this species.

The little blue-winged hawk or Pigeon Hawk as it is often called, may be taken on our southern borders as early as March tenth in the spring migration, and from September first during the three autumnal months in its southern journey. It undoubtedly is found in the State during ever month of the year, as I have met with it in December and have seen a small hawk, which could hardly be of any other species,

in January. One* which I came into the possession of was making havoc among the persistent English Sparrows in the center of the city.

Having never met with a nest of this species, although thorough search of twenty years duration has been my lot, I cannot speak of its habits in this respect, having to content myself with an uncertain study of its manners during migration. Mr. F. A. Norton, of Ypsilanti, has found two nests of one pair of birds. These were placed in ash trees about thirty feet from the ground and were constructed much after the manner of the Cooper's Hawk, but were not so large.

The eggs of this species are among the most beautiful of hawks' eggs and are well worthy of the efforts of an ambitious climber. They are a dirty white in ground color, sometimes of a bluish tinge and are generally beautifully blotched and marked with dark reddish-umber, and usually in greater abundance at the larger end, but sometimes at the smaller end. Often there is a ring formed about the egg and not rarely the blotches are entirely confluent.

Accipiter Cooperi (BONAP.) The Cooper's Hawk.

This active, audacious hawk is well known in our State and under a variety of names but to the large majority of people it is called chicken hawk, blue-backed hawk and pigeon hawk. The last two names being also given to the sharp-shinned congeners and, as is often the case, being misapplied in both instances. The pigeon hawk, very rare here, being a true falcon, while the local species of the genus *accipiter* are true hawks. There is nothing in a name, as many will insist, however, to which I will add, true enough in English names. Allow me to say here, therefore, that it is the best advice to those interested in any department of natural history, when told to learn a scientific nomenclature, and to adhere to it at all times when writing or talking, thereby avoiding many errors and misunderstandings, sure to arise if the old common local names are used.

*I wish there were more of them.

It would be difficult to say when the first spring Cooper's Hawk makes his appearance as all do not go south each fall. I have met with this species in Southern Michigan during every month of the year. In December they are often far from rare, and may even be seen not infrequently about the edges of the city. They sometimes venture to the very centers of our crowded squares in pursuit of the ubiquitous English House Sparrow. At these seasons the swift hawk is seen gliding about our yards, dipping down nearly to the earth and again rising to the level of the fences or hedges, always active and ever on the alert for prey or danger. These incursions into the city are only made at early morning when few are stirring and are seldom or never observed during summer, but rather in early winter. The Cooper Hawk appears common about April tenth and perhaps this may be taken as the height of the vernal migration of those which spend the winter south of us.

The nesting season begins in late April and extends into June. The nest construction occupies the pair nearly ten days; much of this time, however, being occupied in flying about, apparently in an aimless manner as during the recent mating season. The nest is ready for the eggs about May first, but much earlier dates are recorded; April 22 ranking first hereabouts, I believe, while records of fresh sets, date as late as May 29. The nest, hereabouts, is generally built in the white or black oak *Quercus alba* or *Q. coccinea*, but not rarely it is found in the common beech. The birds usually select the highest lands for their breeding purposes and this explains why the nests are so often found in oak trees. The nest is quit a bulky affair for the size of the bird and is probably augmented in size from year to year by the successive nestings, which certainly do occur in some instances.

The eggs, dirty blue or more properly, perhaps, light, dull blue, hardly need description here, as they are so well known. Sometimes only two eggs are found in a

nest, but generally occurs late in the season and probably occurs as a result of a second nesting where pair was robbed of the first set. The usual number is four but often only three, and in rare instances five eggs are found. The Cooper's Hawk is an audacious robber of the farm yard poultry, but confines itself to half-grown fowls. It is quite retired in its habits and its nests are not readily found, and are not generally seen except by accidental discovery.

Accipiter americanus (Wils.) American Goshawk.

A rare winter resident. I have never seen but one alive. This captive was owned and captured near Cadillac, Michigan, about 44 degrees, 30 minutes north latitude. I was assured that the bird was taken from a nest while young, in that immediate vicinity. The species is not generally known to be a resident of our State, but only as a rare straggler to our southern boundaries.

The eggs of this species are said to very nearly resemble those of the Cooper's Hawk and an imposition may be and undoubtedly is frequently practiced on the unsuspecting oological collector who is not sufficiently exacting as to identification.

How to Retain the Natural Color of an Egg.

In looking over an article by the Rev. J. G. Wood I found something very interesting, as well as instructive, and thinking it might be of interest to some of the readers of the OOLOGIST, I send it to you. It is a preparation for restoring the pinkish cast which so many eggs lose when blown, and which destroys much of the original beauty:

Make a glass tube like that which is used in emptying the eggs, but let the aperture be larger. Heat some white wax, and while it is hot and liquid mix it with carmine and gamboge, taking care to make the mixture several shades deeper in hue than the egg is required to be externally. Warm the egg, heat the pointed end of the glass tube, and suck up some of the colored

liquid into it. You will not want much of the liquid as it would interfere with the transparency of the egg. Blow the wax into the egg, hold it over a spirit lamp or in front of a fire, and keep turning the egg about until you can see the color appears in every part of it. Then remove it gradually from the heat, still continuing to turn it about, and in a very short time it will cool, and the coating of wax will be uniformly distributed over the interior.

The process is rather a tedious one, but the effect is so admirable that no one who tries it will regret the expenditure of time and trouble. Hoping this will interest some of the readers of the OOLOGIST, I am oologically,

R. S. C., Jr., Owings Mills,
Balto. Co., Md.

Repairing a Nest of the Black-capped Chickadee.

On the 14th of April, 1888, while out collecting, my attention was attracted to a small hole in the side of an old rotten stump. I broke the hole open and was vexed to find a nest made of moss and hair but no eggs. Without thinking I pulled the nest out and pulled it apart. Just then the owner, a Black-capped Chickadee, came flying toward me and I was more vexed to think I had spoiled the nest.

A thought struck me. I took my knife and cut a large piece of bark, large enough to fit over the place I had broken. I then put back the moss and hair, tied the bark over the hole and cut a small hole in the top and left it.

Two days later I returned and rapped on the stump. Out flew a Chickadee and up I went to the hole. Tearing the bark off I found two little eggs; they were pure white, specked at the larger end with light reddish-brown.

This find was one of the most pleasing discoveries I have had this season.

W. E. L., Peoria, Ill.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

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In order that our adv. may not be misleading we would here state that Mr. Oliver Davie has been a dealer in oological specimens and supplies; but in order to devote his whole time to his Great Works and his pet hobby—taxidermy, he sold his entire stock. This, as we understand it, does not include a very fine private collection.

Important.

You have been selected to act as one of the judges in the Prize Article contest, which includes all articles of over 100 words that appeared in the OOLOGIST from May to November, 1888., including the issues of both these months. It has been found too much of a job for any one or two persons to make the decision and be willing to shoulder the responsibility.

Therefore, the publisher of the OOLOGIST

has thought it best to ask *you* to act as one of the judges. Write on a postal card, at any time before April 20th, the titles of the three articles which *you* considered the most valuable, instructive, and interesting in the OOLOGIST which appeared in the 1888 issues, May to November, inclusive.

Send in your postals at once, as the result must be announced in the next OOLOGIST. The writers of the two articles receiving the greatest number of votes will receive \$5.00 worth of Job Lots; the next two will receive \$3.00 worth; and the next two \$2.00 worth.

We think the competitors will agree with us in thinking the most fair method of making the awards.

Prize Contest.

The following were the lucky winners of the prizes awarded the purchasers of Davie's Eggs. Contest closed March 15th and prizes awarded to the lucky winners on March 25th. Every contestant received a prize, and 35 prizes were not taken on account of lack of contestants:

1	Walter Raine, Toronto, Can.	\$27.34
2	Geo. Schoen, Kansas City, Mo.	17.00
3	F. E. Shoup, Sewanee, Tenn.	12.45
4	Chas. E. Doe, Providence, R. I.	12.00
5	Salome Oldershaw, Brooklyn, N. Y.	3.88
6	Will A. Moore, Norwalk, Ohio.	3.35
7	A. Kennedy Ashworth, Pittsburg, Pa.	2.00
8	Everett G. Duncklee, Brockton, Mass.	2.00
Not enough orders amounting to \$2.00 or over were received to take prize Nos. 9 to 25.		
26	Eddie O. Fero, Cohoes, N. Y.	1.70
27	Wm. I. Comstock, Norwalk, Conn.	1.26
28	R. H. Douglas, Burlington, Kan.	1.25
29	Will Roberts, Ottawa, Kan.	1.20
30	Maurice Smith, Ohio, Ills.	1.10
31	L. O. Dart, Litchfield, Minn.	1.10
32	S. C. Crump, West Bay City, Mich.	1.05
33	D. W. Raymond, Norwalk, Conn.	1.05
34	F. A. Benson, Burlington, Ia.	1.04
35	R. H. Moth, Kenosha, Wis.	1.00
36	S. A. Taft, Aiken, So. Car.	1.00

Not enough orders of \$1.00 and over to take prizes 37 to 40.

41	Geo. L. Alverson, Marengo, Ia.	.90
42	C. J. Mitchell, Shelbyville, Ky.	.88
43	Heyward Long, Martins Ferry, Ohio.	.80
44	Arthur F. Stone, St. Johnsbury, Vt.	.88
45	John Williams, Wenham, Mass.	.69
46	P. H. Hadlock, Wenham, Mass.	.68
47	Geo. M. Lincoln, Malone, N. Y.	.65
48	C. H. Remington, Brooklyn, N. Y.	.60
49	C. B. Aiken, Vineland, N. J.	.51

Not enough orders of 50c and over were received to capture prizes No. 50 to 60.

From "Old Virginny."

I have read with the greatest interest the articles on birds from nearly every State, but noticed that few, if any, were from "Old Virginny." Therefore, I will write a short article, with the hope that it will not escape the waste basket, from this section.

The first birds that breed here are the Hawks, Owls and Crows; next come the *Picidae*; Nuthatches are among the first. But I feel constrained to stop here and relate the experience of a pair (or rather our experience with them) that built in our school yard: I located the nest on April 7th, and on April 12th climbed up to take the eggs. We had the misfortune to break the only egg in the nest, while enlarging the hole in the tree large enough to admit my hand. After waiting five days longer we took a set of three eggs, and five days after, another set of 3 eggs, but still they stuck to their nest; so our better natures appealing in their behalf, we allowed them to hatch and rear four young ones unmolested. Making the whole number of egg laid by one pair to be eleven. Is not this a rare occurrence? There are not many birds that breed in April, but in May every bird builds its nest; the greater part in the latter part. I took two sets of Whip-poor-will's eggs on May 25th, which is a lucky occurrence in this section, for they are very rare. If I would take every Catbird, Robin and Sparrow's nest I find, I would have enough to stock the State. Scarlet Tanagers arrived here about two or three years ago and are now very plentiful.

SAMUEL PARSONS, JR., Louisa C. H., Va.

Nesting of the Tufted Tit.

(*Lophophanes bicolor.*)

BY J. WARREN JACOBS, WAYNESBURG, PA.

This active little fellow is known in this locality as the Tom Tit. In winter they seem to be quite tame, and will allow a close approach.

During the winter of '82 one entered our kitchen through a broken pane of glass in the window. They seem to go in pairs, the year around, and in winter and early spring they are not uncommon in most portions of our town. They may be seen swinging from twig to twig in the maple and other ornamental trees that border on the pavement, or hopping about the ground hunting seeds and crumbs.—Always paying no attention to the crowd of enraged and scolding English Sparrows, who seem to think the trees and gardens all their own.

As the winter wears away, Owl and Hawk nesting comes; and as I tramp through the woods paying my respects to these birds of prey, the Tufted Tit is ever with me, making his presence known by his cheering notes, or by scratching and digging in the leaves, after the manner of the Towhee Bunting.

By and by Tom and his wife go to house-keeping. First they investigate all the old "snags," "stubs," "knotholes" and the deserted homes of the Woodpecker. After finding a suitable nesting place, they gather leaves, grass, fur, wool, moss etc., and pile it in a mass on the bottom of the cavity. Upon this they construct a neat cup-shaped nest of leaves, grass, and hair.

On May 13, '88, I was out collecting, and after passing through two large pieces of woodland, was returning home by the nearest route, which lay through a very small tract of timber. When about half way through, I heard the scolding notes of the Titmouse a few rods in advance. Presently a pair of these birds approached us, coming from the vicinity of a small oak "snag" about 15 feet high. On examination, I found it would be hard to "shin," as there was but one branch, and it a small half

dead one near the top. After some difficulty I managed to get hold of the limb and draw myself up. Imagine my delight when I peeped down into the cavity and counted six beautiful eggs.

A friend who was with me passed me up the hatchet with which I cut off a good portion of the top. Then I proceeded to take out the eggs, which to my surprise a numbered seven, instead of six. The wall of the nest had at first hidden one from view. The nest was made of leaves, fine strips of bark and a small amount of fur and moss. The eggs were perfectly fresh and are white with a slight roseate tinge, covered, mostly at the larger end, with bold blotches and spots of reddish brown and lilac. Measurement, .67 by .54, .68 by .53, .68 by .55, .69 by .54, .70 by .54, .70 by .54 and .69 by .54.

On the afternoon of the 14th I was out searching for a nest of the White-breasted Nuthatch, when I saw a pair of Titmice feeding near a small oak stub which was hollow at the top. As this was the same cavity in which I found, in '87, a nest containing three eggs of the Titmouse and one of the Cowbird, I thought it would be to my interest to examine it again.

Upon climbing up and looking down into the cavity I could see a set of six beautiful eggs. Thinking it possible the set incomplete, I left it a few days. When I returned on the 16th, I found the old bird sitting on the eggs. No amount of threatening and face-making would induce her to leave: so I put my hand underneath her and lifted her out. The nest contained the same number that it did on the 14th. They were fresh and in color, size and shape closely resembled the set of six collected on the 13th.

The nest was made of leaves, grass, fine strips of bark and a small amount of hair and moss, eight feet from the ground.

The next nest was found on May 18, composed of leaves and hair, placed in cavity in dead beech, twelve feet from the ground. The cavity was in the side of the tree and was excavated by the birds themselves.

The eggs are six, pure white, with fine spots of reddish brown and lilac scattered

over the entire surface, but most thickly at the larger end. Measurement, .73 by .53, .71 by .54, .73 by .54, .74 by .54 and .74 by .53 in.

My fourth set was collected on the 19th, same month. It also, contained six fresh eggs, very much like the preceding set in size and markings. The nest was made of leaves, grass, bark and some fur, placed in natural cavity in top of dead oak stub, twenty feet from the ground.

My fifth and last set was also collected on the 19th. It contained four eggs, white, with a very slight creamy tinge, marked with fine reddish brown specks about the larger end, with lilac scattered evenly over the whole surface. The average size is .70 by .54 in. The nest was placed in hollow "stub," fifteen feet from the ground, and was made of leaves, grass etc.

Peculiarities in Sets and Eggs of a Few of Our Commoner Birds.

Lately there have appeared several articles on peculiar eggs and sets, and I wish to add my mite.

About 1877, I went with an older collector to a swamp not far from Marietta, Ohio, and among others, we found a set of Red-wing Blackbird, one egg of which was a runt. It contained an embryo, however, but was so cracked in blowing that I can only approximate its size; it is about .42 x .50.

Either the Red-wing is more addicted to laying odd eggs than other birds, or its abundance brings such cases oftener to our notice, for almost every oologist can show some freak of this kind. I have two sets, one of four eggs, all which are unspotted, and another set of seven, of which three were probably laid by one female and the rest by another; for there is great difference between the two lots, and the four were almost hatched when taken while the others were beginning to addle.

White Robin and Bluebird eggs are so frequently reported that I will merely say I have found both.

Passing over a runt egg of the Goldfinch

measuring .35 x .40, and a set of seven Purple Grackle, I came to a set of four Crow's that is very similar to "Aye Caye's" in the Jan. OOLOGIST; Nos. 1 and 2 correspond perfectly; No. 4 only lacks the large blotch, but No. 3 is just like No. 1., and only measures 1.10 x 1.45.

Last year I found a Brown Thrasher's egg in a Crow nest, but from appearances, I judged some small boy had put it there. It was addled, while one of the Crow eggs was piped.

Large sets of Flicker eggs are so common that one of 24 barely deserves mention, and the same holds good of unspotted eggs of the Red-shouldered Hawk; but albino egg of Wilson's Tern is quite a rarity; I took mine last year, on Gill Island, N. Y.; there were three eggs in the nest, and the other two were of the usual type.

I would say in reply to W. J. S., in the Dec. No., that in the two cases that I observed of albinism in the Bluebird eggs, the parents were unusually brightly colored.

C. R. H., New London, Conn.

White-rumped and Loggerhead Shrikes The Difference.

EDITOR OF THE OOLOGIST:

C. B. C., of Odin, Ill., wishes to know through the columns of the OOLOGIST, the difference between the White-rumped and Loggerhead Shrike. Perhaps, the following taken from a comparison of both species may be of use to him:

The most noticeable difference, and the one of greatest importance, is the *white rump* feathers of the White-rumped Shrike, which are *gray* in the Loggerhead species; again, the entire underparts of the former are nearly white, while in the latter species, they are light gray. The Loggerhead Shrike has a larger bill, but as a rule shorter wings and tail than its white-rumped cousin, for these birds are certainly closely related, and I have no doubt that there are birds in certain stages of plumage so closely resembling both species as to cause the best ornithologists to scratch their heads before separating them.

Respectfully yours, S. W. DENTON

Birds of Grafton Co., New Hampshire.

I was greatly interested in the article entitled "Birds of Broome Co., N. Y.," and thought some readers of the OOLOGIST might be equally interested in a short account of the birds of Grafton Co., N. H., and I heartily second Mr. Clute's suggestion that the readers of the OOLOGIST should send in an account of the birds of their county for publication. I, therefore, undertake to interest the readers of the OOLOGIST by an account of the birds of Grafton Co., N. H.

This county is a very good field for ornithologists on account of its physical features. Although there are few aquatic birds, yet this absence is hardly noticed on account of the abundance of land birds. But occasionally there is seen a Loon, Wild Goose and Wild Duck. Of the birds of prey are more the Pigeon Hawk, Sparrow Hawk, Marsh Hawk, Red-shouldered Hawk, Sharp-shinned Hawk, Cooper Hawk. While the Brown-winged Hawk and the Gyrfalcon are not uncommon.

Among the Owls we have the Short-eared Owl, Long-eared Owl, Barred Owl, Hawk Owl, Screech Owl and the Great Horned and the Great Gray Owl are often seen.

The Thrush family is well represented in the Wood Thrush, Hermit Thrush, Tawny Thrush, Olive-backed Thrush, Brown Thrush, the Robin and the Catbird.

All the Warblers are very common except the Black Burnian, Prairie and the Cape May Warbler. The latter is rarely seen.

Of the Swallows, the Barn, Cliff, Bank, and White-bellied are very common; and the Purple Martin is not rare.

The Belted Kingfisher is common along streams, in the sandy banks of which it nests. The Crow and Blue Jay are very abundant, and do great damage in the corn-field. This applies principally to the former.

The Yellow-shafted Flicker, Hairy and the Downy Woodpecker are the most common of their family and sometimes the Pileated Woodpecker is seen; but this

species can only be counted as a stranger.

The Flycatchers are quite abundant, the Pewee often nesting in verandas, and are quite tame. The Kingbird, however, greatly outnumber the others.

The Hummingbirds have only one representative: the Ruby-throated, which is seen in almost every garden.

English Sparrows are too abundant, for we could well dispense with half their number. All other Sparrows are common except the Fox-colored, White-throated and White-crowned; these appear only as migrants.

The Grosbeaks and Purple Finch are some years very abundant while again they will be very rare.

Bluebirds are among the first of our Spring visitors.

This year the Snow Buntings are very common and flocks of fifty to a hundred are frequently seen.

The Snowbird seems to have fallen off in numbers since last year. The Nuthatches are not very common. Perhaps none of our birds meet with more favor here than the Red-eyed Vireo. It is of great use to the farmers, and its industrious and cheerful disposition secures for it the good will of all. The other Vireos are not so common as the Red-eyed, but the White-eyed, Warbling and Yellow-throated Vireo are well represented.

The Great Northern Shrike, White-winged Crossbill and the Red Crossbill are among the most common of our Winter friends, though these are quite rare.

The Baltimore Oriole, Rusty Blackbird, and Crow Blackbird are quite common, and the Orchard Oriole is a possible resident in Summer.

Chimney Swifts are very common, and large numbers may be seen circling around the chimney tops on warm Summer evenings.

The Yellow and Black-billed Cuckoos are quite rare.

I hope other readers of the OOLOGIST will follow Mr. Clute's suggestion and send in reports of their feathered friends. A great deal of valuable information would thus be gained and it would be of no little interest.

MAURICE S. SHERMAN, Hanover, N. H.

Davie's New Egg Check-List, 3rd Edition

is now promised about May 1st. Over 300 pages are now printed. The work bids fair to contain fully 500 pages; and the price unquestionably will exceed that of \$1.00, and possibly may run up to \$2.00, but we will take advance subscriptions at the low price of \$1.00.

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Below and on the next page we copy the articles on the Murre and Western Grebe from advance pages of this invaluable work:

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* * * An edition bound in cloth will be issued. The additional cost will be given in next OOLOGIST, so that all desiring a copy in that form can remit the additional cost and have the cloth-bound edition if they prefer.

30. *Uria troile* (LINN.) [763.]

Murre.

Hab. Coasts and islands of the North Atlantic, southward on the coast of North America in winter to Southern New England; breeding from Nova Scotia northward.

Like all of the Auks, Murres and Puffins, this species is eminently gregarious, particularly in the breeding season. It is found in great numbers throughout the Arctic Ocean and on nearly all the islands north of Asia, Europe and America. On this side of the Atlantic it breeds from Nova Scotia northward.

Tens of thousands of these birds congregate to breed on the rocky islands, depositing and incubating their single egg close to one another on the shelves of the cliffs. The birds sit side by side, and although crowded together, never make the least attempt to quarrel. Clouds of birds may be seen circling in the air over some huge, rugged bastion, forming a picture which would seem to belong to the imagination rather than the realistic. They utter a syllable which sounds exactly like *murre*. The eggs are so numerous as to have a commercial value, and are noted for their great variation in ground color and markings. They vary from white to bluish or dark emerald-green in ground color; occasionally unmarked specimens are found, but they are usually handsomely spotted, blotched, lined in various patterns of lilac, brown and black over the surface. In some the markings are confused zigzag lines that look like hieroglyphics. The eggs are large for the size of the bird, measuring from 3. to 3.50 long by 1.95 to 2.10 broad; pyriform in shape.

1. *Aechmophorus occidentalis* (LAWR.) [729.]

Western Grebe.

Habitat: Western North American.

This is the largest of the Grebes in North America. Its distribution extends from Mexico and Lower California on the south, to Washington Territory and the Red River region on the north, breeding nearly throughout this entire range.

A common summer resident at Utah Lake and also at Lake Malheur, in Eastern Oregon, thence eastward to the extensive marshes of Shoal Lake, in Manitoba, where it breeds abundantly.

Mr. Edward Stebbins found it breeding in an arm of Devils Lake, Dakota, in the first part of June, at which time all the eggs were more or less incubated. He estimates the numbers of nests observed to be about two hundred in an area of an acre and a half. They were built in water three or four feet deep, and were made of reeds and sedges matted together and fastened to the tall, rank grass, so as to float on the surface.

It is a remarkable fact that the Grebes cover their nests with weeds and other vegetable matter before leaving them, so that incubation may continue during their absence.

Only a few of the nests observed by Mr. Stebbins were covered; the tall grass obstructed the view of the birds, so that when approached they would hurriedly slip off the nests, and leave the eggs exposed. The only birds seen were those in the vicinity of the nests, and they swam away with their heads and necks above water, making a kind of cackling noise. In their habits they resemble the Loon, diving or swimming under water with the greatest ease; and, when on the wing, they fly with wonderful rapidity for birds of their nature.

The eggs of this species are from two to five in number, elliptical oval in shape, very pale bluish green in color; and, like all Grebes' eggs, the surface is stained a light brown, or very much soiled by contact with the decomposed vegetable matter of the nests.

Mr. Walter E. Bryant, of Oakland, California, has a set of five eggs in his collection, which were taken at Washoe Lake, Nevada, in the latter part of May. These measure as follow: 59 x 39, 63 x 39, 58.5 x 38, 60 x 38, 59 x 39.5 mm.* Three sets in my collection, two of five eggs and one of four, taken by Mr. Stebbins, measure: 2.32 x 1.58, 2.40 x 1.57, 2.50 x 1.53, 2.46 x 1.58, 2.48 x 1.60; 2.14 x 1.48, 2.27 x 1.54, 2.30 x 1.63, 2.29 x 1.58, 2.28 x 1.53; 2.44 x 1.52, 2.37 x 1.47, 2.52 x 1.44, 2.45 x 1.47.

The bird known as Clark's Grebe† is probably the female of *A. occidentalis*.‡

*2.32 x 1.54, 2.48 x 1.54, 2.30 x 1.50, 2.36 x 1.50, 2.32 x 1.56.

†Placed in the "Hypothetical List" of the A. O. U. Check-List.

‡Cf. Henshaw, Bull. Nutt. Orn. Club, VI, 1881, pp. 214-215; B. B. and R., Water Birds N. Am., II, p. 43; Bryant, Auk., II, pp. 313-314.

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Corrections and Change of Prices.

Cedar Waxwing.....	08
Bullock's Oriole.....	10
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Cassin's Kingbird.....	30
Ptarmigan.....	75
Mew Gull.....	30
Stormy Petrel.....	50
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OUR PRICES

for 1889 will remain the same as quoted in the *Naturalist's Bulletin* of Sept., '88, and as given and corrected on this page. We have hundreds of specimens not noted on these lists, but from present outlook we think it will be impossible to issue new catalogues before 1890.

CORRECTIONS.

No. 4, Short-handle Egg Drill 21-100 is 15c instead of 25c.

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× Wilson's Thrush.....	10	Loggerhead Shrike.....	15	Purple Grackle.....	05
× Russet-backed Thrush.....	10	White-rumped Shrike.....	10	Bronzed Grackle.....	05
× Olive-backed Thrush.....	30	Cedar Wax-wing.....	10	European Starling.....	10
× Hermit Thrush.....	25	Purple Martin.....	15	Common Crow.....	05
× American Robin.....	02	Cliff Swallow.....	03	Florida Crow.....	25
× Western Robin.....	15	Barn Swallow.....	03	Fish Crow.....	30
× Mockingbird.....	05	White-bellied Swallow.....	12	Black-cilled Magpie.....	20
× Catbird.....	02	Violet-green Swallow.....	40	Blue Jay.....	04
× Brown Thrasher.....	63	Bank Swallow.....	03	California Jay.....	20
× Mexican Brown Thrasher.....	25	Rough-winged Swallow.....	25	Sky Lark.....	12
× Curve-bill Thrasher.....	50	Scarlet Tanager.....	20	Shere Lark.....	20
× Californian Thrasher.....	25	Summer Redbird.....	18	White-throated Shore Lark.....	25
× Stone Chat.....	10	English Sparrow.....	02	Mexican Shore Lark.....	25
× Bluebird.....	02	European Tree Sparrow.....	25	Sdlssor-tailed Flycatcher.....	12
× Californian Bluebird.....	15	Purple Finch.....	15	Gray Kingbird.....	35
× Rocky Mt. Bluebird.....	15	House Finch.....	05	Kingbird; Bee Martin.....	03
× Black-crested Flycatcher.....	60	Orlmsn House Finch.....	05	Western Kingbird.....	08
× Blue-gray Gnatcatcher.....	25	American Goldfinch.....	06	Cassin's Kingbird.....	40
× Tufted Titmouse.....	60	Green-back Goldfinch.....	20	Great Crested Flycatcher.....	12
× Plain Titmouse.....	50	Arizona Goldfinch.....	60	Ash-throated Flycatcher.....	20
× Black-capped Chickadee.....	10	Lawrence's Goldfinch.....	20	Phoebe Bird; Pewee.....	03
× Carolina Chickadee.....	20	Lapland Long Spur.....	75	Wood Pewee.....	10
× Least Tit.....	15	Savannah Sparrow.....	10	Acadian Flycatcher.....	15
× Yellow-headed Tit.....	50	Western Savannah Sparrow.....	20	Trail's Flycatcher.....	20
× White-bellied Nuthatch.....	25	Grass Finch.....	05	Least Flycatcher.....	10
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× Brown-headed Nuthatch.....	50	Western Yellow-winged Sparrow.....	50	Anna's Hummingbird.....	75
× Californian Bewick's Wren.....	25	Sharp-tailed Finch.....	45	Chimney swift.....	12
× Texan Bewick's Wren.....	35	Sea-side Finch.....	35	Chuck-will's-widow.....	150
× House Wren.....	05	Lark Finch.....	08	Whip-poor-will.....	125
× Parkman's Wren.....	06	Western Lark Finch.....	12	Nighthawk.....	35
× Long-billed Marsh Wren.....	05	Gambel, s White-crowned Sp'w.....	30	Western Night-awk.....	40
× Short-billed Marsh Wren.....	50	White-throated Sparrow.....	40	Texan Nighthawk.....	50
× European Titlark.....	10	Chipping Sparrow.....	02	Hairy Woodpecker.....	50
× Blue Yellow-backed Warbler.....	20	Western Chipping Sparrow.....	10	Downy Woodpecker.....	20
× Summer Yellow-bird.....	02	Brewer's Sparrow.....	30	Gairdner's Woodpecker.....	40
× Black-and-yellow Warbler.....	70	Field Sparrow.....	03	Texan Sapsucker.....	1.00
× Chestnut-sided Warbler.....	10	Black-chinned Sparrow.....	60	Pileated Woodpecker;	
× Black-poll Warbler.....	70	Black Snowbird.....	25	Logcock.....	1.00
× Large-billed Water Thrush.....	70	Black-throated Sparrow.....	50	Red-bellied Woodpecker.....	25
× Maryland Yellow-throat.....	10	Bachman's Finch.....	1.00	Golden-fronted Woodpecker.....	75
× Yellow-breast Chat.....	10	Song Sparrow.....	02	Red-headed Woodpecker.....	18
× Long-tailed Chat.....	20	Mountain Song Sparrow.....	25	Lewis's Woodpecker.....	30
× American Redstart.....	10	Heerman's Song Sparrow.....	15	Californian Woodpecker.....	30
× Red-eyed Vireo.....	10	Californian Song Sparrow.....	05	Yellow-shafted Flicker.....	04
× Warbling Vireo.....	20	Swamp Sparrow.....	15	Red-shafted Flicker.....	08
× Yellow-throated Vireo.....	30	Texas Sparrow.....	75	Belted Kingfisher.....	18
× Blue-headed Vireo.....	60	Chewink; Towhee.....	10	Road-runner.....	20
× White-eyed Vireo.....	15	Florida Towhee.....	25	Yellow-billed Cuckoo.....	12
		Spurred Towhee.....	25	Black-billed Cuckoo.....	10
		Californian Brown Towhee.....	08	Groove-billed Crotopaga.....	1.50
		Albert's Towhee.....	1.25	American Barn Owl.....	40
		Cardinal Grosbeak.....	05	American Long-eared Owl.....	40
		Texan Cardinal.....	50	Short-eared Owl.....	1.00
		Rose-breasted Grosbeak.....	10	Barred Owl.....	90
		Black-headed Grosbeak.....	20	Little Screech Owl.....	35
		Blue Grosbeak.....	40	Texan Screech Owl.....	70
		Indigo Bunting.....	10	California Mottled Owl.....	60
		Lazuli Bunting.....	18	Great Horned Owl.....	1.40
		Painted Bunting.....	12	Western Horned Owl.....	1.50
		Grassquit.....	60	Snowy Owl.....	2.25
		Black-throated Bunting.....	05	European Hawk Owl.....	1.50
		Bobolink.....	25	Burrowing Owl.....	25
		Cowbird.....	03	Whitney's Pigmy Owl.....	2.00
		Dwarf Cowbird.....	20	Prairie Falcon.....	2.00
		Bronzed Cowbird.....	50	Duck Hawk.....	2.50
		Yellow-headed Blackbird.....	05	European Merlin.....	40
		Red-and-buff-shouldered Blackbird.....	02	Sparrow Hawk.....	30
		Red-and-black-shouldered Blackbird.....	05	European Kestrel.....	30
		Red-and-white-shouldered Blackbird.....	12	Caracara Eagle.....	1.50
		Meadow Lark.....	10	American Osprey.....	50
		Western Meadow Lark.....	10	Marsh Hawk.....	30
		Hooded Oriole.....	60	Cooper's Hawk.....	25
		Orchard Oriole.....	05	Sharp-shinned Hawk.....	50
		Baltimore Oriole.....	06	American Goshawk.....	2.00
		Bullock's Oriole.....	15	Harris's Hawk.....	1.25
		Brewer's Blackbird.....	05	European Buzzard.....	30
		Great-tailed Grackle.....	30	Red-tailed Hawk.....	50
				Western Red-tail.....	75
				Red-shouldered Hawk.....	50
				Red-bellied Hawk.....	75
				Swainson's Hawk.....	1.00

Broad-winged Hawk.....	1.00	Willet.....	35	Bald's Cormorants.....	45
American Rough-legged Hawk.....	1.00	Field Plover.....	40	Snake Bird.....	20
Ferruginous Rough-leg.....	2.00	Spotted Sandpiper.....	15	Gannet.....	20
Golden Eagle.....	8.00	Whimbrel.....	40	Black Skimmer.....	10
Bald Eagle.....	4.00	American Avocet.....	60	Kittiwake Gull.....	50
Gray Sea Eagle.....	2.50	Red-breasted Rall.....	12	Glaucous Gull.....	75
Turkey Buzzard.....	.50	Clapper Rail.....	.08	Great Black-backed Gull.....	50
Black Vulture.....	.50	Virginian Rail.....	.50	Western Gull.....	25
Passenger Pigeon.....	1.00	Spotted Crake.....	20	Herring Gull.....	20
Mourning Dove.....	.03	Sora Rail.....	.05	American Herring Gull.....	20
White-fronted Dove.....	.50	Corn Crake.....	20	Californian Gull.....	30
White-winged Dove.....	.50	Purple Gallinule.....	25	Ring-billed Gull.....	30
Ground Dove.....	.20	Florida Callinule.....	.08	Mew Gull.....	45
Chachalaca.....	1.50	American Coot.....	.06	Laughing Gull.....	20
Wild Turkey.....	.60	European Coot.....	15	Gull-billed Tern.....	20
Ruffed Grouse.....	.15	The Limpkin.....	1.25	Caspian Tern.....	50
Willow Ptarmigan.....	1.00	American Flamingo.....	.75	Royal Tern.....	40
Prairie Hen.....	.15	Mallard.....	20	Forster's Tern.....	10
Sharp-tailed Grouse.....	.60	Black Mallard.....	40	Common Tern.....	.05
Sage Cock.....	.70	Gadwall.....	.75	Arctic Tern.....	10
Bobwhite.....	.10	Pintail.....	.30	Roseate Tern.....	.17
Florida Quail.....	.15	Widgeon.....	.25	Least Tern.....	.05
Texan Quail.....	.12	Baldpate.....	.75	Black Tern.....	.12
Calliforian Quail.....	.10	Shoveller.....	.40	Skua.....	.70
Ward's Heron.....	.35	Blue-winged Teal.....	.25	Richardson's Jaeger.....	.75
Wurdeman's Heron.....	1.50	Cinnamon Teal.....	.40	Fulmar Petrel.....	.60
Great Blue Heron.....	.25	English Teal.....	.18	Stormy Petrel.....	.16
Common European Heron.....	.20	Green-winged Teal.....	.40	Leach's Petrel.....	.15
American Egret.....	.20	Wood Duck.....	.50	Western Grebe.....	.50
Snowy Heron.....	.12	Scaup Duck.....	.60	Thick-billed Grebe.....	.10
Reddish Egret.....	.30	Redhead.....	.25	Loon.....	1.25
Louisiana Heron.....	.10	Barrow's Golden-eye.....	.75	Black-throated Diver.....	1.25
Little Blue Heron.....	.10	American Golden-eye.....	1.00	Red-throated Diver.....	1.00
Green Heron.....	.08	Harlequin Duck.....	1.25	Razor-billed Auk.....	.20
Black-crowned Night Heron.....	.10	Old Squaw.....	.40	Common Puffin.....	.20
White-crowned Night Heron.....	.30	Common Elder.....	.35	Tufted Puffin.....	.50
Least Bittern.....	.20	American Elder.....	.20	Black Guillemot.....	.25
European Oystercatcher.....	.25	Ruddy Duck.....	.50	Common Guillemot.....	.20
American Oystercatcher.....	.70	Red-breasted Sheldrake.....	.30	California Guillemot.....	.50
Lapwing.....	.15	American White Pelican.....	.50	Ostrich.....	1.50
Golden Plover.....	.43	Brown Pelican.....	.20	Emeu.....	2.50
Kildeer.....	.20	Sheldrake.....	.50	Alligator.....	.20
Semipalmated Plover.....	1.00	Common Cormorant.....	.35	Shark.....	.20
Piping Plover.....	.50	Double-crested Cormorant.....	.20	Devil fish.....	.20
Wilson's Plover.....	.20	Florida Cormorant.....	.20	Skate.....	.05
American Woodcock.....	1.25	Brandt's Cormorant.....	.45	Turtle.....	.10
		Violet-green Cormorant.....	.50	Black Snake.....	.15

A Letter to the Oologists of AMERICA.

C. J. MAYNARD & CO.,

Pubs. of

Birds of Eastern North Am'ca

Dealers in

Birds' Eggs, Naturalists' Supplies

ETC., ETC.

Boston, Mass., Sept. 17, '87.
Owing to the rapid increase of business, especially in the publishing department, I have been induced to dispose of my large stock of eggs to Mr. Frank H. Lattin, of Albion, N. Y.

Twenty-three years ago I printed the first catalogue of bird's eggs ever issued in North America, and from that time to the present have done a steadily gaining business in this department.

It is with considerable regret that I sever my connections with my customers in this line of Natural History specimens, but there is no one to whom I would consign my egg business with less regret than to Mr. Lattin. This gentleman has from a small beginning, built up a business second to none in the country. Mr. Lattin, I can unhesitatingly say, not only knows the eggs, that he has in his collection most thoroughly and is thus in a position to identify eggs sent to him but is also well acquainted with all the details of his business, and I can conscientiously recommend him to my patrons, whom I trust will extend to him in the future the many favors that they have given to me in the past as I feel confident that they will meet with perfectly fair treatment from this my successor.

Respectfully, C. J. MAYNARD.

Oological Instruments, &c.

EGG DRILLS.	
No. 1, short handle, 8-100, \$0.07	
No. 2, " " 12-100, 09	
No. 3, " " 18-100, 11	
No. 4, " " 21-100, 25	
No. 0, medium handle, 4-32 in. burr..... 18	
MEDIUM OR LONG HANDLED, NICKED AND ENGRAVED. Neatest and the Best made.	
No. 1, 5.32 in. burr.....21	
No. 2, 5.32 "29	
No. 3, 6.32 "42	
No. 4, 8.32 "63	
No. 5, 11.32 "90	
No. 6, 16.32 "1.35	
BLOW-PIPES.	
No. 1, Brass.....13	
No. 2, white metal.....25	
EMBRYO HOOKS.	
Long handle, 3 sizes, small, medium, and large, each.....25	
Handle and hook.....38	
Handle, with 5 hooks, (assorted sizes).....72	
CALIPER RULES.....25	
LEAD PENCILS, soft for marking eggs.....08	
OOLOGIST CEMENT, per bottle.....10	
NATURALIST CEMENT.....20	
CLIMBING IRONS, strapped ready for use, by Express.2.35	
Embryo Scissors, cheap.....25	
" " Xtra.....50	
" " curved.....1.00	
Syringes, hard rubber, for rinsing eggs.....30	
Rubber Tubing, for making water Blow-pipes. .07 cts per foot, 8 ft. for 50 cts. and for each extra foot.....06	
Water Blower complete. Including 8 ft. of tubing, Blow-pipe, Rings, Can, and printed instructions, for only...1.00	
Collectors who have used it, say they will never again blow eggs in the old, tiresome, laborious, and wind-exhausting method.	
DATA BLANKS.	
(Assorted styles)	
Small, per 100, 12c, per 1000 \$0.90	
Medium " 16 " 1.20	
Large " 20 " 1.60	
Very large, No. 8, per 100, 28c., per 1000.....2.50	
Our Data Blanks are the very best, will not blot through. Not padded at above low prices. Sample sheet of Datas, showing 10 styles and quality of paper, only 2 cts-	
Outfits for Oologists, at Special Reduced Rates.	
OUTFIT NO. 1, will be sent post-paid for only 35 cents.	
Contents:	
1 Hand Book.....\$0.25	
5 Checking Lists.....10	
50 Assorted Datas.....15	
1 12-100 Drill.....12	
1 Brass Blow-pipe.....15	
OUTFIT No. 2 post-paid only 80 cents.	
Contents:	
1 Hand Book.....\$0.25	
1 Directory.....30	

5 Checking Lists.....10	
100 Assorted Datas.....25	
1 15-100 Drill.....10	
1 21-100 Drill.....15	
1 Brass Blow-pipe.....15	
1 Embryo Hook.....30	
OUTFIT No. 3, post-paid for only \$3.40.	
Contents:	
1 Davie's Key to Nests and Eggs of N. A. Birds.....\$1.00	
1 Hand Book.....25	
1 Book of Datas.....35	
1 Field Notes.....50	
1 Oologist's Directory.....30	
12 Checking Lists.....20	
1 4-32 Drill, No. 0.....25	
1 6-32 Drill, No. 3.....50	
1 Embryo Hooks and handle.75	
1 Embryo Scissors.....50	
1 White Metal Blow-pipe.....25	
1 Calliper Rule.....35	
Outfit No. 3, contains THE BEST, and is just what is needed by every Oologist. Should you already have one or more articles in this outfit, I will allow you 1/2 the price at the left for such articles, this amount to be deducted from the \$3.40. my price for the outfit complete.	
Outfits Nos. 1 and 2, are put up in large quantities, and can not be changed.	
Outfit No. 1, will prepare a set of fresh eggs just as well as No. 3.	
Pink Wool Cotton:— Desirable for lining trays and cabinets. Comes in strips 14 in. wide. 12c per ft., 30c per yard; in lots of 5 yards or over, 25 cts. per yard. sample, 2c.	
We also keep Blue, Canary and white cotton for lining trays, etc., at same prices.	
TAXIDERMISTS' Instruments & Supplies.	
Brain Scoop.....\$0.25 to \$0.75	
Scissors, dissecting......60	
" curved......75 to 1.25	
Scalpels, 5 sizes, best made, each......60	
Cartilage Knife......75	
Disarticulator......75	
Microscopic Knife......75	
Taxidermists' Forceps 30 to 2.00	
Tweezers, many styles...12 to 30	
" Taxidermists'.....25	
Cops, for winding birds' bodies .08 each, 4 for 25c.	
For other Taxidermists' and Naturalists' instruments and supplies, write what you want.	
Morocco Cases for carrying instruments in pocket 1.25.	
Tags for Bird Skins, printed, 10c per 100, 75c per 1000.	
Tags same as merchants use for marking goods, not printed but with string, very handy for skins, etc.:	
Small, per 100, 10c, per 1000, 50	
Medium " 12 " 75	
Large " 15 " 1.00	
Outfits for Taxidermists.	
We have put you up a complete set of instruments for preparing skins, consisting of 1 pair	

of Scissors, 1 Scalpel, (ebony handle); 1 Cartilage Knife; 1 pair Spring Forceps; Chain and Hooks.

We will send all in a neat cherry case by return mail for only \$2.00; or, for \$5.00 we will send you

1 Cartilage Knife, 3 sizes scalpels (ebony handles), 1 Dissecting Hook, 1 pair Scissors, 1 pair Forceps, 1 set Chain Hooks, 1 Strap for sharpening scalpels, 1 pair Stuffers, 1 Manton's Taxidermy, 50cts. worth of Glass Eyes, and 1 Black Walnut Case for holding instruments.

We guarantee either of the above sets of instruments to be first-class in every respect, and to give better satisfaction than any case of instruments ever offered before for the money.

GLASS EYES!

Please examine our prices before ordering elsewhere.

ELONGATED PUPILS, 20 per cent. extra.

FISH EYES, 10 per cent. extra. Special extra fine veined eyes at from 40 per cent. extra to double price. Write just what you want, and for what.

We keep the following colors in stock:

Hazel, brown, red-brown, white, yellow, straw, red and clear or flint (can be painted any color desired). State color desired when ordering eyes with "colored" iris.

COLORED		SIZES.		BLACK.	
Per pair	Per 5 pair	No.	diam in. inch.	Per pair	Per 10 pair
\$0.02	\$0.07	00	1-32	0.01	\$0.02
.02	.07	0	2-32	.01	.12
.02	.10	1	3-32	.01	.12
.02	.10	2	4-32	.01	.12
.03	.13	3	5-32	.01	.13
.03	.13	4	6-32	.01	.13
.04	.16	5	7-32	.01	.15
.04	.17	6	8-32	.01	.15
.04	.19	7	9-32	.01	.17
.05	.20	8	10-32	.01	.17
.06	.26	9	11-32	.02	.10
.06	.27	10	13-32	.02	.10
.08	.38	11	14-32	.02	.14
.09	.40	12	15-32	.02	.14
.12	.55	13	16-32	.02	.16
.13	.60	14	17-32	.03	.19
.14	.65	15	18-32	.03	.24
.15	.70	16	10-16	.04	.30
.17	.80	17	11-16	.05	.40
.18	.85	18	12-16	.05	.47
.20	.95	19	13-16	.07	.60
.21	1.00	20	14-16	.08	.67
.24	1.15	21	15-16	.09	.80
.25	1.25	22	1	.12	.94
.28	1.35	23	1-16	.13	1.07
.31	1.50	24	1-16	.14	1.20
.35	1.70	25	1-16	.15	1.33
.37	1.80	26	1-16	.15	1.47
.41	2.00	27	1-16	.20	1.75
.54	2.60	28	1-12	.25	2.00

SHELLS.

The following shells are all very fine and showy, all are cleaned and many highly polished, and are sold at wholesale at the prices we are offering them.

Chinese Pearl Snail	\$0.85 to \$2.00
" Banded Snail	.40 " 60
" Blotched Snail	.40 " 60
" Trochus (Top)	.25
" Spider	.15 " 1.00
" Harp	.25 " 75
" Halfotis	.05 " 15
" Small Ear	.05 " 10
" Strombus	.10 " 10
East India Clam	.20 " 2.00
" Furblo Clam	.40 " 3.00
" Scorpion	.40 " 75
" Melon	.35 " 2.00
" Turks Cap	.20 " 50
" Goldmouth	.15 " 25
" Pearl Trocus	.25 " 60
" Cone	.10 " 40
" Virgin Cone	.25 " 75
" Mitre	.10 " 30
" Marlin'spike	.30 " 50
" Tiger Cowry	.05 " 25
New Zealand White Ear	50 " 1.25
" Green Ear	.50 " 1.00
Japan Black Ear	.50 " 1.00
" Haliotus	.15 " 15
Cal. Red Ear (Abalone)	1.00 " 2.00
Same in rough	.25 " 75
Panama Black Murex	.25 " 75
" Rose Murex	.25 " 1.00
Pink Murex	.25 " 75
Bahama Black Helmet	.50 " 1.00
West India Conch	.15 " 50
Florida Strombus	.05 " 15
Florida Olive Shell (Key)	.10 " 10
Florida Fasciolaria	.05 " 10
" Pyrala	.05 " 10
" Murex	.05 " 15
" Fiddle head	.05 " 10
" Bloody Tooth	.03 " 15
Zanzibar Cameo	.25 " 75
" Tritons	.75 " 3.00
" White Murex	.15 " 2.00
Magpie Trochus	.20 " 30
Engraved Cameo	.15 " 2.00
" Motto Cowry	.25
" (Lord's Prayer)	
Snail	1.50
Engraved (Lord's Prayer)	
Trochus	1.25
Engraved (Lord's Prayer)	
Cowry	.50
Zanzibar Blue Cowry	.10 " 25
" Mourning	.20 " 50
" Silverlip	.10 " 15
" Hooked Scorpion	.20 " 35
" Orange	.20 " 35
" Egg Shell	.20 " 40
" Cocker	.40 " 1.00
East India Valute	.15 " 30
" Nautilus	1.00 " 2.50
" Yellow Helmet	.75 " 2.00
Bahama Hatchet	.50 " 1.50
Ceylon Banded Snail	.15
" B'ck Mouth	.15

We can put up an assortment of large showy shells, at from \$1.00 to \$25.00; they will retail at twice these prices.

FLORIDA SHELLS.

Fine live specimens carefully prepared.

Oliva literata	\$.05 to \$0.15
Cardium magnum	.25 " 50
Murex capucienis	.10
Callista gigantea	.25

Cardium isocardia	10 " 15
Conus leonensis	10 " 15
Fasciolaria distans	10
Dosina discus	10 " 15
Sycotypus papyracus	15
Chama arcanella	10
Uplura Tamplensis	.07 " 15
Glaudina parallela	.10 " 15
Nerita peleronta	.05 " 10
Pholas costatus	.25 " 50
Voluta junonica	2.00 " 5.00

Smaller Shells.

Cowry Shells, assorted including *Cypraea Mneta*, *Lync*, *Arabra*, *Pantherina*, *Heluola Caput-serpentis*, etc., each 2 to 5 cts.; per doz., 5 to 30 cts.; per 100, \$1.00.

Venetian Snail, doz. \$0.05 to \$1.00

Black Snail " 05 " 10

Yellow Snail " 05 " 10

Olive " " 10

Frog " 10 " 15

Screw " 05 " 25

Horn " 05 " 25

Guinea Peas " 02

We have in stock over 50 other var. of small shells.

MARINE CURIOSITIES.

CORALS.

Organ Pipe	\$.05 to \$1.00
Black, Africa	.05 " 25
Branching, very fine large clusters	1.50 " 3.00
" small spec.	.02 " 50
Pink, from Caroline Isles	
This lace like coral is quite expensive, rare and beautiful; our supply is limited; fine sprays	.03 " 5.00
Red, Sandwich Isles, very fine	.05 " 2.00
Rose Corals	.05 " 25
Brain " "	.20 " 5.00
Vermetus Corals	.10 " 5.00
Palm " "	.10 " 3.00
Many species coral not on list	1.00 " 5.00
Sea Fans	.10 " 75
Flexible Coral, Africa	.05 " 50
Coralline, Florida	.10
" Africa	.10 " 50
Purple Sea Ferns	.25 " 1.00

Sponges. A large assortment of curious forms and species. 1.00 " 1.25

Venus Coral or Glass Sponge. 1.00 " 1.50

Sea Urchins, Atlantic. .03 " 10

" Pacific. .05 " 10

" large white Bahamas. .15 " 25

Sea Urchins, Mammoth purple, Pacific. .75

Sea Urchins, (Sand Dollars). .03 " 15

Key-hole Urchin. .25

Club-spined Urchins, rare. .35 " 75

Sea Biscuits, spines. .35 " 75

" without " .25 " 50

Sea Beavers. .40 " 75

Starfish, common Atlantic. .03 " 25

Starfish, the largest and finest we ever saw, some measuring 16 in. in diam. and 4 in. through. .50 " 1.50

Skate Eggs	05
Shark Eggs	15
Devil fish Eggs	20
Alligator Eggs	20
" Teeth	.03 " 50
Barnacles, from the Pacific, very fine and and curious	.05 " 25
Lucky tooth from Codfish	.08
Cards of Marine Algae	
Atlantic, each 08; doz.	75
Sawfish Saws, 6 in. to 14 in. long, very fine and perfect	.50 " 1.00
Sword fish Swords, 30 in. long	1.50 " 2.00
Mammoth Alligator Heads prepared	5.00 " 20.00
Egg Case of Periwinkle	.50

Miscellaneous Curiosities.

Brazil Nut Pods	.40 " 75
Vegetable Ivory Apples	.35 " 75
Beetle Nuts, New Zealand	10
1000 mixed Foreign Stamps	20
100 Foreign Stamps, all different	15
Chinese Coins, 5, 3 var. for 10	15
Japanese Coins, oblong	15
Bark from Cork Tree in natural state	.10 " 2.00
Bark from the "Big Tree" of Cala.	.10 " 20
Cone from Cala. "Big Trees"	20
Resurrection Plant from Mexico, when placed in water will unfold and assume a beautiful green	15
Tarantulas, dried	25
Buffalo Horns, polished	1.00 " 3.00
Nest of Tarantula or Trap Door Spider very fine	.50 " 75
Shavings of a Meteor which fell at Cohasset, N. M.	.10 " 25
W Nickels, 1883, without the word cents, fresh from the mint, never in circulation	15

FOSSILS.

Shark Teeth, S. C.	.05 " 25
Mazon Creek Fossil Ferns	.05 " 50
Other Mazon Creek Fossils	.05 " 50
Crinoid Stems, Tenn.	.03 " 10
" " Crawfordsville, Ind., the finest in the world	.05 " 20
" Fossil Coral	.05 " 1.00
" Petosky" Agates, unpolished	.15 " 25
Petosky Agates, polished	.25 " 50
Fossil Coral, Iowa, polished, very fine, two var., "Birds Eye" and "Fish Egg," each	.25 " 2.00
Fossil Fish, very fine	1.00 " 5.00
Fossil Bone	.05 " 30
Tribolites	.25 " 75
Ammonites	.75 " 1.00
Bacculites	.25 " 75

INDIAN RELICS.

(STONE AGE.)

ARROW HEADS.

War Points, Triangular, no notches.	\$0.10	to \$0.25
" " Deep Notched.	10	" .25
" " Long and Slender, notched.	10	" .25
Leaf Shaped.	05	" .25
Short and Thick or Blunted.	05	" .25
"Oregon" Points.	25	" 1.00
Shallow Notched.	05	" .25
Deep Notched.	10	" .50
Rotary.	50	" 1.00
Serrated.	25	" 1.00
Double Notched.	25	" .50
Top Notched.	20	" .50
Pointed, both ends.	25	" 1.00
Stemmed.	10	" .50

SPEAR HEADS.

Triangular.	25	" .50
Leaf Shaped.	25	" .50
Long slender, notched.	15	" .50
Broad, notched.	25	" .50
Deep Notched.	25	" .50
Top Notched.	50	" 1.00
Curved Fish Spears.	25	" 2.00
Thick Spears.	25	" .50

KNIVES.

Curved Back.	50	" 1.00
Double Edged.	20	" 2.00
Single Edged.	25	" 1.00
Straight Edged.	25	" 1.00
Curved Edged.	25	" 1.50

DRILLS.	25	" 1.00
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SCRAPERS.

Notched.	15	" .50
Unnotched.	10	" .25

AXES.

Small, grooved.	40	" 1.00
Medium, "	70	" 1.25
Large, "	1.00	" 2.00

CELTS.	25	" 1.00
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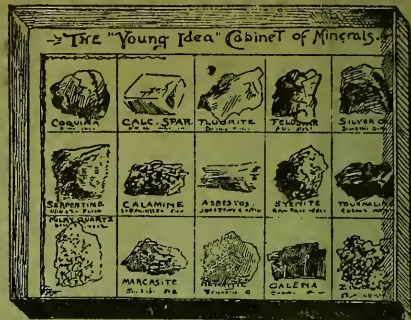
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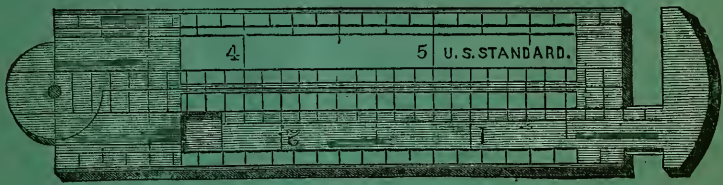
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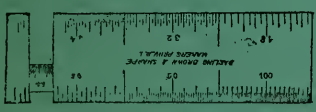
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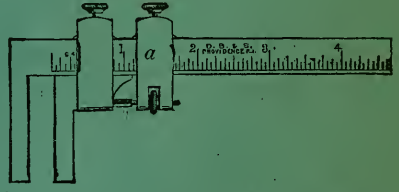
No. 4 is a steel Caliper Rule registering 100ths. This cut shows the exact style. When closed this rule is 3 in. long. The Caliper can be drawn out to measure 2 $\frac{1}{2}$ in. The thickness of the rule is $\frac{1}{8}$ in. Price \$2.50.



No. 5 is a 1 in. steel Rule with the following graduations, viz.:—16ths, 50ths, 64ths, and 100ths, they are furnished with split ring and make a first-class Watch Guard Charm.

We can furnish them as follows:

Plain Steel	each	\$.30
Nickel plated	"	.40
Silver	"	.50
Gold	"	.75



No. 6 Caliper Square steel divided in 100ths. This is unquestionably the best article ever offered for measuring specimens we can furnish these squares in two sizes.

2 in. size	\$3.50
4 in. size	4.50

postpaid at these prices, this square is exactly like the above cut—except that it is divided in 100ths, and is without the adjusting screw "a".

Address,

FRANK H. LATTIN,
Albion, N. Y.

TO EXCHANGE—Hand-inking printing press, chase 7 x 4 $\frac{1}{4}$ inches, large fount of long primer, brass rule, etc. for 1st-class eggs in sets with data. Eggs of Hawks, Owls and Herons preferred. FRED W. CURTIS, Wauwatosa, Wis.

Mr. Fred Corless, of Los Gatos, Cal., writes "I received over 50 letters from my exchange notice in the OöLOGIST."

Exchange Extraordinary.

I want at once the following first-class eggs, either single or in sets, in exchange at full *Bulletin* prices, or if in sets I will allow 10 per ct. above these prices, in exchange for the articles mentioned below. Eggs taken in large or small quantities. No exchange amounting to less than \$1.00 can be "bothered with" unless 10c additional is enclosed for return postage and packing. Species warranted, Ridgway's No's.:

No. 2, 4, 4a, 5b, 16, 21, 41, 47, 51, 56, 60, 63, 63a, 67, 69, 70, 72, any of the Warblers and Vireos, Nos. 75 to 145 inclusive; 157, 161, 168, 181, 198, 217, 231c, 231b, 237, 240b, 242, 244, 245, 248, 251, 254, 260, 263, 264, 270, 271, 277, 279, 282, 289, 293, 299, 300, 312, 313, 315, 326, any of the Hummingbirds, 353, 354, 357, 361, 385, 387, 388, any of the Owls, Hawks, Buzzards, Vultures or Eagles, 473, 477, any of the Quails, 487, 488, 489, 494, 497, 498, any species from No. 500 to 764.

In return for the above I will give any of the following articles, specimens or supplies at the prices quoted.

SUPPLIES.

No. 1, 8-100 Egg Drill, .. .. .	.08
" 2, 12-100 " .. .. .	.12
" 2½, 15-100 " .. .. .	.15
" 3, 18-100 " .. .. .	.18
" 4, 20-100 " .. .. .	.20
Blowpipes, watch-metal. .. .. .	.25
Bottle of Oologist's Cement, .. .. .	.15
100 Exchange and Return Ex. Sheets, .. .. .	.80
" Order Sheets, .. .. .	.45
" Billheads, .. .. .	.45
" Data Blanks, No. 8, .. .. .	.45
" " " 4, .. .. .	.20
" Labels, No. 11, .. .. .	.18
" Taxidermists' Labels, No. 13, .. .. .	.20
" " " 14, .. .. .	.15
Oologist's Hand-book, .. .. .	.25
Oologist's Directory, .. .. .	.30
17 Back numbers Oologist (prem No. 30) .. .. .	.50
Oologist without prem. from date to Jan., '90 .. .. .	.50
Card good for one Exchange Notice in the OOLOGIST, .. .. .	.25

SPECIMENS.

Egg Case of Periwinkle, .. .. .	.35
Lucky Tooth of Codfish, .. .. .	.15
Club-spined Urchin, .. .. .	.50
Choice Bahama White Urchin, large, .. .. .	.25
Sand Dollar, extra, .. .. .	.15
Starfish, Martha's Vineyard, fine, .. .. .	.25
Shark's Egg, .. .. .	.25
Bahama Purple Urchin, .. .. .	.15
Six Cards Marine Algae, .. .. .	.50
Vegetable Ivory Apple, fine, .. .. .	.50
Pod of Royal Ponciana or Sabre Bean, very curious, .. .. .	.35
Rajah or Beetle Nut, .. .. .	.15
Brown-banded Sea Bean, .. .. .	.10
Red Sea Bean, .. .. .	.03
Gray Sea Bean, .. .. .	.03
Trilobite, Calymene, Niagraensis, .. .. .	.40
Scaphites, from Black Hills, choice & desirable, .. .. .	.50
Resurrection Plant, .. .. .	.15
An extra fine Rose Coral, .. .. .	.25
Barnacle, Pacific, a choice double specimens .. .. .	.25
Polished Agate, pendant, can be worn as a charm, .. .. .	.25
Indian Pottery, fine 2 in. specjmen, .. .. .	.25

SHELLS.

All extra fine <i>live</i> specimens.	
Tellina radiata, .. .. .	.10
Oliva inflata, .. .. .	.10
Cypræa lynx, .. .. .	.10
" caurica, .. .. .	.18
" vitellus, .. .. .	.10
" helvola, .. .. .	.05
Mercenaria Lalteri, .. .. .	.15
Purpura patula, .. .. .	.15
Murex pudoricolor, .. .. .	.15
Oliva fusiformis, .. .. .	.15
" litterata, .. .. .	.15
Chiton, squamosus, .. .. .	.10
Fissurella Barbadosis, .. .. .	.10
Strophia glans, .. .. .	.10

NOVELTIES.

Little Brown Jug, .. .. .	.05
Collector's Puzzle Whistle, .. .. .	.15
Bird Warbler, .. .. .	.10
Catapult Gun—wood frame, .. .. .	.25
Box Pharaoh's Serpent Eggs, .. .. .	.15
18 best assorted Fish Hooks, .. .. .	.10

If you desire to obtain anything on the above list in exchange, send on your eggs at once; if you have no eggs, but have other desirable specimens in quantity, write what you have with price; or will exchange for collections of fine Postage Stamps, or books on Natural History, or choice Indian Relics.

Only first-class specimens accepted at any price. All others returned at senders expense.

We will receive hundreds of packages in answer to this exchange, and if you do not write your name plainly on the outside of the packages you send, your exchange will be delayed and packages possibly lost.

This offer will hold good until June 10th only. At that date we may see fit to extend it, but shall do unless withdraw it entirely.

Send on your specimens at once in large or small quantities. It makes no difference to us whether you send \$1.00 or \$100.00 worth; but if less than \$1.00 worth, 10c extra must be enclosed for return postage and packing.

Large quantities shipped by Express or Freight *must be prepaid.*

Address plainly,

FRANK H. LATTIN, Albion, N. Y.

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

I have got first-class birds' skins for sale or exchange for the same. Please Address, JESSE T. CRAVEN, Box 64, Huiburton, N. Y.

GOOD D. B. B. L. shotgun, side snap, 12 gauge, cost \$15, to exchange for eggs in sets. C. W. TREAT, Brooklyn, O.

TO EXCHANGE—For the best offer of bird's eggs' before August 1, 1889, \$25.00 worth of rare U. S. and Foreign stamps. For particulars, Address, W. PHILLIPS, Red Wing Minn. Box 151.

WANTED—To exchange eggs in sets for any books on oology or ornithology. Write and tell me what you have and receive my list. Address, WILL C. STAAT, 501 Jerome street, Marshalltown, Iowa.

WANTED—Second-hand trays, sizes 2 x 1½ and 3 x 2, 100 of each size; also first-class eggs, single and pairs, can offer first-class sets and single eggs of 673, 643a, 492. What offers? WILLARD ELLIOT, Thonotosassa, Fla.

800 first-class birds' eggs, 50 var., or 100 arrow-heads, to exchange for rare United States coins, other eggs, curiosities or a good gun. WM. HUTCHINSON, North Star, Alleghany Co., Pa

TO EXCHANGE—I have about 250 varieties of N. American fresh water shells and 200 varieties of N. A. marine shells to exchange for N. A. species of moths and butterflies. A. K. FAIRCHILD, Whippany, N. J. my6

WANTED—To exchange a first-class American Gos-hawk egg with data, for the best offer of first-class eggs in sets or single. F. E. SHOUP, Sewanee, Tenn.

Nos. 181, 154, 170a, 315, 306, 261a, 337 and 336 with nests, all sets to exchange for climbing irons and taxidermist's outfit. A. W. NOLTE, Rowland St., Los Angeles, Cal.

EXCHANGE—Sets of eggs for same; will have, this coming Spring, Eagles', Owls', Hawks', Geese' Ducks', Gulls' etc, etc., in full and complete sets with full data, collected in the United States. Can furnish lists, and will book exchanges now. A few nice sets, 3 eggs each, No. 674, Franklin's Gull for other sets. Eggs for anything send list of what you have, stating your wants. HENRY W. DAVIS, Lock Box 2, North Granville, N. Y.

I want The following first-class singles: will give in exchange eggs of this county, Lattin's hand-book as a basis: Nos. 11, 41, 67, 282, 375, any of the Owls', Hawks' or Herons', 580, 601, 627, 627a, 641, 650, 656, 666, 666a, 673, 734, 742-794a. I have a first-class egg of Harris Hawk which I would exchange for Ingersoll's "Birds Nesting." MOSES L. WICKS JR., No. 1, South Hill St., Los Angeles, Cal.

WANTED.— TO PURCHASE COLLECTIONS OF INDIAN RELICS AND OTHER CURIOSITIES FOR WHICH CASH WILL BE PAID. PARTIES HAVING SUCH FOR SALE WILL PLEASE CORRESPOND WITH W. H. H. KING, JACKSONVILLE, ILLS. ay1



Your name and address will be inserted in any department, 1 month for 10 etc.; 3 months, 25 etc.; 6 months, 40 etc.; 1 year, 75 etc. Should you desire to have your name printed in more than one department, one-half of these rates will be charged for each additional one.

Live collectors will not be long in observing the importance of keeping their names standing in this Directory. Collectors and dealers desiring to make sales, purchases or exchanges will not only write to the parties whose names appear in this directory for their wants, but will also keep them posted on "bargains" that they may have for sale cheap, publishers having papers etc, that would be of interest to the persons whose names appear in this Directory, will recognize the importance of placing samples etc. in the hands of Live Collectors and will act accordingly. Collectors receive as high as Fifty Letters, Postals, Circulars, Samples etc. from having their names inserted one time at a cost of only 10 CENTS in this Directory. Address, THE OOLOGIST, Athol, N. Y.

BIRDS' EGGS.

- H. W. Davis, North Granville, N. Y. my
- L. W. Nichols, Jr., Richmond, Ills. m3
- Coite K. Woodruff, Hotel Balmoral, Montreal, Can. m3
- R. B. Trouslot, Rooms 15 & 16, Humboldt Block, Kansas City, Mo. 3m
- F. E. Shoup, Sewanee, Tenn. A3
- N. R. Christie, Box 394, Modesto, Cal.
- Chas. E. MacDonald, No. 58, West 82nd St., New York City, N. Y.
- Willard Eliot, Thonotosassa, Fla.
- Roger Whinfield, care of Prof. Rankin, Waukesha, Wis.
- G. H. Rogers, Jr., Box 14, Wauwatosa, Wis.
- Will A. Moore, Box 661, Norwalk, Ohio.
- F. H. Baker, Box 68, Oakville, Ontario, Canada.
- Will J. Cosgrove, 59, Court St., Binghamton, N. Y.
- W. C. Hutchinson, Winchester, Ills.

BIRD SKINS.

- L. W. Nichols, Jr., Richmond, Ills. m3
- Colburn & Lake, No. 1938, 14th St., Washington, D. C. A2
- Herbert L. Merritt, Box 116, Chatham, Ont, Can.

POSTAGE STAMPS.

- G. F. Osborne, 13, Lydentram St., Kingston, Can.

INSECTS.

- Chas. E. Brown, 219, 14th St., Milwaukee, Wis.

INDIAN RELICS.

- R. G. Treat, Brooklyn, Ohio.

TAXIDERMISTRY.

- Mrs. E. C. Wiswall, Prairie DuSac, Wis. m3
- W. Nichols, Jr., Richmond, Ill. m3
- Colburn & Lake, No. 1938, 14th St., Washington, D. C. A2

BOTANY.

- James Galen, Rawlinsville, Pa. m3

DAVIE'S EGGS.

It has been deemed advisable to offer the few remaining eggs at the following greatly

Reduced Rates

Which range from 10 to 50 per cent less than previous quotations and will average over 25 per cent.

\$20.00 Worth of Eggs IN SETS FREE!

We have concluded to show that we appreciate the efforts of our oological friends in assisting us in disposing of this collection by making the largest purchasers presents of the following valuable eggs:

To the person sending us the largest amount of money for Davie's eggs, either sets, singles or nests on or before May 15, 1889, we will give a set of one egg of the Bald Eagle.

To the second largest purchaser a set of 1 egg of the Bridled Tern.

To the third largest purchaser a set of 4 eggs of the Horned Grebe.

To the 4th and 5th largest purchasers each a set of 1 egg of the American Flamingo.

To the 6th and 7th largest purchasers each a set of one egg of the Noddy Tern.

To the 8th to 10th largest purchasers each a set of 1 egg of the Sooty Tern.

To the 11th to 15th largest purchasers each a set of 2 eggs of the Black Tern.

To the 16th to 25th largest purchasers each a set of 2 eggs of the Mourning Dove.

Conditions.

The winner of the 1st to 3rd prizes, must purchase at least \$5.00 worth of the Davie eggs; 4th to 10th prizes, at least \$2.00 worth; 11th to 25th at least 50 cts. worth. To compete for these prizes only orders for the Davie eggs will count. Orders can be mailed at any time between Apr. 1st and May 15th. Prizes will be awarded May 25th and announced in June Oologist. Should a person send a dozen or more orders between Apr. 1st and May 15th it will be the total sum of all these orders that will count in the competition. In case two or more persons should send the same amount the earliest order will rank first.

All eggs will be carefully packed in strong tin or wooden boxes and sent by mail or express at our risk and (on orders of \$1.00 or over) expense. Make remittances in most convenient manner.

Address Plainly

FRANK H. LATTIN,
Albion, N. Y.

EGGS IN SETS.

All prices are for the complete set as described.

Orders under 30 cts. must contain 5 cts. additional and under \$1.00 10 cts. additional, for postage and packing.

In all cases you must name additional sets that you can use as substitutes in case the ones ordered have been sold. In case this is not done we will take equally desirable sets from our stock to fill the order, or money will be refunded.

Abbreviations.

To condense the list, the following abbreviations have been used:

ch.....	chipped holes	
dc.....	data complete	
dnc.....	data not complete	
F. C. O. and fco.....	Franklin Co., Ohio	
L. I.....	Long Island, N. Y.	
N.....	nest accompanies set	
nd.....	no data	
O.....	Ohio	
S. G. P. C. or sgpc.....	San Gorgonia Pass, Cala.	
snc.....	set not complete	
?	questionable	
1-2 Wood Thrush, 3, nd.....		\$.08
3-5 Wood Thrush, 4, coll. by Oliver Davie, Franklin Co., O., dnc.....		.18
6-7 Wood Thrush, 5, coll. O. Davie, Franklin Co., O. dnc.....		.22
10-11 Catbird, 3, FCO? nd.....		.04
12-13 Catbird, 4, FCO? nd.....		.06
14,16 Brown Thrasher, 3, FCO? nd.....		.06
19 Blue-gray Gnatcatcher, 4, S GPC dc.....		.70
21 Black crested Flycatcher, 2, S GPC dc.....		.75
26 Ground Tit, 2, snc S GPC dc.....		1.15
27 Tufted Titmouse, 4, Clinton Co., Ind dc.....		1.25
28 California Bush-tit, 5, S GPC dnc.....		.50
31 Carolina wren, 5, coll by O. Davie, FCO dnc.....		1.00
36 Yellow-breast-Chat, 3, O. Davie, FCO dnc.....		.35
37 Chewink, 3, FCO? nd.....		.20
38 Yellow-breast-Chat, 2, FCO? nd.....		.14
39 Am. Redstart, 3, O. Davie, FCO dnc.....		.30
40 Am. Redstart, N 2, nd.....		.20
41 California (?) Shrike, 5, San Jose, Cal., dc.....		.35
42 California (?) Shrike, 5, S GPC dc.....		.35
43 Cedar Waxwing, 3, Lake Co., Ill. dc.....		.25
44 Purple Martin, 3, snc 1ch. St. Law. Co., N. Y. dc.....		.25
45 White-bellied (Tree) Swallow, 4 snc, St. Law. Co. N. Y. dc, eggs dirty.....		.35
47 House Finch, 4, Haywards Cala. dc.....		.18
56-57 Arkansas Goldfinch, N 4 S GPC dc.....		.75
58 Lawrence's Goldfinch, 5 (3 ch) S GPC dnc.....		.60
59 Lawrence's Goldfinch, N 1 S GPC nd.....		.30
61 Sharp-tailed Finch, 2 snc, Mass. dc.....		.55
62 Field Sparrow, 2, FCO nd.....		.06
63 Field Sparrow, 3 FCO nd.....		.08
64 Field Sparrow, 3 snc FCO nd.....		.07
65 Song Sparrow, N 5, nd.....		.12
66 Cal. Song Sparrow, 3, Marlon Co., Cala. dc.....		.20
67 Cal. Song Sparrow, 3, near San Francisco dnc.....		.15
69 Rusty Song Sparrow, 4 (1 ch) Oregon dnc.....		.75
70 Spurred Towhee, 4, sgpc dc.....		.50
76 Lazuli Bunting, 4, San Bernardino, Cala. dc.....		.50
17 Blue Grosbeak, 2 snc, Forsythe Co. N. C. dc.....		.60
81 Bullock's Oriole, 4, sgpc dc.....		.35
84-87 Bullock's Oriole, 5, sgpc dc.....		.45
88 Bullock's Oriole, 6, (ch) sgpc dc.....		.50
90 Purple Grackle, 3 snc, L. I. nd.....		.07
91-93 Purple Grackle, 4 snc, L. I. nd.....		.10
94 Purple Grackle, 5, L. I. nd.....		.15
99 Kingbird, N 3, fco dnc.....		.15
101 Arkansas Kingbird, 4, sgpc dc.....		.30
102 Cassin's Kingbird, 4, Riverside, Cal. dc.....		1.10

105	Trall's Flycatcher, 3, fco nd.....	25
108	Trall's Flycatcher, 4 (1ch) fco nd.....	30
116	Western (?) Night-hawk, 2 Beattie Co. Kan. dc.....	60
119	Red-headed Woodpecker, 4, col. O. Davie fco dc.....	50
120	Red-headed Woodpecker, 3, fco nd.....	15
121	Red-headed Woodpecker, 4, nd.....	20
123	Flicker, 4, O. nd.....	14
124	Red-shafted Flicker, 4, sgpc nd.....	25
125	Red-shafted Flicker, 5, sgpc nd.....	35
127	Road-runner, 5, sgpc dc.....	75
128	Yellow-billed Cuckoo, 3, fco nd.....	25
131	Am. Hawk Owl, 7 (1ch) Labrador, dc. The data for this set gives Labrador as the locality, but as it comes through a German dealer, we think it can be set down as the European species.....	5.00
133	Western Red-tail Hawk, 2, Cala? nd handsome specimens.....	1.25
134	Red-tail Hawk, 1snc, Mid. Co. Ct. dc.....	60
135	Swainson's Hawk, 2, Los Angeles, Cala. dc.....	1.25
133	Mourning Dove, 2, San Diego, Cal. dc.....	05
142-143	Chachalaca, 2, Starr Co. Tex. dc.....	2.25
145	Oregon Ruffed Grouse, 6, Coos Co., Oregon dc.....	2.00
146	Texan Quail, 14, Lee Co., Tex. dc.....	1.25
148	Wurdemann's Heron, 3, Cape Sable, Fla. dc.....	3.00
149	American Egret, 4, Tampa, Fla. dnc.....	80
150	Snowy Heron, 3snc, Tallahassee, Fla. dc.....	30
151	Snowy Heron, 4, Tampa, Fla. dc.....	45
152	Reddish Egret, 3snc, Tampa, Fla. dc.....	65
159-162	Black-crowned Night Heron, 3, L. I. nd.....	20
163-165	Bc. Night Heron, 3snc, L. I. nd.....	20
166	Bc. Night Heron, 4snc, L. I. nd.....	25
167-168	White-crowned Night Heron, 4, Jeff Co., Tex. dc.....	90
170	Golden Plover, 4, Iceland dc.....	1.15
171	Golden Plover, 4 (1ch), Scotland dc.....	1.00
172	Ringed Plover, 4, Iceland dc.....	50
173	Ringed Plover, 3, England dc.....	35
175	European Woodcock, 4, Sweden dc.....	4.00
176	English Snipe, 3snc, Eng. dc.....	50
177	Willet, 4, Beau, Co., S. C. dc.....	1.00
178	Long-billed Curlew, 4, England dc.....	1.50
181	Sora Rail, 1snc, Hen. Co., Minn. dc.....	1.00
185	Pintail, 7 (2ch), Lapland dc.....	1.50
186	Widgeon, 7, 1 brk., Iceland dc.....	1.00
187	Shoveller, 8, Russia dc.....	1.50
188	Black-winged Teal, 11 (1ch), Devil's Lake, Dak. dc.....	2.25
189	Am. Golden-eye, 7, Russia dc.....	3.75
191	Elder, 4, Finland, dc.....	1.00
192	Am. Sheldrake, 10, Norway dc.....	4.00
197	Brandt's Cormorant, 4, Farralone Is. dnc.....	90
200	Glaucous Gull, 2, Greenland dc.....	1.15
201	Gt. Black-backed Gull, 2, Sweden dc.....	60
202	Western Gull, 3, Farralone Is. dc.....	75
203	Herring Gull, 2snc, Eng. dc.....	35
210-212	Common Tern, 2, L. I. N. Y. dc.....	08
222-223	Western Grebe, 5, Devil's Lake, Dak. dc.....	2.00
224	Am. Eared Grebe, 4, Cal. dnc.....	75
225	Black-throated Diver, 1snc, Lapland dc.....	75
227-229	Tufted Puffin, 1, Farralone Is. dc.....	1.00
230	Cassin's Auk, 1, Farralone Is. dc.....	2.25
231	Black Guillemot, 2, Grand Menan dnc.....	30

Single Eggs.

The figures in the first column at the left, give the number of 1st-class single eggs in the collection. The second column, the number of 2d-class ones.

The prices quoted are for a single 1st-class specimen of the species named.

Where we have 2d-class specimens, we will sell them for *one-half* these prices.

Orders under 30c must contain 5c. and under \$1.00, 10c. additional for postage and packing. Over \$1.00 will be sent prepaid.

Always name additional specimens that can be used as substitutes in case we should be out of those most desired at the time of receiving order. In case this is not done we will take equally desirable specimens from our stock to fill the order or will return your money.

10	1	Wood Thrush.....	02
4	11	Robin.....	01
15	2	Mockingbird.....	03
7	3	Catbird.....	01
2	3	Brown Thrasher.....	01
3		Cal. Bluebird.....	05
10	5	Blue-gray Gnatcatcher.....	12
2		Cactus Wren.....	07
8	2	Parula Warbler.....	10
5	7	Yellow-breast Chat.....	04
3		W. Warbling Vireo.....	08
2		Bell's Vireo.....	08
4		White-rumped Shrike.....	06
		Barn Swallow.....	01
1	2	Ark. Goldfinch.....	12
4	3	Chipping Sparrow.....	01
4	3	Field Sparrow.....	02
12	6	Song Sparrow.....	01
2		Spurred Towhee.....	15
1		Canon Towhee.....	18
9		Cal. Brown Towhee.....	06
2		Cardinal Grosbeak.....	03
4	3	Indigo Bunting.....	05
16	6	Cowbird.....	01
12	4	Red-winged Blackbird.....	01
5		Bullock's Oriole.....	05
10		Purple Grackle.....	03
4		Florida Grackle.....	05
10		Bronzed Grackle.....	03
15		Crow.....	03
3	1	Florida Crow.....	15
2		Kingbird.....	02
8	4	Trall's Flycatcher.....	03
10		Red-headed Woodpecker.....	05
3		Red-shafted Flicker.....	04
4		Road-runner.....	13
2		Yellow-billed Cuckoo.....	06
	2	Cal. Screech Owl.....	40
3		Western Great Horned Owl.....	1.00
1		Swainson's Hawk.....	50
5		Mourning Dove.....	02
4		Great Blue Heron.....	15
25		Black-crowned Night Heron.....	05
2		Mallard.....	10
40	7	Common Tern.....	03

We have decided to break the sets, if any of our patrons desire, and can offer the following species, for the first time, as single eggs. Write quick if you desire any of them, for the few left will soon be sold at the prices we quote

Black-crested Flycatcher.....	\$.40
Ground Tit.....	.60
Tufted Titmouse.....	.40
Cala. Bush Tit.....	12
Carolina Wren.....	10
Cedar Waxwing.....	08
Purple Martin.....	12
Tree Swallow.....	03
Lawrence's Goldfinch.....	20
Sharp-tailed Finch.....	35
Cala. Song Sparrow.....	05
Rusty Song Sparrow.....	25
Lazuli Bunting.....	15
Blue Grosbeak.....	35
Cassin's Kingbird.....	30
Western Night-hawk.....	35
Hawk Owl.....	1.00
Belted Kingfisher.....	15
Sora Rail.....	10
Pintail.....	25
Widgeon.....	20
Shoveller.....	25
Blue-winged Teal.....	25
Golden-eye.....	60
Am. Sheldrake.....	50
Brandt's Cormorant.....	25
Glaucous Gull.....	60
Gt. Black-backed Gull.....	35

Western Gull.....	30
Herring Gull.....	20
Western Grebe.....	50
Am. Eared Grebe.....	20
Black Gullmot.....	18
Wild Turkey.....	35
Western Red-tail Hawk.....	70
Red-tail Hawk.....	40
Chachalaca.....	1.00
Oregon Ruffed Grouse.....	40
Texan Quail.....	10
Wurde mann's Heron.....	1.00
American Egret.....	22
Snowy Heron.....	10
Louisiana Heron.....	18
Reddish Egret.....	25
White-crowned Night Heron.....	20
Least Bittern.....	15
Golden Plover.....	30
Ringed Plover.....	15
European Woodcock.....	1.50
English Snipe.....	20
Willet.....	30
Long-billed Curlew.....	40

Birds' Nests.

If ordered by mail, add 5c additional for postage and packing on each nest, except Red-winged Blackbird for which you must add 10c and Crow Blackbird 20c; all others 5c.

2 Phainopepla.....	\$.10
2 Parula Warbler.....	10
1 Yellow Warbler.....	.05
1 American Redstart.....	.05
2 Red-eyed Vireo.....	.05
2 Am. Goldfinch.....	.05
1 Arizona Goldfinch.....	.05
1 Yellow-winged Sparrow.....	10
1 Field Sparrow.....	.05
3 Song Sparrow.....	.05
3 Indigo Bunting.....	.05
2 Red-winged Blackbird.....	.05
1 Orchard Oriole.....	10
1 Crow Blackbird.....	.05
1 Scissor-tailed Flycatcher.....	10
4 Pewee.....	.05
Traill's Flycatcher.....	.05

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

Owing to the extremely low rates that we sold eggs during April, only a very few collectors purchased "Davie eggs" and from present outlook those few will have a "snap" on the prize contest. Only a single collector has sent in an order of \$5.00 or over and only two or three of over \$2.00. Remember, if you do not mail your order until MAY 15th, it will count in the contest. Also remember that we have concluded to "break the sets" and so offer many new species as samples this month and also that you can send in orders for Davie Eggs at these prices until June 10th; but in order to compete for the prizes they must be mailed by May 15th.

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The undersigned are engaged in publishing the largest and finest Oologists' and Ornithologists' Directory ever published. It will be strictly first-class in all respects, printed on fine book paper in clear, legible type and neatly bound in serviceable binding. It will postively be issued, without fail on August 5, 1889. No time or expense will be spared in making it as complete and reliable as possible. We need the help of every live collector. Names inserted free of charge. Do not neglect this opportunity, but send name and address plainly written, on postal, immediately. Exchange notices, of 25 words or less, 10c.; over 25 and less than 40, 15c. A limited number of only strictly reliable advertisements will be inserted at the following low rates: 1 in., single column, \$.75, double column, \$1.25; half page, \$3.50; page \$6.00. Price of Directory, 30c.

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FRANK H. LATTIN,

Albion, N. Y.

THE OOLOGIST.

Vol. VI,

ALBION, N. Y., MAY, 1889.

No. 5

AVI-FAUNA OF ORLEANS COUNTY, N. Y.

Compiled by Neil F. Posson, Medina.

The following list is probably not a complete list of all our county birds as I have refrained from naming any but those that are well authenticated, preferring that future researchers should add to the list rather than take from it.

I am greatly indebted for assistance in this work, to Rev. J. H. Langille, M. A., whose valuable production, *Our Birds in their Haunts*, written largely upon the birds of this locality, has been a most helpful reference; also, to Mr. George H. Hedley, of Medina, Mr. Frank H. Lattin, of Albion, and Mr. Fred C. Lusk, of Holley; who have kindly given me valuable information concerning many doubtful species.

P. S. An account of the occurrence, within the county limits, of any species not mentioned in this list will be most thankfully received by the compiler.

(Arranged according to Ridgeway's Nomenclature.)

1. *Hylocichla mustelina*. Wood Thrush. Common Summer resident. Breeds. Arrives early in May. Departs early in September.
2. *Hylocichla fuscescens*. Wilson's Thrush. Common Summer resident. Breeds. Arrives early in May. Departs early in Sept.
3. *Hylocichla ustulata swainsoni*. Olive-backed Thrush. Rare migrant. Mr. Frank H. Lattin, of Gaines, reports having found the nest and eggs of this bird in the vicinity of his residence for two successive years, the dates being June 2d, 1880, and June 1st, 1881.
4. *Hylocichla unalascae pallasi*. Hermit Thrush. Rare migrant, occurring early in April, and again in October. Noted one in a dense second-growth, April 7, 1888.
5. *Merula migratoria*. American Robin. Most abundant Summer resident, frequently wintering here. Breeds. Arrives about the middle of March. Departs late in October.
6. *Galeoscoptes carolinensis*. Catbird. Very common Summer resident. Breeds. Arrives about May 1st. Departs in September.
7. *Harpophycus rufus*. Brown Thrasher. A rare Summer resident. Breeds.
8. *Sialia sialis*. Bluebird. Abundant Summer resident. Breeds. Arrives late in February or early in March. Departs in November.
9. *Regulus calendula*. Ruby-crowned Kinglet. Spoken of by Langille as a common migrant, occurring in April and October; and perhaps some remaining here to breed.
10. *Regulus satrapa*. Golden-crowned Kinglet. Common migrant, occurring about the middle of April, and again about the middle of October.
11. *Parus atricapillus*. Black-capped Chickadee. Common resident. Breeds.
12. *Sitta carolinensis*. White-bellied Nuthatch. Resident and common. Breeds.
13. *Sitta canadensis*. Red-bellied Nuthatch. Rare migrant sometimes seen in Winter. Noted a pair in company with the preceding species in a hemlock grove, Feb. 22, 1889.
14. *Certhia familiaris rufa*. Brown Creeper. Abundant during Spring and Autumn migrations, and frequently seen in Winter.
15. *Troglodytes ædon*. House Wren. Common Summer resident. Breeds. Arrives about May 1st.
16. *Anorthura troglodytes hyemalis*. Winter Wren. Spoken of by Langille.
17. *Telmotodytes palustris*. Long-billed Marsh Wren. Summer resident. Common in certain localities, where it breeds. Arrives in May. Departs late in September.
18. *Cistothorus stellaris*. Short-billed Marsh Wren. Reported by Langille as occurring in considerable numbers in Tonawanda Swamps, where it breeds. Arriving early in May, and departing early in September.

19. *Mniotilta varia*. Black-and-white Creeping Warbler. Common Spring and Autumn migrant.
20. *Helminthopaga chrysoptera*. Golden-winged Warbler. Spoken of by Langille as a Summer resident here, arriving during the second week of May, and remaining until September. Breeds.
21. *Helminthopaga peregrina*. Tennessee Warbler. Rare migrant. Reported by Mr. George H. Hedley and Mr. Frank H. Lattin.
22. *Parula americana*. Blue Yellow-backed Warbler. This bird has been taken here by Geo. H. Hedley.
23. *Perissoylosa tigrina*. Cape May Warbler. Reported by Langille as being "not infrequently found here during the migration."
24. *Dendroeca aestiva*. Summer Yellowbird. Yellow Warbler. Abundant Summer resident. Breeds. Arrives the last of April or first of May. Departs in September.
25. *Dendroeca caerulescens*. Black-throated Blue Warbler. Not an uncommon migrant. Reported by Geo. H. Hedley.
26. *Dendroeca coronata*. Yellow-rumped Warbler. Abundant Spring and Autumn migrant, occurring the last of April and the last of October.
27. *Dendroeca marculosa*. Black-and-yellow Warbler. This and the following species have both been taken by Mr. Hedley. This occurs as a migrant, while Langille says the following is a common Summer resident.
28. *Dendroeca caerulea*. Coerulean Warbler. See above.
29. *Dendroeca pennsylvanica*. Chestnut-sided Warbler. Not uncommon Summer resident. Breeds. Arrives early in May. Departs about middle of October.
30. *Dendroeca castanea*. Bay-breasted Warbler.
31. *Dendroeca blackburnia*. Blackburnian Warbler. This and the preceding species have both been taken by Mr. George Hedley. Both occur as migrants.
32. *Dendroeca virens*. Black-throated Green Warbler. Common Summer resident in Tonawanda Swamp. Plentiful elsewhere during migrations. Arrives early in May. Departs in October.
33. *Siurus arcticus*. Golden-crowned Thrush. Common Summer resident. Arrives early in May.
34. *Siurus naevius*. Small-billed Water Thrush. Langille considers this species a somewhat common Summer resident in this locality, arriving during the last of April, and breeding here.
35. *Geothlypis philadelphia*. Mourning Warbler. Not uncommon Summer resident in thickets. Reported by Mr. Hedley.
36. *Geothlypis trichas*. Maryland Yellow-throated Warbler. Reported by Mr. Hedley.
37. *Myiodioctes mitratus*. Hooded Warbler. Spoken of by Langille as a common Summer resident, arriving early in May.
38. *Myiodioctes canadensis*. Canadian Flycatching Warbler. Not uncommon Summer resident in swampy places. Reported by Mr. Hedley.
39. *Setophaga ruticilla*. American Redstart. Common Summer resident. Breeds. Arrives the first of May.
40. *Vireosylva olivacea*. Red-eyed Vireo. Common Summer resident. Breeds. Arrives early in May. Leaves early in October.
41. *Vireosylva philadelphia*. Philadelphia Vireo. Langille says that this species is occasionally found here.
42. *Vireosylva gilva*. Warbling Vireo. Not uncommon Summer resident. Breeds. Arrives early in May. Departs during the last of September.
43. *Lanius borealis*. Yellow-throated Vireo. Not uncommon Summer resident. Breeds. Arrives during the last of April or first of May.
44. *Lanius borealis*. Blue-headed Vireo. Reported by Langille as a rare migrant in May.
45. *Lanius borealis*. Great Northern Shrike. Frequent Winter visitant. Generally noted during January and February.
46. *Lanius ludovicianus*. Loggerhead Shrike. This bird has been taken by Mr. Hedley. It is a straggler.
47. *Lanius ludovicianus excubitorides*. White-rumped Shrike. Not uncommon Summer resident. Breeds. Arrives about the first of April or earlier.
48. *Ampelis garrulus*. Northern Waxwing. Reported by Langille as appearing regularly in flocks in Winter.

49. *Ampelis cedrorum*. Cedar Waxwing. Common Summer resident, sometimes seen in Winter. Arrives during March. Breeds.
50. *Progne subis*. Purple Martin. Common Summer resident. Arrives about the middle of April. Leaves during the last days of August. Abundant about the business blocks of Medina in Summer, in the cornices of which it breeds.
51. *Petrochelidon lunifrons*. Cliff Swallow. Abundant Summer resident. Breeds. Arrives in mid-April. Departs in August or September.
52. *Hirundo erythrogastra*. Barn Swallow. Abundant Summer resident. Breeds. Arrives late in April. Leaves late in August.
53. *Tachycineta bicolor*. White-bellied Swallow. Common Summer resident. Breeds. Arrives during the second week of April. Leaves in September.
54. *Cotile riparia*. Bank Swallow. Abundant Summer resident. Breeds. The last of the swallows to arrive in the Spring.
55. *Stelgidopteryx serripennis*. Rough-winged Swallow. Not uncommon Summer resident. Breeds. Occurs with the preceding species.
56. *Pyrranga rubra*. Scarlet Tanager. Common Summer resident. Breeds. Arrives the first or second week in May. Leaves in the latter part of Summer.
57. *Pipicola enucleator*. Pine Grosbeak. An occasional visitant in severe Winters.
58. *Passer domesticus*. English Sparrow. Superabundant prolific resident and a nuisance.
59. *Carpodacus purpureus*. Purple Finch. Common Summer resident. Breeds. Arrives between March 14th and April 1st. Leaves the last of October.
60. *Loxia curvirostra americana*. American Crossbill. A Winter straggler, occurring occasionally at irregular intervals. Specimens have been taken by Geo. H. Hedley.
61. *Aegithus linaria*. Common Redpoll. Not uncommon Winter visitant.
62. *Astragalinus tristis*. American Goldfinch. Abundant Summer resident, occasionally seen in Winter. Arrives, generally in March and stays until late in October. Breeds.
63. *Chrysomitris pinus*. Pine Siskin. Irregular Winter visitant. Not uncommon.
64. *Plectrophanes nivalis*. Snow Bunting. Abundant Winter visitant. Common from December to March.
65. *Centrophanes lapponicus*. Lapland Longspur. Reported by Langille as a Winter visitant. "Not common."
66. *Passerculus sandwichensis savanna*. Savannah Sparrow. Common Summer resident. Breeds. Arrives in mid-April. Leaves late in October.
67. *Pooecetes gramineus*. Vesper Sparrow. Abundant Summer resident. Breeds. Arrives about April 1st. Leaves late in October.
68. *Coturniculus passerinus*. Yellow-winged Sparrow. Found by Langille at Pine Hill. He reports it as "not at all common," being "confined to certain dry or sandy fields;" arriving in May and leaving in September; probably breeding.
69. *Zonotrichia leucophaea*. White-crowned Sparrow. A not uncommon migrant, occurring about the first of May and again about the first of October.
70. *Zonotrichia albicollis*. White-throated Sparrow. A not uncommon migrant, occurring in April and May and again in September and October.
71. *Spizella montana*. Tree Sparrow. An abundant migrant, frequently wintering here. Most numerous during the last of April and in October.
72. *Spizella domestica*. Chipping Sparrow. Abundant Summer resident. Breeds. Arrives during the first week in April. Leaves about the middle of October.
73. *Spizella pusilla*. Field Sparrow. Common Summer resident. Breeds. Arrives about April 1st.
74. *Junco hyemalis*. Black Snowbird. Abundant migrant, frequently remaining over Winter. Generally found here from the middle of March to the middle of April and again during the entire month of October.
75. *Melospiza fasciata*. Song Sparrow. Abundant Summer resident. Breeds. Arrives early in March. Leaves the last of October. Occasionally one is seen in Winter.
76. *Melospiza palustris*. Swamp Sparrow. Reported by Langille as occurring in Tonawanda Swamp, where it breeds; arriving about the 20th of April. Summer resident.
77. *Pipilo erythrophthalmus*. Chewink; Towhee. Rare Summer resident, arriving early in April. Noted one fitting about the brush-piles of a shady grove, April 7, 1888.

- No instances have been recorded of its breeding within the county.
78. *Zamelodia ludoviciana*. Rose-breasted Grosbeak. Not uncommon Summer resident. Breeds. Arrives during the first or second weeks of May.
79. *Passerina cyanea*. Indigo Bunting. Common Summer resident. Breeds. Arrives about May 10th.
80. *Dolichonyx oryzivorus*. Bobolink. Abundant Summer resident. Breeds. Arrives about May 1st. Departs in August.
81. *Molothrus ater*. Cowbird. Abundant Summer resident. Breeds. Arrives generally during the first week in April, although they have been noted as early as March 18th.
82. *Aegelaus phoeniceus*. Red-and-buff-shouldered Blackbird. Abundant Summer resident. Breeds. Arrives about March 20th. Leaves the middle of October.
83. *Sturnella magna*. Meadow Lark. Abundant Summer resident, sometimes seen in Winter. Arrives about March 20th. Leaves about October 15th. Breeds.
84. *Icterus galbula*. Baltimore Oriole. Abundant Summer resident. Breeds. Arrives about May 1st. Leaves about September 1st.
85. *Scolecophagus ferrugineus*. Rusty Blackbird. Reported by Langille as a plentiful migrant, occurring early in April and again in October.
86. *Quiscalus purpureus*. Purple Grackle. Abundant Summer resident. Breeds. Arrives during the latter part of March. Departs about the middle of September.
87. *Corvus frugivorus*. American Crow. Abundant resident. Breeds.
88. *Cyanocitta cristata*. Blue Jay. Resident and breeds. Not common.
89. *Eremophila alpestris*. Horned Lark. Common resident. Breeds in March. Most abundant from February to May and in October.
90. *Tyrannus carolinensis*. Kingbird; Bee Martin. Abundant Summer resident. Breeds. Arrives the first week in May. Departs about September 1st.
91. *Myiarchus crinitus*. Great Crested Flycatcher. Not uncommon Summer resident. Breeds. Arrives during the first week in May.
92. *Sayornis fuscus*. Phoebe Bird; Pewee. Abundant Summer resident. Breeds. Arrives about April 1st. Departs in September.
93. *Contopus virens*. Wood Pewee. Common Summer resident. Breeds. Arrives about the middle of May. Leaves late in September.
94. *Empidonax flaviventris*. Yellow-bellied Flycatcher. This species has been taken by Mr. George H. Hedley.
95. *Empidonax acadicus*. Acadian Flycatcher. Spoken of by Langille as a "Common Summer resident of our upland woods." Breeds.
96. *Empidonax pusillus trailli*. Traill's Flycatcher. Reported by Langille. Breeds. Summer resident.
97. *Empidonax minimus*. Least Flycatcher. Not uncommon Summer resident. Breeds. Arrives last of April or first of May.
98. *Trochilus colubris*. Ruby-throated Hummingbird. Common Summer resident. Breeds. Arrives during the latter part of May. Leaves about the first of September.
99. *Chaetura pelagica*. Chimney Swift. Abundant Summer resident. Breeds. Arrives in mid-April. Departs late in September or early in October.
100. *Caprimulgus vociferus*. Whip-poor-will. Rare Summer resident. The breeding and migration of this bird is not known to the compiler.
101. *Chordeiles popetue*. Nighthawk. Not uncommon Summer resident. Breeds. Arrives early in May. Leaves early in Fall.
102. *Picus villosus*. Hairy Woodpecker. Not uncommon in Winter, and probably a resident.
103. *Picus pubescens*. Downy Woodpecker. Common resident. Breeds. Abundant during the Winter months.
104. *Sphyrapicus varius*. Yellow-bellied Woodpecker. The only instance of the occurrence of this bird in the county (of which I know) is the well authenticated one of the finding of the nest with four young birds by Harry A. Chase, of this place, June 5th, 1886.
105. *Centurus carolinensis*. Red-bellied Woodpecker. Will P. Chase and John P. Chase, of this place, identified a specimen of this bird, June 2d, 1885. This is the only instance I have of its occurrence here. It is a straggler.
106. *Melanerpes erythrocephalus*. Red-headed Woodpecker. Common Summer resident, occasionally seen in Winter. Breeds.

107. *Colaptes auratus*. Yellow-shafted Flicker. Abundant Summer resident. Breeds. Arrives late in March or early in April. Departs in September.
108. *Ceryle alcyon*. Belted Kingfisher. Common Summer resident. Breeds. Arrives in March or April. Departs late in September.
109. *Coccyzus americanus*. Yellow-billed Cuckoo. Rare Summer resident. Breeds.
110. *Coccyzus erythrophthalmus*. Black-billed Cuckoo. Common Summer resident. Breeds. Arrives during the latter part of May.
111. *Asio americanus*. American Long-eared Owl. Not uncommon resident, reported by Mr. Frank H. Lattin.
112. *Asio accipitrinus*. Short-eared Owl. This bird has been taken here in Winter Mr. Will P. Chase.
113. *Strix nebulosa*. Barred Owl. Rare. It has been taken by Mr. Fred C. Lusk, of Holley.
114. *Nyctale acadica*. Saw-whet Owl. Not uncommon resident. Breeds.
115. *Scops asio*. Screech Owl. Common resident, most noticeable in Winter. Breeds.
116. *Bubo virginianus*. Great Horned Owl. Common resident. Breeds.
117. *Nyctea scandiaca*. Snowy Owl. Not uncommon Winter visitant.
118. *Falco peregrinus naevius*. American Peregrine Falcon; Duck Hawk. This bird has been taken in this county by Mr. J. Bridgman, of Holley, as well as by Langille.
119. *Aesalon columbarius*. Pigeon Hawk. Common migrant in April and September.
120. *Tinnunculus spawerius*. Sparrow Hawk. Common Summer resident. Breeds. Arrives about the middle of April. Departs late in September.
121. *Pandion haliaetus carolinensis*. American Osprey; Fish Hawk. Reported by Mr. John P. Chase, April 22d, 1888.
122. *Circus hudsonius*. Marsh Hawk. Common Summer resident. Breeds. Arrives early in April. Departs early in the Fall.
123. *Accipiter Cooperi*. Cooper's Hawk. Common summer resident, breeds.
124. *Accipiter Fuscus*. Sharp-shinned Hawk. Common summer resident, breeds. Arrives during April. Occasionally seen in mild winters.
125. *Astur atricapillus*. American Goshawk. Rare winter visitant, reported by Mr. Wm. Palmer, of Holley.
126. *Buteo borealis*. Red-tailed Hawk. Our most abundant hawk, a summer resident, although occasionally seen in winter. Breeds. Arrives late in February or early in March.
127. *Buteo lineatus*. Red-shouldered Hawk. Rare. Taken by Mr. Fred C. Lusk, of Holley.
128. *Buteo pennsylvanicus*. Broad-winged Hawk. This bird has been taken by Mr. Fred C. Lusk.
129. *Archibuteo lagopus*. Rough-legged Hawk. Spoken of by Langille as a not uncommon migrant, occurring about the middle of April and again the last of October or first of November.
130. *Haliaeetus leucocephalus*. White-headed Eagle. Bald Eagle. Not uncommon along Lake Ontario, where it has been known to breed.
131. *Epotistes migratoria*. Passenger Pigeon. Very rare summer resident. Breeds. Reported by Frank H. Lattin.
132. *Zenaidura carolinensis*. Mourning Dove. Common summer resident, occasionally seen in winter. Arrives about March 20th, departs the last of September. Breeds.
133. *Bonasa umbellus*. Ruffed Grouse. Common resident. Breeds.
134. *Ortyx virginia*. Bob-White. American Quail. Rare resident. Breeds.
135. *Ardea herodias*. Great Blue Heron. Common summer resident. Breeds. Arrives about April first.
136. *Butorides virescens*. Green Heron. Noted a single one August 14, 1888. It probably occurs as a summer resident, and if so must breed.
137. *Botaurus lentiginosus*. American Bittern. Not uncommon summer resident arriving in April and leaving in October.
138. *Ardetta exilis*. Least Bittern. Common summer resident. Breeds.
139. *Streptopelia interpres*. Turnstone. Reported by Langille as a migrant, passing south in the latter half of September; observed on the shores of lake Ontario.
140. *Suastrorola helvetica*. Black-bellied Plover. This and the following species

were both observed by Langille on the shore of Lake Ontario as migrants, occurring late in April or early in May and again in the latter part of September.

141. *Charadrius dominicus*. American Golden Plover. See above.

142. *Oryzochus vociferus*. Killdeer. Abundant summer resident. Breeds. Arrives the last of March or first of April. Departs late in September.

142. *Aegialites semipalmatus*. Semipalmated Plover. Reported by Frank H. Lattin,

144. *Philohela minor*. American Woodcock. Common summer resident. Breeds. Arrives early in April.

145. *Gallinago media wilsoni*. Wilson's Snipe. A common migrant during the latter part of April.

146. *Actodromus minutilla*. Least Sandpiper. According to Langille this and the following species usually occur together as migrants, being common along the lake late in April or early in May and again from late July to early October.

147. *Ereunetus pusillus*. Semipalmated Sandpiper. See above.

148. *Totanus melanoleucus*. Greater Yellow-legs; Tell-tale.

149. *Totanus flavipes*. Yellow-legs. This and the preceding species are migrants across the county in April and again in August and later. The former species being the more common. Langille.

150. *Bartramia longicauda*. Bartram's Sandpiper. Field Plover. Not uncommon summer resident, arriving late in April and breeding here.

151. *Tringoides macularius*. Spotted Sand-piper. Common summer resident. Breeds. Arrives about May first.

152. *Rallus virginianus*. Virginian Rail. Not uncommon Summer resident. Breeds. Arrives late in April departs in October.

153. *Porzana carolina*. Sora. Common summer resident. Breeds. Arrives late in April and leaves in October.

154. *Gallinula galeata*. Florida Gallinule. Common summer resident. Breeds. Arrives in April. Leaves in October.

155. *Fulica americana*. American Coot. Spoken of by Langille as a common migrant in April and October.

156. *Olor americanus*. Whistling Swan. A rare migrant. Two specimens were taken near Medina in the spring of 1886.

157. *Bernicla canadensis*. Canada Goose. Abundant migrant occurring in March and April and staying some three or four weeks; and again during the entire month of October.

158. *Bernicla canadensis hutchinsi*. Hutchins's Goose. A not uncommon migrant occurring with the preceding species.

159. *Anas boschas*. Mallard. Reported by Langille as a common migrant, occurring in March and April and again in September and later.

160. *Anas obscura*. Black Mallard. Our most common duck. Migrant, occurring in April and again in September and October. Langille says that quite a few remain here to breed.

161. *Dafila acuta*. Pintail. This and the following species, according to Langille occur more or less in company with each other being migrants in April and again in September and October.

162. *Mareca americana*. Baldpate. See above.

163. *Querquedula discorse*. Blue-winged Teal.

164. *Nettion carolinensis*. Green-winged Teal. This and the preceding species are reported by Langille as migrants, occurring in April and again in September and later.

165. *Aix sponsa*. Wood Duck. Summer Duck. Not uncommon summer resident Breeds. Arrives about April 1st.

166. *Fulix marila*. Scaup Duck. Common migrant. Occurring in mid-April.

167. *Fulix collaris*. Ring-billed Blackhead. Spoken of by Langille as a rather rare migrant. He reports the taking of a pair on the Erie canal.

168. *Clangula albeola*. Butterball; Bufflehead. Common migrant, being most plentiful in April and October.

169. *Mergus serrator*. Redbreasted Sheldrake. This species is with us in large numbers in late autumn and early spring remaining during winter if the waters are sufficiently open. Langille.

170. *Phaethon flavivestris*. Yellow-billed Tropic Bird. The extraordinary occurrence of this straggler from the tropics is reported by Langille. A young male found in a clover field after a heavy storm from the southwest, was brought to him alive in September, 1876.

171. *Larus argentatus smithsonianus*. American Herring Gull. Noted a single specimen at the shore of Lake Ontario near the mouth of Johnson's Creek, August 7, 1888
172. *Dytes aretus*. Horned Grebe. This species is reported by Langille as a migrant in April and October.
173. *Podilymbus podiceps*. Thick-billed Grebe. Not uncommon summer resident Breeds along lake Ontario.
174. *Colymbus torquatus*. Loon. Not uncommon migrant. Have seen it during the first days of May.

SUMMARY OF THE ABOVE LIST.

Resident species.....	14
Summer resident.....	84
Migrant.....	46
Winter visitant.....	9
Stragglers.....	4
Unclassified, i. e., cannot be classified with certainty.....	17
<hr/>	
Total.....	174
Number of species that have been known to breed within the county.....	89

The Robin.

The Robin, *Turdus migratorius*, is one of our very common species of birds. His dress and habits are so well known to all our readers that a detailed description will be unnecessary.

How eagerly we look for his first appearance in Spring! He is among the first arrivals, following usually the Sparrows and Bluebirds. After he has arrived, we feel that the "icy hand of Winter" is relaxing and it will soon be removed from the streams and fountains. Then all nature will quickly respond to the warm breath of Spring; the buds will swell and burst; the flowers bloom; other birds will come; and all will join in a general thanksgiving for deliverance. What melodious notes issue from his throat, when mounted on the topmost bough of some tall tree near our dwellings. How inspiring his song! How it thrills the nerves of a lover of nature! He is now seen at his best. It will soon be time for him to commence housekeeping. After he has helped prepare a home, his time will be fully occupied in attending to the wants of his mate and his little family which will soon appear. The robins commence to build their nest not far from the first of May. They are made of straw, dried grasses, weeds, mud etc., lined with finer grasses. The blue eggs, usually four in number, soon appear. The eggs are hatched in a short time. Then

the robins' work begins. The nest is built in some tree, on some fence, under some shed, on a root under some bank, or just where it pleases the fancy of the bird to build.

Last summer while visiting my old home in Buckland, Mass., I discovered what I called a curiosity in the birds' nest line. I will call it a double Robin's nest:

It was built on a board nailed to two upright joists under my brother's wagon shed. Old horseshoes, chains, etc. have been hung on this board for years; and someone took down or hung up something there very often during the busy season of the year. I am sorry to say it was deserted when I found it, so I couldn't watch the birds and unravel the mystery. There were two perfectly formed nests built closely together and interwoven at the bottom. In one nest there were four eggs; in the other, one. I couldn't see anything wrong about either nest or eggs to cause the birds to leave one and build the other by its side. Could there any such thing happen as that the male robin had two mates and they built side by side? Have two pairs of Robins been known to build side by side, so that the nests are united at the bottom and separate at the top? These are questions I submit to the readers of the OOLOGIST for explanation. Have any of you found similar structures? Any one who has taken the time to watch a pair of robins feed their young, can get a little idea

of the amount of food required to satisfy their hunger. We can't estimate the amount of good they do the farmers in the number of injurious insects they destroy in one season. Still the Robin has a good many enemies among the human family, because they think he helps himself too freely to their cherries, strawberries and other small fruits. A good many have been destroyed because of these propensities to take fruit. We believe that they pay back more than an hundred-fold for the fruit destroyed, by the good they do in keeping under subjection our insect enemies.

Let us then befriend the Robin and do all we can to raise him in the estimation of those who wish to injure or destroy him. It is true that we have laws to protect our feathered friends. Then let us see that they are enforced, when reason fails to produce a sentiment in favor of protection. Let us be ready to give him a hearty welcome when he again visits us the coming Spring.

ERWIN G. WARD, Palmer, Mass.

Davie's Egg Check List.

From present indications this invaluable work will be mailed to advance purchasers sometime during the month of May.

Under date of April 20th Mr. Davie writes:—"At this writing the book is in type as far as the Yellow-throated Warbler, 663 A. O. U., and this A. M. I received Mr. Norris' introduction.

The work will contain a *complete analytical* Index—every common name given to each species will be given. I have this big job complete as far as Shrikes and my preface is written.

In regard to the price of my book you may state that to those who have ordered of you or who may send you their orders for the work before it is out of press, which will be in the first part of May. The price will be *only* \$1.00, after that time the price will be advanced to \$1.25 in paper cover and \$1.75 in cloth binding. This is final on the retail prices.

Very truly, Oliver Davie".

The Crow in the North.

BY AYE C. CAYE, RIVEESIDE, N. B.

Mr. Willard N. Clute in the March OOLOGIST enquires about the Crows' northern range in Winter.

In this locality the immense flocks which congregate in the Autumn, gradually dwindle away, until in December only a few of their dusky forms may be seen in the Winter landscape, flying high overhead or searching the snow-covered fields for the wherewithal to satisfy their cravings of hunger. I should judge that fully seven-eighths of our whole crow population leaves us in Winter, probably seeking a more congenial climate.

Their return in the Spring varies according as the season is cold and stormy or bright and beautiful.

The latter part of March usually ushers in many forerunners of the sable band. Before the sweet-scented May flowers show their pink cheeks among the mossy hillocks, the Crow is to be seen almost everywhere. As the Albert County Express puffs along through the broad meadows which border our sea line, hundreds of these birds give her a discordant greeting from their hoarse throats; on both sides the extending acres are literally peppered with their black forms.

When the sun drives his flashing span over the western hills, and the shadows flutter to and fro across evening's calm face, the Crow bethinks him of his favorite roosting place, out on Grindstone Island. This island is thickly wooded with spruce and fir, the only mask of civilization being the tall white spire of the lighthouse.

For two hours every evening an irregular procession of Crows, almost numberless, may be seen leisurely flying hither. Do they have select roosting spots in every place? In nesting time the same thing occurs—the larger number probably being male, while the females guard their speckled treasures in the lonely forests among the hills.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

TERMS OF SUBSCRIPTION.

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

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Until May 20th we will receive subscriptions for Davie's Check List bound in paper at \$1.00 or in cloth at \$1.50, after this date prices will be as quoted on last page.

So valuable will this work prove to the Oologist that we will guarantee that not a single purchaser would be willing to part with his copy for \$5.00, one would be safe in saying \$10.00, could he not obtain another.

The Prize Article Contest.

In reply to our request in April Oologist 15 collectors kindly volunteered to pass their opinion on the articles in the '88 OOLOGISTS that entered this contest.

The result is undoubtedly as fair a one as could be obtained under the circumstances and we think will give the best of satisfaction.

Each judge was entitled to cast his ballot (or rather three ballots) for *three* articles, a few voted for *one* only, a few for *two* and a few more for articles taken from other publications which could not be counted. The whole number of ballots cast were 37 and were given to the articles named as follows:

The Bald Eagle, page 70,	6
A Day with the Gulls, p. 148,	5
The Family Rallidæ, p. 85,	4
Some of Our Falconidæ, p. 128,	3
Notes for Collectors, p. 126,	3
In Defense of Birds, p. 121,	2
Reminiscences of 1886, p. 119,	2
Advice to Live Collectors, p. 69,	2
Eggs of Mississippi Kite, p. 105,	2

The following articles each received one vote:

Nidification of Ictinea Mississippiensis, p. 74; Loon, p. 103; Nesting of the Chestnut-sided Warbler. p. 73; Black Snowbird, p. 125; Useful Contrivances, p. 152; Annual Trip to Seven Mile Beach, p. 120; Among the Warblers, p. 76; The Great Auk, p. 123.

The \$20.00 worth of Job Lots offered will be distributed as follows, viz.:

The Bald Eagle,	\$5.00
A Day Among the Gulls,	5.00
The Family Rallidæ,	3.00
Some of Our Falconidæ,	2.50
Notes for Collectors,	2.50
Advice to Live Collectors,	50
In Defence of Birds,	50
Reminiscences of 1886,	50
Eggs of Mississippi Kite,	50

Full particulars of another novel contest will be given in June Oologist.

Many of our readers will wonder which of the judges came the nearest to naming the leading prize-winning articles, and to gratify their curiosity, we would say that Mr. Geo. E. Boyd, of Warren Co., Ill., named "A Day with the Gulls," "A Bald Eagle," and "Some of Our Falconidæ."

Mr. W. H. Aspinwall, of Washington, D. C., named the first two mentioned above, and for the third "Notes for Collectors."

Mr. W. E. Pratt, of Cook Co., Ill., named the first two and for the third one "Eggs of the Mississippi Kite."

Mr. T. G. Pearson, of Alachua Co., Fla., cast one ballot only, and that for "The Bald Eagle."

Other parties named one, two and even three of the prize winners, but the gentlemen named came the "nearest."

A Bald Eagle's Nest.

On January 5 I took my first egg for the season of '89. A friend of mine while out hunting on New Year's day, saw the nest of a Bald Eagle and asked me to go with him to get the eggs. I was glad of the chance, and on the 5th, after dinner, we started with a lot of cleats, as the tree was a very tall pine and no other trees near it.

We had hard work nailing on the cleats, as it was more than 50 feet to the first limbs. We knew there was something in the nest, because when we reached the tree the old bird flew off of the nest and her mate joined her and they sat on a dead tree not far away to watch the proceedings.

We reached the nest at last, which was a huge affair, about 5 feet broad and almost as thick, composed of pine sticks about as thick as a man's thumb, for the most part, the top was flat, except in the center, where it was depressed a few inches deep and large enough to hold the eggs, and lined with grass and other soft material.

There was one egg in the nest of a dull, whitish or kind of greenish color. The old birds flew pretty close to us, screaming, but did not attack us.

We got home about dark, determined to try it again soon, and see if she would lay the rest of her clutch. The egg when blown was fresh, and must have been laid that day.

On the 14th we went out again and up to the nest and got two eggs which had just commenced to show signs of incubation when blown.

This time the old birds were not so shy, and flew quite close to our heads, uttering harsh notes, but we answered them back and waved our hats at them. We were well pleased with our first set for '89. We afterwards learned that the eagles had occupied the nest for several years.

The first egg measures 7 inches in circumference by $8\frac{1}{2}$ the other way; the next is 7 x 8, and the third $6\frac{7}{8}$ x $7\frac{3}{4}$ inches in circumference.

B. G. Dayton, Fla.

Making Bird's Skins.

Have just read Mr. Ernest E. Thompson's excellent article on making bird and mammal skins, in the March OOLOGIST.

As there are various methods employed in this art, it will not come amiss to give one that is used quite universally among recent collectors. I have given most every method a fair trial, and experience the best results from the following:

After the bird has been skinned and poisoned, and cotton placed in the eye sockets, turn the skin right side out, pull the skin of the head back and make it fit snugly, and arrange all the feathers nicely. Now take a round pluffy piece of cotton, pull one end of it out into a neck and introduce with the forceps to the inside of the skin and run it up firmly into the throat, withdraw the forceps, leaving the cotton in position. Now tuck the cotton that hangs outside, into the skin, being careful not to push it too far forward, as that will raise the feathers on the breast and drive the shoulders apart. It is not necessary to have any cotton in the skull cavity. By having the throat and neck in one piece, it does away with placing a separate piece in the throat and afterwards tying the bill together; it also gives a beautiful curve from bill to breast.

Contrary to what one might suppose, more cotton is placed in the hind part than in fore part.

Beginners will find it to their advantage to tie the wing bones close together and also to take a stitch in the opening; but with practice you will soon be able to do away with both.

In drying the skins I use a paper cylinder made the same caliber as the natural bird. It is a good plan to put the bird half way in and arrange the wing quills nicely, then let it slide the remainder of the way in.

As a preservative, I use a preparation of equal parts of arsenic and powdered alum. The latter ingredient acts as a tanner and sets the feathers more tightly.

Always measure your specimens.

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for 1889 will remain the same as quoted in the *Naturalist's Bulletin* of Sept., '88, and as given and corrected on this page. We have hundreds of specimens not noted on these lists, but from present outlook we think it will be impossible to issue new catalogues before 1890.

CORRECTIONS.

No. 4, Short-handle Egg Drill 21-100 is 15c instead of 25c.

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Laughing Gull,	08
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Clay-colored Sparrow,	50
Rusty Song Sparrow,	35
Canon Towhee,	25
Florida Grackle,	08
Northwest Crow,	40
American Raven,	1.95
Green Jay,	1.00
Florida Jay,	1.50
Mexican Crested Flycatcher,	75
Say's Pewee,	18
Black Pewee,	18
Berlandier's Wren,	50
Baird's Flycatcher,	25
Costa's Hummingbird,	75
Yellow-bellied Woodpecker,	50
Florida Screech Owl,	70
Florida Burrowing Owl,	4.00
Red-bellied Pigeon,	2.00
Oregon Ruffed Grouse,	75
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Willard Ptarmigan,	75
Chestnut-bellied Scaled Partridge,	75
Ringed Plover,	15
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Corrections and Change of Prices.

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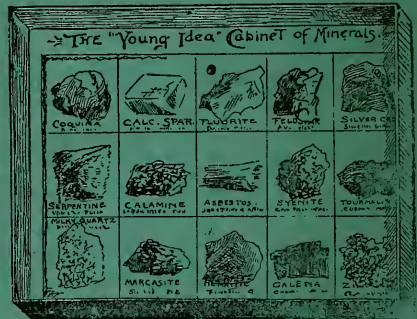
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Monthly.

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VOL. VI,

ALBION, N. Y., JUNE, 1889.

No. 6

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

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Albion, N. Y.

THE OOLOGIST.

Vol. VI,

ALBION, N. Y., JUNE, 1889.

No. 6

Birds of Mathews County, Va.

I think the suggestion made by Mr. Clute in the January issue of the OOLOGIST, a very good one—for everyone to give some account of the bird life in his locality. Doubtless this would be very interesting as well as instructive to the readers of the OOLOGIST, for a great deal of valuable information concerning the haunts and habits of our birds, could thus be gained.

As some have already given interesting accounts regarding the above, I send in the following report of some of the most common species which occur in this section, hoping that it may of interest to some.

This county, as may be observed, lies on the western side of the Chesapeake Bay; the northern, eastern and southern shores being washed by its waters. The entire coast is indented with rivers, creeks and coves, so that there is no point within the county, more than two miles from salt-water; hence we are frequented by many aquatic birds, such as Ducks, Geese, Gulls, Terns, Loons, Herons, Rails, etc.

Among the Ducks the most common are the Canvas-back, Mallard, Scoter, Red-headed, Old-wife, Pintail, Golden-eye, Teal, Wood, etc. With exception of the Wood Duck, all depart, at the approach of Summer, for more northern regions.

The Loons, which are frequently caught in the seines, by the fishermen, are very common during Winter and early Spring, but the Summer haunts, of this bird, is farther north.

We have quite a number of species of the Gull and Tern, but I can not give each by its proper name, as I have not had the opportunity to procure specimens for identification; but however the Laughing Gull and Common Tern are the most numerous of their family. Hundreds of eggs of the latter species can be picked up along the beach about the first of June.

The chief representatives, of the Heron

family, are the Great Blue Heron and the Green Heron; the first is known here by the name "Scoggin." The White Heron is sometimes met with, but he can not be considered as a summer resident.

The Clapper Rail, Black Rail and Yellow Rail are found here in the Summer season. The Sora or Carolina Rail is not common here, but in the reeds and marshes along the rivers, farther inland, where it is very numerous it is hunted extensively by the sportsmen, affording a most agreeable amusement as well as a delicious repast.

Of the shore birds, the Wilson's Snipe, Least Sandpiper, Spotted Sandpiper, Woodcock and Killdeer are among the most numerous. The Woodcock is common throughout the year. In the latter part of March, when nidification begins, it resorts to the swamps, sedgefields and thickets, where it rears its young. Its nest is usually placed in a tussock of grass or patch of briers. I have seen the young large enough to fly by the middle of May.

The Turkey Buzzard, which is so much respected here for his usefulness, though not beloved, in consequence of his habits, is abundant at all times. They begin nesting here about the first of May. A slight depression in the ground with, perhaps, a few scattering leaves, inside of an old hollow stump, make up the nest. Two eggs are said to be a set, but we frequently find them here containing four.

The Bald Eagle, in consequence of his great partiality for fish, which he often procures by robbing the Fish Hawk, is a common resident here. The nesting season of this bird begins about the 10th of February, though Mr. M —, a friend of mine, took a nest on Feb. 15, '89, containing eaglets not less than a week old. Allowing four weeks for incubation, the eggs were laid about January 12th. This, I consider, early nesting for this species: certainly in

this locality. Two eggs are usually laid, but I have known them to lay three.

Departing for more southern regions in the latter part of September, the Fish Hawk reappears in great abundance at the early approach of Spring, and returning to the same nests occupied in the former season. They begin laying about the last week of April; the nests are generally placed on pine trees in the vicinity of water, ranging from ten to seventy-five feet from the ground, and sometimes on the ground. There may be seen, sometimes, along our coast, dozens of nests within a few square acres.

Among the Owls, the Great Horned and Screech Owls are most common. The Long-eared and Saw-whet are rare.

Crows are abundant at all seasons. In Winter evenings about sunset, they can be seen flying in large flocks to the southern portion of the county to roost, and returning early in the morning.

Of the Woodpeckers, the Flicker, the Hairy and Downy Woodpeckers are very common. The Pileated and Red-bellied are rare. The Red-headed Woodpecker, which was once so common here, has become almost extinct. His predatory habits in the orchards and cornfields; his excessive fondness for fruit, especially the cherry, and his peculiar habit of approaching dwelling and farm houses, and rapping on the shingles, are some of his marked peculiarities. His absence here may, perhaps, be attributed to the scarcity of timbered lands the most of which have been cut, as such places are his favorite retreats, especially in time of nidification.

The following, named in order of their abundance, are quite numerous: Night Hawk, Whip-poor-will and Chuck-wills-widow, also the Chimney Swift and Ruby-throated Hummingbird are very numerous. These occur only as Summer residents.

Kingfishers are abundant along the river shores throughout the summer season.

Yellow-billed Cuckoos are abundant as Summer residents. The Black-billed is very rare.

We have many representatives of the Tyrannidæ family, the chief of which are

the Kingbird, Crested Flycatcher, Acadian Flycatcher, Traill's Flycatcher, Wood Pewee and Phoebe. These we have only as summer residents.

The Orchard Oriole, Meadow Lark, Cowbird, Red-winged Blackbird, Purple Grackle and Boat-tailed Grackle are very abundant. Baltimore Orioles and Bobolinks very rarely occur.

We have among the Turdidæ family, American Robin, Bluebird as common residents. The Wilson's Thrush and Hermit Thrush appear only as migrants.

We have as common residents the following: Cardinal, Water Thrush, Mockingbird, Carolina Wren, Black-capped Chickadee, American Quail, Mourning Dove, Song Sparrow, Chipping Sparrow, Field Sparrow and Goldfinch.

As Winter residents we have the following: White-throated Sparrow, Tree Sparrow, Swamp Sparrow, Fox Sparrow, Snowbird, Golden-Crowned Kinglet and Yellow-rumped Warbler.

The following are Summer residents: Seaside Sparrow, Catbird, Blue Grosbeak, Indigo Bunting, Scarlet Tanager, Summer Redbird, Purple Martin, Barn Swallow, White-bellied Swallow, Bank Swallow, Red-eyed Vireo, Warbling Vireo, Blue-headed Vireo, White-eyed Vireo, Yellow Warbler, Yellow-breasted Chat, Golden-crowned Thrush, Brown Thrasher, House Wren and Blue-grey Gnatcatcher.

The following occur as migrants; Purple Finch, Pine Grosbeak, Savanna Sparrow, White-crowned Sparrow, Rose-breasted Grosbeak and Cedar Waxwing.

M. C. WHITE.

Changes in the Nesting of Birds.

Among the many changes which have taken place in the habits of birds since the settlement of America, those which concern their nesting habits are of much interest.

The Bluebird early left his hole in some forest-tree for a hollow limb in the orchard or apartments in the bird-house, and the House Wren, who lived in the same situa-

tions as the Bluebird, took up his abode in any odd cranny about the house or out-building.

The Pewee, which is so common about our barns and houses, long ago placed its nest on any convenient shelf among the rocks; some individuals do so this day, but by far the greater number have betaken themselves to the dwelling of man or to a beam under some bridge.

But of all birds, the Swallows have taken most kindly to the habitations of man. Before there were any barns to build in, the Barn Swallow nested in caves or under overhanging cliffs, but as soon as the large roomy barns of our ancestors began to appear, the cliffs were left for the more comfortable retreats among the rafters. This exodus from the caves must have taken place very early in the history of our country, for the bird is rarely called by any other name than Barn Swallow. A danger now threatens this bird in our modern tight barns: no opening is left as of yore for access to their nesting places, and from this cause, it is said, the Barn Swallow is gradually diminishing in numbers. Will they remember their former haunts among the cliffs and go back to them again?

A neighbor of the Barn Swallow, on the cliffs, who has followed him to our barns, is the Cliff Swallow; he builds his jug-shaped nest beneath the eaves and one wonders what he has gained by the exchange, unless it is a greater abundance of insect food. Yet all Cliff Swallows have not forsaken the ways of their ancestors, for they are occasionally found nesting on cliffs, and in the West they nest very commonly in such situations. It was formerly believed that since the settlement of this country, the Cliff Swallow has gradually spread over the continent from the West, where it is most abundant. It is now generally conceded that it always nested in the East, but was seldom seen during the early days, owing to the nature of its nesting places.

The White-bellied or Tree Swallow has not entirely forgotten his hole in a tree or

stump, but each year his nest is becoming more common in bird-houses and holes about buildings. In time he will probably nest in no other situations. This bird, however, does not seem very particular as to where it places its nest. Langille saw them under flat stones and in holes in the ground in Nova Scotia.

The Bank Swallow could make little change for the better and still nest in river banks; lately they have taken to nesting in railway cuttings when the soil is soft enough for them to work in.

A hollow tree was the Chimney Swift's early nesting place, but the great wide chimneys built by our forefathers did not long escape its notice and the tree was soon forsaken for the chimney's capacious depths. No doubt the superior opportunities afforded for getting its living was the main cause for the change, but the bird has also gained greater safety from its enemies.

The Purple Martin, too, was formerly in the habit of nesting in trees, and the early settlers found them nesting in gourds hung up by the Indians for that purpose. At the present time, the Martins are nearly always found breeding in bird houses. They seem particularly attached to certain localities, and in some places are quite common, while in others they are seldom seen.

The reader will call to mind many other instances of birds that have made some change in their nesting places. Many changes are slowly taking place now. Maurice Thompson says of the Red-headed Woodpecker: "I prophesy that, within less than a hundred years to come, he will be making his nest on the ground, in hedges or the crotches of orchard trees." No one need expect such great changes in many of our birds, but a hundred years will very materially change the nesting places of some.

WILLARD N. CLUTE,

Binghamton, N. Y.

A Short Collecting Tour in Florida.

On the 11th day of April, 1888, I left home for a short tour in the country. I went more especially for the Sparrow Hawks, as they were now in their prime nesting; but was ready for anything desirable that I came across. I had proceeded about a mile, when, seeing a pair of Sparrow Hawks fooling around, I began to look for their nest. Presently I saw a hole about twenty feet up, that looked "wore," and strapping on my climbers "shinned up." Imagine my surprise on finding a Florida Screech Owl sitting on two fresh eggs. I suppose the Sparrow Hawk had nested here last year; but this year the "Screecher" had got ahead of them and they were at a loss to know what to do for a nest. I had proceeded but a short distance when I found a set of five badly incubated Logger-head Shrike's eggs. The nest was composed of sticks and straws, lined with bits of feathers, cotton etc. I soon had these packed safely away in my collecting box.

Seeing a colored boy at work in an adjoining field, I asked him if he knew where there were any birds' nests. He said yes; he knew where there was a Tilla Hawk's (meaning Sparrow Hawk) nest, to which pointed, saying, "Hit was way up dar." After looking at the snag, I decided I would not attempt to climb it, as the hole was fully sixty feet up and the snag was very rotten; but when I pounded on the snag and the "old lady" flew out, I could not resist trying it, and after a shaky climb I secured a nice set of four badly incubated eggs.

The eggs were laid on rotten wood on bare floor of cavity; and near this nest I found another set of four Sparrow Hawk eggs just exactly like the first set in color, markings and shape. I think this set must have been laid by the offspring of the other pair. I found nothing after this for nearly two hours and then found a pretty set of three Sparrow Hawk eggs, perfect-

fresh. My next find was a set of five Brown-headed Nuthatch eggs. I saw the pair pecking away on a dead tree, and thinking they might have a nest near by, concluded to watch them; and soon the female flew to a dead stump and began her twittering when she was joined by her mate; whereupon she disappeared in a small hole I had failed to notice before. At this I thought it time to investigate the matter myself. To make a long story short, after ten or fifteen minutes tedious and delicate work, I secured the set. They were beauties; having a white ground color thickly sprinkled with reddish-brown dots, chiefly at the larger end. These birds excavate their holes like the *Picida*. This cavity they line with fine strips of pine bark and vegetable fibre. Soon after this I found a set of six Logger-head Shrike's eggs, perfectly fresh. The nest was situated in an orange tree fifteen feet up, composed of moss, lined with cotton. My next and last find was another set of Sparrow Hawk eggs, five in number, perfectly fresh. I noticed a pair of Sparrow Hawks sitting on a dead snag, and thinking they must have a nest near by, began looking around and soon discovered a hole that looked suggestive, and after a short climb secured a fine set of five, by far the prettiest set I had taken during the day. I had now arrived near home and soon after was enjoying a good supper and congratulating myself on my success for the day.

A. L. QUAINANCE, Archer, Fla.

Nesting of the Pigmy Owl

The California Pigmy Owl is sometimes seen sitting on the limbs of trees in dark thickets. It is a curious looking bird, a little larger than a Cal. Woodpecker. I have never taken but one set of the eggs, and I found them accidentally. I was working out in the country near Santa Rosa. It was about the middle of May, and one day after dinner I took a short walk up the side of a rocky hill, near the building I was at work upon. I had a lath in my hand

with which I was striking the trees as I passed along. About half way up the hill I saw a Red-shafted Flicker looking out of a hole in a snag of an oak tree. I thought I would look into its nest as I came back; and went on about thirty yards, when, as I started to pass a tree, which had been broken off about six feet from the ground. As I went to pass I noticed a hole about a foot from the top of the stump, which looked as if it had been made by a Woodpecker. I struck the stump below the hole and a gray colored bird popped out and flew rapidly away. I tried to look into the hole, but could see nothing. The stump, though rotten, was too hard to break with my hands so I started back to the house and got a hand-axe and ran all the way back again. A few licks with the axe and I had a hole large enough to put my hand in. I felt in carefully, and was elated to feel eggs. I took them out one at a time until there were three perfectly white eggs, spherical in shape, and measure 1 1-16 by about 1 in. As I have no caliper rule, I took the measure with a common rule, but the measurements are, I think, correct. The eggs were perfectly fresh, and I have no means of knowing whether three eggs are a set or not. I should like to know how many eggs the Cal. Pigmy Owl lays. If any reader of this article does know, let's hear from him through this paper.

Yours Respectfully,
A. Calderwood, Jr.
Sonoma Co., Cal.

Woodcock in Southern Illinois.

Though the game birds are the least interesting to the ornithologist, except from a gastronomic point of view, it may, notwithstanding, be of interest to notice the occurrence of what is undoubtedly a somewhat common bird in an unusual locality. That is a Woodcock *P. minor* that had been killed by flying against a telephone wire over a low stream and was found soon after. Since these are considered game birds they must necessarily be somewhat

abundant in some localities, though this is the first occurrence in this region, Southern Illinois, that has come to my notice.

The genus *Philohela* is the smallest one of the perfectly defined family *Scolopacidae* the most interesting of the *limicola* or shore-birds.

The *P. minor* that fell to my lot, dispatched as it were on the wires, after careful manipulation furnished a first-class skin. It is a female in fine plumage. I would be pleased to learn of others' experience with this family through the OOLOGIST, as I have seen little mention heretofore.

H. F. ANDREWS.

Shrikes.

Your correspondent C. B. C. I see is out with the query on the difference between the White-rumped Shrike and the Loggerhead. Perhaps I can enlighten him somewhat.

The Loggerhead, *ludovicianus*, is the type the White-rumped *l. excubitorides* simply being a variety of that species. The difference between the two is very close, and consists chiefly as follows:

The White-rumped is much lighter in color, particularly noticeable in the upper parts where it bleaches to a lighter shade on the rump, a thing not found on the Loggerhead; the white spot on the primaries is longer and narrower on the White-rumped. The black line on the side of the head is generally found to be shorter and broader on the Loggerhead. In size the White-rumped is found to be slightly larger. The Loggerhead is the form from the South-eastern States, while the White-rumped inhabits the Middle and Western States. Still another form now hails from the Pacific Slope, known as the Ridgway Shrike.

GEO. G. CANTWELL,
Minneapolis, Minn.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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The American Woodcock.

The nesting habits of this beautiful game bird are known to very few collectors.

Years ago, it is said, these birds were plenty; but the continuous raids of the pot-hunter and sportsman thinned them out.

Its favorite haunts are in swampy woodlands, near some sluggish stream that creeps through the banks of soft loamy soil, tufted with clumps of ferns and herbage, that mimic well with their upper feathers.

They feed especially in the morning and evening, on insects and worms which they get by prodding their long bill in the soft ground.

The nest of the Woodcock is found in low moist woods, but it is not an uncommon thing to find them in high dry woods.

The nest is always placed on the ground; it is simply a slight depression, about the size of a Robin's nest on the outside, and an inch deep, lined with leaves and grass.

The eggs are three and four in number, the ground color buff, covered with blotches spots and dots of different shades of brown. They measure about 1.40 x 1.20 inches.

The Woodcock migrates farther to the south in the Autumn and returns again in the Spring by nightly journeys. They start generally with the full moon which ushers out October or lights up the early November night. It arrives again about the first of April and begins to nest soon after.

C. F., Princetown, N. Y.

Wood Pewee.

In the OOLOGIST for '88 I have not seen any articles on the Wood Pewee. To my mind this species is worthy of note.

During the last season I have found the Wood Pewee very abundant in this locality, frequenting groves and woodlands. Its food, the nature of which renders it very helpful as an insect destroyer, consists of small beetles and winged insects. It obtains nearly all of its food while upon the wing. In the woods, some small opening between the tree tops is selected for its hunting grounds. The whistle of the Wood Pewee has a somewhat dreamy cadence that is in harmony with a quiet afternoon in June or July.

The site usually selected for the nest is a dead limb of an oak, the nest harmonizing in color with the bark of the limb. I have rarely found this bird nesting in other trees, except on one or two occasions, when I have found nests in butternut and maple trees. The height at which the nest is placed varies from fifteen to thirty feet. The typical nest is saucer-shaped, measuring, diameter outside, 3 inches, inside, 2 inches; depth outside, 1½ inches, inside, 1 inch, and composed of small straws and weed stems, and lined in some instances with hair, covered on outside with gray lichens.

The eggs, two or three in number, rarely 4, 3 seems to be the number usually deposited, are of a rich creamy white, thickly spotted with deep reddish-brown and lilac often forming a confluent ring around larger end.

Average measurement, .76 x .54 and .71 x .53.

F. W. C., Wauwatosa, Wis.

A Murderous Red-headed Woodpecker.

There is no pursuit that furnishes me with so much delight as natural history; but birds' habits have been so well studied and recorded that it seems hardly possible to note anything more that will be new for our latitude. However that may be, I will relate something I observed which strikes me as an unusual trait in the habits of the Red-headed Woodpecker:

One day in July, 1886, I visited a farmer and gardener named Abel Steele, who resides about three miles west of Hyde Park, and while walking with him to the back of his farm we observed some young Robins along the lane fence. They were able to fly two or three rods at a time before alighting. Returning an hour later by the same route, Mr. Steele called my attention to a Red-headed Woodpecker carrying something large in its beak; I looked just in time to see the Woodpecker drop its drop its burden and alight upon a clod close by it, and look at it with much eagerness. I went to see what it might be that the Woodpecker had been flying away with, and was greatly surprised to find it to be one of the young Robins we had noticed when passing that way before. It was just newly killed; its head being smashed to a jelly and brain oozing out at a number of places. I have no doubt but that the Woodpecker had killed the Robin, for I have frequently in Winter seen Red-heads chase Chickadees, Nuthatches and smaller species of Woodpeckers.

I would like to hear from others on the same subject.

JOHN A. MORDEN, Ontario, Can.

Black-billed Cuckoo Nesting in Dakota.

As the writer of the article on Cuckoos, in the Jan. number of the OOLOGIST, desires to hear from others on the subject, I thought a few notes from Dakota might prove interesting to my Oological friends.

On the 29th of June, 1886, brother and I were on a fishing excursion up the "James," although a narrow river it is the longest* one wholly in the territory and abounds in many species of fish. Numerous small willows grow along its banks. Occasionally a small grove of plum and choke cherry trees have sprung up along its bluffs. Nine years ago there were some good sized ash, elm, box-elder and cottonwood trees growing along its banks in Beadle Co.; but now we can only speak of stumps and shrubs.

Returning to my subject; being somewhat tired of rowing up this winding river, we sought shelter from the sun in a thick growth of willows, growing on the east bank about 7 miles north and east of Huron. After a short time I possessed a curiosity to explore this tangle of willows and rose bushes, and consider myself well paid for my trouble, for I had only gone a short distance when I caught sight of a female Black-billed Cuckoo sitting on its nest. In a second she had slipped of the nest and disappeared among the bushes and my eyes rested upon a beautiful set of four greenish-blue eggs in as beautiful a nest, composed of willow twigs, leaves and catkins. It was well concealed in a wild rose bush, scarcely 3 feet from the ground. The willows formed a canopy a few feet overhead, the silent river was not a rod away. I do not believe I have ever seen a more pleasant place for a cuckoo to establish a summer home. The eggs, which measure 1.06 x .84, 1.13 x .84, 1.14 x .85 and 1.16 x .85 now rest in a cotton lined tray in my cabinet and call to mind many pleasant thoughts of that day we went fishing.

E. S. C.

Datas.

We would like to call the attention of oologists to the importance of writing good datas. We often receive sets of eggs with incomplete datas.

For example, I have before me a data for a set of Least Flycatcher: the number name, identity and set-mark are all right; then the collector gives only his initials, and for the locality gives the town without giving the State.

Now, if I didn't know the collector by reputation, the name of the State, and the locality in which this bird breeds, I might suppose the eggs were collected in South Africa by a Hottentot. For the nest, he says it was placed in an apple tree. Surprising information! Remember! the nest was placed in apple tree, not a plum or a pear tree. It may have been four or forty feet from the ground. A little thing of 20 or 30 feet does not make any difference. He gives no description of the nest. It may have been composed of fence palings and lined with grape vines, for all the information he gives us on the subject.

Now, with a few minutes time he could have given a complete and satisfactory data which would have increased the value of the set to my notion. We often receive incomplete datas for eggs of sea birds. Usually the datas are all right till they come to the description of the nest; this space they leave blank.

Now, we all know that most of these birds do not build a nest, but lay their eggs on the beach, in burrows or in clefts in the rocks. The description of the nesting place of these birds would of course be brief. Why couldn't the collector give us this information and not have us wondering whether the eggs were placed on the beach, on a cliff 500 feet above the sea, or a thousand and one other places where they may have been deposited. Always write the name of the collector on the data.

There are many eggs difficult to identify. If we see the name of a reliable collector on the data for such eggs, we at once say

these eggs are all right, or this man would not give his word for it. It doesn't take a quire of paper to write a good data. The medium size blanks are large enough. Be clear, complete, and above all, give us facts, and a smile of satisfaction will overspread the countenance of the oologist when he receives your datas.

J.

The Nest of the Marsh Hawk.

Perhaps the Marsh Hawk is too common a bird in most localities to merit attention in the OOLOGIST, but in this vicinity I find it rather rare. I have as yet been able to find but one nest of this species, which happened as follows:

I was one day (in the Spring of '88) traversing a low marshy forest in quest of oological specimens, when a female Marsh Hawk started up a little way in front of me, emitting a loud cry of alarm. Suspecting that she started from her nest, I at once started in search. I had proceeded but a few steps when the male bird appeared upon the scene of action. He had apparently got directly over me before he discovered the intruder and then in his surprise dropped a mouse from his talons which almost hit me as it fell, and then as I proceeded both birds, the male in advance plunged through the air directly at me, coming within a few feet of my head, and each time coming nearer to me until I was obliged to retreat and get a club to keep them back until I reached the nest.

The nest, if nest it could be called, was situated on a hassock about six inches high and partly surrounded by water. The hassock was slightly hollowed on the top and a few dry spears of grass and weeds laid across to keep the eggs from the damp ground.

The eggs, five in number, were very fine specimens; very uniform in size and shape, and a very smooth surface. In color they were white with a very faint blue tinge, and three of them were well marked with brown blotches. Incubation was well advanced.

M. D. C., Antrim, N. H.

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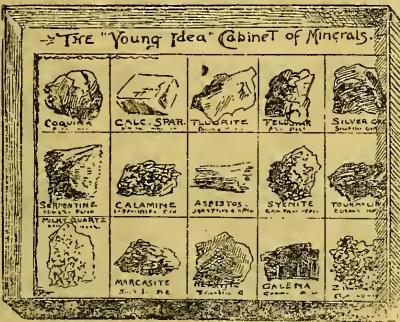
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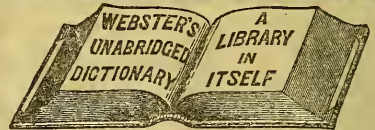


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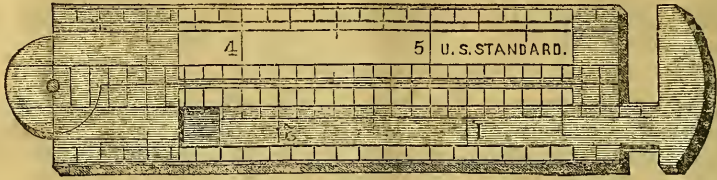
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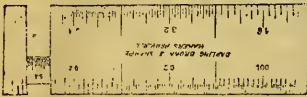
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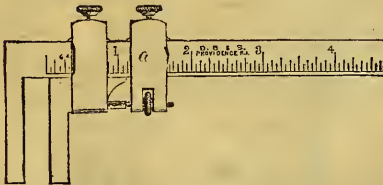
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THE OOLOGIST.

Vol. VI,

ALBION, N. Y., JULY, 1889.

No. 7

Notes From Michigan.

I spent more time in the field during 1888, than in any other season and thinking that a few notes will be interesting to other collectors I take the following extracts from my note book:

Feb. 3, Saw my first shore lark. I have found fully fledged young of this species as early as April 15, but never took any eggs, although my brother found two sets of fresh eggs in June.

Feb. 11, Snow one foot on the level but drifted in some places along the fence and ditches to the depth of four feet. Shot four shore larks and wounded another. This flock with the exception of a nut hatch and a Great northern shrike caught in the act of impaling an English sparrow on a thorn and were the only birds seen.

Feb. 12. Noticed three Blue birds. This is very early for I never saw one here before earlier than the 25th.

Feb. 18. Shot and wing-tipped a Blue Jay and by using her as a decoy secured another, also flushed a Meadow Lark.

Mar. 1. Some of the hawks are taking advantage of the extraordinary mildness of this season to build their nests. I found a Red Shouldered Hawk's nest, to-day, nearly complete, will expect a set of eggs in about three weeks. Shot a male Sparrow Hawk, a bird never very common here.

Mar. 10. Took a trip to Windsor. The warm weather has broken up the ice and it comes floating down the river in large cakes. The woods are full of Blue Jays and the pretty little Bluebird can be seen flitting from post to post in search of insects, which I am afraid he finds rather scarce. Song Sparrows are also quite plentiful.

Ma. 12. Gt. Horned Owl. Set of two eggs incub. far advanced. Nest in an old Hawk's nest, in a grove near the city. Not near so common as it was a few years back.

Mar. 24. Two incub. eggs of Red shouldered Hawk. Nest in in a clump of trees,

the lowest limb in the group being 30ft. from the ground. I leave the eggs for young, hope at the same time to secure the parent birds.

April 8. Took two Red-shouldered Hawk's eggs from a nest in the forks of a short scrub oak in low, damp woods. The birds were very much distressed and hovering over-head gave vent to their feelings by many cries. The locality generally chosen by this bird for a nest is the main fork of a tree in deep woods. A piece of ground covered by beech and surrounded by timber of a swampy nature is favorite site. They construct a large, bulky nest, though comparatively shallow. It is composed of sticks and twigs carelessly placed together and lined with corn-husks, leaves, feathers, etc. As soon as incubation begins the loose, downy feathers of the breast come out and may be seen clinging all over the nest and to the surrounding limbs. At this period the female has a curious habit of ornamenting the nest with green leaves. The male takes his turn in incubating the eggs which usually does not commence until the second is deposited. The eggs are two to five and some times six in number, but the majority of sets however consist of three. Each set is singularly variable in regard to markings the first being much more highly colored than the last. The ground color being a dirty white with a bluish tinge, spotted and blotched with brown and amber of different shades, size about 2.25 by 1.75. A handsome specimen in my cabinet is light buff, blotched with very dark brown, gathered in a broad ring around the larger end. When I find a nest and know the set is not complete I remove them and substitute hens eggs. The Hawk cannot distinguish the difference and sits on them as faithfully as on her own. I found fastened among the sticks of a nest of this species a Wood-mouse's nest containing young.

April 10. American Crow, set of six fresh eggs. Nest composed of sticks and twigs,

lined with strips of bark, moss, and horse-hair, placed in main fork of an oak tree fifty feet up. A very common bird. I have noticed that when the crow retires into the woods to breed it is not uncommon to find nests in the immediate neighborhood of each other much nearer the ground than in groves and open woods. While the trees are yet leafless the nest is easily seen, but after the bursting of the buds it can be found only after a very careful search.

April 17. American Long-eared Owl, set of five slightly incubated eggs. Nest in beech twelve feet from ground and composed of sticks lined with leaves and feathers. This is the most common variety of owl that inhabits our woods, but as it is a very nocturnal bird is seldom seen.

April 20. The only find to-day was a set of four fresh eggs of the Song Sparrow placed in nest on side of ditch. Who has not seen our commonest native sparrow threading its way through a brush heap, traversing the twigs, stems and branches of trees and bushes with surprising ease, or perched on a fence-rail or tree-top pouring forth its full sweet song. It is a very lively bird and usually flies near the ground. Often has it flown along the fence before me dodging in and out between the rails each motion follows by a flirt of the tail and always keeping a certain distance ahead.

April 23. Visited the Hawk's nest found on the 24th of last month and left for young. The birds were absent on my arrival, there was no under-brush and as the branches were yet leafless I could not conceal myself effectually. The female was the first to put in an appearance, but before arriving within gunshot her sharp eyes detected my presence, turning quickly she ascended to a great height, where she was joined by her mate, and as the two continued to soar above my head without apparently any intention of approaching any nearer I gave up all hope of getting them, climbed the tree and secured the two downy young. One fell and was killed, the other I named Jack.

April 24. Bluebird nest in hollow of a willow tree and contained five fresh eggs, also four fresh American Robin's eggs, from nest in pine three feet above ground.

April 26. Jack has already become very tame. He has taken up his quarters in a box nailed on the side of the shed and filled with soft hay, here he sits all day for his legs are too weak to bear his weight. When he is hungry he becomes excessively noisy, and being unable to tear to pieces the food given him, I am obliged to feed him by hand. His food is entirely of an animal nature.

April 28. Cooper's Hawk, a strong forked branch near the top of a lofty elm was chosen for the nest. It was built of sticks, twigs, grass, weeds etc., lined with bark, moss, wool and other soft materials. There were four fresh eggs in it, of a greenish white, spotted with pale brown. This bold and reckless hawk is not so common as *Buteo lineatus*.

April 30. Pewee, nest under bridge and contained five eggs of this species and one of the Cowbird.

May 5. Jack with rare intelligence has learned in this very brief time to distinguish me from the other and shows an excessive affection for me. The rapid growth of his feathers is surprising.

May 10. Took two sets of one, one of four and one of five English Sparrow's eggs from ornamental maple trees in the city. This sparrow is not only a tyrant, driving all other songsters from the city, but a general nuisance also.

May 14. Chickadee, saw a Chickadee fly from a hole in a decayed stump and by cutting away the wood I obtained the nest and six eggs, it was composed of hair, wool, moss and feathers. Although regarded as a common bird in winter few are seen in summer yet I believe many stay and breed. From a dense thicket, interwoven with briars and thorny creepers I flushed a Ruffed Grouse and a short search revealed nine eggs, two other nests containing eggs was a Towhee's containing one egg which I left for a larger set and a Chipping Sparrow's on the top-

most branch of a small oak. The latter species ranks next to the Song Sparrow in abundance.

May 18. Spent to-day among the reeds along the river. The first find was two sets of four, five sets of three and one set of five Red-winged Blackbird's eggs. The nests were placed in a clump of rose and thorn bushes mixed with the reeds. At mid-day the heat in the reeds became almost stifling and I was glad when a grove of oaks loomed up ahead, this reached. I threw myself in the shade of a large tree to rest. Several male Blackbirds discovered me, alighting on the branches overhead, exhibiting many signs of uneasiness and anxiety. Occasionally one of them would perform a short flight and poising over the reedy shore, uttering warning cries to the inmates of his well concealed home below. I walked along the reeds through the marsh hay for nearly four more miles more and found only three incub. Kingbird's eggs in a nest on the horizontal fork of a half decayed willow. As the afternoon was well advanced I started for home. On a bridge some boys were amusing themselves by catching bank swallows with a small fish-hook, baited with a fly, as they went skimming over the smooth surface of the water beneath. They told me that they knew where there was a swallow's nest full of white eggs and agreed to show it for a nickle. So we started down the road. We had not gone far when one the boys showed me a hole in a fence post and said the nest was there. It was a Tree Swallow's and contained seven white eggs, nearly fresh.

May 23. Four fresh Tree Swallow's eggs from box nailed on top of a tall pole.

May 25. Least Bittern, set of three fresh eggs, one of which was finely dotted with light brown, nest a mere platform of cut blades of grass and weeds placed in dead reeds four feet over the water. A resident only in the large marshes along the river, not very common, also a set of eggs of the King Rail, nest composed of reeds, and placed in bush four inches over water.

May 28. Red-headed Woodpecker, three

fresh eggs, they were deposited on bare wood at bottom of cavity in a tree stump twenty feet up.

May 30. Took a White-rumped Shrike's nest situated among the lowest branches of an oak tree and contained three young, and three fresh eggs of the Lark Finch. Nest placed in a depression on the ground and well concealed.

June 4. Set of Bee Martin's eggs, nest in an apple orchard on the fork of a small horizontal branch and well concealed among the leaves. Went to the Towhee's nest found on the 14th of May and found in the place of of a handsome set of eggs four young. In the same woods I noticed a bird of the Flicker species leave a hole in the dead top of an ash tree, and climbing secured seven incub eggs. The last two finds were in a thick willow swamp, namely three Catbird's eggs and a nest of Yellow Warbler in a thorn bush holding four young and one addled egg. Under the nest was a perfectly fresh Cowbird's egg.

June 5. Jack has no great love for dogs, or cats and will dash unhesitatingly at them. This reckless, headlong courage often gets him into trouble and if he does not learn to be more prudent will some day be the means of his death.

Red-winged Blackbird, set of three incub. eggs, nest placed among the reeds in the usual manner. While engaged in collecting their eggs one must be very careful in pushing his way through the reeds to get as firm a footing as possible, for many of the best appearing places are very deceiving and the collector need not be at all surprised if he suddenly goes down into a hole of slimy water and sticky mud, out of which he will have some difficulty in extricting himself. While collecting in the marshes, a long, light pole to sound the way with, is very useful. When the young are fledged and able to fly this bird leaves the reeds very early in the morning, going inland to feed, and returning to their former haunts at sun down. Long-billed Marsh Wren, set of five eggs from a nest in the marsh hay, which grows in abundance around the margin of the

reeds, also set of Oriole's eggs. This species has been far less common this season than usual.

June 6. Swamp Sparrow, five highly incub. eggs, nest in branch of reeds on edge of marsh. In waste marshy lands it is quite common.

June 12. Scarlet Tanager, while walking through a thick piece of woods to-day I found a nest of this bird situated on the fork of a small dogwood tree, it contained one egg and one young bird.

Wilson's Thrush, nest composed of grass, twigs, and leaves, lined with fine vegetable fibers, placed in a small bush about two feet up and contained three eggs. The nest is almost always placed in a hollow on the ground.

Spotted Sandpiper, four fresh eggs, nest a mere hollow in the ground lined with grass.

Blue Jay, nest fifty feet up in hickory, made of usual material. Two of the three eggs found in it were dark olive-brown and unspotted.

Chimney Swift, set of four eggs slightly incub., nest in chimney of uninhabited log cabin. This pair have built their nest in this chimney for three successive seasons, notwithstanding that I have taken the eggs each season and several times caught and examined the female.

June 15. Jack is shy of strangers and screams in a most ear-piercing manner when approached by them.

June 16. Catbird, nest placed in in some thick bushes. The Catbird and Brown Thrasher are called mocking birds here.

June 20, Three incub. eggs of the Thrasher, nest in cluster of black berry bushes. Not very common.

June 21. Cedar Waxwing, five eggs from nest in orchard, also set of Traill's Flycatcher's, three Yellow-billed Cuckoo's eggs, nest of former in a patch of second growth maple, that of the latter on a platform of sticks in an elder tree. Commoner than the Black-billed species.

July 1. Jack is very voracious and if permitted will gorge himself until it seems as though he would burst, and at such times

seems inspired with the very soul of laziness sitting on his perch for hours.

July 4. From the extremity of a hole in a sand bank, early one-fourth of a mile from water, I took five Bank Swallows eggs.

July 6. Grass Finch, the nest was in a strip of pasture land, built of small twigs and grasses, lined with horse-hair. It contained four eggs.

July 7. Took a set of Black-billed Cuckoo's eggs from a nest in an apple tree. The Cuckoo seldom lays more than four eggs here.

July 24. Three eggs of Chipping Sparrow. Few of our native birds are better known than this sober plumaged little sparrow, also six fresh eggs of Goldfinch, nest in apple tree. I noticed large flocks last winter in the swamps and among the weeds in the fields.

July 26. One of the handsomest and neatest nests found here is that of the Goldfinch, and to-day I found one with four fresh eggs. It was in the same orchard as the one taken on the 24th.

August 8. Indigo Bunting, six fresh eggs, nest in upright fork of small bush, just where the main stem separated.

August 9. Wood Pewee, three slightly incub. eggs, nest on horizontal limb of an apple tree. This species is much more rare than Traill's Flycatcher and the nest is easily distinguished from that of the latter being a flat, compact structure, with thick sides, but thin flooring, in fact so thin that the eggs can often be seen from beneath. It is fastened to a horizontal branch and is covered outside with lichens. It selects a dead limb near the nest and attaches itself to the same spot for many successive days.

August 12. Ever since Jim's encounter with Jack he has shown a marked respect for the latter's sharp beak and strong talons.

August 16. While preparing Jack's dinner to-day, with his Hawkship perched upon my shoulder, I tossed a piece of meat into the air. He flew after it in an instant and caught it before it reached the ground.

Sept. 8. I sat in the yard reading, when I was greeted with a caw, and down came

Jim and perched upon my shoulder. I paid no attention to him and he at once commenced to investigate the contents of my pockets. There being only a few tooth-picks in them I let him withdraw these and conceal them in a knot-hole, after these were disposed of he tried to pull the buttons off my coat, but as they would not come and there was nothing else about me that he wanted, he flew down the walk and lit near Jack, who appeared to be asleep. After watching him closely for sometime to be sure that he was not shamming, for Jim judges everybody by himself, Jim jumped into his dish and commenced eating the few bits of meat left; suddenly out went one of Jack's strong pinions and Jim received a rap over the cranium which I have no doubt made him see stars, at any rate he flew straight across the yard and against the fence with a dull thud and fell senseless to the ground.

Sept. 14. Shot a Bittern. The Am. Bittern although still to be found breeding in favorable localities along the river, is much less common than it was when I became an oologist four years ago. In 1885 I could walk along the river edge and flush several of these birds within two miles, but this season although I was often in their haunts only two birds were seen.

Sept. 8. Shot a Sharp-shinned Hawk and White-bellied Nuthatch. This hawk is very scarce in summer but common in spring and fall, the Nuthatch resides with us throughout the year, being common at all seasons.

Oct. 15. While Snipe hunting to-day I saw a Pileated Woodpecker.

J. C. W.

Detroit, Mich.

The Robin Wintering in the South.

No doubt your Northern readers are all very familiar with the Robin's Summer habits, but his Winter habits suppose they know very little about.

The Robins arrive here about the middle of October, and fill the woods with their cheery notes. They seek the swamps and dense woods mostly, on account of the

berries and mast which they afford. The holly trees are they favorite resorts and in one of these trees a number of these birds can be seen almost any time of the day satisfying their ravenous appetites. But the Robin does not remain all the time so selfish; sometimes he comes near our habitations and partakes of the berries of the china tree. Here he is not as temperate as he ought to be; he eats too much of these berries and becomes intoxicated and falls to the ground.

At this season of the year this bird is in an excellent condition, and notwithstanding the old legend (to kill a Robin makes the cows give blood for milk), they are killed by great numbers. It is said that at a certain point on the Warrior river, in this State, these birds congregate by the millions to roost, and although dozens of hunters are there every night, no diminution in their number is noticeable. The noise they make can be heard two or three miles.

But man is not the Robin's only enemy; he is attacked very often when seeking the china tree, by the Mockingbird and made to beat a hasty retreat. I have a number of times witnessed the above proceeding. The Robin espies the berries and without suspecting the least danger, flies to the tree, but alas, poor bird, his expectation was of no avail.

Winter has nearly passed us now. The Robin sees the approach of Spring, and mounting one of the tallest trees, calls for his dusky mate, utters his shrill farewell note, and is off to his Summer home far away.

C. W., York Sta, Ala.

Feb. 4, '89.

How to Make a Mechanical Egg Drill.

First secure the works of an old clock and see that the spring is not broke, then take off the pendulum, ticker and hands, so that when the spring is wound up, the pinion which turns the hands goes around very fast.

Fasten the works to a small block to keep them from jumping about when in operation. Now get an old tin can and cut two strips from it about an inch long and not quite a quarter wide, and punch a hole in them near the end as large as the hole in the pinion which turns the hands.

Fasten the strips of tin one on each side of the pinion by pacing a pin through the holes and bending it down to keep it in place.

The whole thing may be covered with a neat box (take an old cigar box and cut it down to fit the works), allowing the pinion to project through a hole made for the purpose, cut another hole in it to put the key in to wind it up with. The cover may also be stained and varnished. The drills may be made from a piece of steel, or, better still, Lattin's short handle cheap drill No. 4, 21-100 in.

To operate the machine, fasten the drill on the pinion by placing it between the two pieces of tin and wrapping it then securely together with thread or fine wire—copper is the best. Then wind up the spring and press the egg to be drilled, lightly but firmly, against the revolving drill.

To make a "patent" stop—take a piece of wood and cut a hole in the cover, and stick the piece of wood in the cogs of the wheels; upon taking out the wood the drill will continue to revolve until run down.

FRED W. STACK,
Po'keepsie, N. Y.

Arkansas Notes.

Bird life in this section has been quite busy for some time. Many are just arriving, some have gone, and numbers have yet to come and gladden us with their song. Building is in order with quite a number of the earlier species, while a few have completed their oological collections for the year and such as Hawks, Owls, Vultures, and Pileated Woodpeckers are ready to hatch.

My collecting this year is headed by an "April Fool". I had been watching a Downy Woodpecker's nest for some time when, on the 1st of April, happening by the

tree, a large black oak, I thought I would get the eggs then and save another trip. So up the tree I went, without climbers, hatchet or saw. I cut a limb with my knife to pry with, and after half an hour's hard work the hole was opened to the bottom, only to disclose an empty nest. I descended, resolved not to be so hasty next time. My first set, April 2d, was that of five Pewee eggs, one of which was dotted with specks of cinnamon. As it is invariably the case in this locality the Pewee builds under cliffs and in the mouth of caves. The nest was of the usual material, mud, moss, grass, leaves and fine strips of bark.

Blue bird, April 4th. Five bluish green eggs. Nest was placed in a black gum stump one foot from the ground and was made entirely of grass, leaves and stems. I look for the Blue bird to build on the ground next. This find calls to mind an inst. of a Grass Finch, which was placed on the top of a stack of timothy hay, in 1886. I have no excuse for the Blue bird, but the sparrow evidently built high to avoid the water on the ground in that wet season. The nest had four young birds in it, which furnished ample proof. Was not that reason? Ap. 6. Two sets of Pewee, five eggs each; and a partial set of three Downy Woodpeckers. Last year common Red-heads were thick, but not one is here this year.

First Whip-poor-will here, April 4th; Summer Red Bird, April 7th; Scarlet Tanager, April 8th; Black and White Creeper, March 15th; Brown Creeper, March 26th; Blue Gray Gnatcatcher, March 17th; Wild Geese, 20-21 of March. Robins do not sing here; they nest thirty miles north.

"ARKANSAS HOOSIER."

Clinton, Ark. April 28, '89.

A Goldfinch in Confinement, and Other Items.

There are many instances of keeping wild birds that have been taken from the nest, and I have a bird which I caught full grown. It is a male specimen of the Goldfinch, which had its wing broken. I picked it up

in a field where it had been eating thistle-down seeds and was so far removed from water that its bill was covered with rust. On placing it in a cage, it quite adapted itself to its new mode of living and the next morning it was eating as if it were in the fields. I placed the cage out of doors and in half an hour there were two other birds of the same kind on it. These new comers would allow you to approach within two or three feet before flying. On account of the changing of its coat twice a year, we named him "Mugwump".

Mugwump was ill-fated, however, as most other birds are and had his eye picked out by Gyp, the canary. He lost the other last summer. On account of the extreme tameness of the wild birds I captured another by simply setting the cage in the house and opening the window. In half an hour or so another bird came into the room; I then closed the window and picked the bird up. I kept him for a week and let it go.

Poor old Mugwump is now deaf, dumb and blind and will soon die.

In regard to Albino eggs, talked of in your paper, I will add my experience. I took, about 3 years ago, a set of four white eggs, of the Blue Bird, from an old natural cavity in a tree. At a different date I took a set of spotted Phœbe eggs. Last spring I found a set of six Yellow-shafted Flicker's eggs and about two weeks after a set of five eggs of the Bluebird, out of the same hole.

D. B. M.
Lockport, N. Y.

The Burrowing owl.

Spotylocunicularia hypogœa (BONAP) Ridg^e

The Burrowing Owl is not a bird attendant on civilization. Long before the trains of prairie schooners started westward to California he reared his brood upon the plains unmolested, where he loves to stay. They remain near the nest during the day, feeding principally at night, though they are seen oftener during the day time than any of the other *Strigidae*.

The food of the Burrowing Owl is composed principally of insects. He eats a large number of grasshoppers and locusts thus preventing their too rapid increase. As many as 59 locusts have been found in his stomach at one time. Besides this he often catches mice and occasionally a ground squirrel or a lizard.

The Burrowing Owls remain in pairs throughout the year. They are quite common in this locality. The nest is usually made in the deserted burrow of the ground-squirrel, though they are capable of excavating one for themselves. The hole is from three to six feet in length and one to two feet below the surface of the ground. They commence laying early in April. The eggs are pure white, six to eleven in number, elliptical in shape, and measure about 32 min. by 25 min.

In this locality the Burrowing Owls *invariably* place in their nests a quantity of horse manure as soon as they commence to lay. This is apparently removed and more supplied so that by the time the set is completed quite a pile accumulates. This is a sure indication that the nest contains eggs. I would like to hear from other collectors in other localities regarding this habit.

When you approach the nest the birds commence thicking their heads and calling out cuckoo. From this cry the boys in this locality call them the cuckoo-owl. If you go near they fly to some slight eminence near and watch you. If incubation is advanced or the nest contains young, the female remains in the burrow. If you dig down to the nest she is even then loth to leave and may be easily caught and examined more carefully. Many pleasant hours may be spent in watching them.

A. L. S., Anahim, Cal.

April 29, 1889, while out after eggs I came across a Robin's nest in an old shed, upon climbing to the nest I found 4 eggs of the common size, with reddish brown spots, over the entire surface. I have one in my collection now. H. F. M. Quechee, Vt.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

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Single Subscription, - - - 50c per annum.
 Sample Copies, - - - - 5c each.
 The above rates include postage and premium.

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Our Reply.

A little amateur four page sheet published in one of the great cities of the Empire State has seen fit to give the OOLOGIST and its publisher a gratuitous advertising puff in its editorial columns, this puff we would have never discovered, had not some of our friends to whom samples (?) had been sent, written us very kind and flattering words in regard to both the OOLOGIST and its publisher, and also had we not receive a letter from the publisher of "the sheet" from which we quote—"trust you will reply to our article in last number of our paper, through the columns of the OOLOGIST." Were it not for these circumstances we would have been so busy attending to our own business that the brilliant, suggestive and highly instructive article would have entirely escap-

ed our notice; and even if it had not, we should not have considered of sufficient importance to have noticed it, and now being in the midst of the busiest season we ever experienced, we have neither the time, nor space to devote to a suitable reply, even if the article had been printed by a publication of standing, but as it is we simply make a few statements which, if not already self evident, we can verify with both *facts* and *figures*.

1st. The writer of the article is not a true Oologist.

2d. He does not understand his own business, let alone that of the publisher of the OOLOGIST.

3rd. As long as the publisher of the OOLOGIST conducts his business honestly, a disinterested party should attend to his own affairs.

4th. The actual number of paid subscriptions to the OOLOGIST is greater than of all other American publications devoted to ornithology and oology combined.

5th. That the actual average circulation of the OOLOGIST has been *two thousand five hundred* (2 500) copies each issue for the past six years.

6th. A subscriber has never yet complained to the publisher that he was not receiving the worth of his money,

7th. Hundreds have written saying that they would not be without the OOLOGIST for many times its present price.

8th. Should the OOLOGIST have any subscriber, or subscribers that can honestly claim that they are not receiving information in regard to birds, their nests and eggs of greater value to them than the amount invested, we will return their money with *50 per cent. interest*.

9th. The publisher of the OOLOGIST publishes and agrees to publish eight pages of instructive matter relating to ornithology and oology in each monthly issue, if more is published it is the subscribers gain.

10th. The advertising pages are printed at the publishers expense, and should their number ever be so great as to jar the more sensitive natures of our subscribers or the jealous ones of our exchanges, it is our re-

quest that they either overlook or tear them out.

11th. We have several hundred subscribers that would rather pay us an additional 50c. per year than to have the OOLOGIST published without its advertising pages.

12th. That inasmuch as *over four hundred* of the OOLOGIST's subscribers have already paid in advance for Davie's *New Check List* and fully as many more are anxiously awaiting its issue, we know from experience that anything that conveys an idea to the waiting oologist that the work is ever to be issued, is of decided interest.

13th. As to the OOLOGIST "degenerating into a third-class paper," we would simply say that we are willing to submit the last twelve issues of our little magazine to a committee of five *live oologists* and if from their verdict it is determined that the *average* value of *each* issue is not greater from an oological and ornithological standpoint, than *all* the issues of any four-page amateur publication in America during the same period, we will donate to any school or college they may name a collection of bird's eggs worth not less than fifty dollars.

As a reply to the editorial we might suggest the following letter, as it handles the subject with much greater ability and fairness than could possibly be done by the editor of the OOLOGIST. Much value and weight is added to the letter from the fact that it was written unsolicited by a disinterested party, and that further the gentleman is not only an oologist, but an editor of one of the leading newspapers of Vermont, *viz: The St. Johnsbury Calendarian*.

We purposely omit the name of the sheet publishing this "trash" as we have no desire to give it the benefit of "our reply" as an advertisement.

St. Johnsbury, May 18, '89.

Mr. Lattin,

Dear Sir:—The last _____ has such an unwarranted as well as false attack on the merits of your little magazine, that I want to offer an unsolicited tribute to its value and merit. From a newspaper standpoint, and my business makes me view

it in that light, what can any one think of a paper which prints such rot as this?

"We are advised that a certain publisher is passing criticisms on the last number of this paper. If we are able to find out who the knock-kneed, long-legged, gamble-slanked, big footed, bleary-eyed, dilapidated specimen of a man is we wont leave enough of him to fill a humming-bird's egg.

I took this from the _____ under the head of *editorials*.

Your magazine is well edited, its advertisements have built up my small collection of eggs, as you well know, and the idea that is a third-class paper is false. Success to the OOLOGIST.

Yours Truly,

Arthur F. Stone.

This is the *editorial* (?) I refer to.

The slobberologist of Albion is degenerating. It used to be second to none, but has now degenerated into a third-class paper. About one-half of each issue is taken up with its bargain lists, which bargains no body wants, one-eighth to Davie's new check list and the rest to some scientific discussion which interests no one but the person who writes it. "Wake up" Mr. Mattin and save your paper's reputation.

Ground Dove.

Having seen a good deal about the nesting habits of this bird, I will tell what I know about it. I noticed an article by L. S. Morrison, Lake Helen, Florida, in which Mr. Perry says: "Have been collecting for fifteen years and never found nest of this bird on the ground". Out of five sets that I collected in 1888, four were laid on the ground, the nest being simply a slight hollow in the ground, lined with a few straws. Its nesting season is any time from February to October. The bird is very abundant in this county. They become very tame and stay around a house like the Mockingbird. There were two nests built within 75 feet of my house last season. Hoping to hear more about this beautiful bird.

W. E., Thonotosassa, Fla.

GLEANINGS FROM OUR CORRESPONDENTS.

Notes and Items of Interest, Queries and Answers.

L. R. C., York, Nebr., would like to know what part of the U. S. furnishes the best field for collecting and studying the nesting habits of aquatic birds.

W. H. L., Jr., would like to know the correct name of the hawk known as the Blue-darter Hawk, in this locality (Covington, Ga.). We think it is the Marsh Hawk.

Fred Allin, Iowa City, Ia., wants to know the correct name for the Wild Canary, and Ground Chippie of his locality.

J. A. B., Morganton, N. C. Says: "I would like to recommend to the readers of the OOLOGIST the instrument case, described by J. H. F., Jr., Baltimore, Md., in the Aug., Sept., 1888 OOLOGIST. I recently made one according to directions and it is a beauty. Instead of covering the outside with Alligator skin, I stained it black and varnished it.

H. E. Fisher, Prairie du Sac, Wis., writes. "To-day, Feb. 18th, I found a nest of the Great Horned Owl, *Bubo Virginians*. The nest was made in a hollow tree, of sticks so that it would not go to the bottom of the tree and then some leaves, and then lined with feathers. It contained one egg which measured $2\frac{1}{4} \times 2$ inches, which seems to me to be rather small.

Sam. E. Bacon, Erie, Pa., writes: April 7th, '88. Found the first nest, Kildeer's, one egg. May 26th. Found a Robin's nest in a large cavity in an apple tree. May 30th. Found three nests of the Chipping Sparrow on the ground. They were all in orchards, in long grass.

I have a white egg of Blue bird, unspotted, and a spotted egg of Purple Martin; also a Spotted Sandpiper's, measuring 94×75 , and a Bee bird's, measuring 76×68 ."

From C. J. Schafer, Eddyville, Iowa, we receive the following: Not having seen much news from Iowa, I thought I would send you a few '88 notes from my Field Book.

The first Robin appeared Feb. 21, began nesting April 8th.

First Blue bird appeared Feb. 18th. The first nest was in an old tree April 3d.

First Red-and-buff shouldered Black bird was seen March 13th, found a nest May 27th, in a large hazel bush at the edge of a pond, containing four eggs.

First Shrike was seen March 14th. (I saw one this year in Jan.); began nesting April 20th. and on the 29th found a nest with five eggs.

First Purple Martin appeared on March 18, began nesting April 29th.

A. W. Nolte, of Los Angeles, Cal., took a set of the Costa's Hummingbird on Feb. 3rd. and one of the Black-chinned, Feb. 6th.

A. S., Anaheim, Cal. The Mourning Dove is so common to require a description. The Ground Dove is a very small species no larger than a good sized sparrow and could not possibly be mistaken for the former. In some localities the Mourning Dove nests on the ground.

At a recent sale, in London, Audubon's Birds of America" brought \$1535.00.

We think that the "nearly full-grown, young Grass Finches", found by G. S. J., Jeff. Co., N. Y., on April 19 were Shore Larks.

P. C. W. Walden, Mass. writes of an English Sparrow building its nest over the globe of an electric street light.

I do not agree with the article written by D. B. R., in the Feb. OOLOGIST. He states that Blue-birds either lay entirely white or entirely blue sets. Last summer I found a set of six eggs of the Blue-bird. Two were pure blue and the rest were snowy white. W. E. L., Peoria, Ill.

C. Bacon, Bell, Ky., took two sets of two eggs each of the Gt. Horned Owl on Jan. 12th.

Geo. Boyd, of Roseville, Ills., wants to know the correct name for the "Mouse Hawk", a small hawk of his locality.

Several Cala. collectors wish to know how they can distinguish the different species of Hummingbirds.

Frank L. Farley, of St. Thomas, Ont., records his first set of Red-tail Hawks for '89, on April 2nd.

F. C. Grinnell, Ia., writes that a set of the Gt. Horned Owl was taken. at that place, Feb. 9th.

In reply to H. J. K., Elba, N. Y., would say that the Brewer's Blackbird is a western species.

The Bronzed and Purple Grackles are both known as the Crow Blackbird, and that the "Heigho" is the Flicker. "Hell-diver" is doubtless the Thick-billed Grebe, and the "Lazy-bird" is the Cowbird.

S. C. Crump, of West Bay City, Mich., had his collection of eggs on exhibition in Bay City at the Michigan State Poultry and Pet Stock Association's annual show, and they were viewed by about 6000 people during the week. They nearly filled an eight-foot show case and caused considerable discussion. One man would say they are worth a thousand dollars, and then would come an old lady who would say, they are all humbugs, they are painted, they are plaster of paris &c.

A. L. C., Hartwick Sem., N. Y., writes as follows, in regard to finding a set of fine Nashville Warblers on May 20th:-

"The nest was built on the ground, on a side-hill covered with small bushes. The nest was built of fine strips of bark and moss, lined with fine hair. The eggs had just begun to show signs of incubation".

Neil F. Posson, Medina, N. Y., writes. I observed, on Feb. 22nd, a pair of Red-breasted Nuthatches. They were in company with the White-breasted species and Chickadees. Is not the occurrence of this species, in winter, in this locality, unusual? I had supposed that it was a migrant, and that it wintered much farther south than this.

Davie's Egg Contest, No. 2.

Owing to an extraordinary rush of business, we were unable to announce the result of the Egg Contest in *JUNE OOLOGIST*. Below we give the result, which must prove very satisfactory to the contestants. The prizes were awarded as follows:

- 1st. Glenn F. Stearns, Texas.
- 2nd. H. G. Askew, Texas.
- 3rd. John B. Bastian Jr., Penna.

The winners of the first three prizes sent orders amounting to from \$5.00 to \$7.55 each.

- 4th. W. H. Smith, N. C.
- 5th. Howard de F. Earle, Conn.

As there were no other orders of \$2.00 or over the 6th to 10th prizes were not awarded.

The balance of the prizes were awarded as follows:

- 11th. H. Myles, Canada.
- 12th. D. W. Wright, Va.
- 13th. Chas. E. Craw.
- 14th. F. E. Atwood, Vt.
- 15th. Geo. F. Gueff, N. Y.
- 16th. W. F. Lewis.
- 17th. Will J. Cosgrove, N. Y.
- 18th. L. H. Grant, N. J.
- 19th. John Skinner, N. Y.
- 20th. G. Lindsay, N. Y. City.
- 21st. J. A. Black, Neb.
- 22nd. W. K. Pratt, Mass.
- 23rd. Geo. H. Bockoven, N. Y.

The winners of prizes No. 11 to 23 sent us orders ranging from 50 cents to \$1.74 each. If any errors have been made in the award of prizes please notify us at once and we will rectify.

Birds of Eastern North America.

With Original Descriptions of all the Species which occur East of the Mississippi River, between the Arctic Circle and the Gulf of Mexico, with full Notes upon their Habits etc., by
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Not only were the land birds carefully studied, but special attention was also given to the aquatic species, and many large breeding grounds on the Florida Keys, along the coast and in the Gulf of St. Lawrence, were visited and thoroughly explored. No time or expense has been spared in accumulating material for the work, for the expeditions undertaken for this purpose were necessarily expensive, as the author was obliged to employ many assistants, and thousands of dollars were expended in this way.

THE CHARACTER OF THE WORK.

The descriptions of the birds are all original and were written for the work, nothing which has ever appeared in print before, being given. Each species is described in detail, beginning with the adult, and where it was known, ending with that of the nestlings, while all the intermediate stages are given. The attention of students is particularly called to this point, as thereby any species, even if in obscure plumage, may be readily identified. Another character, which particularly recommends the book to beginners, is the fact that very few technical terms are used, simple words being substituted for the long and too often meaningless cognomens, which have been applied to the various parts of birds. Students will also find that comparisons are given between one species and others allied to it, thus greatly assisting in identification, especially in closely allied species.

The classification used, although similar to that in current use, presents some changes, based upon the anatomical studies. Average dimensions, often taken from many specimens, are given of each species, as well as the longest and shortest individual measured. The distribution and extent of migration of each species is also given, and a detailed description, with measurements of the nests and eggs. The num-

ber of species described is 449. Following the description will be found a popular account of the habits etc. in which are mingled scenic sketches and notes on travel and adventure. The work is provided with full indexes of scientific and common names, and an explanatory list of plates.

THE PLATES.

Thirty-two full-sized plates, drawn on stone and colored by hand, are given. In these are represented twenty-two life-sized figures of birds, with appropriate plants, shrubs etc.; eighty-six heads, also life-sized, representing many genera, and two hundred and twenty-three other figures of sternums, beaks, etc., illustrating family generic and other characters, making in all *three hundred and thirty-one* figures, which are fully explained either in the text or in the index of plates at the end of the volume. All of the figures have been prepared with great care; in short, no pains or expense have been spared to render this work acceptable to beginners, as well as to advanced students; and judging from the universal expressions of approbation with which the work has been received, as it has been issued in parts, the author's endeavors to please the public have not been in vain.

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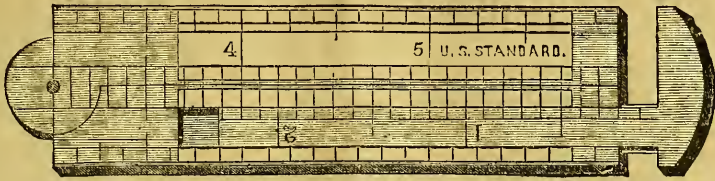
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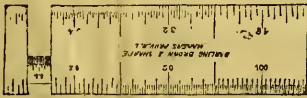
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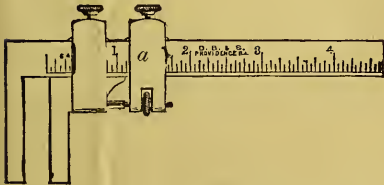
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Vol. VI,

ALBION, N. Y., AUG., 1889.

No. 8

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TO EXCHANGE.—First-class original sets with data of Nos. 47, 63a, 149a 182, 154, 240b, 261a, 274 and 338. Send your list of sets. WALTER RICHARDSON, 435 So. Moline Ave., Pasadena, Cal.

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"EXCHANGE EXTRAORDINARY" IS AGAIN RENEWED THIS MONTH, BUT WILL BE WITHDRAWN ON AUG. 20th. SPEAK QUICK IF YOU DESIRE TO ACCEPT ANY OF THE MANY OFFERS.

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F. W. McCormack, Box 34, Leighton, Alabama.
W. N. Fleming, Box 1267, Natick, Mass.
Ed. Collett, 1400 Colo. St., Austin, Texas.
E. D. Ball, Little Rock, Iowa.

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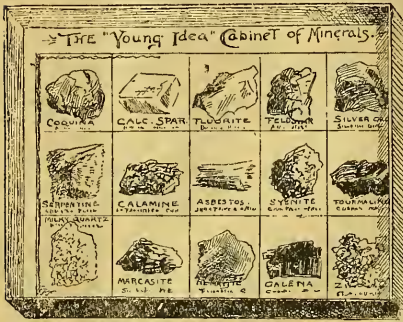
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THE OOLOGIST.

VOL. VI.

ALBION, N. Y., AUG., 1889.

NO. 8

Notes on the Eggs and Birds of Hillsborough Co., Florida.

The following is a list of the eggs taken by the writer during the spring and summer of 1888, and some notes made at time of taking the eggs. I have carefully prepared the notes and trust they will be of interest, and hope to see more such from other states. Write your experiences, collectors, and thus help to popularize oology.

Mar. 6. Took my first set for the season consisting of a set Loggerheaded Shrike, containing five fresh eggs. The nest was placed in a lemon tree in a neglected orange grove.

April 25. Took my second set of Shrike's eggs, in the same grove and am positive, of the same birds. The location of the nest was unchanged to an orange tree. This set also contained five eggs.

April 27. Took my first set of Mocking Bird's, containing four fresh eggs. Nest situated in an orange grove in one of the trees. And the same day I found a set of two, same species, the complement not being complete.

April 28. Visited a large Florida Cormorant and Brown Pelican rookery. The birds had built many nests, but there were yet no eggs. There was perhaps 500 Cormorants and 200 Pelicans breeding on this key which consisted of about 3 acres of heavy mangrove timber. The nests were made in the mangrove trees, from 10 to 35 feet from the ground, and made of coarse mangrove twigs, lined with grass and green leaves (mangrove). They were white with excrement, and filthy.

Apr. 30. Decided to spend the day hunting specimens. 10 A. M. I took my first set of Fish Crow. The nest was situated in a pine tree, about 35 feet from the ground, composed of

coarse twigs. Then walking by a pond and seeing many Boat-tailed Grackles, I commenced hunting for their nests and soon took a set of two. The nest was placed in a low bush, and was bulky, deep and strongly fastened. Composed of very coarse grass. In a few minutes I found a second set of 3. As the pond was nearly dry, I walked out to the center. In a small hole was many small alligators. I found two more sets in the grass, and walked on. My next find was a set of 3 Mocking-bird's placed in a deserted orange grove. The set was fresh. On my way home I walked through a button-wood swamp and discovered a set of 4 Green Heron's. The nest was a frail structure of twigs placed in bushes, 4 feet above water. In a neighboring pond took a set of 4 and one of 3 fresh B. T. Grackles. Reached home tired but happy.

May 1. Took a set of 4 Least Bittern. The eggs were fresh. The nest was a mere platform placed in a cluster of ferns, on the edge of a muddy pond.

May 2. Tramped all day, and took 1 set of 4 Mocking-bird's. Nest in orange tree. Eggs fresh.

May 6. Took a walk up the bay shore and found a set of 3 and one of 2 Boat-tailed Grackles in the pond where I found my first set. The set of 2 was found in the same nest in which I found my first set of 3, (April 30.) I thought it rather odd.

May 15. On my way home from work, found a set of 2 Mocking-bird's eggs. The nest, as usual, was in an orange tree, and composed of orange twigs, root fibers and blue lupen leaves, not so compact and strong as that of the Shrike. The set was fresh and incomplete. In another tree near by I found a set of 5 fresh eggs of the Lg. H. Shrike. The nest was well built of or-

ange twigs and lined with thistle down. The parents sat near by, and the cry of the female was piteous indeed. He, who has not soul enough to feel deep sympathy with the parents cry of distress, is not much of a naturalist.

May 16. Visited the Cormorant rookery mentioned previously, and found vigorous preparations for building going on, but no eggs. Met one of those pesky "plume Hunters" trying to secure an egret or two. He showed me a set of three Green Heron's eggs; they were fresh and placed on a mangrove tree, about 8 feet from the ground.

May 21. Went to a Bayou to hunt Rails eggs, and tramped for hours and found one rotten egg and got disgusted and left. Followed up the banks of a creek and saw two nests containing young Green Herons and got one set of 2 fresh eggs. Saw a nest containing 3 eggs, nearly 25 feet up in a sapling; an unusual height for a Green Heron.

May 26. I again visited the Cormorant rookery, with better success than before. Climbing a mangrove tree, in which all the nests were built, I was pleased to find 3 nests containing 3 eggs each; you may be sure I "jugged" them. The nests averaged 30 feet from the ground. I next took a set of 4, and then 4 sets of 3, 1 set of 2 and 1 set of 1. Leaving the key, went to outside flats to look for Gulls' eggs; found none, and came to a key, and while exploring, found a set of 1 Chuck-wills-widow's. The egg was laid under a young pine tree, on the pine straw. There was no attempt made to build a nest.

May 28. My brother and I started on a trip down the coast to turn sea turtles. We reached Passage Key, 12 miles from Bonifacio, at dusk. Many hundreds of Laughing Gulls hovering over the Island, gave promise of a successful day to come; so retired full of pleasant expectation.

May 29. Arose, and after lunching,

we landed and proceeded to hunt for eggs. The key is covered with tussocks of coarse grass, and in this the Gull usually makes a wallow and deposits her eggs, but sometimes she lays on bare sand. We had found one set of three, 6 sets of 2 and 3 sets of 1, by noon. Then entering a thicket, on the edge of a pond, in the key, we found a colony of Louisiana Herons, nesting, and obtained 8 sets of 3 and 1 set of 2. The nests were made of loosely arranged sticks and very poorly constructed. Wading along the edge of the pond, I discovered 2 sets of 3 fresh eggs of Grey Kingbird. The nests were remarkably thin and weak, composed of brown fibrous material and placed about 6 ft. up. Also found one set of B. T. Grackle's, 3 fresh eggs in the set; nest placed in mangrove limb, overhanging the water.

June 3. Returning with a load of turtles and turtle's eggs, we landed again on Passage Key and collected 15 sets of 3 and 2 sets of 2 Laughing Gull's. Leaving the key at noon, reached home safely.

June Myself, a gentleman and wife went to Passage Key. I found 1 set of 3 and 3 sets of 2 Laughing Gull's. On the northern end of the key the Black Skimmers were nesting on a bare sand spot. proceeded thither and found 2 sets of 3, 1 of 2, 8 singles. Leaving late, we sailed home.

July 29. While on my way to work, passing through a low piece of ground, I flushed a Night Hawk and was much pleased to find a set of two fresh eggs. The variation in the set was very marked, one egg being quite dark and very thickly spotted with brown, and the other nearly white with only a few blotches on its surface. The eggs were laid in a most open spot and there was not even a wallow to serve as a nest.

This completes the list of specimens taken during the year 1888. During the present year, expect to take many new species (to me) and will send in

such notes as I think may be of interest from time to time. Let us see more original articles in the OOLOGIST.

C. S. M.,
Bonifacio, Florida.

The Shore Lark in Canada.

On the 20th of this month, March, I found a nest of the shore lark, which I think must be the first of the season for this latitude. The nest contained 3 fresh eggs. None of the early sets I ever found of this species ever numbered more than 4 eggs, and once only 2, which were the first I had found of this bird. The largest set I have taken is 6 eggs. It seems to me that the Shore Lark begins nesting in March as soon as bare ground appears and exposes the dead grass with which they make their very plain nest, which so much resembles the surrounding earth that to find it without flushing the bird or watching her to her nest is a pure accident.

Very often in this locality we have a heavy snow fall late in March, or early in April, which must destroy nearly all the early broods, but some certainly escape for I have seen large young of this species following their parents in April while some snow still lingered in the fence corners.

I well remember the first nest of this species which I found. It was placed on the bottom of a large gravel pit. I had seen a Shore Lark fly silently out of this pit whenever I came near to it, and I searched carefully for a nest, but owing to the size of the pit, perhaps $\frac{1}{2}$ acre, or most likely the sameness in appearance of the nest and gravel, I failed to find it until the morning of April 3d, 1879. On the previous night there had fallen about 3 inches of snow, and I thought "now's my chance to find that nest." I approached the pit carefully and looked over the bank and saw the bird rise leaving a small bare spot on the ground where she sat. I ran down in glee to the nest, and found that it contained 2

eggs which proved to be rotten. During the next night snow fell to the depth of 13 inches. Now can you imagine such a thing as birds hatching eggs beneath a foot of snow? During the next day or two many shore larks came to the barnyard and lingered about until the snow melted. For several seasons, late in March when the weather was very cold and snow deep, I have shot a few Shore Lark and found that the females invariably had bare and wrinkled bellies which proved that they had been endeavoring to hatch their young, but had been overtaken by adverse weather.

JOHN A. MORDEN,
Hyde Park, Canada

The Belted Kingfisher.

The Belted Kingfisher is found throughout North America, its color is blue above and the lower parts white, the length is about thirteen inches and the extent of the wings twenty-two. Its flight is rapid and it often suddenly stops, like a Sparrow-hawk, and hovers over the water, dashing headlong after its prey which it carries to the nearest stump or tree and swallows instantly. It follows the course of rivers, even to their source and its presence near a stream is good evidence that fish are abundant.

The nests are made in holes dug to the depth of from four to six feet in a bank, the entrance being just large enough to admit the bird, and the end rounded like an oven.

The eggs are generally six and pure white. Incubation lasts about 16 days being performed by both parents.

May 19, 1888, I took five eggs of this bird from a hole in a high river bank. This nest was not more than 2 feet from a nest that I dug out in 1887.

May 28th, I dug out another nest containing one egg. This probably completes the set found on the 19th.

EDWARD L. KITTRIDGE,
Milford, New Hampshire.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

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Single Subscription, - - - 50c per annum.
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The above rates include postage and premium.

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ALBION, Orleans Co., N. Y.

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Can Quails be Domesticated.

Some one asks through the OOLOGIST if the Bob-white or Quail can be domesticated. I will tell you an incident that came under my own observation. When I was quite small my parents moved into the country, thinking the free life of a rural home would be much healthier for growing children than to keep them housed up in town in a sea of smoke and bricks and mortar. And so it proved to be.

There were very few Quails on the place when we moved there, they having been killed off by hunters from a town close by.

After father took possession he would not kill the Quails nor permit others to do so; consequently it was not long

until the birds of all kinds began to know where they were welcome and where they would be protected. The Quails each year became more plentiful and not so wild, until one pair more trusting than the rest, came into the garden and made their nest in a bed of onions only a few yards from the house. They grew so tame we could part the onions and look in upon their quiet home without the old one leaving her nest. After the young were hatched they remained about the garden until winter set in, when they went to the woods for shelter, returning occasionally, each time with their numbers diminished.

When spring came the old ones came back and took up their abode in the garden again, this time making their nest under the projecting end of a rail but a few feet from where they had built the year before. When the female had been sitting about ten days we went out one morning to find her torn from her nest and devoured, presumably by some prowling old cat. This, we thought, would scare our friends away, but the remaining bird mourned his loss for two or three days, then took possession of the nest, and, to our great surprise, hatched every egg. They scarcely went outside of the garden until they had their growth. They took great delight in getting into some hotbeds in the garden to dust their feathers, often causing sad havoc among the young plants. If they had turned every hot-bed in Christendom topsy-turvy, it would not have lowered them any in our estimation for they seemed almost a part of our family. We never tried to house them, but for several years would plant a patch of pop-corn in the garden for them to stay in, and to have a place to feed them. We fed them principally on sorgum seed, gathered in the fall and stored away for their especial benefit. They knew as well as a flock of chickens,

where to come for their feed, and were a great deal tamer than a great many chickens are. The last winter we were on the farm, we fed seventy-six. To see such a flock eating their breakfast, and hear their chatter of delight, is a sight never to be forgotten.

I have not the slightest doubt but with patience and care they can be domesticated and taught to go in a house to roost.

MISS L. I. C.,
Richmond, Ind.

Red-tailed Hawk.

Buteo borealis (GMEL.)

This bird is a common resident throughout the year in this locality and one of the most familiar sounds from early spring till midsummer, is its weird cry as it slowly sweeps in majestic circles high above the timbered bottom lands or grassy prairies in search of their favorite food, timber rats and field mice. This much slandered bird, known in every state in the Union as the "hen-hawk," is ruthlessly shot and poisoned by young and old whenever the opportunity is presented, simply because his smaller and much bolder cousin, *Accipiter cooperi*, makes his meal of poultry occasionally. I have been a close observer of the local *Falconidae* for several years, and although I have on several occasions seen the Coopers Hawk dash into the barn-yard and bear away a chicken or young duck, I have yet seen *Buteo* take poultry of any kind, although he may do this in other localities.

The Red-tailed Hawk is almost invariably seen in pairs throughout the year. During the latter part of February and first March they confine themselves almost exclusively to the vicinity of the nest they had used the previous year and by March 15 they have completed their set of eggs. If they are left undisturbed the young will appear

during the second week in April. They are large, awkward, helpless things and remain in the nest for four of five weeks, or until they are full grown and full fledged. From the time the young appear until they leave the nest, the parent birds are untiring hunters and the amount of rats mice, etc., that they bring to feed the ravenous crew is surprising.

Within a radius of a few miles of my home are least seven nests of this bird that have been occupied annually for years, and apparently they never change owners. They are invariably placed in the highest trees in the immediate vicinity, without regards to variety, for I have found them in oak, elm, bass and sycamore, the distance from the ground varying from 50 to 80 feet. There is very little variation in the build or material used in these nests. They are usually about 30 inches in diameter by 20 inches in depth on the outside and only slightly hollowed on top, composed of dead branches of the size of one's thumb, interwoven with smaller twigs. They are usually lined with shreds of grapevine bark, but some have only a few twigs of cedar, and others are partially lined with cornhusks.

Davie gives the number of eggs in set as generally three, sometimes two or four. Size 2.40 by 2.00. Goss in his work on Kansas birds, gives number of eggs in set three or four, size 2.30 by 1.84. My observations do not exactly agree with those gentlemen, although they were undoubtedly correct as far as their localities are concerned. During the last two seasons I have taken two sets of *Buteo borealis*, two sets of three each and five sets of two. I also climbed up and examined three other nests whose contents I did not disturb. One contained two eggs, the others each contained two young birds. From these observations I have come to the conclusion that in this locality two eggs is the usual complement, occasionally

three. The eggs, like the eggs of all the Raptores, vary greatly both in size and markings. The ground color is bluish white and the normal specimen is uniformly spotted over the entire surface with large and small spots and blotches of reddish brown and amber. I have one egg in my collection that entirely lacks the markings, only having a faint brownish tinge on the smaller end. Another has a large, mottled reddish-brown blotch entirely covering one side, while the other side is free from markings of any kind.

The average size of the sixteen eggs I have collected is 2.43 by 1.86. The smallest measuring 2.37 by 1.81 and the largest 2.53 by 1.90.

This bird shows none of the pluck and dash in defending its nest that is often seen in the smaller hawks. When the nest is being rifled it generally sits on some lofty tree in plain view, but hardly ever approaching within one hundred yards of the collector. Their persistency in keeping the same nest year after year is wonderful. When once they are established it is almost impossible to dislodge them. Last year, 1888, I took a set of eggs on March 18th and another on April 8th, both from the same pair of birds, and on May 3d they had again deposited a set of two which I had not the heart to take. The young from this set did not leave the nest till the latter part of July.

Although I have never had the opportunity to examine minutely the plumage of the adult bird or take measurements, still his general appearance is almost as familiar to me as is that of the barn-yard fowl, and undoubtedly every collector in the Union knows the bird at sight, which he first identified by seeing the brick red color of the under side of the tail feathers.

March 20, 1888.

D. B. R.,

Beattie, Kan.

An Untimely End of a Set of Brown-headed Nuthatch Eggs.

There is a saying that there is always some bitter with the sweet, so it was with my first eggs collected this year ('89). On the 15th of March, with a companion, I started, afoot, for a little hunt of a day or two, after Gt. White Heron eggs. Our course led through a desolate pine forest for eight or nine miles. We trudged along the sandy road for several miles without seeing anything of note when I suddenly caught the sound of a Brown-headed Nuthatch's clatter. I called the attention of my companion to it, but was about to pass on again when the noise was repeated. This time there was no mistaking the sound. Going in the direction of the sound, we were soon rewarded by seeing a Nuthatch hanging to the side of a snag, about eight feet high, flipping his tail up and his head down, each time uttering an alarming cry. On our near approach the bird flew to the trees, and there in the side of that rotten stumb was a tiny hole scarcely an inch wide. With great care a small portion of the rotten wood was broken away and my companion peeped in. Then he jumped up and gave such a yell as old Florida hasn't heard since the Seminole war, and said "Gill there is two eggs in there." Then we both yelled and rolled on the ground and yelled some more. After we had got our happiness somewhat under control; more of the rotten wood was taken away, and lo! not two, but *seven* beautiful fresh eggs met our gaze. O! they were pretty; I can see them now, six lying in a circle around one in the middle. The nest was composed of bits of wool and pine bark, together with fine chips of rotten wood. We soon had them secure, and "went on our way rejoicing." Now this was the sweet part, the bitter came that night.

Our camp was in an old cabin where an unscrupulous "bachelor" lived, who, it seems, could not tell a hat lying on the floor, with a handkerchief spread over it, (for in this were the precious Nuthatch eggs) from his Sunday shoes and socks; so when he went to get ready for a dance that night, the hat with the handkerchief were grabbed up to put on his unworthy feet, when dip, dip, dip, went every egg on the floor. Now this was the bitter.

T. G. PEARSON,
Archer, Fla.

—————
**Broad-Winged Hawk. Black-capped
 Chickadee.**

April 20th, at Bradford, Mass., I found a set of two eggs of the Broad-Wing Hawk, incubation just begun. The nest was situated in an oak tree 40 feet from the ground, composed of sticks and lined with grass. The female left the nest when I got within 30 feet of it; so I had a good chance to identify her. The measurements of the eggs were 2.10x1.70 and 2.12x1.70.

April 26, at Bradford, Mass., I found a nice hole excavated in a dead popular stub about 7 feet from the ground. The tree was in a second growth of hard wood and near a clearing. Went to it again May 5th and found a nice nest inside made of green moss and lined with rabbit hair. Thought it was about completed but could not see any bird around. I thought I would give them time to complete the set, so I did not go to it again until May 15th. Then I went to it very carefully so as to see the bird and find out what I had found. I did not see anything that looked like a bird, so I pounded on the tree right side of the nest, and no bird. So I got up to it and looked in but could not see anything. In going up to the nest May 5th I took hold of a limb near the nest to help me get to it, and it broke off and exposed the side of the nest, so I went

to work and cut a piece of bark from the same tree, and made some pins of hard wood, and nailed it over the break so as to shut out the light and rain. But as I was taking off the bark I had nailed on, a little bird went out of the hole like a flash of light, and lighted on a tree about 20 feet from me, and I saw it was what I had thought from the first it would be, a Black-capped Chickadee. I cut a little more away from the side hole and soon had a fine set of eight eggs packed in my box. I put the bark back over the hole, but hardly think they will use it again. If they do, I will let you know later on.

C. S. B.
Haverhill, Mass.

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Bluebirds Laying Albino Eggs.

In reply to W. J. S.'s query in Vol. 5, No. 12 of the OOLOGIST regarding the identification of my Albino eggs of the Bluebird, would say they were identified but no peculiarities were observed and think there were none I am sure they were only the common Bluebird for after I collected this set of Albinos I watched the vicinity for about two weeks, when to my surprise, on going to the same tree which I collected the Albino from, I found they had carried a little more fine grass and relined the nest. I made it my business to attend the site daily for three or four days when to my disappointment I found the nest to contain one pale blue egg. This set of four for four was all she laid, was of a very pale light blue, in fact they were almost as light again as the usual run of the eggs are. They were also blunt or more rounded at the small end than is generally found. I find the average egg of the *Sialia sialis* is pointed like all the small eggs but my set of five Albinos and this set of four were rounded. I will close hoping the above will interest W. J. S., if not others.

C. B. COOK.
Odin, Ills.

Gleanings from Our Correspondents.

Notes and Items of Interest, Queries and Answers.

In Feb. No. OOLOGIST Mr. N. F. Posson, of Medina, N. Y., says in his article that he saw a "Horned Lark" on Jan. 1st. I saw the Horned Lark on Jan 25th for the first time this year. Would like to know if this can be beaten; I found a nest of the H. L. on March 28, '86; contained 4 eggs. Geo. L. White, Mt. Morris, N. Y.

Eugene Fernholtz, Jefferson, Wis., has in his collection an end-blown egg of the Blue-bird. It is of a white color having a circle of blue about one-sixteenth of an inch wide and about one-fourth inch from the small or tip end.

Under date of Feb. 24th, E. L. Menefee, of San Jose, Cal., writes:

"The egg season here has hardly commenced yet. I found a set of 402 e the 20th inst., which is unusually early for this section. Although I frequently hear of owls nesting even in January in the Eastern states, this is the earliest date that has come to my knowledge while collecting in California for several years. The next eggs which the wide-awake Californian oologist may seek for are the Least Tit, Plain Tit, Meadow Lark and Shrike. Robins have been unusually scarce in this section this season, as they were unusually plentiful last. I have not seen more than a dozen the whole season; the first in October and the last on the 23d inst.

The Bluebird, House Finch and Green Backed Goldfinch are among the arrivals that have become common. Swallows have just arrived and I have seen a few doves, although I suspect they were some that wintered here.

We have received many letters from collectors in the various states and Canada making inquiries as to whether it

is unlawful to collect bird's eggs in their respective localities, and if so, how they can obtain a permit to collect? As the laws in the various States, Provinces, and we might say localities, vary, we must advise collectors to consult some legal friend. But we might add that the *true oologist* or the collector of eggs for scientific purposes is rarely molested and that in most localities the law either allows him to collect or a permit can be obtained through a lot of (un)necessary (?) "red tape."

E. G. B., of Mouson, Me., sends us an egg of the Olive-backed Thrush and gives the following very interesting description:

"The bird is, I am quite sure, some species of Thrush, but I can find no description of nest, eggs, etc., in Samuel's 'Birds of New England,' which coincides with that of this bird. The bird strongly resembles the Hermit Thrush in color and markings, when seen at a little distance, but is considerably larger. It also has a note very much like that of the Hermit Thrush when the nest is approached. It breeds very commonly here. The nests that I have seen, and I have seen a large number, was placed in a cedar tree from four to ten feet from the ground, and with one exception, within a few feet of a pond or stream of water. The nest is constructed of birch and cedar bark, grass and leaves. It is quite deeply hollowed and lined with grass and leaves. I can not say positively whether any mud was used or not, but think there was not. The eggs are usually four in number. Some that I have seen much larger spots than the one I have sent you."

For the Oologist.]

The Wilson Ornithological Chapter of the Agassiz Association.

This Society was organized Dec. 3, 1888, in order to investigate the habits

of our American birds and to turn to advantage the observations made by our ornithologists and oologists

Our work for 1889 will be on the family of Thrushes.

In the first report, due in April, members will enumerate the Thrushes known to occur in their locality and

I. State, by using the abbreviations indicated, to which of the following five categories each species belong:

1. Permanent Resident, or found regularly throughout the year (R).

2. Winter Visitant, or occurs only during the Winter season, passing north in the Spring (W V).

3. Transient Visitant, or occurs only during the migrations in Spring and Fall (T V).

4. Summer Resident, or known to breed, but departs southward before Winter (S R).

5. Accidental Visitant, or straggler from a remote locality (A V).

Also indicate the relative abundance, as: Abundant, Common, Tolerably Common or Rare.

Synonyms: Enumerate all common names applied in your locality, to these birds.

The second report, due July 1,

II. Migration: Note: When the species is first seen and number observed at this time. 2. When it is next seen. 3. When it becomes common. 4. When the bulk departs. 5. When the last individual is seen.

In the Spring Migration under 4 and 5 would be given the date when the Transient Visitants at your place depart northward; and in the Fall Migration should be noted, the date at which they arrive from the North and at which they go South.

Habitat: Are they found in forests, marshes, dry uplands, on borders of ponds or lakes, running streams or near dwellings? Can you give any reason for this choice of location?

Nesting: Give full full particulars of

construction, position, height from ground, locality, proximity to water, contents of nests, as eggs or young, exact date, incubation of eggs, identification and composition of each nest found during the year. Descriptions of sets, giving, in addition to particulars concerning nest and surroundings, *the size and coloration of each egg* are especially desirable. Describe peculiar situations of nests. Do the eggs laid late in the season differ in size, color or number from those laid earlier?

If so, state fully your authority.

Natural Enemies: Enumerate the birds, mammals or reptiles which have been known to disturb, or attack any of these species. Give all methods and artifices used by the birds for their protection from enemies or storms.

Third report, due Oct. 1.

Any additional notes on the preceding reports and: Number of broods raised by one pair of birds in one season, giving full particulars. If possible give the length of time required before the eggs are hatched from the time they were laid and the length of time each brood is cared for by the parent birds.

Habits: Explain all peculiar habits. Describe flight. When on the ground do they hop, or run?

Song: Favorite time of day or night; influence of weather on its song; difference between song of male and female.

Relations with Cow-bird (*Molothrus ater*); are any of these species imposed upon by the Cow-bird?

Give particulars, date, etc.

Fourth report, due Dec. 1, will be on the Fall Migration and additional notes on the preceding reports.

In addition to this general plan, our members, in those states where we have a sufficient number of observers, have selected two common summer residents which can be studied to special advantage in their locality, for their special attention.

No dues or entrance fees are exacted. Members are added with the approval of the President. Owing to our large membership our reports can be published at a merely nominal cost for each member who desire to purchase them. □ We have now a strong and enthusiastic organization, and cordially invite all ornithologists and oologists to join us in advancing our favorite science. Applications for membership may be made to

J. B. RICHARDS, President,
Fall River, Mass.
or LYNDY JONES, Secretary,
Grinnell, Iowa.

A Bit of Biography.

John Jame Audubon, the greatest of American Naturalists was born in Louisiana in the year 1780. When quite young he was passionately fond of birds, and took delight in studying their habits. In 1797 his father, an Admiral in the French navy sent him to Paris to be educated. When he again returned to America he settled on a farm in Eastern Pennsylvania, but afterwards removed to Henderson, Ky., where he resided several years, supporting his family by trade, but devoting most of his time to the pursuit of his favorite study. In 1827 he went to England, and commenced the publication of the "Birds of America" which consists of ten volumes—five of engravings and five of letter press. Cuvier declares this work to be "the most magnificent monument that art has ever erected to ornithology." In 1830 Audubon returned to America and soon after made excursions to nearly every section of the United States and Canada. A popular edition of his great work was published in seven volumes in 1844 and "The Quadrupeds of America" in six volumes, three of plates and three of letter press in 1848.

He removed to the vicinity of New

York about 1840, and resided there until his death which occurred in the year 1851, at the age of 71 years. He knew all birds either by their flight or voice so thoroughly did he know the feathered tribe of America.

PAUL B. HASKELL,
Ashland, Ky.

The Burrowing Owl.

During a short stay in California in 1888, it was my fortune to obtain a set of Burrowing Owl's eggs. I was returning home from a collecting trip one day, April 21, tired and not in a very good frame of mind, for I had not had much success that day, when I saw one of these birds fly up a short distance ahead of me, and on drawing near I discovered a hole which I rightly conjectured was the bird's burrow. It was too deep for me to reach the bottom with my hand, but I returned the next day with a spade and after digging about a foot in the ground I again tried to reach the bottom of the nest, and felt a feathery substance, which was the old bird. I caught her firmly by the wings and drew her forth, and proceeded to examine the nest, which contained 8 pure white eggs, incubation advanced. The nest was about 2½ feet deep, and at the entrance was about half a foot in diameter. It did not run straight into the ground but in a slanting manner.

I took the old bird home but afterward gave her her liberty, for as I robbed her of her eggs, I would not commit a further indignity by robbing her of her freedom.

The Burrowing Owl breeds from the Mississippi River west and is found plentifully on the plains in that region. It is said that it often inhabits the same hole with a rattlesnake or some small burrowing animal, but I do not think it does in California.

L. C. A.
Kentucky.

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During the months of July and August we open branch stores at Chautauqua, N. Y. and Atlantic City, N. J. Unquestionably many of our patrons will visit one or the other of these Great Summer Resorts, and we trust that they will not forget to visit our "Curiosity Shops." At Chautauqua you will find our store in the N.E. corner of the "Dock Building," and at Atlantic City on the Board Walk, nearly opposite Applegate's Pier.

Our mail business is carried on *exclusively* at Albion, N. Y., and all correspondence must be addressed us at that place, for we have no time to attend to correspondence at our branch stores, but at our headquarters, Albion, N. Y., we shall endeavor to answer all letters and fill all orders by return mail.

But if you live within 100 miles of either Chautauqua or Atlantic City the trip will well repay you for your trouble and expense, and should you happen to want specimens of any kind you will find a goodly assortment—many which we never catalogued.

You will also find our prices very reasonable and besides, will have the pleasure of picking out your specimens yourself, which to many is a very important item. Should any of my patrons, or should they not, happen to visit my Branch Stores, while I may not be able to meet them personally, I shall remain as ever,

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N. B.—Our patrons visiting Silver Lake, N. Y., should not fail to visit the Curio. Bazaar on Assembly Grounds, near Post-office and Book Store. All orders for our goods that you do not find already in stock will receive prompt attention.

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SPECIAL NOTICE:

All copy intended for the OOLOGIST must not reach us later than August 15th, or at the very latest, 20th. Send in your exchanges and advs. *early*.

EXCHANGE EXTRAORDINARY. THIS OFFER EXPIRES ON AUGUST 20, 1889.

I want at once the following first-class eggs, either single or in sets, in exchange at full *Bulletin* prices, or if in sets I will allow 10 per ct. above these prices, in exchange for the articles mentioned below. Eggs taken in large or small quantities. No exchange amounting to less than \$1.00 can be "bothered with" unless 10c additional is enclosed for return postage and packing. If you have any of the rarer species to offer, send lists.

Species wanted, Ridgway's No's.:

No. 2, 4, 11, 51, 56, 60, 63, 67, 70, 93, 99, 115, 122, 123, 135, 149, 151, 161, 168, 181, 198, 231c, 237, 242, 244, 245, 248, 251, 260, 263, 264, 270, 271, 277, 282, 289, 293, 306, 312, 320, 326, any of the Hummingbirds, 351, 353, 354, 357, 361, 382, 387, 388, any of the Owls, Hawks, Buzzards, Vultures or Eagles, 459, 473, 477, any of the Quails, or Herons, 498, 501, 516, 552, 555, 569, 572, 574, 582, 583, 601, 609, 618, 643, 643a, 649, 673, 679, 686, 687, 688, 723, 735, 760.

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Limpkin (extra fine 2nd class)	1.00
Barrow's Golden-eye	1.25
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Vol. VI,

ALBION, N. Y., SEP., 1889.

No. 9

Exchanges and Wants.

Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

\$10.59 worth of Eggs, first-class with data, to exchange for Indian Relics. Wish to exchange all of them in one lot. Address Box 6, La Fayette, R. I.

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WILL EXCHANGE.—First-class Birds' Eggs and two volumes of Audubon's Ornithological Biography, for common Pigeons. Good flying birds only. Send for particulars, P. M. LLOYD, 312 Church St., Poughkeepsie, N. Y.

TO EXCHANGE.—I have about 250 varieties of N. American fresh water shells and 200 varieties of N. A. marine shells to exchange for N. A. species of moths and butterflies. A. K. FAIRCHILD, Whippany, N. J. my6

WANTED.—TO PURCHASE COLLECTIONS OF INDIAN RELICS AND OTHER CURIOSITIES FOR WHICH CASH WILL BE PAID. PARTIES HAVING SUCH FOR SALE WILL PLEASE CORRESPOND WITH W. H. KING, JACKSONVILLE, FLA. ayr

WANTED.—Good sets of Eastern Eggs in exchange for rare sets of Western species. Send lists and receive mine. Positively no eggs for sale. Address, A. M. SHIELDS, rooms 6 and 7 Bryson & Bonebrake Bld., Los Angeles, Cal.

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G. L., Hamilton, Ont.

Received Davie's Check List safely, and am well pleased with it.
T. S. B., Northfield, Minn.

Have just received 3rd edition of Davie's book. Very well pleased with it. I am sorry now I didn't get it in cloth, as such a book is valuable and will last longer if bound.
P. M., Philadelphia, Pa.

Nests and Eggs of N. A. Birds come to hand this P. M., and am more than satisfied with it; think it well worth the price. H. E. P., Perth Amboy, N. J.

Davie's Nests and Eggs of N. A. Birds received. Have looked it carefully over and must say that I cannot speak too highly of it. It should be in the hands of every oologist and ornithologist in North America. I would not sell mine, if I could not get another, for ten times its price. Will take great pleasure in recommending it to every collector I know.
T. L., Aptos, Cal.

I received Davie's Key to N. A. B. the 4th, and I would not be without one for twice its value. It is simply a beauty.
F. S. B. N., Madison, Wis.

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Collectors receive as high as *Fifty* Letters, Postals, Circulars, Samples etc. from having their names inserted as high as *one cent* in a set of only **10 CENTS** in this Directory.
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- E. L. Kittredge, Wash. Sq., cor. Emerson St., Haverhill, Mass.
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In the year of 1845 the present owners of the SCIENTIFIC AMERICAN news paper commenced its publications, and soon after established a bureau for the procuring of patents for inventions at home and in foreign countries. During the year 1845 there were only 502 patents issued from the U. S. Patent Office, and the total issue from the establishment of the Patent Office, up to the end of that year, numbered only 4,347.

Up to the first of July this year there have been granted 406,413. Showing that since the commencement of the publication of the SCIENTIFIC AMERICAN there have been issued from the U. S. Patent Office 402,166 patents, and about one third more applications have been made than have been granted, showing the ingenuity of our people to be phenomenal, and much greater than ever the enormous number of patents issued indicates. Probably a good many of our readers have had business transacted through the offices of the SCIENTIFIC AMERICAN, in New York or Washington, and are familiar with Munn & Co.'s mode of doing business, but those who have not will be interested in knowing something about this, the oldest patent soliciting firm in this country, probably in the world.

Persons visiting the offices of the SCIENTIFIC AMERICAN, 361 Broadway, N. Y., for the first time will be surprised, on entering the main office, to find such an extensive and elegant equipped establishment, with its walnut counters, desks, and chairs to correspond, and its enormous safes, and such a large number of draughtsmen, specification writers, and clerks, all busy as bees, reminding one of a large banking or insurance office, with its hundred employees.

In conversation with one of the firm, who had commenced the business of soliciting patents in connection with the publication of the SCIENTIFIC AMERICAN, more than forty years ago, I learned that his firm had made application for patents for upwards of one hundred thousand inventors in the United States, and several thousands in different foreign countries, and had filed as many cases in the Patent Office in a single month as there were patents issued during the entire first year of their business career. This gentlemen had seen the Patent Office grow from a sapling to a sturdy oak, and he modestly hinted that many thought the SCIENTIFIC AMERICAN, with its large circulation, had performed no mean share in stimulating inventions and advancing the interests of the Patent Office. But it is not alone the patent soliciting that occupies the attention of the one hundred persons employed by Munn & Co., but a large number are engaged on the four publications issued weekly and monthly from their office, 361 Broadway, N. Y., viz.: The SCIENTIFIC AMERICAN, the SCIENTIFIC AMERICAN SUPPLEMENT, the Export Edition of the SCIENTIFIC AMERICAN, and the Architects and Builders Edition of the SCIENTIFIC AMERICAN. The first two publications are issued every week, and the latter two, the first of every month.

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THE OOLOGIST.

VOL. VI.

ALBION, N. Y., SEP., 1889.

NO. 9

"Old Abe," Jr.

In perusing number after number of the OOLOGIST I see so many things about Birds and Bird Pets that are interesting, that I am tempted to steal a few moments from my work in writing a small article in regard to "Our Pet (*Haliaeetus Lelcocephalus*) Old Abe, Jr.," named in honor of the grand old bird carried through our late Civil War by the gallant 8th Wis. Inf. It may not be very interesting to some of my readers, to others it may be, as it fully shows (as I have had ample time to observe) the different changes of color which the Bald Eagle passes through, and from which so many controversies arise in regard to the many varieties of Eagles, such as Golden Eagle, Black Eagle, Gray Eagle, Bald Eagle, etc., etc., but which Dr. Elliott Cones settles very satisfactory in "New England Bird Life," page 133-4, vol. 2. From my note book I take the following record: Old Abe, jr., was shot on the Des Moines River, near Eddyville, Iowa, March 29, 1887, by one, J. Williams, a noted hunter of that place. His left wing was broken at elbow joint, and was amputated as soon as brought into town, from which operation he nearly bled to death. Two days later he had improved so much that he was purchased by the writer for the small sum of \$1. He was undoubtedly one year old at that time, as he was then a very dark gray with dark brown eyes and dark, horned-colored bill. Also gray through the season of '87, but several shades lighter by December, the same year. His bill and eyes have become much lighter, and his head almost white, but no signs of any white in his tail. The This season, '89, his head has turned almost clear white, his eyes and bill

bright yellow, and at the present time he is moulting and white feathers begin to show in his tail. Think that next spring he will come out a *full fledged* Bald Eagle.

When I had had him about six weeks I arranged for a visit to Minnesota, and something must be done with Abe. So I built a strong lath fence, about 2 rods square to keep him in, put in shelter and perch. When I let him out of the big box he was in. I will never forget the look in his eyes. They just fairly sparkled, would look skyward, Oh, so longingly, then would make a break to go, and you can readily guess what the consequences were with one wing gone, or part of it. Several times he made the attempt, but all in vain; but those eyes said plainer than words, "Did I possess the whole earth, I would give it quickly to be possessed of my lost wing again." Well I thought to catch him and put him in the yard prepared for him, so took an old apron and thought to throw it over him and then grab him up, but if some of my readers had seen the outcome they would have laughed in spite of themselves. Quicker than a flash he was on his back and as the apron struck him, well, talk about old ladies tearing carpet rugs, they could have found them there in less time than it to tell it.

I then put a stick down to him which he instantly grabbed. I raised him up by this and put him over into the yard. While I was gone to Minnesota, he got out, and as boys sometimes say, "Took in the Town," and like to have got drowned in a rain-water barrel, but was helped out and made back home to the back corner of our lot where there is a big plum tree which has a leaning trunk, managed to climb to the top of it where he could take in the scenes,

and from that day to this that plum tree has been his home. But he has become so tame that he will take meat out of my wife's hand, she usually feeds him, and hangs around her like a cat or dog will around their master. I never saw one treacherous action about him, is gentle to everything, unless it be dogs or cats that sometimes try to steal his meat, then take care. Neither one has any business with him, and when they attempt to defraud him, the generally depart with more haste than dignity.

One more item showing the sagacity of birds as well as animals, and I will close this too lengthy article. Abe is a very clean bird and likes the bath tub every day, will splash and play in a tub of water equal to any duck or goose. One day he was given a dishpan of on the porch close to the door. There were strangers in the house who wanted to see him bathe, but of whom he was a little shy. He eyed the pan of water for a while, then carefully approached and grabbed the handle one side of the pan with one of those mighty claws, and literally dragged that pan of water away to what he thought a safer distance, then took his regular bath plumed and dried himself, and then returned to his plum tree where he now sits monarch of all he surveys. I have always been a great lover of pets and have had many, but not one to whom wife, children and all were so attached they would all rather go without meat than to see Abe go hungry.

R. D. Goss,
New Sharon, Iowa.

A Day's Collecting Trip.

I agree with your correspondent, J. C. W., in the December OOLOGIST, that no collecting affords more real, solid enjoyment than searching for the nests of water birds. I will endeavor to tell the readers of the OOLOGIST of a pleas-

ant trip which I made on the 30th of May. I left home and arrived at a slough back of the gun club grounds, about 9 a. m. This slough was surrounded by a meadow. I had not proceeded over one hundred feet when a bird flushed almost under my feet. A glance told me that it was a Blue-winged Teal. I looked down and there was the nest. It was nothing but a "hole in the ground," lined with down, and contained twelve eggs. Rather a large set as Davie says 6 to 10. My next find was an uncompleted set of two Long-billed Marsh Wren's eggs. The nest was made by bending down the surrounding grasses and weaving other grasses through them, making a globular structure with the entrance on the side. Within ten feet of this nest I found a set of 11 Sora Rails eggs. Last year this bird was very common and I could have taken 500 of their eggs, but the above set is the only one I found this year. I next found a lot of common eggs which I did not take, such as Red-winged Blackbirds, Yellow-headed Blackbirds, Yellow Warblers, etc. I then started for another lake and on the way a farm boy showed me a set of three Least Bittern's eggs. The incubation was one-fourth advanced. He also gave me a set of six Virginia Rail's eggs for a sling shot. I now sat down and ate my lunch, when I saw a bird fly to a birch tree near the water. I went and investigated the matter and the result was 4 badly incubated eggs of Yellow-bellied Woodpecker. I now started for a lake where I had heard that Black Terns bred. Upon reaching it a cloud of them came over my head uttering their shrill cries. I waded in and found five sets of three and one set of two. The nest was nothing but a pile of grasses with a slight depression on which the eggs were deposited. In all cases the nests were floating. While collecting these I found three sets of Pied-billed Grebes—two sets of seven

and one set of nine. The nests were nothing but a pile of floating, decaying weeds. The birds do not incubate the eggs during the day but cover them with weeds, so it is not possible to see the eggs before removing the covering. As it was now getting late I started across lots for home. In going through a wheat field I found a set of five field sparrows's eggs. Shortly after this I reached the club grounds. In front of the traps is a pile of straw to prevent any of the clay birds from breaking that are not hit. I was stooping down to pick up a perfect bird when, lo! there on there on the straw was a nest containing three Horned Lark's eggs. Truly a queer place for a bird to build, when twice a week the sportsmen assemble to shoot.

W. d. l. B.,

Minneapolis, Minn.

Bell's Vireo.

I have made a special study this season of this interesting member of our *avi-fauna*, by no means an uncommon bird. I have had abundant opportunity for observing its habits. Its usual nesting place is in a hedge or in a plum thicket. The nest is usually placed within three feet of the ground, but I have seen one nest, built no doubt, by an eccentric pair of Vireos, which was at least six feet from the ground. I have found nests in hedge, on small plum trees, on sumachs, apple trees, in fact the nest may be looked for in almost any small tree or bush where the foliage is dense enough to conceal it from above. The eggs are always four in number, except when a cowbird deposits an egg in the nest; then only three eggs are laid. If, however the cowbird should lay an egg before the second Vireo's egg is laid, the Vireo will desert the nest. The eggs are usually white, speckled sparingly with brown or reddish brown spots; however I have found nests in which part of the

eggs were spotted as usual, the rest being pure white, unspotted.

I found one nest containing three Vireo's eggs, and returning that way in a few days, was somewhat surprised to find the Vireo's eggs gone, and in their place a fresh Cowbird's egg.

Query: Did the Vireo remove the eggs to another nest or were they destroyed? Has there ever been an authenticated report of a bird removing its eggs from one nest to another?

There were no shells about or other evidence of the eggs being destroyed, and I am quite sure that no other collector had any knowledge of the nest.

During the nesting season the familiar song of the male is heard, generally within ten feet of the nest; but as any person approaches, the bird gradually flies away from the nest, stopping anon to repeat its song, (?) which, by the way, when once heard, can never be forgotten. It somewhat resembles a Black-throated Bunting's notes, but the harshness in the Bunting's is softened in the Vireo's. The notes slightly resemble *Cheed-a-leed-a-leed-a-lec-c-c* with the last notes very high.

When the nest is discovered the female noiselessly steals away, unless the nest is disturbed or contains young when she will begin chattering, which is not unlike that of a wren.

ALBERT O. GARRETTE,

Ft. Scott, Kansas.

Additions to the Ari-Fanna of Orleans County.

Since the *Avi-Fauna* of Orleans County was published in the May OOLOGIST, the following additions have been reported:

175. *Nyctherodius violaceus*. White-crowned Night Heron.

176. *Plegadis falcinellus*. Glossy Ibis. A specimen of this bird, shot in Towanda Swamp, was brought to Mr. Hedley in May, 1889. It is a straggler.

Respectfully, NEIL F. POSSON.

The Black Tern.

This a very common species throughout the states of Wisconsin, Michigan, Illinois, Minnesota and Dakota. This bird is sometimes called the Short-tailed Tern, but is more commonly known as the Black Tern. These birds have large wings in proportion to the size of the bird, and when it is on the wing it looks not unlike a large swallow. These birds nest in quite large colonies, but they do not increase very rapidly each year because there are too many oologists collecting their eggs. There is one thing quite singular about this bird. This is: If you collect a set of their eggs one day, you can go to the same nest two or three days afterward and you will find just as many eggs in the nest as there were the previous day. This bird arrives in Wisconsin about the first of May, and begins incubation about the first of June. It does not have to work as hard as some birds do to build its nest. It simply finds a suitable mud flat. (floating on the water.) and lays a few reeds and grasses around on the mud to keep the eggs from rolling about. The eggs, which are of a greenish color, thickly clothed with brown and lilac, are then laid in this nest. After the eggs have been laid incubation sets in, and continues for about three weeks, when the young appear. These are fed on worms and snails until they are able to take care of themselves. Then another set of eggs is deposited the the same nest and another brood is reared in like manner. I collected a set of three eggs of this species June 6. 1889. Incubation advanced. They measured as follows: $\frac{1}{3}$ 1.46x1.00, $\frac{2}{3}$ 1.46x.98, 3-3 1.35x1.00. This set resembled very much, both in color and in markings, those of the Spotted Sandpiper. In blowing these eggs one has to be very careful so as not to destroy the bloom. These birds as a rule are very fond of low, marshy

lakes for their haunts. They go farther South when it begins to show signs of winter. I will close now hoping this article will be of some benefit to the readers of THE OOLOGIST.

F. S. N.
Madison, Wis.

The Yellow-rumped Warbler.

While rambling through the swamps in the vicinity of Highland Park on June 1, '89, I came unexpectedly upon a nest of the Golden-crowned or Yellow-rumped Warbler, situated in the crotch of a small hemlock tree about ten feet from the ground. I would undoubtedly have passed it, as it was in a place one would not think of looking for a nest, but the old bird, frightened by my approach, flew off and thus attracted my attention.

I had some difficulty in climbing, as the tree was very slender and easily bent, but by the aid of a neighboring tree I finally succeeded in reaching the nest, which I held in my teeth until I reached the ground. There in a soft-warm bed of thistle down lay four small eggs. They were of a creamy-white color, covered sparsely with spots and blotches of different shades of reddish-brown, thickest at the largest end of the egg. Dimensions of the eggs, .68x.50 inch, .67x.50 inch, .66x.49 inch, .65x.49 inch. The nest was a small structure, firm and compact. the outer parts formed of silky fibers from different plants, attached to the twigs near it by means of glutinous matter, mixed with the inner bark of the wild grapevine, within this is a deep and warm bed of thistle-down and the inner layer composed of feathers and the fine hair of small quadrupeds.

H. C. A.
Detroit, Mich.

Nesting of the Cuckoo.

Since I became a subscriber to the OOLOGIST I have become more deeply interested in the study of birds and their habits, especially through the nesting season. The soil and climate, the hills and valleys of Vermont, afford a most excellent place for the nesting and breeding of our feathered tribes. On the 25th day of May, '89, I started out for a two hour's walk, thinking, perhaps, I might find something of interest to add to my collection. I followed a small stream for 20 or 30 rods, closely examining the clumps of willows and alders as I passed and presently saw a cuckoo sitting on her nest, about three rods in advance. I approached the nest as cautiously as possible so as to obtain a good view of the bird before she flew. There were three greenish-blue eggs of uniform size and color and of the same size at both ends. The nest was placed in a clump of alders about three feet from the ground and was composed of dry twigs, leaves and fibres. It was $4\frac{1}{2}$ inches in diameter, with only $\frac{3}{4}$ of an inch depression. On blowing two of the eggs were perfectly fresh, while the embryo in the third was at least one-third developed, an incident I have never met with before. Can any one give an explanation?

S. C. WHEELER,
Waterbury Centre, Vt.

[A very common occurrence with the Cuckoos.—ED.]

A Nest of the American Woodcock

The American Woodcock, one of our game birds, is becoming very scarce in this locality, South Eastern Pennsylvania, and their nests are very hard to find. While out collecting the 20th day of April, last spring, '89, I took my first set. They arrive here the latter part of March and from three to four weeks

later they are nesting. I was crossing a low wet piece of woods and had just jumped across a little stream when I flushed a bird very close to my feet. Not seeing any nest, and knowing something of the habit of this bird, I stood in my tracks and watched the retreating form of that bird. She flew but a short distance and dropped into a patch of ferns out of sight. I then glanced around me and by close looking soon discovered the nest. It was simply a little hollow in a raised bunch of leaves, about four inches in diameter. It contained four eggs—beauties. Eggs that would fill most collectors with a thrill of delight. The ground color was buff, spotted and blotched with shades of brown about the larger end. They measured 1.40 x 1.25, and were perfectly fresh.

J. P. J.,
Kelton, Pa.

Murderous Sparrows.

One morning in early spring, as I was sitting under an apple tree in my back yard, I noticed a number of sparrows flying about a tree in which a blue-bird had taken up her abode four or five weeks previous. Her young were almost ready to leave the nest, when the sparrows determined to hasten matters. I soon perceived that a portion of the sparrows attracted the attention of parent blue-birds, while the rest employed themselves in ousting the young birds from the nest, and in this they succeeded before I could interfere. After replacing them I was called away, and on returning found that a tragedy had been enacted in my absence. The young birds being again thrown from the nest, and this time speedily devoured by the family cat.

The old blue-birds soon after left the vicinity, and the sparrows took possession of the deserted home.

C. R.
Cleveland, Ohio.

An Automatic Blower—Interesting Oological Items.

I have used a plan of blowing eggs with complete success for several years, and as I have not seen anything like it described, I will give a description of it for the benefit of those who still use the old method, viz.: Blowing the air through the mouth. It is simply this: Get a small rubber bulb, such as are used on small syringes, etc., and insert the blowpipe in this and it is ready for use. All you have to do is to compress the bulb and the air is forced through the blowpipe. The bulb I use is one I got from a Goodyear improved atomizer No. 6. It has an air valve in one end. This is an advantage in one respect as it does not suck anything up through the blow pipe. But for rinsing eggs it does not come so handy, as it will not suck up water unless the air valve is stopped. This is easily done by placing your finger over the air hole. A rubber ball will do but is not so good as an oval bulb, as compressing the ball will move the blow pipe upwards while in the other the pipe remains stationary. I think I can blow eggs in one-fourth the time I could by the old way and I very seldom break one. This makes blowing eggs a pleasure where it was to me, before I got on to this scheme, one of the dreaded jobs of collecting. To come home from a collecting trip with say 30 or 40 eggs and to have to twist your neck out of shape to blow what little wind there is left in you after a hard day's tramp through a small blow pipe and probably have the contents of a "checked" egg squirt in your face, or by mistake suck it up in your mouth, is, to say the least, anything but pleasant work for me, and by using the above plan it is entirely unnecessary.

The best way I have found to dry eggs, is to hold them hole down near a lighted lamp. This will immedi-

ately force all remaining moisture out of the hole and will not injure the egg in the least. I think it a good plan to rinse all eggs, first or otherwise.

I found a small net, made by bending a piece of wire in a circle about six inches across and fastening cloth to to this so it would form a bag, fasten this to a pole about 10 feet long, a great convenience in getting a set of Hawk's eggs that were on a leaning limb.

I have taken twelve sets of Red-tailed Hawk's eggs this spring. I find that the complete sets invariably have 3 eggs in this locality. I never found but one complete set that had less than 3 and never found one that had more than 3.

I hope some one will try my method of blowing eggs and report what success he has.

G. H. LOCKWOOD.

Flight of Ducks.

I have held my watch on several kinds of Ducks and Geese. But the main part comes from old gunners who have favored me with their experience. The Canvass Back can distance the whole Duck family. When this duck takes it easy it makes 80 miles an hour. But if it has some business somewhere, it leaves back of it 2 miles a minute, and does it easily. If you don't believe it just fire at the leader of a string of Canvass Backs that are out on business. Duck shot travels pretty fast, but if you happen to hit one you see if it isn't the fifth or sixth one back of the drake or leader. A drake does not always lead, but it generally does if there is one in the flock. If there is more they will seldom lead. If you wish to bring down the leader you must aim at a space about 8 feet ahead of him, and then if he falls you will line a long distance off. The Mallard is a slow one. It is all he can do to make a mile a minute, but he can if he wants to. His regular rate is about 40 miles an hour.

The Black Duck is a slow coach. He is about as good as the Mallard, and the Wood Duck and Pintail, Widgeon cannot do any better. The Red Head can go easily 90 miles an hour as long as he likes; all day if necessary. The Blue-winged Teal and its beautiful cousin, the Green-winged Teal can fly side by side and make 100 miles per hour and take it easy. The Gadwall, you see them here very seldom, though well known west of the Allegheny river and as Kishammock, though looking like the Mallard, is a smarter duck and harder to shoot. It can make 90 miles an hour and not try hard.

Maybe you think a goose can't fly fast. Why, it can double the speed of the fastest railroad train. Of course I mean a wild goose. It can get from feeding ground to feeding ground so suddenly that it fools some of our best wing shots. If you see a flock of Honkers moving along so high that they seem to scrape their backs to the sky you wouldn't think they were making nearly 100 miles per hour, but they are. The wild goose is not much on foot, but it still means business every time. The Broad-billed goose comes next to the Canvass Back in speed. Put the two together and in an hour the Broad-billed Goose will only be 10 miles behind the Canvass Back.

The fastest railroad train cannot hold a candle by the side of the slowest duck that flies.

This information comes from correspondence of life-long gunners. And gunners will tell you that I have hit the mark pretty close.

A. W. NOLTE,
Los Angeles, Cal.

The White-eyed or Florida Towhee.

Having never noticed anything about this bird, I thought I would tell what I know about them. To begin with, plumage. Male, head and neck to point of breast jet black; breast and belly

greyish white; sides and under tail reddish brown; lack edge of tail when spread white; back and top of tail blackish brown.

Female, plumage same as male, except head and neck, chestnut brown. Both birds have a narrow bar of white on each wing, which looks like a small patch when the wing is closed; also a small crest which is raised and lowered at will. So far for description. Not very scientific to say the least.

The Towhee whistles a few notes, the most frequent of which is "Jo-ree, Jo-ree" uttered as it jumps about on the ground. It frequents low scrub land and palmetto patches, where it is very abundant. It has a peculiar way of scratching with both feet and makes so much fuss that I have often, while out hunting, got down on my knees to look in the brush, expecting to see some large, only to see a "Jo-ree" scratching away for "dear life," and making the leaves fly in every direction.

Though the bird is so plentiful, I have never found a nest and can not tell anything about its nesting habits.

WILLARD ELIOT,
Thonotosassa, Fla.

A Peculiar Nesting Site.

While out fishing with some friends I sat down on a rotten stump and began to push it over. At that moment a Black-capped Chickadee flew out of a hole near the bottom of the stump. I looked in and to my surprise I saw six eggs. The hole was about three inches above the ground and nest two inches below the surface. Upon examining the eggs they were found to be as peculiar as the site of the nest, being larger than usual and were covered with blotches instead of spots of brown.

Thus I found my first underground Chickadee's nest.

C. V. Wheeler,
Chesterville, Me.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

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Pigmy Owl.

In reply to the query of A. Calderwood Jr., in June OOLOGIST, concerning the number of eggs laid by the Pigmy Owl, I offer the following:

Mr. Charles F. Morrison, in the "Ornithologist and Oologist" for May, 1889, mentions finding a nest of this species containing four young.

Capt. Charles E. Bendire, in his excellent article on the "Habits of the Genus *Glaucidium*," in the "Auk" for October, 1883, speaks of the discovery of two nests; one with three eggs, the other with four young. He further says, the number of eggs to a set is probably never more than four.

The above information is all that is at my command. These eggs are with-

out doubt, exceedingly rare, and Mr. Calderwood is to be congratulated on such a desirable find.

HARRY C. OBERHOLSER,
 Red Bank, N. J.

Nesting of Trail's Flycatcher.

All of the nests of this bird that I have found and examined, were placed in willow bushes situated in low swampy land, and the nests were usually placed about 6 feet from the ground. In some instances the nests are rather slovenly built on the outside but much neater inside. But this is not always the case, for this year, '89, I found one that I would call a beautiful structure. It was situated in the upright forks of a willow bush 5½ feet from the ground. It was composed of fibrous strips of weeds, fine grass and bits of soft downy material from different plants, and lined with fine grass. The dimensions of the nest are as follows: Diameter, outside 2½ in., inside, 1¾ in. Depth, outside 3 in. inside 1¾ in. This nest contained four eggs of a light buff or creamy color, spotted very sparingly with reddish-brown, and average about 68x50.

W. C. M.
 Columbus, Ohio.

My long looked for Davie's Egg Check List has arrived. It is a valuable work.
 C. E. C., Davenport, Ia.

Cooper's Hawk.

Accipiter Cooperi (BONAP.)

Tyrant of the barnyard fowls and terror of all the smaller feathered tribes, this bird bears an unenviable reputation. He makes himself especially obnoxious to the farmer and poultry fancier, and by his increasing attentions to the nicest, fattest young ducks and chickens, he has given a "bad name" to the whole *Falconidae* family, which can never be erased from the minds of a certain class of people, to whose pre-

judiced comprehension a "hawk," no matter to what genus it belongs, is the typical representation of rapacious plunder.

For reckless pluck and dash the rather small, trimly built genus *Accipiter* is rivaled by few and surpassed by none of the feathered race, with the exception perhaps of the family *Tyrannidae*. Of the three birds comprising the genus *Accipiter*, *A. cooperi* is the only one which remains in this locality, north-eastern Kansas, throughout the year, *A. velox* and *A. atricapillus* being merely irregular winter visitants. The wings of the Cooper's Hawk are quite small for the size of the bird, though what they lack in size is made up by their muscular vigor. Thus the bird is rendered incapable of great soaring feats or long extended flights, but its rapid movements and quick, arrow-like dashes are so well known that it has acquired the popular name of "dart hawk."

In taking a stroll through some lonely piece of woods on a winter's morning, one may often see the Dart Hawk rapidly skimming along, just above the ground, or seated on some secluded tree, partially stupefied by an overfeed of fresh quail, upon which it feeds almost exclusively, during cold weather. As spring gradually opens the leaf buds and brings its swarms of feathered songsters from the South, *A. Cooperi* and his consort, begin to search for a suitable nesting site. The spot usually chosen is an old crow's nest, located in some secluded nook of the woods, farthest from the habitation of man. The nest is merely a few coarse sticks and strips of bark laid on top of some old deserted nest of some other bird, or if it builds a nest for itself it closely resembles a flat-topped Crow's nest. This bird does not build in such lofty positions as do many of our hawks. I have never found a nest over thirty feet from the ground, and in one instance I took a set of two eggs from a nest but

fifteen feet up. It usually begins to lay about the first of May and lays one egg daily until the set is complete. Good authorities give the number of eggs layed as four or five. I have been unfortunate in getting small sets, for I never took more than two eggs from a nest, and sometimes but one.

The eggs, oval in form, vary considerably in size, averaging about 1.85x1.47. Smallest, 1.74x1.43; largest, 1.85x1.48. Are usually unspotted, light-blue in color. I once took a set that was sparsely marked over the entire surface with sharp specks of reddish-brown. Incubation begins when the set is complete, and lasts about three weeks. From the time the young appear until they leave the nest, June 1st to July 1st, is the period in which the farmer meets with his greatest losses by this bird. During this time the young are fed almost exclusively on young poultry and young birds picked up in the woods. After leaving the nest the young are fed for a few weeks by the parents who gradually become less bold, and when at last they leave them to their fate, usually the shot-gun, the old birds seem to entirely disappear until fall, when they become as plentiful as ever, but are much shyer than in the spring. They show the greatest bravery in the defense of their nest and young. On several occasions while rifling their nests, I have been struck severe blows on the head and back. Both birds take part in these attacks, continuously uttering their rapidly repeated cry of "kute, kute, kute," which closely resembles the live of the Red-bellied Woodpecker (*Melanerpes carolinus*.)

Although outlawed by the human race, the reckless bravery of *A. Cooperi* ought at least to entitle him to respect in spite of his numerous shortcomings.

D. B. R.,
Beattie, Kan.

Houses to Let.

If any one wishes to receive large dividend on a small investment I would advise them to put up a few bird houses around the house or grounds. They will readily find reliable tenants who will repay all trouble. It will interest any one whether ornithologist or not, to watch the birds at their mating and nesting. If there had been more of these conveniences provided for our native birds there would have been no excuse for the importation of that "pesky varmint," the English Sparrow. I believe that all of our birds that breed in boxes are purely insectivorous, and hence of great value to the farmer, gardener and orchardist. The martin will also serve the poultry keeper a good turn by driving away depredating crows and hawks. The blue-birds and wrens will give us fine songs besides destroying many insects. In the past two years the following birds have visited some bird houses which were put up around the house: Bluebirds, Wrens, English Sparrows, Gt. Crested Flycatcher and Purple Martins. Now if this reaches you too late for this season, remember it and spend some stormy day next winter in making a few houses to let, it is far more profitable than building castles in the air.

A. B. F.,
Bennings, D. C.

A Day on Shelter Island.

Never reading anything about collecting in my locality, I will write a small account of my first specimens taken this year. On the morning of May 1, 1889, I started for the eastern shores of Shelter Island to see how the Kingfishers and Ospreys were building. After walking about three miles, I saw a new Kingfishers hole in the bank and started up the bank for it, arriving at the top, I measured the length of the hole by

thrusting a long stick into it, taking the length also the direction, then laying the stick on the top of the bank and taking the directions, I began to dig. I was rewarded with a set of four eggs. During my walk I met a friend on the same expedition as myself. Together that morning, we were rewarded with five sets of Belted Kingfisher as follows: 1-4, 1-6, 2-6, 2-5, 3-7 also two beautiful sets of American Osprey of three eggs each. On our way home, we each collected a set of Bluebird's and Crow's.

A. E. PAYNE,
Greenport, L. I.

A Curious Nesting Place.

Walking one afternoon, with a friend along a railroad track, he surprised me by saying that in a few feet of me was a Bluebird's nest. As I am always interested in anything of that sort. I at once began an earnest but vain search. At last my companion had to help me out by pointing out the nest securely fastened in one of the wheels of a by-standing car! The bird had chosen one of the holes around the axle for a building place and when I found the nest there were already two eggs in it.

R. C. M., Columbia, S. C.

Unusual Occurences.

Have any of the readers of the OOLOGIST ever found a set of Mourning Dove containing three eggs? I found a set of three placed in a frail nest in an evergreen tree. One egg was the usual size, and the other two were some what smaller. This is the first time that I know of that three eggs were found. Perhaps some of the readers of the OOLOGIST have also had a find of the same kind. Also found a set of Robins', with two pure white eggs and two the usual color.

W. C. HUTCHINSON,
Winchester, Ills.

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WHAT THEY THINK

— OF —

DAVIE'S NESTS AND EGGS OF NORTH AMERICAN BIRDS.

The copy of Davie's Check List received a few days ago. Since then I have been perusing it and am greatly pleased with it. It is the "biggest little" work I have ever seen.

J. A. B., Morgantown, N. C.

I enclose you six c (.06) for which please mail me a copy of August OOLOGIST. I had my number, but it was lost on the way from the post-office, and I cannot possibly miss a number, for it is invaluable to all real lovers of Ornithology. I would pay a dollar per year rather than not have it. Davie's Key is a perfect gem. If you can't supply the August number please send me a number prior to June, 1888, and oblige.

W. E. S., Beaver Dam, Wis.

I have just received Davie's Nests and Eggs and am very much pleased with it, and think that it is just what I need.

J. B. S., Clinton, N. Y.

I have looked the book over some and am very much pleased with it, and consider it a good work for the price.

W. A. M., Norwalk, O.

Davie's 3d Edition came to hand Aug. 6. I am certainly much pleased with it and it far exceeds my expectations.

C. W. L., Staunton, Va.

I received Davie's work yesterday and am much pleased. To the working Oologist it is the most valuable work I remember having seen.

W. C. C., Ann Arbor, Mich.

Allow me to express my entire satisfaction with the book, Nests and Eggs of North American Birds, by Oliver Davie. It is a first-class work in every particular, and is just what every oologist should have, and would recommend it to all who are interested in oology. It is the best book for the price ever published.

B. F. S., Brooks, Maine.

I received Davie's Nests and Eggs a few days ago and I am very much pleased with it. It is worth twice the amount you ask for it.

T. B. K., Talbotton, Ga.

Cloth bound edition of Davie's Nests and Eggs just received. I knew it would be more valuable to the oologist than the second edition, but it far surpasses my expectations. I would not be without it for many times its cost.

J. W. J., Glenwood, Pittsburgh, Pa.

The third edition of The Nests and Eggs of North American Birds came duly at hand and I beg leave to acknowledge its receipt and to also add a few words of praise for the book. It is, truly, a valuable work, and should be in the hands of every person interested in oology. Although I have scanned its pages hurriedly, I am satisfied that it contains *new information* and plenty of it, and that is what we all want. Its sale should be unprecedented as the price is within the reach of all.

C. L. K., Salem, Oregon.

Please accept my thanks for Davie's Nests and Eggs of N. A. Birds. It far surpassed my most sanguine expectations. It is worth many times the price I paid for it. Will recommend it to all my friends who have an oological turn.

W. D. R., Fredericksburg, Va.

Received the trays and Davie's Key to North American Eggs and Birds. Everything was all right; am much pleased with the book.

D. W. R., Norwalk, Ct.

Davie's Key received; is a great deal better than I expected it to be, in fact I would not exchange my volume for any \$5.00 work on ornithology or oology published. Surely those that ordered in advance could not have spent \$1.00 more profitably. The type is clear and engravings as real as Nature. I ordered my volume last September, and many told me I would never receive it, but I simply said, I was acquainted with your reliability, and waited, and now I have a work worth \$5.00 before me.

W. E. S., Beaver Dam, Wis.

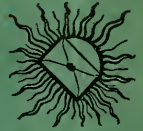
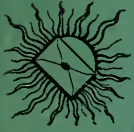
Davie's Nests and eggs of North American Birds just received; am highly pleased with it. Feel well paid for having waited so long for the book.

E. J. B., Medina, N. Y.

Received my look of Nests and Eggs of N. A. Birds to-day and think it the best book of its kind I have seen for that sum of money and well worth the time I have waited.

W. L., Peoria, Ill.

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THE CHARACTER OF THE WORK.

The descriptions of the birds are all original and were written for the work, nothing which has ever appeared in print before, being given. Each species is described in detail, beginning with the adult, and where it was known, ending with that of the nestlings, while all the intermediate stages are given. The attention of students is particularly called to this point, as thereby any species, even if in obscure plumage, may be readily identified. Another character, which particularly recommends the book to beginners, is the fact that very few technical terms are used, simple words being substituted for the long and too often meaningless cognomens, which have been applied to the various parts of birds. Students will also find that comparisons are given between one species and others allied to it, thus greatly assisting in identification, especially in closely allied species.

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FRANK H. LATTIN,
Albion, N. Y.



THE



OÖLOGIST.

Monthly.

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Vol. VI,

ALBION, N. Y., OCT., 1889.

No. 10

Exchanges and Wants.

Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

Through my exchange notice in the OÖLOGIST I received over 50 letters, and did exchanging to the value of over \$175.00, adding nearly 100 sets to my collection, some very rare. Hoping success to you and the OÖLOGIST, I remain H. Y. BENEDICT, South Frairie, Tex.

I have large quantities of first-class Birds' Eggs in full sets with data, also singles to exchange for same and first-class Bird Skins. Lists exchanged. E. M. HAIGHT, Box 24, Riverside, Cal.

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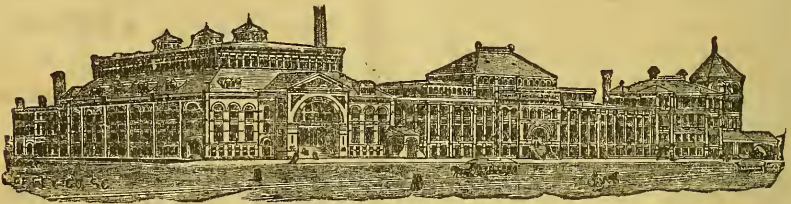
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THE OOLOGIST.

VOL. VI.

ALBION, N. Y., OCT., 1889.

NO. 10

List of the Winter Birds Found in Kalamazoo County, Mich.

(BY SCOLOPAX.)

For about twenty years I have carefully recorded the birds to be found or occasionally seen in my native county. This list, from its thoroughness I think, is now sufficiently complete to publish, and although I do not consider it as perfect, it will, I believe, not be much increased for some time to come.

I embrace here permanent residents, those species that live within our boundaries summer and winter, and are always to be found. Second, winter visitors, those birds which arrive from the North and either remain with us during the winter months, or pass through our territory going or coming to or from the South either during December, January or February. Third, half-hardy, those species which remain with us during mild winter or occur during late January and February, or leave us not till after the first of December.

PERMANENT RESIDENTS.

1. *Parus atricapillus*, Chickadee. Abundant all season of the year.
2. *Sitta carolinensis*. White-bellied Nuthatch. Common all the season.
3. *Cyanocitta cristata*. Blue Jay. An abundant length resident.
4. *Picus villosus*. Hairy Woodpecker. Abundant resident in some cases. Mostly go North in spring.
5. *Picus pubescens*. Downy Woodpecker. Abundant during winter and a few remain during summer.
6. *Hyptomus pileatus*. Black or Pileated Woodpecker. A rare species Occasionally seen in winter, more rarely in summer. This species was once a resident but may now better be styled an accidental visitant.
7. *Asio americanus*. American

Long-eared Owl. Not a very rare species in some tamarack woods.

8. *Strix nebulosa*. Barred Owl. An abundant species. Found every month in the year.
9. *Nyctale acadica*. Sawwhet Owl. A rare resident.
10. *Scops asio*. Screech or Mottled Owl. Not a rare species.
11. *Bubo virginianus*. Great Horned Owl. Our most abundant resident resident of the Owls.
12. *Melcagris gallopavo*. Wild Turkey. Now a rare resident. Once abundant.
13. *Bonasa umbellus*. Ruffed Grouse; A common resident still.
- 14*. *Bonasa umbellus umbelloides*. Gray Ruffed Grouse. A rare resident. Perhaps a straggler from the north, as they are not observed every season.
15. *Cupidonia cupido*. Prairie Hen. A rare resident. Greatly thinned the last twenty years.
26. *Ortyx virginiana*. Bobwhite; Colin; Quail, Not a sure resident.

WINTER VISITANTS.

17. *Lanius borealis*. Northern shrike. An uncertain sojourner from the north. Often goes further south almost proving it to be half hardy.
18. *Ampelis garrulus*. Northern Waxwing. A rare and uneasy migrant, occasionally appearing here from the north. Only once visited Kalamazoo County to my knowledge.
19. *Pinicola ennetator*. Pine Grosbeak. A rare and uncertain visitant.
20. *Loxia curvirostra americana*. American Crossbill. Not rare some winters, usually appear in December,

*What I have called *B. umbelloides* may be only a peculiarity in coloration of the commoner form. Have seen none of late and may be mistaken.

and again in February, and occasionally stays until May.

21. *Loxia leucoptera*. White-winged Crossbill. A rarer species from the North. Never numerous.

22. *Aegiothus linaria*. Lesser Redpoll. A common irregular visitant.

23. *Aegiothus linaria holbolli*. Greater Redpoll. Taken once in winter of 1878 by F. H. Chapin, Esq.

24. *Chrysomitris pinus*. Pine Linnet. Occasionally seen during early or late winter.

25. *Plectrophanes nivalis*. Snow Bunting. Occasionally seen the entire winter. Generally passes through early and late winter.

26. *Spizella montana*. Tree Sparrow. Not rare in winter. Usually seen in December and February.

27. *Junco hyemalis*. Snow Bird. Abundant December and February. Often seen during entire winter.

28. *Nyctea scandiaca*; Snowy or White Owl. A rare and occasional winter visitant.

29. *Astur atricapillus*. Goshawk. A rare winter visitant.

30. *Archibuteo lagopus sancti-johannis*. American Rough-legged Hawk. An occasional winter visitant from the North. Being observed in December and late in February.

31. *Bernicla canadensis*. Canada Goose. Occasionally seen early December and late February.

32. *Clangula glaucium Americana*. American Golden-eye. Not rarely observed in open spots or river in December and February, and occasionally remain all winter.

33. *Harelda glacialis*. Old Squaw. A rare winter visitor.

□34. *Mergus neryganser americanus*. American Sheldrake. Goscander. Not a rare visitant from the North. Usually seen in December and February, but occasionally seen throughout the winter in open places on river.

35. *Larus argentatus smithsonianus*.

American Herring Gull. Observed January 8th, 1887. Two in a flock. Rare at this time of year. Often seen in February before ice goes off of lakes.

36. *Colymbus septentrionalis*. Red-throated Diver. An occasional winter resident from the North. Occupies open spots on the river.

HALF-HARDY.

37. *Merula migratoria*. Robin. Occasionally found throughout the winter. Nearly always appear from the middle to the last of February.

38. *Sialia sialis*. Bluebird. I have one arrival February 8th. Not rarely seen by February 25th.

39. *Regulus satrapa*. Golden-crowned Kinglet. Many remain in the county during mild winter. Occasionally observed in February in dense swamps.

40. *Sitta canadensis*. Red-bellied Nuthatch. Occurs as a visitant for a short time season in December or late February when to or from the South.

41. *Certhia familiaris rufa*. Brown Creeper. Occasionally remain throughout the winter, and during the severest weather, again does not appear until February from the South.

42. *Lanius ludovicianus excubitoridrs*. White-rumped Shrike. Rarely occurs from the South during latter February.

43. *Ampelis cedroruna*. Cedar Bird. Abundant as rule during winter, but sometimes not seen till March.

44. *Asiragalinus tristis*. American Goldfinch. A common resident occasionally. Often not seen in winter.

45. *Melospiza fasciata*. Song Sparrow. Have seen it in December and as early as February 22d.

46. *Agelaius phoeniceus*. Red-winged Blackbird. Once observed as early as February 8th. Not rarely by the latter part of the month.

47. *Quiscalus purpeus*. Purple Grackle. Observed once February 28th. and had he remained away one day longer would not have been honored as

an early arrival, and a winter bird in this article.

48. *Corvus frugivorus*. Crow. Usually remain throughout winter, if not, appear latter part of February.

49. *Eremophila alpestris*. Shore Lark. Common some winters but more often seen in December and February than in January.

50. *Centurus carolinus*. Red-bellied Woodpecker. Usually remain during our winter, but not always.

51. *Melanerpes erythrocephalus*. Red-headed Woodpecker. A rare winter resident, occurs one year in ten.

52. *Colaptes auratus*. Golden-winged Woodpecker. Have been reported every month of the twelve, but rarely appear before February 20th.

53. *Ceryle alcyon*. Kingfisher. Occasionally seen by February 20th in early season. Not rarely seen in early December.

54. *Asio accipitrinus*. Short-eared Owl. Taken January 16, 1887, the first winter record to my knowledge.

55. *Circus hudsonius*. Marsh Hawk. Occasionally seen in December. Sometimes appear from South in February.

56. *Accipiter Cooperi*. Cooper's Hawk. Observed once in January.

57. *Accipiter fuscus*. Sharp-shinned Hawk. Shot Dec. 3, 1886 in the city of Kalamazoo.

58. *Buteo borealis*. Red-tailed Hawk. Occasionally arrives by February 20th. Sometimes observed in December.

59. *Buteo lineatus*. Red-shouldered Hawk. Rarely observed in winter.

60. *Ectopistes migratoria*. Passenger Pigeon. Occasionally arrived in late February. No more immense flocks, and only a few scattered pairs are ever seen now.

61. *Zenaidura carolinensis*. Mourning Dove. Rarely taken in winter. Accidental straggler.

62. *Oxyechus vociferus*. Killdeer. Occasionally arrives by February 20th in open winters.

63. *Philohela minor*. Woodcock. A rare species in winter. Has been observed during each of the winter months.

64. *Gallinago media Wilsoni*. Wilson Snipe. This species is not rarely taken in late February. It has been observed in January.

65. *Anas boschas*. Mallard. Occasionally remain until Christmas.

66. *Anas sponsa*. Wood Duck. In open seasons arrive in late February.

67. *Podilymbus podiceps*. Common Grebe. An occasional arrival as early as late February.

68. *Colymbus torquatus*. Common Loon. Occasionally arrive in February. Kalamazoo, Mich.

Golden Crowned Thrush.

This little bird is abundant in my locality, during all the summer months. They generally arrive in May, and depart in the latter part of September. They seem to prefer the dry, leafy woods, and here they can be found in abundance. About the last week in May, or first in June, the nest is commenced. It is situated on the ground sometimes near a bunch of weeds or other underbrush, and is covered over like an oven, with an opening on the side. The material used is dry leaves, grasses, etc, lined with moss, hair, and grass stems. The eggs, usually four in number, are of a creamy white color, spotted and blotched with reddish brown, and measure from 80x60 to 90x70. Beside the eggs of the owner, those of the Cowbird can usually be found. A nest I found on June 17 '89 contained two eggs of the Thrush, and four of the Cowbird. The Golden Crowned Thrush seems to have no song, except a note resembling *peche, peche*, uttered five or six times in succession.

B. H. S., 1220 Woodward Ave.,
Detroit, Mich.

Am. Long Eared Owl.

In the past numbers of the OOLOGIST I have seen several short articles on this bird. I have had the good fortune with a friend, to secure five sets this season. All were found in deserted crow's nests and in four cases near a house some them less than 100 yds. I have often in winter known these birds to roost in a pine tree a few yards from a house, and they were always quite tame, especially after night.

My first set, taken on March 11, '89, was one of eight eggs in a deserted crow's nest in a white pine, a favorite tree with the Owl, about 20 feet from the ground. The old bird did not leave the nest until I was very close to it. The eggs were placed in the bottom of the old nest, just as it was, except a few feathers from the breast of the old bird. It had evidently begun incubating with the first egg, as some had well-formed embryos, and others were quite fresh. One, to all appearances, having been laid that morning.

The next set was one of seven, taken five days later in a pine tree ten feet from the ground. I had ample opportunity to observe the old bird during the time she was laying this set, as it was only fifty yards from an old house on the farm, and not over 150 yards from the dwelling houses. She deposited an egg every other day, taking fourteen days for the seven eggs. Incubation began with the first egg. Before laying she sat on the nest for a week or more, either to dry it or perhaps to shape it. Nothing was added to it by the Owl.

The third set was taken from an old crow's nest in a pine tree fifteen feet from the ground. Nothing was added to it by the Owl. It was taken March 22, and was of seven eggs, incubation begun in some of the eggs, as usual, while some were fresh. It is in the collection of F. W. McCormack, of Leighton, Ala.

The fourth set was of seven eggs, taken from the same nest as the second set of seven and from the same birds as the female never left the nest, but continued setting. She began laying on the 28th and deposited one egg every other day as before, and had finished by the 12th of April. Quite a number of feathers were shed from her breast and left in the nest. Incubation as usual. I can detect no difference in this set and the first set she laid.

The fifth set was taken on April 15th. It was of five eggs, incubation well begun in all. It was found in a deserted crow's nest in a hedge, ten feet from the ground. The nest was in very bad condition and would hardly hold the eggs. The Owls were around this nest over a month before they began laying. The Owl in the grove began laying her third set on April 25th and deposited seven eggs, making twenty-one in the same nest. I did not take these but let her hatch them. The period of incubation was about a month. One egg was thrown from the nest and another was found to be rotten. The first one to hatch was found dead under the nest next morning. Three days later the next one hatched, and two days after the third, another egg was thrown from the nest at this time and the fourth hatched four days after third. The second and third were nearly of a size, but the fourth was much smaller, and the others left the nest some time before it.

The female was very tame. When thrown from the nest she would return. A number of mice were generally found in the nest with the birds and the pellets of the old birds contained no bones but those of mice.

A Green Heron raised a brood not over twenty yards away, and many hundreds of Bronzed Grackles nest in the grove.

A set of eight eggs shows the following dimensions: 1.62-1.25, 1.64-1.28,

1.63-1.30, 1.58-1.34, 1.61-1.28, 1.62-1.29, 1.60-1.29, 1.56-1.29. A set of seven: 1.60-1.28, 1.59-1.27, 1.60-1.30, 1.52-1.27, 1.52-1.29, 1.53-1.30, 1.61-1.23. Average of the fifteen eggs, 1.60-1.28. Ridgeway gives the average as 1.66-1.28.

The eggs have small hollows running lengthwise in most of them, and they are pitted more or less over the entire surface.

Let us hear from others regarding their experience with this bird.

A. C. MURCHISON,
Kewanee, Ills.

Wood Ibis in Illinois.

In "Bulliton No. 2, Division of Economic Ornithology, U. S. Dept. of Agriculture" in the "Systematic Report" of the birds of the Mississippi Valley under Wood Ibis, *Tantulus loculator*, (Linn.) we find the "Wood Ibis" is a Southern bird, common in all marshy localities near the Gulf coast. A few ascend the Mississippi Valley, where they have been taken in Indiana, Illinois, Wisconsin, Kansas and Missouri. They are rare, irregular, etc. The reader may, therefore, easily imagine my surprise at finding them by the hundreds while staying for a few days on the Illinois River, in in Lat. about 39 degrees, 19 minutes. At this place the bluffs are three and one-half to four miles distant, with a woods and lakes intervening—a veritable sportsmen's and collectors' paradise. The lake which I visited is called Potato Prairie from the fleshy rootstocks of *Nelumbium* which abounds there. The lake is surrounded by heavy woods which are full of wild turkey, besides ruffed grouse in great numbers. As the forest approaches the lake the large trees give way to stunted willows and dogwood, which as the water becomes more constant and deepens, yield to bur-reeds, flags and water lilies, with large expanses of open water, which at this

season alone contains water. Here are found thousands of Little White Egrets, *A. candidissima*, feeding on young fish. During the overflow season, *i. e.* when the bottoms are flooded by back-water from the Mississippi, fish come from the river into the lakes to spawn. Thus when the water recedes and finally the long droughts of summer leave behind only a series of smaller lakes and expanses of mud flats, where from October to August is one continuous lake, here Herons find excellent feeding grounds in the shallows.

While I thus had an opportunity to observe this bird undisturbed, I took occasion to notice its manner of securing its prey. Standing or quietly stalking along in water almost up to its body it seized its fish between its mandibles invariably, instead of piercing with its spear-like bill as has always been my impression.

While Egrets seem to be drawn together by a social instinct when feeding Great Blue Herons alight and feed at random, but when frightened Egrets after darting here and there for a time, rise and make off in a straggling flock, while the Great Blue Herons arise high in the air in one flock and wheel round and round in majestic circles.

As we made our way from one tract of open water to another through chains of lesser lakes which are now mere mud flats, numerous Rails, Least Bitterns and a solitary woodcock rose from the surrounding reeds, appearing for an instant, then vanishing over their tops. Darting hither and thither, mingling with the hundreds of swallows, white-bellied mostly, were flocks of Least Tern and an occasional Night Hawk, while now and then a Turkey Buzzard sailed slowly along the shore in quest of stranded dog fish. Farther out than the Egrets could wade stood the Wood Ibises with pantaloons rolled high up to his body. The whole demeanor of the Wood Ibis is more stoi-

cal than that of a Heron; in fact he has much of his European cousin's philosophical turn of mind, meeting alike friend and foe with that suggestive "clack" of his huge bill. Our host had one with the tip of his wing shot off, which he kept as a pet. Among cats or dogs he unhesitatingly asserted his rights, taking each by the nose in his powerful mandibles—an ordeal which the same dog would hardly subject himself to a second time since a Wood Ibis stands almost waist high to a man, but at the sight of a pig he always lost his courage and fled. This particular Ibis was an enormous feeder in the broadest sense, eating any scraps from the table, provided they be placed in water whence he skimmed them off with his bill. From observing this bird and the contents of the stomach of one from which I made a skin, I am inclined to think the Wood Ibis an enormous feeder to a certain extent. Did space permit, many pages could be written upon this one bird, but as I probably will spend next spring in that place collecting and I may then give my experiences from time to time through the columns of the of OOLOGIST.

H. F. A.
Carlinville, Ills.

A Good Way to Trap Hawks.

While talking with a painter one day on the subject of hawks, he told me how he has caught a good many large ones. He said he took a small steel trap which he set on a conspicuous dead limb of a tree in a locality which hawks frequent, and, baited it with a small dead bird, which he secured to the pan of the trap. Be careful to fix the bird so that the jaws will clear it, on closing. The hungry hawk sailing along spys the bird, which he grabs at with his talons, and is thus caught. I set one and found it to be very efficient.

J. HARMANUS FISHER, JR.
Baltimore, Md.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

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Jottings.

The big fire at Chautauqua and the great storm at Atlantic City, while creating a considerable damage in our immediate locality, and causing our neighbors great loss, we are pleased to be able to inform our patrons, caused us no damage. We desire to express our thanks to our patrons for the interest shown for our welfare in making inquiries in regard to our loss, and expressing hopes that we entirely escaped these two great casualties.

Our printer thinks that we have neglected an important duty by not announcing that the OOLOGIST is now being printed from new type, purchased expressly for it. We might also add

that the OOLOGIST is being printed in one of the largest and best equipped job printing offices, outside of Rochester and Buffalo, in Western New York, viz.: that of Mr. A. M. Eddy, of Albion.

As we go to press we receive the following note from our friend, Mr. E. B. Webster, of Cresco, Iowa, Publisher of the Hawkeye, Ornithologist and Oologist:

Cresco, Iowa, Sept. 28.

Please announce that the Hawkeye, O. and O., is discontinued for the present, and that all claims presented now will be honored in the future. Am completely burned out. Lost nearly \$1000, insurance \$225. 22 buildings burned.

Respectfully,

E. B. WEBSTER.

The Hawkeye, O. and O., was one of the best publications of its class published, and we trust Friend W. will receive sufficient encouragement to guarantee its early reappearance.

In our Premium List we stated that if in any instance we failed to mail the OOLOGIST by the 10th of the month, we would send our patrons a coupon, good for 10 cents. As yet we have mailed each issue before that date, and consequently cannot be called on to pay the forfeit. The numerous delays and in many instances lost OOLOGISTS, have been occasioned in mails after it was beyond our control. We are in no way accountable for, and fail to see any means whereby we can avoid the errors of the clerks in the employ of the Government. Should our patrons not receive their OOLOGIST by the 15th of the month, we will gladly mail them another copy.

During the past two months we have been very very busy and have been obliged to work both night and day. Our Exchange Extraordinary offers brought us in more answers than we bargained for, the boxes and packages came piling in by the "hundreds," and

so many of them that a large number were necessarily neglected until we could take the time to attend them. We have endeavored to fill them in rotation received, and expect to have all straight by Oct. 15th. Many of our patrons would have had their exchanges attended to much more promptly had they not neglected to write their names on the outside of the package.

From September 10th to October 1st much correspondence was necessarily delayed, owing to the fact that our stores at Atlantic City, N. J., and at Chautauqua, N. Y., were still running and that we were obliged to send our assistants from Albion to attend our exhibits at the Buffalo and Detroit International Fairs. At this date, Oct. 7th, we are hard at work straightening out all correspondence, orders and exchanges and if any of our patrons have not had their orders attended to, with big interest on delay, by Oct. 20th, they will please drop us a line stating full particulars and we will, if possible, straighten matters to their entire satisfaction.

Large Sets.

W. C. H., in the September OOLOGIST, mentions finding a set of three Mourning Dove's eggs. I have also found the same number. Two were of the usual size, the third was smaller. A friend of mine took, last season, a set of three Ruby-throated Hummingbird's eggs, also a set of Pied Billed Grebes. The following are some of my large finds: Set 16, Virginia Rail; 18, Sora Rail; 12, Blue-winged Teal; 12, Young Kingfishers; 6, Cooper's Hawk; 7, Bronzed Grackle, 4, Cowbird with 3 of Song Sparrow; set 10, Flicker; 8, Red-headed Woodpecker and six Yellow-headed Blackbird. These are all of my large sets, but I have had very good luck the past season in getting full sets.

W. D. L. B., Minneapolis, Minn.

Birds of Bertie County, N. C.

Following Mr. Clute's and others example, I will endeavor to interest the readers of the OOLOGIST with a description of a part of the birds of this county.

Of the Thrush family the Catbird is the most numerous, and is only a summer resident, migrating South in the latter part of September. The Wood Thrush comes next and is quite common during the summer months. The Robin is an abundant winter resident, migrating North when spring opens, to breed.

The Bluebird is a resident at all times and build their nest in any suitable place.

The Blue-gray Gnatcatcher is not very common, and is only a summer resident. This species construct the nicest nest of any bird that it has ever been my lot to find.

The Carolina Chickadee is common during the summer and breeding season I collected a set of this Chickadee last April, and the nest was a hole excavated in the dead top of a pear tree. It contained six eggs but I broke one in trying to get them.

Of the Nuthatches the Brown-headed is quit common. Indeed, it is the only one that breeds here, I believe. These birds always excavate a hollow for their nest in almost any suitable place; but nearly always in the new grounds when there are any high stumps.

The Carolina Wren take the lead of all the rest of the Wrens in numbers about here. Resident.

Of the Warblers the Hooded Warbler is the only one that I know anything about. These birds alwas build their nest in the small under-bushes, and only a few feet from the ground, generally not more than three feet. Summer resident.

Vircos. The Red-eyed Virco is the only representative of these beautiful

nest makers in this county, I think. Summer resident.

The Bank Swallow is quite common in the spring during the migration. They are said to breed in the banks along the Albemarle Sound.

That great pest, the English Sparrow, has not got in this county yet. The most common sparrows in the summer are the Song and Chipping Sparrows, and in the winter the Swamp and Yellow-winged Sparrows are very common.

Crows. The American and Fish Crows are the only birds of this family that are seen in this county. They are both numerous. The Fish Crow is a summer resident, while the American Crow is a resident at all times.

The Meadow Lark is the only Lark here and it is a winter resident.

Flycatchers. The Acadian and Crested Flycatchers are common, and migrate South on the approach of winter.

The Ruby-throated Hummingbird is the only of this species that we see in our gardens. Common summer resident.

The Chimney Swift is common, building in almost every chimney that it can. Summer resident.

The Chuck-wills Widow, Whipoorwill and Night Hawk are all common. Almost any night in the breeding season one can hear three or four Chuck-wills Widows at a time. Summer residents.

The Pileated Woodpecker is common and is to be met with in almost any swamp. The Golden-winged and Downy Woodpeckers are the most numerous residents.

The Belted Kingfisher is to be seen frequently along streams of clear water, in which there are plenty of fish.

The Black and Yellow-billed Cuckoos are both here in summer.

Of the Owls, the Barred Owl is the most numerous, although the Great and Little Horned Owls are to be met with occasionally.

Birds of Prey. The Red-shouldered

Hawk is a common resident. The Sparrow Hawk is a resident, but not so common as the Red-shouldered Hawk. The Pigeon Hawk is seldom seen. The Bald Eagle is not very common.

The Black Vulture is a common resident, and the Turkey Buzzard is very common. In fact, there is never a day but what the latter may be seen.

Wild Turkey. This fine bird is common, being met with in thick forests and dense swamps. Resident.

The Bob-white is an abundant resident, and in walking over an old field two or three gangs will often be flushed.

The Green Heron is common and breeds. There is a herony near here that two or three dozen eggs can be collected in almost any day during the breeding season. The Great Blue and Snowy Herons are to be seen occasionally.

Loons are here in December and January.

J. W. P. SMITWICK,
Sans Souci, N. C.

Collecting in Western Florida.

Seeing the exploits of so many collectors recorded in the OOLOGIST I venture to send the record of a little collecting trip which my father and myself took in Western Florida last winter and hope it will not be to long for your columns. March 20, started up the Wakula river from St. Marks in a leaky water soaked boat, did not see anything till we had gone nearly two miles when I shot a Florida Cormorant: Have three Osprey nests but they were all empty, save one which had young. Shot a few Snakebirds, Gallinules and "Gaters."

March 21. Started for the Gulf Shore where we camped for the night.

March 22. Turned out before sun-

rise. Spent the whole morning hunting Rails eggs without success. When I vented my ill humor by shooting six or seven Willets. Spent the afternoon in hunting for Vultures eggs. Shot a few Snipe and Doves, and a Cormorant when I went to camp. Father and the cracker who served as a guide came in with an Egret and a dozen different kinds of Herons. Spent the evening in making up skins.

March 23. Went to a Cormorant rookery, the nests were put in the top of dead cypress trees and as I had not any climbers I could not get to them. While going through the pine woods I found a Brown Nuthatch nest with five fresh eggs, it was placed in a dead stump thirteen inches from the ground, the nest was in plain view, the mouth of the hole being four inches wide while the cavity was scarcely six inches deep. Shot a few Boat-tail Grakles and Fish Crows. Put in the afternoon sitting under a Palmetto tree skinning birds.

March 24. We fired the marsh to day and shot the Rails as the flames drove them out of the dry weeds, we shot four different species: Sora, King, Clapper and Louisiana Clapper Rail. On the way to camp we saw a large flock of White Ibis, I fired at them but did not kill any.

March 25. Went up the Wakula this morning. Shot some Snake birds and Little Blue Heron. Shot an Egret but as it fell in the swamp we did not get it. Saw an Alligator twelve feet long and shot him through the head three times but did not get on.

March 26. We reached home to-day, well pleased with our trip, so far as eggs go it was a failure, but for bird skins it was a grand success.

CLARENCE A. SMITH.

A White Sparrow.

"At Twelfth and Oxford streets yesterday four groups of interested sight-

seers stood upon the four separate corners intently watching the antics of a snow-white English Sparrow, which seemed to be king among its soberer coated fellows, demanding and receiving from them an amount of homage and respectful attention that would have done the heart of his highness, the Shah of Persia, good. A resident of the neighborhood said that he had noticed the albino for two or three years. "He has a nest in yonder church steeple," he explained, "and I have spent considerable time in watching him and studying his peculiarities. He is a male bird and a bachelor. That may sound strange, but there are lots of bachelor and spinsters birds among the English Sparrows. Season after season they refuse to mate, set up establishments of their own and live in them, despised and quarreled with constantly by the married birds. This white Sparrow seems to have some authority over the others. They bring him food and even build his nest for him. Life with him is an existence of idleness and luxury. When any bird refuses or neglects to pay him tribute he attacks the direct, gives him a sound drubbing and eventually brings him to terms."

I took the above from the Atlanta Constitution, and the Constitution copied it from the Philadelphia Inquirer, and I should be glad to hear from some of oologist friends in Philadelphia about the white Sparrow, for I know it would interest all the readers of THE OOLOGIST.

J. W. P. S.,
Sans Souci, N. C.

Nests and Eggs of North American Birds.

The Following is What the Farm, Field and Stockman, of Chicago says of the third edition of Davie's Work.

A thorough and reliable work, the new edition of which has been looked

for during several months by those interested in birds. In some respects it is a unique work. The investigations to procure the necessary scientific facts have been pursued with great persistency and fidelity. The author seems to have brought under contribution every one who could give the data wanted from original sources. Usually the authority is cited. The illustrations are a great help especially to youthful students or collectors. They add much to the attractiveness of the book for the general reader. There are thirteen of these full-page illustrations. Some of them probably depict what has never before been attempted. Such for example as that of the Burrowing Owls, Water Ouzels or Dippers and nests, California Bush Tit, etc. Among the plates which are an ornament to the book as pictures are those of the Swallow-tailed Kite and nest, the Wood Ducks, Blue Gray, Gnatcatcher and nest, etc. There is a touching and poetic dedication to the memory of Locius S. Willson, evidently a companion and dear friend in the pursuit of scientific knowledge and in the appreciation of nature.

One feature which should popularize this work for collectors, students and the general reader, is the care in giving prominence to the common names. In this respect great care and good sense is shown in the type and the general style of printing and arrangement of paragraphs. The scope of the work seems to be to cover the land and water birds of North America and to give a description of the nests and eggs. It includes all the species that are indigenous north of the Southern United States boundary, including Greenland and the Peninsula of Lower California. The breeding range of each species is given, the time of nesting, the exact number of eggs laid, their color and size, together with the chief characteristics of the birds.

Often the measurements of eggs are

of those in the cabinet of the author. It should be understood that though this is merely a new edition of a work already having a good reputation among scientific men, it is much larger and more complete than ever before. Nothing could be better to encourage thoroughness in students and aid all collectors to identify specimens. To facilitate practical use a full alphabetical index is added, not only of the leading name by which the bird is commonly known, but with all the common names mentioned in the text. A page or two of directions for collecting and preserving birds' nests and eggs will be found very useful to many beginners in this delightful occupation of a collector. We might quote from any page and interest our readers in the facts so clearly and succinctly stated. Many curious and interesting facts are noted concerning birds more or less familiar, but to whom the general reader had never applied the scientific methods of observation and investigation, illustrated in this book. No section of our country has been neglected. The birds of Arizona are apparently as fully described as those of Ohio. Where on every page there is so much of value, it is difficult to select. Among the more elaborate and interesting articles, we may cite the following:

Brown Thrasher, the common Blue-bird, American Magpie, American Eared Grebe, Great Auk, Great Horned Owl, Burrowing Owl, Red-headed Woodpecker, Parula Warbler, Oven-bird, Bryant's Marsh Sparrow, Cowbird, Chimney Swift, Swallow-tailed Kite, Turkey Vulture, Cooper's Hawk, Red-tailed Hawk, Red-shouldered Hawk, Swainson's Hawk, Duck Hawk, etc., etc.

We know of one young collector who has identified the Oven-bird by the description on page 378.

The print is large and clear. The work is generous and full in whatever

aspect it is viewed. There are 475 pages of large size. We would suggest that every school library in the land should possess a bound copy of this work, and that every boy or girl who has a taste for ornithology, be provided with at least a paper edition if not that in cloth.

The Black Tern.

This is an abundant species here, arriving during the latter part of April or first of May, when they may be seen in considerable numbers and picking up the grubs of which they are very fond. They can be easily caught in steel traps by putting a grub on the panel of the trap and setting it on a newly plowed furrow. One will come along and when it sees the worm it will balance itself over the trap and make a dive for the tempting morsel, but it finds that it is not as easy to rise as it was to drop, and so it stays there. When the other terns see that one is in such a fix they hover over it diving part way down and uttering cries of distress until frightened away. But they will not take warning by its fate and the trap is set in the same way again another will soon be caught. When a little "kid" I used to amuse myself by catching them in this way, and thought it great sport.

The sloughs in this locality are a favorite nesting place. In these, on decaying vegetation or on logs formed by sunken muskrat houses, the nests are placed and consist of small piles of the decaying vegetation slightly hollowed. The eggs are two or three in number, usually three. They vary from brownish to greenish in color, spotted and blotched with black and brown of different shades. They are usually deposited about the middle of June, average size, 135x98in. In some sloughs these birds breed in colonies; in others only one nest will be found. In the latter case the bird constructs its own nest and it is usually well built. They stay here till late in the fall.

JOHN V. CRONE, Marathon,, Iowa.

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No efforts have been spared to make this the most excellent of all works of a similar character heretofore published. The reading matter will be printed from large new type on finest bookpaper. The colored plates are made after the originals of artists who rank highest in their profession. The firm who reproduced these originals in a highly finished style, Ernst Kaufmann, in Lahr, Germany, and New York, is well-known in art-circles for its specialty: Chromo-work. The author, Mr. Nehrling, is an active member of the American Ornithologists' Union, a corresponding member of the Nuttall Ornithological Club, and honorary member of a large number of European scientific societies. Mr. Nehrling is an original writer, not simply a compiler. He has observed the life of our birds in the woods of Wisconsin, where he was born, in the prairies of Illinois, in Florida, Texas, Missouri, and many other states. He is well versed also in the literature of American and European Ornithology. The Ornithological Magazines at home and abroad have published series of articles from his pen, which have won him honor and esteem among the scientists as well as among the amateurs in ornithology, and the lovers of the beautiful winged inhabitants of our country. In short, Mr. Nehrling and the above named artists have combined with the publisher to present to the public a work on North American birds, which will, by its own merits and its fine make-up, undoubtedly become a standard work, one that cannot be missed in any well selected Private, College or Public Library. The work is also published in German.

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ALBION, N. Y., NOV., 1889.

No. 11

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

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THE OOLOGIST.

VOL. VI.

ALBION, N. Y., NOV., 1889.

NO. 11

The Thick-billed Grebe.

(*Podilymbus podiceps.*)

Although this is one of the most generally distributed of Grebes, ranging nearly over the entire United States and beyond, I have seen very few articles written on this very interesting bird. Probably its retiring habits, or rather the placing of its nest where it can not often be reached without a boat, is the reason why it is not more generally observed.

In most of our small lakes here will be found a growth of coarse rushes extending to a greater or less degree over the entire lake. Among these rushes will be found the summer home of the Pied-billed Grebe, known in our local vernacular as "Hell-diver."

This Grebe, like the Loon, will dive at the flash of a gun, making it very difficult to shoot one if it should see you; or sitting on the water, it will quietly sink backward, disappearing beneath the surface, leaving scarcely a ripple to mark the spot it had occupied but a moment before.

Their nest is composed of rushes and decaying vegetation. The rushes pulled up from the bottom of the lake and placed crossing each other on the water, with the small ends farthest from the center, and serving a double purpose as a float and as a foundation for the heavier material which is gathered together in a little heap from two to four inches in height, and perhaps six or eight in diameter, hollowed just enough to keep the eggs from rolling into the water, probably not over an inch. In this depression are deposited the five to eight eggs, generally six or seven, commonly eight, rarely ten, always wet from the soaking and decaying vegetation of which, as I have said, the nest is composed, and always

warm from the heat generated by the decomposition of the same materials. In color they are a light greenish-blue, when freshly laid, resembling the tint found in some Heron eggs, or like the eggs of the Least Bittern; but they soon take on a deep buff, drab or light-brown shade from coming in contact with the nest. Some few, even after being in the nest quite a while, retain the original color in spots, giving the egg a cloudy, mottled appearance. Still others take on a uniform dirty or greyish-white, not showing the heavier stain at all.

I have very seldom found a set of eggs without a few showing a rough, warty excrescence or calcareous deposit in spots on the shell. When found the eggs are almost always covered with decayed rushes and grass taken from around the nest by the parent bird. Although I have collected a few sets that were uncovered when found, it is an exception and not the rule to find them where their has not at least been some visible attempt at covering them.

Only in one instance have I seen the bird cover her eggs, and then I found the nest, to her, unexpectedly. She stood upright on the edge of the nest and drawing her head down until her bill nearly or quite rested on her breast, she, with a forward and upward movement, pushed and lifted part of the nest upon the eggs, repeating the operation two or three times, smoothing it over them with about the same motion that a duck goes through in feeding when on the water. This was all done in less time than it takes to tell it, and throwing herself backward off the nest, she disappeared beneath the water.

From as careful an observance of this bird as I have been able to make, and a wide range of experience as re-

gards their nidification, I will say that it is my opinion that the bird rarely, sets on the eggs during the day, but leaves them to be hatched by the heat generated by decay of nest, decomposition assisted by nature's great incubator, the sun. Why the Grebe covers her eggs, if it is not for the purpose of fostering the heat generated, I do not know. They have no natural enemies, in this locality at least, to guard against, which the covering would prove a panoply of defence. I suppose opinions vary as to the cause, but we can see the effect in the finding of the eggs in one nest, all the way from fresh to badly incubated. But be it as it may, this trait of the Grebe shows one of the all-wise and wonderful provisions of nature through what we are pleased to call the instinct of a bird.

The eggs in size are very variable. A few that are in my cabinet present the following measurements: 1.62 x 1.16, 1.75 x 1.16, 1.87 x 1.12, 1.81 x 1.19, 1.75 x 1.19, 1.73 x 1.19, 1.62 x 1.12, 1.56 x 1.09, 1.75 x 1.19, 1.97 x 1.09. The last is out of common proportions, yet not rarely found. L. DART.

Birds' Nests.

Collectors of birds' eggs are apt to regard the nest as a secondary consideration, yet there is as much to be learned from it as from the eggs themselves. There is an individuality about it which the eggs do not possess.

The Orioles are among the best of nest-builders. The deftly woven nests of the Baltimore Oriole are all made after the same general pattern and yet no two are exactly alike. In placing the nest the bird shows great cunning, also, and the question is not how to find the nest, but how to get it after it is found. The nest of the Orchard Oriole is interesting because of the materials used in construction; grasses are common enough in birds' nests, but this Oriole

is one of the few birds, who prefer green grass.

Another family of pensile nest-builders, are the Vireos. We can generally find their pretty cup-shaped nests in the deep woods where they are swung from the forks of some low shrub, sometimes as low as two feet from the ground. The Cow-bird, too, manages to find them out however cunningly they be concealed.

Several species of Fly-catchers are famous for ornamenting their nests in an exquisite manner. The common Pewee usually covers the outside of its nest with green moss, and the Wood Pewee uses gray lichens for the same purpose. Another, the Great Crested Fly-catcher, has a fancy for cast-off snake skins and is seldom without one or more.

The Cat-bird's nest is an unique affair usually found in thorn-bushes; the outside is built of course twigs and the inside of fine rootlets—anyone can identify it even in mid-winter.

Indeed, winter is a very good time to go a nesting; then one has no trouble to find them. The Goldfinch's nest is one of the most common found on such snowy excursions; the bird is a good architect and builds a nest that will often out-last several winters.

The most of our resident sparrows nest on the ground; a few nest in trees; the Song Sparrow seems undecided which to do so nests in both places; in the case of such birds as breed, sometimes in trees and sometimes on the ground, it is nearly always the early broods that are found on the ground; as the season advances, more and more nests are found in trees. Some one has suggested that the reason the birds take to the trees, is that they want to avoid the disturbance of their nests by the farmer in cultivating the land; but perhaps a better reason for the early broods being found on the ground, lies in the fact that the bushes which would

otherwise contain their nests, are not in leaf when the first nests are built.

For the most part the nests of any one species are all built alike and any variation from the general type is worth noting. Late last summer the writer found a nest of the Meadow Lark which was completely roofed over—the entrance being on the side, toward the north; the nest proper, that is, the part below the surface of the ground, was composed entirely of needles from the white pine; the roof was of grass.

On the 19th of May, '89, a Robins nest was found in a rather unusual place, being built in a hole in a tree; the mud wall was especially prominent, though it would seem to be of little use in such a place.

W. N. C., Binghamton, N. Y.

Yellow Billed Cuckoo.

Coccyzus Americanus, LINN.

This bird of which I have seen little mention of in the OOLOGIST is plentiful in this locality and is known to many under the name of Rain-dove or Rain-crow. It utters its note most frequently before storms, from whence it gets the name. They are oftener seen than heard and again when heard they are seldom seen. The times of nidification of this species, range from May to September and I have obtained fresh eggs in the latter month. Of eight nests which I have had opportunity to examine have found the bird on in every instance, admitting of my approach to within a few feet. If you are cautious and stop at a respectful distance, the bird will give you a good opportunity to look at her. The long curved bill is very conspicuous as so is the iris. The whole plumage of the bird is gray, darker above, shading to white beneath, with very beautiful black spots or bars on the under side of the tail. Most of the nests of this species which I have found

have been located in apple trees from 6 to 20 feet above the ground while a few were placed in thickets and bushes on marshy grounds. They are very rudely constructed being but a few twigs, little sticks and a few leaves laid together to form a platform barely hollowed sufficiently to prevent the eggs from rolling off, which indeed I once experienced in making to hasty an ascent of a shaky limb. The eggs are from two to four in number, though sets of six are on record. Fresh and incubated eggs are generally found in the same nest owing to a lapse of several days between the depositing of the eggs. When fresh they have much the color of eggs of the Green Heron but as incubation advances, they become lighter. Average size is 128x88. Elliptical in form. The Black-billed, a closely allied species differ, but little in general description. The nest is somewhat more substantiably built, and the eggs a little smaller, 128x80, of rather a darker green. In many nests of the Yellow-billed species have I seen the eggs from below, which is impossible with the Black-billed. J. P. J. Kelton, Pa.

A Query.

Medina, N. Y., Sept. 14, '89

There is a problem which by its repeated occurrence has forced itself upon me for a solution, and as I am unable to solve it, I bring it to you hoping that either you or some reader of your valuable journal may be able to. It is this: Every year as soon as the first of September comes and all through the first half of that month, at about sundown every night, large flocks of black-birds are seen flying over to the northeast. Now the fact of their congregating in itself would be nothing of unusual occurrence, but when we consider that it is always in the same direction, it appears to be not quite so commonplace. For several years I have noticed this movement and it is always and invariably toward the northeast. Now the question arises, where are they going?

Hoping that I may receive some information that will set my curiosity at rest. I am

Very respectfully,
NEIL F. POSSON, Medina, N. Y.

A Mechanical Egg Drill Improved.

Seeing a recent article in the OOLOGIST, how to make a mechanical egg drill, I will tell my Oological friends about my drilling apparatus, which I like much better than the one described in July OOLOGIST by Fred W. Stack.

First, I got a fifty cigar box and then I made two wheels, one larger than the other. The larger one measured $3\frac{1}{2}$ in. diameter and for the smaller one, I used a No. 40 Clark's cotton spool.

Having gotten my wheels in shape, I proceeded to make spindles for them to work on. The larger wheel's sindle should project out on the side that the box opens on, and fixed for a crank to work on, by means of which the drill is to be put in motion. For the smaller wheel's spindle I got a reed that the drill I wanted to use would fit in the hollow nicely—not too tight. I then fastened each wheel on its respective spindle. Then I got a piece of wood an inch wide, quarter of an inch thick and long enough to fit in the box lengthwise, and made two holes in it large enough for the spindles to work in loosely and in such a position that neither wheel would touch the ends or sides of the box in running. I also made two corresponding holes in the bottom of the box. The spindle of the smaller wheel must be long enough and so arranged that the drill can be put in position for drilling from the bottom. I forgot to say that I cut a groove around the larger wheel for a band to work on.

Having everything adjusted in their proper places with a band on the wheels (For a band I used a piece of twine.) I fastened the piece of wood in its place with some small tacks. I then made a crank and fixed it on so that it could be removed to let the box shut.

If everything is well adjusted one can drill eggs as if by magic.

All I have to do when I want to drill

eggs, is to open my box, adjust the crank and drill. place the box on one of its sides (not bottom, top nor ends) and fasten it with a small tack to hold it steady, and then I am ready for work.

J. W. P. SMITHWICK,
Sans Souci, N. C.

Birds Moving their Eggs.

The September number of your valuable little monthly just received, and in perusing its contents, I noticed a query as to what became of a certain set of Vireo's eggs which mysteriously disappeared from the nest and were replaced by a Cowbird's egg. My theory is that the Cowbird removed them before depositing her own. The ground for this belief is based upon a tenanted nest of the Red-eyed Vireo found by me this year. It was a beautiful little cup-shaped structure suspended from the fork of a small dogwood tree, and when found contained one egg. Visiting the nest five days later, three more eggs had been laid, this making a set of four which I did not take, as my cabinet already abounded in eggs of this species. Collecting in the same swamp, the following Sunday, I peeked into the nest and to my surprise, found two of the Vireo's eggs gone, and their respective places occupied by a pair of ugly cowbird's eggs, both of which, I destroyed. I searched the ground in the vicinity thoroughly for the missing eggs, and at last found one about 20 feet from the nest. It was perfect with the exception of a hole in the side as though the shell had been punctured by the bill of some bird and the contents eaten out. Sometime after this visit, I chanced to pass that way, and curiosity prompted me to pull down the limb and look into the nest; here a second surprise awaited me, for the nest contained four eggs of the cowbird and one little cowbird just struggling into existence.

In regard to birds carrying eggs from

one nest to another, I remember reading somewhere of a farmer who, while ploughing a field, flushed a Quail from her nest almost under the horses feet. Not wishing to break up the happy home, he carefully removed them a short distance to a bed of grass made for the purpose. On returning an hour or two afterwards, he found the eggs gone, and during the course of the afternoon, the Quail was discovered sitting contentedly on her eggs in a fence corner 100 yards away.

I also recollect reading another interesting anecdote of a Robin, transferring her eggs from one nest to another before the last nest was hardly finished.

In conclusion, I will do myself the honor of saying that Davie's Nests and Eggs of North American Birds is the best book of its kind I ever saw.

Yours Truly,

J. CLAIRE WOOD.

The Cardinal Grosbeak.

The Redbird, as it is commonly called, is one of the most abundant birds in Kentucky and one that has attracted as much attention as any. Its sprightly figure, its gaudy plumage and its vivacity do not fail to make it one of our best known songsters.

The Cardinal is sometimes called the Virginia Nightingale on account of its clearness and strength of voice and note, many of them resembling the slight notes of a lark and are nearly as loud. They begin their song with the first appearance of dawn and frequently, with little intermission; sing for a whole morning together.

The whole upper part of the Cardinal's body is a dusky red except the side of the neck and head, which, with the lower parts, are a bright vermillion. The head is ornamented with a crest or topknot.

The female is smaller, but there is not much difference in the plumage.

It is not a migratory bird, but remains with us throughout the entire winter months, and as seen flitting throughout the leafless forests, its brilliant plumage contrasts strangely with the stark and frozen branches of the trees, the bleak surroundings and generally dismal aspect, bringing back to the collector memories of spring and summer, when the selfsame woods were green with leaves, and the forest aisles filled with sunshine, and feathered songsters of all description twitted and sported away the golden hours, filling the air with their sweet carols from early morn till dewy eve.

The Cardinal generally breeds in a thicket of scrubby bushes not far from the outskirts. Half the time a scrubby thorn tree is selected for the nesting site, which is situated four or five feet from the ground. It is composed of coarse grass, vegetable sprigs, fine twigs, bark of grapevine, and lined with finer grasses and hair.

Davie, in his third edition, intimates that the number of eggs found in a clutch are three or four, as many of one number as of the other. In this section I find that three-fourths of the sets found contain only three eggs.

The ground color of the egg is generally a dull white, sometimes with a tinge of green, with lavender and reddish-brown spots and blotches distributed over the entire surface.

I have in my possession the finest set of eggs of this bird that has ever come under my notice. They were taken about a mile from Lebanon. The nest was placed in a low pine tree about four feet from the ground. The ground color of the eggs was of a greenish hue and the markings are so heavy and large that they cover nearly the entire surface. Incubation was fresh, and number of eggs, four.

A. C. L., Lebanon, Ky.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

FRANK H. LATTIN, — ALBION, N. Y.

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
 Sample Copies, - - - - - 5c each.
 The above rates include postage and premium.

ADVERTISING RATES

Single insertion. 20 cents per line, nonpareil.

	1 mo.	3 mo.	6 mo.	1 yr.
Five lines,	1 00	2 50	4 00	6 00
One inch,	2 00	5 00	5 00	12 00
1/2 column,	7 00	17 50	25 00	42 00
1 " "	13 00	32 50	52 00	78 00
One page,	25 00	62 50	100 00	150 00

Advertisements under five lines, charged one line extra. Special discounts can be given on many advertisements. Send copy for estimate and we will give you the exact cost of the advt. you wish inserted.

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Jottings.

In this issue of the OOLOGIST we give a complete list of the birds of North America, arranged according to the new A. O. U. check list. We have also quoted as far as possible, prices for each species. A few of these prices may differ slightly, from those of other dealers, but taken as they average, will be found the nearest, accurate and most "consistent" ever published; and they have received the approval of one of our best American oologists. The list will be the standard of the majority of our collectors for 1890.

For 1891 we intend to make the list far more accurate and desire suggestions from any of our older oologist in regards to an advance or decrease of any quotations we have made. While the quotations given, will be our regular prices for 1890, and orders will be filled at prices quoted by any reliable dealer, we publish the list in the OOLOGIST for collectors to use as a basis for making their exchanges for 1890.

There are several American birds, included in the European fauna. The eggs of which can be obtained in Europe at from one-half to one-tenth their true value were they collected in America. (The numbers representing these species, on the list, are mostly enclosed in brackets). The quotations are in most cases for the imported specimens, in our 1891 list, (to be issued in Dec.

1890. We shall give prices for both the American and imported specimens of these species.

In order to make this issue of the OOLOGIST of still greater value, we have prepared a few instructive articles in relation to making exchanges, etc. As every collector will want at least a few extra copies of this issue, we will mail them prepaid at the following low rates, viz: four cents per copy; three copies for ten cents; ten for thirty cents; one hundred for \$2.50.

To Pack Eggs For Transportation.

Always use strong boxes, well made from some light material.

Cigar boxes, if well made, answer the purpose very well. The large sizes we do not consider as safe as the smaller ones.

Should the cover fit inside of the end pieces of the box, nail a small cleat across each end on the inside, thereby preventing any possibility of the cover breaking in and crushing the contents, which would otherwise almost invariably happen from the rough usage which the box is sure to receive in the mails.

For orders or exchanges smaller than those required to a "50" size cigar box we use round tin boxes ranging in size from 1 oz. to 16 oz. The saving in postage by the use of these boxes will more than pay the first cost. The larger sizes, although we use hundreds of them, at our risk, we do not consider safe unless the boxes are first covered with corrugated paper before the final wrapping for the mail. Having prepared a suitable box for the specimens, we proceed to pack them by wrapping each egg carefully in a small roll of cotton. The eggs thus wrapped can then be packed in layers, snugly, but not tightly, in the box. Hundreds of eggs are broken through careless packing, and by trying to crowd in too many eggs into a small space.

After wrapping your eggs in cotton, it is advisable to add an additional wrapper of thin paper, tissue is best. Do not wind on several yards of thread,

we know this is a customary practice with many collectors and dealers, but it is both a waste of time and material, and small eggs are far more liable to become broken when unpacked than if wrapped in the ordinary manner.

Pasteboard partitions should never be used unless the sender wishes to be rewarded with a lot of broken eggs. The same caution might also be given to collectors who are in the habit of throwing in their eggs loosely, either in layers or in bulk. Large sea bird eggs can be packed in dry moss, tow, oakum, or similar material.

Never use bran or sawdust, it will work in the holes where the eggs are blown and will make them so solid that they will jolt together and break. Hundreds of valuable specimens have been broken every season through improper packing, fully seventy-five per cent. of these breakages could have been avoided if the packers had only used a little more care and judgment.

Frequently specimens are broken by rough usage and handling in the mails, this of course is no fault of the shipper, but if no agreement to the contrary is made, it is an unwritten law, or we might say understanding, that the shipper guarantees safe delivery and in case of loss by breakage the shipper should either replace such specimens gratis, or have their value deducted from the shipment, provided, however, that the receiver of the damaged specimens return the imperfect or broken ones within three days after they have been received.

Useful hints, items, and instructions are given in the OOLOGIST from time to time, and any question of interest to the collector will be cheerfully answered through its columns.

Numbering Eggs.

Every collector should mark or number his eggs and arrange them accord-

ing to either the A. O. U. Check List of North America Birds, or according to Ridgway's Nomenclature. To young collectors and beginners it is advisable to use the former, as it is the list arranged and adopted by the American Ornithologists' Union and has with trust come to stay. But as there are many large collections numbered and arranged according to Ridgway's and by far the bulk of the eggs in this country bear the Ridgway numbers, it will be some time before our older collectors will make the change and give up the No's that are now as familiar to them as their A. B. C's, but the change must come and we would advise collectors to mark all specimens during the coming season, with the A. O. U., No's.

As it is supposed that you will use, beginning with 1890 at any rate, the A. O. U., No's. you should mark the specimen with the number given in that list, with a soft lead pencil, never ink, making the figures small, neat, and plain and placing them on the under side of the egg, near the hole from which the contents were emptied. Unnatural stains or marks, other than the No. and set-mark, should never be made on an egg and natural ones should never be removed.

Disposal of Duplicate Specimens.

Collectors usually dispose of their duplicate specimens by exchange with other collectors or with dealers. In both cases some standard list is adopted as a medium or basis of exchange, and exchanges with the former are made at even rates and reckoned at the prices given in the list adopted. It frequently happens that a collector obtains some very desirable duplicates of species not easily obtainable and some other collector may be glad to allow him more than list prices for them, but as price lists of leading

dealers are usually made from some standard say, for example, that the egg of the Robin is worth three cents and the Bald Eagle \$5.00, the prices given other species are made according to their supply and demand when compared with the two species last mentioned. As a rule the prices given in established dealers' lists are as near fair and accurate as can be made and as the motives which induce oologists to make their collections are either for pleasure, pastime, or study, and not for gain from a financial standpoint, it is safe to say that all exchanges with brother collectors, should be made at even rates. Making exchanges with dealers, however, is different. The dealer handles specimens from a business standpoint and with him it is first a question of "bread and butter," and the "pleasure" part must take second place. As a rule dealers will take what duplicates, if desirable, a collector may have and allow him one-half their regular prices for them, paying the collector in return with specimens at full rates. At first thought, the collector may think this is allowing the dealer a good commission for making the exchange, but it is really all that the dealer can afford to allow, except in cases where he happens to be in need of the species the collector offers, and the collector wants, or is willing to take species which the dealer has a surplus. In this case it is an accommodation to the dealer, as well as collector and he will often allow full, or special rates. Many of our best collectors consider it more profitable and satisfactory to exchange with a reliable dealer, than to make exchanges with a large number of collectors. More especially is this, the case when the collector has a large number of specimens of a single species and it would be necessary to make exchanges with a dozen or more collectors, in order to dis-

pose of them, in cases like these, the additional expense, risk and time, hardly offsets the gain on rate. Both methods of exchange has its advantages, and if the writer had a lot of duplicates that he desired to exchange for others, new to his collection, he would make exchanges with both collector and dealer. Large and valuable lots of fragile specimens should always be sent by express, as it is much safer. Express packages should always be sent prepaid.

Never ship a lot of specimens to anyone without first making a bargain with them. We have doubtless had more unpleasantness occur, over this one failing on the part of our patrons, than any other single thing.

A dealer rarely wants a lot of common eggs at any price. He cannot afford to give large and low priced sea bird eggs in exchange, unless the collector is willing to pay the postage both ways. Other than strictly first-class specimens are rarely wanted at any price. Many species that a dealer has in stock, he cannot give in exchange, unless special arrangements are made to that effect.

Parties desiring to make exchanges, should always observe the following hints, thereby preventing any possible unpleasantness or delay:

Write, stating plainly what you have to offer, and what you desire in return, should an exchange be arranged:—

Pack carefully; remember you ship your eggs at your risk.

Mark your name and address on the package; it is often impossible when the collector or dealer to whom you send has a large correspondence to tell who it is from if you do not.

Last, but not least: Send nothing but strictly first-class specimens in exchange. Specimens of any other quality should be heavily discounted, or returned at the sender's expense.

Small exchanges amounting to less than \$1.00, are rarely desired by a dealer.

123a 646	Violet-green Cormorant	50	204 582	Whooping Crane	\$2 00
123b 646a	Baird's Cormorant	50	205 584	Little Brown Crane	4 00
124 647	Red-faced Cormorant		206 583	Sandhill Crane	1 50
125 640	American White Pelican	50	207 581	Lionpkin	1 25
126 641	Brown Pelican	25	208 569	King Rail	20
127	California Brown Pelican	50	209	Belding's Rail	
128 639	Man-o'-War Bird	2 00	210 570	California Clapper Rail	
129 636	American Merganser	1 00	211 571	Clapper Rail	10
130 637	Red-breasted Merganser	30	211a 571a	Louisiana Clapper Rail	90
131 638	Hooded Merganser	1 00	211b	Scott's Rail	20
132 601	Mallard	20	211c	Caribbean Clapper Rail	
133 602	Black Duck	40	212 572	Virginia Rail	20
134 603	Florida Duck	2 00	[213] 573	Spotted Crane	30
135 604	Gadwall	50	214 574	Sora	10
136 606	Widgeon	25	215 575	Yellow Rail	
137 607	Baldpate	75	216 576	Black Rail	
[138] 611	European Teal	20	216a 576a	Farallone Rail	
139 612	Green-winged Teal	50	[217] 577	Corn Crane	20
140 609	Blue-winged Teal	25	218 578	Purple Gallinule	30
141 610	Cinnamon Teal	40	219 579	Florida Gallinule	12
142 608	Shoveller	40	[220]	European Coot	15
143 605	Pintail	30	221 580	American Coot	10
144 613	Wood Duck	75	222 563	Red Phalarope	1 00
[145]	Rufous-crested Duck	75	223 564	Northern Phalarope	50
146 618	Redhead	25	224 565	Wilson's Phalarope	1 25
147 617	Canvas-back	1 25	225 566	American Avocet	75
148 614	American Scaup Duck	60	226 567	Black-necked Stilt	75
149 615	Lesser Scaup Duck	75	[227] 524	European Woodcock	1 75
150 616	Ring-necked Duck		228 525	American Woodcock	1 25
151 620	American Golden-eye	75	[229] 526	European Snipe	25
152 619	Barrow's Golden-eye	1 00	230 526a	Wilson's Snipe	1 50
153 621	Buffle-head		231 527	Dowitcher	
154 623	Old-squaw	40	232 527a	Long-billed Dowitcher	
155 622	Harlequin Duck	1 25	233 528	Stilt Sandpiper	1 50
156 624	Labrador Duck		234 529	Knot	3 00
157 625	Steller's Duck		235 530	Purple Sandpiper	1 00
158 626	Spectacled Eider		236 531	Aleutian Sandpiper	
159 627	Greenland Eider	30	237 532	Fryhof Sandpiper	
160 627a	American Eider	20	238 533	Sharp-tailed Sandpiper	
161 628	Pacific Eider	1 00	239 534	Pectoral Sandpiper	
162 629	King Eider	1 75	240 536	White-rumped Sandpiper	
163 630	American Scoter	2 00	241 537	Baird's Sandpiper	2 00
[164] 631	Velvet Scoter	75	242 538	Least Sandpiper	2 00
165 632	White-winged Scoter		242.1	Long-toed Stint	
166 633	Surf Scoter	1 00	[243] 535	Dunlin	35
167 634	Ruddy Duck	50	243a 539a	Red-backed Sandpiper	
[168] 635	Masked Duck		244 540	Curlew Sandpiper	
169 591a	Lesser Snow Goose		[245] 542*	Spoon-bill Sandpiper	
169a 591	Greater Snow Goose		246 541	Semipalmated Sandpiper	
169.1 590	Blue Goose		247 541a	Western Sandpiper	2 00
170 592	Ross's Snow Goose		248 542	Sanderling	
[171] 593	White-fronted Goose	1 50	249 543	Marbled Godwit	1 25
171a 593a	Amer. White-fronted Goose	2 50	250 544	Pacific Godwit	
172 594	Canada Goose	1 00	251 545	Hudsonian Godwit	
172a 594a	Hutchin's Goose	1 00	[252] 546	Black-tailed Godwit	50
172b 594b	White-checked Goose	4 00	[253] 547	Green-shank	2 50
172c 594c	Cackling Goose		254 548	Greater Yellow-legs	
173 595	Brant		255 549	Yellow-legs	3 00
174 596	Black Brant		256 550	Solitary Sandpiper	
[175] 597	Barnacle Goose		[257] 751	Green Sandpiper	2 00
176 598	Emperor Goose	3 50	258 552	Willet	40
177 599	Black-bellied Tree-duck		258a 552	Western Willet	40
178 600	Fulvous Tree-duck	1 75	259 553	Wandering Tattler	
[179] 586	Whooping Swan	1 50	[260] 554	Gull	20
180 588	Whistling Swan	2 50	261 555	Bartramian Sandpiper	40
181 589	Trumpeter Swan	4 00	262 556	Buff-breasted Sandpiper	
182 585	American Flamingo	1 00	263 557	Spotted Sandpiper	15
183 505	Roseate Spoonbill	1 00	264 558	Long-billed Curlew	75
184 501	White Ibis	35	265 559	Hudsonian Curlew	
[185] 502	Scarlet Ibis		266 560	Eskimo Curlew	
186 503	Glossy Ibis	25	[267] 561	Whimbrel	40
187 504	White-faced Glossy Ibis	1 25	[268] 562	Bristle-thighed Curlew	
188 500	Wood Ibis	1 00	[269] 512	Lapwing	15
[189] 499	Jabiru		270 513	Black-bellied Plover	2 25
190 497	American Bittern	1 25	[271] 514	Golden Plover	40
191 498	Least Bittern	20	272 515	American Golden Plover	1 50
191.1	Cory's Least Bittern		272a 515a	Pacific Golden Plover	
192 486	Great White Heron	1 25	273 516	Killdeer	20
193	Ward's Heron	40	274 517	Semipalmated Plover	1 00
194 487	Great Blue Heron	25	275 518	Ring Plover	20
[195] 488	European Blue Heron	20	[276] 519	Little Ring Plover	25
196 489	American Egret	25	277 520	Piping Plover	50
197 490	Snowy Heron	15	277a 520a	Belted Piping Plover	75
198 491	Reddish Egret	40	278 521	Snowy Plover	75
199 492	Louisiana Heron	10	[279]	Mongolian Plover	
200 493	Little Blue Heron	10	280 522	Wilson's Plover	25
201 494	Green Heron	10	281 523	Mountain Plover	1 25
201a	Frazar's Green Heron		282 511	Surf Bird	
202 495	Black-crowned Night Heron	10	283 509	Turnstone	75
203 496	Yellow-crowned Night Heron	25	284 510	Black Turnstone	

285]	506	Oyster-catcher	\$ 25
286	507	American Oyster-catcher	70
286.1		Frazar's Oyster-catcher	
287	508	Black Oyster-catcher	
[288]	508	Mexican Jacana	10
289	480	Bob-white	15
289a	480a	Florida Bob-white	10
289b	480b	Texas Bob-white	
289c		Cuban Bob-white	
291		Masked Bob-white	
292	481	Mountain Partridge	90
292a	481a	Plumed Partridge	90
293	484	Scaled Partridge	50
293a		Chestnut-bellied Scaled Partridge	75
294]	482	California Partridge	10
294a		Valley Partridge	20
295	483	Gambel's Partridge	25
296	485	Massena Partridge	
297	471	Dusky Grouse	1 50
297a	471a	Sooty Grouse	1 75
297b	471b	Richardson's Grouse	
298	472	Canada Grouse	1 00
299	472a	Franklin's Grouse	
300	473	Ruffed Grouse	15
300a		Canadian Ruffed Grouse	
300b	473a	Gray Ruffed Grouse	
300c	473b	Oregon Ruffed Grouse	50
301	474	Willow Ptarmigan	75
301a		Allen's Ptarmigan	
302	475	Rock Ptarmigan	1 00
302a		Reinhardt's Ptarmigan	
302b		Nelson's Ptarmigan	
302c		Turner's Ptarmigan	
303		Welch's Ptarmigan	
304	476	White-tailed Ptarmigan	
305	477	Prairie Hen	20
306	477	Heath Hen	
307	477a	Lesser Prairie Hen	
308	478	Sharp-tailed Grouse	75
308a	478a	Columb. Sharp-tailed Grouse	60
308b		Prairie Sharp-tailed Grouse	75
309	479	Sage Grouse	50
310	470a	Wild Turkey	75
310a	470	Mexican Turkey	1 00
311	469	Chachalaca	1 50
312	456	Band-tailed Pigeon	2 00
312a		Viosca's Pigeon	
313	457	Red-billed Pigeon	00
314	458	White-crowned Pigeon	
315	459	Passenger Pigeon	2 00
316	460	Mourning Dove	03
317	462	Zenaida Dove	
318	463	White-fronted Dove	
319	464	White-winged Dove	30
320	465	Ground Dove	25
320a	465	Mexican Ground Dove	2 00
321	466	Inca Dove	75
[322]	467	Key West Quail-Dove	
[323]	468	Blue-headed Quail Dove	
324	453	California Vulture	75
325	454	Turkey Vulture	75
326	455	Black Vulture	75
327	426	Swallow-tailed Kite	12 00
328	427	White-tailed Kite	3 00
329	423	Mississippi Kite	10 00
330	429	Everglade Kite	
331	430	Marsh Hawk	40
332	432	Sharp-shinned Hawk	1 00
333	431	Cooper's Hawk	30
334	433	American Goshawk	1 50
334a	433a	Western Goshawk	
335	434	Harris's Hawk	75
[336]	435	European Buzzard	35
337	436	Red-tailed Hawk	60
337a	436a	Krider's Hawk	
337b	436b	Western Red-tail	75
337c	436c	Saint Lucas Red-tail	
338	438	Harlan's Hawk	
339	439	Red-shouldered Hawk	50
339a		Florida Red-shouldered Hawk	1 50
339b	439a	Red-bellied Hawk	1 00
340	440	Zone-tailed Hawk	
341	441	White-tailed Hawk	1 50
342	442	Swainson's Hawk	75
343	443	Broad-winged Hawk	1 25
[344]		Short-tailed Hawk	
345	444	Mexican Black Hawk	2 50
346	445	Mexican Goshawk	
[347]		Rough-legged Hawk	

347a	447	Amer. Rough-legged Hawk	\$ 2 00
348	448	Ferruginous Rough-leg	2 00
349	449	Golden Eagle	8 00
[350]	450	Hairy Eagle	
[351]	452	Gray Sea Eagle	2 00
352	451	Bald Eagle	5 00
353	412	White Gyrfalcon	
354	412a	Gray Gyrfalcon	
354a	412b	Gyrfalcon	
354b	412c	Black Gyrfalcon	
355	413	Prairie Falcon	1 50
356	414	Duck Hawk	3 00
356a	414a	Peale's Falcon	
357	417	Pigeon Hawk	3 00
357a	417a	Black Merlin	
358	418	Richardson's Merlin	
[358.1]		Merlin	
359	419	Aplomado Falcon	50
359.1	422	Kestrel	25
360	420	American Sparrow Hawk	25
[361]	421	Cuban Sparrow Hawk	
362	423	Andulon's Caracara	1 25
363	424	Guadalupe Caracara	
364	425	American O. prey	50
365	394	American Barn Owl	30
366	395	American Long-eared Owl	35
367	3.6	Short-eared Owl	1 25
368	397	Barred Owl	1 00
368a	397a	Florida Barred Owl	1 00
369	398	Spotted Owl	
370	399	Great Gray Owl	
[370a]	399a	Lapp Owl	3 00
371	400	Richardson's Owl	
372	401	Saw-whet Owl	3 00
373	402	Screech Owl	40
373a	402a	Florida Screech Owl	1 00
373b	402b	Texas Screech Owl	50
373c		California Screech Owl	50
373d	402d	Kennicott's Screech Owl	
373e	402e	Sharp Mountain Screech Owl	
373f	403	Mexican Screech Owl	
374	404	Flammulated Screech Owl	
375	405	Great Horned Owl	1 25
375a	405a	Western Horned Owl	1 25
375b	405b	Arctic Horned Owl	
375c	405c	Dusky Horned Owl	
376	406	Snowy Owl	
[377]	407a	Hawk Owl	1 00
377a	407	American Hawk Owl	
378	408	Burrowing Owl	25
378a	408a	Florida Burrowing Owl	4 00
379	409	Pygmy Owl	
379a	409	California Pygmy Owl	
379.1		Hoskin's Pygmy Owl	
380	410	Ferruginous Pygmy Owl	
381	411	Elf Owl	2 00
382	392	Carolina Parquet	
[383]	389	Ani	
384	390	Groove-billed Ani	1 00
385	385	Road-runner	25
386	386	Mangrove Cuckoo	
386a	386	Maynard's Cuckoo	
387	387	Yellow-billed Cuckoo	10
387a	387	California Cuckoo	25
388	388	Black-billed Cuckoo	12
[389]	384	Coppery-tailed Trogon	
390	382	Belted Kingfisher	20
391	383	Texas Kinglet	
392	379	Ivory-billed Woodpecker	
393	360	Hairy Woodpecker	50
393a	360a	Northern Hairy Woodpecker	
393b	360	Southern Hairy Woodpecker	
393c	360b	Harris' Woodpecker	
393d	360b	Cabanis's Woodpecker	
394	361	Dowry Woodpecker	20
394a	361a	Gairdner's Woodpecker	50
394b		Smoky Woodpecker	
395	362	Red-cockaded Woodpecker	1 25
396	363	Baird's Woodpecker	1 25
396a	363a	Saint Lucas Woodpecker	
397	364	Nuttall's Woodpecker	
398	365	Arizona Woodpecker	
399	366	White-headed Woodpecker	
400	367	Arctic Three-toed Woodp'cker	
401	368	Am. Three-toed Woodpecker	
401a		Alaskan Three-toed Woodp'cker	
401b	368a	Alpine Three-toed Woodp'cker	
402	369	Yellow-bellied Sap necker	40
402a	369a	Red-naped Sapsucker	1 00
403	369b	Red-breasted Sapsucker	1 50

404	370	Williamson's Sapsucker	\$1 00
405	371	Pileated Woodpecker	1 01
406	372	Red-headed Woodpecker	08
407	377	Californian Woodpecker	30
407a	377a	Narrow-fronted Woodpecker,	
408	376	Lewis's Woodpecker	40
409	372	Red-bellied Woodpecker	30
410	373	Golden-fronted Woodpecker	75
411	374	Gla Woodpecker	1 00
412	378	Flicker	03
413	378b	Red shafted Flicker	10
413a		Northwestern Flicker	23
414	379	Gilded Flicker	
415	380	Guadalupe Flicker	
416	353	Chuck-will's-widow	1 70
417	354	Whip-poor-will	1 50
417a		Stephen's Whip-poor-will	
418	355	Poor-will	
418a	355	Frosted Poor-will	
418b	355	California Poor-will	
419	356	Paraque	4 00
420	357	Nighthawk	40
420a	357a	Western Nighthawk	50
420c	357b	Florida Nighthawk	1 00
421	358	Texan Nighthawk	50
422	350	Black Swift	
423	351	Chimney Swift	15
424	352	Vaux's Swift	
425	349	White-throated Swift	
426	334	Rivoli Hummingbird	
427		Blue-throated Hummingbird,	
428	335	Ruby-throated Hummingbird	60
429	336	Black-chinned Hummingbird	75
429.1		Violet-throated Hummingbird	
430	337	Costa's Hummingbird	1 00
431	333	Anna's Hummingbird	50
431.1		Flores's Hummingbird	
432	330	Broad-tailed Hummingbird	1 25
433	340	Rufous Hummingbird	60
434	341	Allen's Hummingbird	75
435	342	Heloise's Hummingbird	
436	343	Calliope Hummingbird	
437	344	Lucifer Hummingbird	
438	345	Ruffer's Hummingbird	
439	346	Buff-bellied Hummingbird	
440	347	Xantus's Hummingbird	
441	348	Broad-billed Hummingbird	
[442]	302	Fork-tailed Flycatcher	10
443	301	Scissor-tailed Flycatcher	03
444	304	Kingbird	03
445	303	Gray Kingbird	40
446	305	Couch's Kingbird	
447	306	Arkansas Kingbird	08
448	307	Cassin's Kingbird	25
449	308	Derby Flycatcher	
[450]	309	Giraud's Flycatcher	
451	310	Sulphur-bellied Flycatcher	
452	312	Crested Flycatcher	12
453	311	Mexican Crested Flycatcher	75
453a		Arizona Crested Flycatcher	
454	313	Ash-throated Flycatcher	25
[455]	314	Lawrence's Flycatcher	
455a		Olivaceous Flycatcher	05
456	315	Phoebe	20
457	316	Say's Phoebe	20
458	317	Black Phoebe	1 50
459	318	Olive-sided Flycatcher	
460	319	Cone's Flycatcher	15
461	320	Wood Pewee	20
462	321	Western Wood Pewee	75
463	322	Yellow-bellied Flycatcher	23
464	323	Western Flycatcher	
464.1		St. Lucas Flycatcher	20
465	324	Acadian Flycatcher	40
466	325	Little Flycatcher	20
466a	325a	Trail's Flycatcher	10
467	326	Least Flycatcher	1 01
468	327	Hammond's Flycatcher	1 51
469	328	Wright's Flycatcher	
[470]	329	Fulvous Flycatcher	
470a	329a	Buff-breasted Flycatcher	1 01
471	330	Vermilion Flycatcher	
472	331	Beardless Flycatcher	
472a		Ridgway's Flycatcher	12
[473]	290	Slylark	25
474	300	Horned Lark	
474a	300a	Pallid Horned Lark	21
474b		Prairie Horned Lark	20
474c		Desert Horned Lark	
474d		Texan Horned Lark	35
474e	300b	Mexican Horned Lark	
474f		Ruddy Horned Lark	35
474g		Streaked Horned Lark	
475	286	American Magpie	25
476	287	Yellow-billed Magpie	75
477	283	Blue Jay	05
477a		Florida Blue Jay	50
478	290	Steller's Jay	05
478.1		Coast Jay	
478a	290a	Blue-fronted Jay	1 00
478b	290c	Long-crested Jay	1 00
478c	290b	Black-headed Jay	1 00
479	291	Florida Jay	1 70
480	292	Woodhouse's Jay	75
481	293	California Jay	25
481a	293	Xantus's Jay	
481.1		Santa Cruz Island Jay	
482	295	Arizona Jay	
483	296	Green Jay	
484	297	Canada Jay	1 25
484a	297a	Rocky Mountain Jay	
484b	297b	Alaskan Jay	
484c		Labrador Jay	
485	298	Oregon Jay	
486	280	American Raven	1 50
486a	280	Northern Raven	1 50
487	281	White-necked Raven	1 00
488	282	American Crow	05
488a	282a	Florida Crow	50
489	282b	Northwest Crow	50
490	283	Fish Crow	25
491	284	Clarke's Nutcracker	
492	285	Pinon Jay	1 50
[493]	279	Starling	10
494	257	Bobolink	20
494a		Western Bobolink	50
495	258	Cowbird	03
495a	258a	Dwarf Cowbird	21
496	259	Bronzed Cowbird	60
497	260	Yellow-headed Blackbird	05
498	261	Red-winged Blackbird	02
498a	261	Sonoran Red-wing	
498b	261	Bahaman Red-wing	
499	261a	Bicolored Blackbird	10
500	262	Tricolored Blackbird	20
501	263	Meadowlark	12
501a	263a	Mexican Meadowlark	35
501b	264	Western Meadowlark	12
[502]	265	Troupial	
503	266	Audubon's Oriole	1 50
501	268	Scott's Oriole	1 51
505	269	Hooded Oriole	51
505a		Arizona Hooded Oriole	51
506	270	Orchard Oriole	10
507	271	Baltimore Oriole	10
508	272	Bullock's Oriole	15
509	273	Rusty Blackbird	75
510	274	Brewer's Blackbird	05
511	278	Purple Grackle	04
511a	278a	Florida Grackle	04
511b	278b	Bronzed Grackle	04
512	275	Great-tailed Grackle	20
513	277	Boat-tailed Grackle	10
514	165	Eyening Grosbeak	
515	166	Pine Grosbeak	
[516]	167	Cassin's Bullfinch	
517	168	Purple Finch	15
517a	168a	California Purple Finch	40
518	169	Cassin's Purple Finch	75
519	170	House Finch	06
519c	170a	St. Lucas House Finch	66
520	171	Guadalupe House Finch	
521	172	American Crossbill	
521a	172a	Mexican Crossbill	
522	173	White-winged Crossbill	
523	174	Aluetian Leucosticte	
524	175	Gray-crowned Leucosticte	
524a	175a	Hepburn's Leucosticte	
525	176	Black Leucosticte	
526	177	Brown-capped Leucosticte	
527	178	Greenland Redpoll	75
527a	178a	Hoary Redpoll	75
528	179	Redpoll	50
528a	179a	Holboell's Redpoll	
528b	179a	Greater Redpoll	
529	181	American Goldfinch	08
530	182	Arkansas Goldfinch	20
530a	182a	Arizona Goldfinch	50
530b	182b	Mexican Goldfinch	

531	183	Lawrence's Goldfinch	25
532	184	Black-headed Goldfinch	50
533	185	Pine Siskin	50
534	186	Snowflake	50
534a	186	Prybilof Snowflake	
535		McKay's Snowflake	
536	187	Lapland Longspur	75
537	188	Smith's Longspur	
538	189	Chestnut-collared Longspur	75
539	190	McCown's Longspur	
540	197	Grass Finch	05
540a	197a	Western Vesper Sparrow	15
540b	197a	Oregon Vesper Sparrow	
541	192	Ipswich Sparrow	
542	193	Sandwich Sparrow	
542a	193a	Savanna Sparrow	12
542b	193b	Western Savanna Sparrow	20
542c	191	Bryant's Marsh Sparrow	
543	194	Belding's Marsh Sparrow	
544	196	Large-billed Sparrow	
544a	195	St. Lucas Sparrow	
545	191	Baird's Sparrow	
546	198	Yellow-winged Sparrow	20
546a	198a	West. Yellow-winged Sparrow	25
547	199	Henslow's Sparrow	
548	200	Leconte's Sparrow	
549	201	Sharp-tailed Sparrow	35
549a	201a	Nelson's Sparrow	
549b	201	Acadian Sharp-tailed Sparrow	
550	202	Seaside Sparrow	25
550a	202	Scott's Seaside Sparrow	
550b	202	Texas Seaside Sparrow	
551	203	Dusky Seaside Sparrow	
552	204	Lark Sparrow	05
552a	204a	Western Lark Sparrow	05
553	205	Harris's Sparrow	
554	206	White-crowned Sparrow	
555	207a	Intermediate Sparrow	
556	207	Gambel's Sparrow	25
557	208	Golden-crowned Sparrow	
558	209	White-throated Sparrow	35
559	210	Tree Sparrow	
559a	210	Western Tree Sparrow	
560	211	Chipping Sparrow	02
560a	211a	Western Chipping Sparrow	10
561	212	Clay-colored Sparrow	40
562	213	Brewer's Sparrow	35
563	214	Field Sparrow	04
563a		Western Field Sparrow	
564		Worthen's Sparrow	
565	215	Black-chinned Sparrow	75
566	216	White-winged Junco	
567	217	State-colored Junco	20
567a	218	Oregon Junco	50
567.1	217	Carolina Junco	
568	219	Pink-sided Junco	
569	220	Gray-headed Junco	
570	222	Arizona Junco	
570a	221	Red-backed Junco	
571		Baird's Junco	
572	223	Guadalupe Junco	
573	224	Black-throated Sparrow	50
574	225	Bell's Sparrow	
574a	225a	Sage Sparrow	
575	226	Pine-woods Sparrow	
575a	226a	Bachman's Sparrow	
576	227	Arizona Sparrow	
577		Mexican Sparrow	
578	228	Cassin's Sparrow	
579	229	Rufous-winged Sparrow	
580	230	Rufous-crowned Sparrow	
580a	230a	Boucard's Sparrow	
580b		Rock Sparrow	
581	231	Song Sparrow	02
581a	231a	Desert Song Sparrow	50
581b	231a	Mountain Song Sparrow	50
581c	231b	Heermann's Song Sparrow	12
581d	231c	Samuel's Song Sparrow	08
581e	231d	Rusty Song Sparrow	30
581f	231e	Sooty Song Sparrow	
581g		Brown's Song Sparrow	
582	232	Aleutian Song Sparrow	
583	234	Lincoln's Sparrow	
583a		Forbush's Sparrow	
584	233	Swamp Sparrow	15
585	235	Fox Sparrow	
585a	235a	Townsend's Sparrow	
585b	235b	Thick-billed Sparrow	
585c	235c	Slate-colored Sparrow	
586	236	Texas Sparrow	75

587	237	Towhee	10
587a	237a	White-eyed Towhee	25
588	238	Arctic Towhee	
588a	238a	Spurred Towhee	25
588b	238b	Oregon Towhee	
589	228c	Guadalupe Towhee	
590	239	Green-tailed Towhee	
591	240	Canon Towhee	1 00
591a	240a	St. Lucas Towhee	
591b	240b	Californian Towhee	
592	241	Albert's Towhee	08
593	242	Cardinal	75
593a	242a	Arizona Cardinal	
593b	242b	St. Lucas Cardinal	
594	243	Texan Cardinal	
594a	243a	Arizona Pyrrhuloxia	50
594b	243b	St. Lucas Pyrrhuloxia	
595	244	Rose-breasted Grosbeak	15
596	245	Black-headed Grosbeak	26
597	246	Blue Grosbeak	25
597a	246a	Western Blue Grosbeak	25
598	248	Indigo Bunting	08
599	249	Lazuli Bunting	20
600	250	Varied Bunting	
600a	250a	Beautiful Bunting	
601	251	Painted Bunting	
602	252	Sharpe's Seed-eater	10
603	253	Grassquit	75
[603.1]		Melodious Grassquit	
604	254	Black-throated Bunting	
605	256	Lark Bunting	05
606	160	Blue-headed Euphonia	50
607	162	Louisiana Tanager	
[607.1]		Gray's Tanager	1 00
608	161	Scarlet Tanager	
609	163	Hepatic Tanager	25
610	164	Summer Tanager	
610a	164a	Cooper's Tanager	20
611	152	Purple Martin	
611a		Western Martin	15
[611.1]	[152a]	Cuban Martin	
612	153	Chiff Swallow	40
613	154	Barn Swallow	04
614	155	Tree Swallow	05
615	156	Violet-Green Swallow	15
616	157	Bank Swallow	50
617	158	Rough-winged Swallow	04
618	159	Bohemian Waxwing	20
619	151	Cedar Waxwing	1 50
620	26	Phainopepla	10
621	148	Northern Shrike	50
622	149	Loggerhead Shrike	75
622a	149a	White-rumped Shrike	15
622b	149a	California Shrike	08
[623]	[137]	Black-whiskered Vireo	08
624	135	Red-eyed Vireo	
625	136	Yellow-green Vireo	10
626	138	Philadelphia Vireo	
627	139	139a Warbling Vireo	
628	140	Yellow-throated Vireo	20
629	141	Blue-headed Vireo	35
629a	141a	Cassin's Vireo	60
629b	141b	Plumbeous Vireo	
629c	141	Mountain Solitary Vireo	
630	142	Black-capped Vireo	1 00
631	143	White-eyed Vireo	30
631a		Key West Vireo	
632	144	Hutton's Vireo	
632a		Stephen's Vireo	
633	145	Bell's Vireo	
633a	146	Least Vireo	15
634	147	Gray Vireo	
635	159	Bahama Honey Creeper	
636	747a	Black and White Warbler	50
637	75	Prothonotary Warbler	30
638	76	Swainson's Warbler	1 50
639	77	Worm-eating Warbler	1 00
640	78	Bachman's Warbler	
641	79	Blue-winged Warbler	2 00
642	81	Golden-winged Warbler	
643	83	Lucy's Warbler	75
644	84	Virginia's Warbler	
645	85	Nashville Warbler	
645a	85	Calaveras Warbler	
646	86	Orange-crowned Warbler	
646a	86a	Lutescent Warbler	
647	87	Tennessee Warbler	75
648	88	Parula Warbler	
649	89a	Sennett's Warbler	25
650	90	Cape May Warbler	

651	92	Olive Warbler	. . . . .	50
652	93	Yellow Warbler	. . . . .	05
652	93	Sonora Yellow Warbler	. . . . .	50
653		Mangrove Warbler	. . . . .
654	94	Black-throated Blue Warbler	. . . . .	75
655	95	Myrtle Warbler	. . . . .	1 00
655	93	Audubon's Warbler	. . . . .	2 00
657	97	Magnolia Warbler	. . . . .	50
658	93	Cerulean Warbler	. . . . .
659	99	Chestnut-sided Warbler	. . . . .	20
660	100	Bay-breasted Warbler	. . . . .
661	101	Black-poll Warbler	. . . . .	75
662	102	Blackburnian Warbler	. . . . .
663	103	Yellow-throated Warbler	. . . . .
663a	103a	Sycamore Warbler	. . . . .
664	104	Grace's Warbler	. . . . .
665	105	Black-throated Gray Warbler	. . . . .
666	103	Golden-cheeked Warbler	. . . . .
667	107	BPk-throated Green Warbler	. . . . .	75
668	108	Townsend's Warbler	. . . . .
669	109	Hermit Warbler	. . . . .
670	110	Kirtland's Warbler	. . . . .
671	111	Pine Warbler	. . . . .	50
672	113	Palm Warbler	. . . . .
672a	113a	Yellow Palm Warbler	. . . . .
673	114	Prairie Warbler	. . . . .	50
674	115	Oven-bird	. . . . .	15
675	116	Water-Thrush	. . . . .	75
675a	116a	Grinnell's Water-Thrush	. . . . .
676	117	Louisiana Water-Thrush	. . . . .	50
677	119	Kentucky Warbler	. . . . .	1 00
678	118	Connecticut Warbler	. . . . .
679	120	Mourning Warbler	. . . . .
680	121	Macgillivray's Warbler	. . . . .	1 00
681	122	Maryland Yellow-throat	. . . . .	15
681a	122	Western Yellow-throat	. . . . .	25
682		Belding's Yellow-throat	. . . . .
683	123	Yellow-breasted Chat	. . . . .	10
683a	123a	Long-tailed Chat	. . . . .	15
684	124	Hooded Warbler	. . . . .	50
685	125	Wilson's Warbler	. . . . .	1 50
685a	125a	Pileolated Warbler	. . . . .	75
686	126	Canadian Warbler	. . . . .	1 50
687	123	American Redstart	. . . . .	15
688	129	Painted Redstart	. . . . .
[689]	130	Red-bellied Redstart	. . . . .
690	131	Red-faced Warbler	. . . . .
[691]	132	Red Warbler	. . . . .
[692]	133	Brasher's Warbler	. . . . .
[693]	134	Bell's Warbler	. . . . .
[694]	69	White Wagtail	. . . . .	10
[695]		Swinhoe's Wagtail	. . . . .
696	70	Siberian Yellow Wagtail	. . . . .
697	71	American Pipit	. . . . .	75
[698]	72	Meadow Pipit	. . . . .	10
[699]		Red-throated Pipit	. . . . .	75
700	73	Sprague's Pipit	. . . . .
701	19	American Dipper	. . . . .	1 00
702	19	Sage Thrasher	. . . . .	75
703	11	Mockingbird	. . . . .	05
704	12	Catbird	. . . . .	02
705	13	Brown Thrasher	. . . . .	04
706	13a	Texas Thrasher	. . . . .	30
707	15	Curve-billed Thrasher	. . . . .	25
707a	15a	Palmer's Thrasher	. . . . .	1 00
708	14a	Bendire's Thrasher	. . . . .	1 00
709	14	St. Lucas Thrasher	. . . . .
710	16	Californian Thrasher	. . . . .	25
711	16a	Leeonte's Thrasher	. . . . .	2 00
712	17	Crissal Thrasher	. . . . .	50
713	53	Cactus Wren	. . . . .	12
714	57	St. Lucas Cactus Wren	. . . . .
715	53	Rock Wren	. . . . .	60
716	53a	Guadalupe Rock Wren	. . . . .
[717]	59	White-throated Wren	. . . . .
717a	59a	Canon Wren	. . . . .	60
717b	59	Dotted Canon Wren	. . . . .
718	69	Carolina Wren	. . . . .	15
718a	69b	Florida Wren	. . . . .	75
719	61	Bewick's Wren	. . . . .	15
719a	61a	Vigors's Wren	. . . . .	25
719b	61b	Baird's Wren	. . . . .	25
720	62	Guadalupe Wren	. . . . .
721	63	House Wren	. . . . .	06
721a	63a	Parkman's Wren	. . . . .	25
721b	63a	Western House Wren	. . . . .	16
722	65	Winter Wren	. . . . .
722a	65a	Western Winter Wren	. . . . .
723	66	Alaskan Wren	. . . . .
724	68	Short-billed Marsh Wren	. . . . .	75

725	67	Long-billed Marsh Wren	. . . . .	06
725a	67a	Tule Wren	. . . . .	15
725.1		Marian's Marsh Wren	. . . . .
726	55	Brown Creeper	. . . . .	75
726a	52a	Mexican Creeper	. . . . .
726b	55	Rocky Mountain Creeper	. . . . .
726c	55	California Creeper	. . . . .
727	51	White-breasted Nuthatch	. . . . .	30
727a	51a	Slender-billed Nuthatch	. . . . .	75
728	52	Red-breasted Nuthatch	. . . . .	1 00
729	53	Brown-headed Nuthatch	. . . . .	70
730	51	Pygmy Nuthatch	. . . . .	75
731	33	Tufted Titmouse	. . . . .	35
731a		Texas Tufted Titmouse	. . . . .
732	37	Black-crested Titmouse	. . . . .	75
733	33	Plain Titmouse	. . . . .	50
733a	33	Gray Titmouse	. . . . .
733b		Ashy Titmouse	. . . . .
734	39	Bridled Titmouse	. . . . .
735	41	Chickadee	. . . . .	12
735a	41a	Long-tailed Chickadee	. . . . .	75
735b	41b	Oregon Chickadee	. . . . .	50
736	42	Carolina Chickadee	. . . . .	15
[736]		Plumbeous Chickadee	. . . . .
[737]	43	Mexican Chickadee	. . . . .
738	41	Mountain Chickadee	. . . . .
739	41	Siberian Chickadee	. . . . .
740	45	Hudsonian Chickadee	. . . . .	1 50
740a		Kowak Chickadee	. . . . .
741	46	Chestnut-backed Chickadee	. . . . .
741a	46a	Californian Chickadee	. . . . .
742	35	Wren-Tit	. . . . .	75
742a	35	Pallid Wren-Tit	. . . . .	1 00
743	47	Bush-Tit	. . . . .	50
743a	47	Californian Bush-Tit	. . . . .	15
743b		Grinda's Bush-Tit	. . . . .
744	48	Lead-colored Bush-Tit	. . . . .
744.1		Santa Rita Bush-Tit	. . . . .
745	49	Lloyd's Bush-Tit	. . . . .
746	51	Verdin, Yellow-headed Tit	. . . . .	50
747	34	Kennicott's Willow Warbler	. . . . .
748	33	Golden-crowned Kinglet	. . . . .	1 00
748a	33a	West. Gold-crowned Kinglet	. . . . .
749	31	Ruby-crowned Kinglet	. . . . .	2 00
750	31	Dusky Kinglet	. . . . .
751	27	Blue-gray Gnatcatcher	. . . . .	20
752	23	Plumbeous Gnatcatcher	. . . . .	1 00
753	29	Black-tailed Gnatcatcher	. . . . .	65
754	25	Townsend's Solitaire	. . . . .	1 50
755	1	Wood Thrush	. . . . .	06
756	2	Wilson's Thrush	. . . . .	15
756a		Willow Thrush	. . . . .
757	3	Gray-cheeked Thrush	. . . . .
757a	3	Bicknell's Thrush	. . . . .
758	4	Russet-backed Thrush	. . . . .	30
758a	4a	Olive-backed Thrush	. . . . .	40
759	5	Dwarf Hermit Thrush	. . . . .
759a	5a	Audubon's Hermit Thrush	. . . . .
759b	5b	Hermit Thrush	. . . . .	40
[760]	6	Red-winged Thrush	. . . . .	35
761	7	American Robin	. . . . .	62
761a	7a	Western Robin	. . . . .	15
762	8	St. Lucas Robin	. . . . .
763	9	Varied Thrush	. . . . .
[764]	20	Red-spotted Bluethroat	. . . . .	60
765	21	Wheatear	. . . . .	70
766	22	Bluebird	. . . . .	62
766a		Azure Bluebird	. . . . .
767	23	Western Bluebird	. . . . .	15
768	24	Mountain Bluebird	. . . . .	15

INTRODUCED SPECIES.

		English Pheasant	. . . . .	25
		Ring Pheasant	. . . . .
		Green Pheasant	. . . . .
		Silver Pheasant	. . . . .	25
		Golden Pheasant	. . . . .	25
		Black Grouse	. . . . .	50
		European Goldfinch	. . . . .	20
		English Sparrow	. . . . .	01
		European Tree Sparrow	. . . . .	15
		Skylark	. . . . .	12

SUNDRIES.

		African Ostrich, small	. . . . .	1 50
		" " large	. . . . .	1 50
		East African Ostrich	. . . . .	2 00
		Emu	. . . . .	2 50
		Rhea	. . . . .	3 00
		Alligator	. . . . .	20
		Turtles	. . . . .	70
		Snakes	. . . . .	10

Our Premium List

Which holds good until Jan. 1st 1890. Is mailed you with this Oologist. Any of our old subscribers desiring to renew their subscription for 1890. in connection with any of the Premiums offered therein, can do so, and all new subscriptions received before Jan. 1st, will be entitled to the months of Nov. and Dec. gratis. A new premium list will be issued in time to mail with either the Dec. or Jan. Oologist. Our patrons will save about ten cents by renewing from the one mailed with this issue. The following premiums we can no longer furnish:

- No. 45 Hand-book Agassiz, Ass'd
- 48 Reel Tape Line
- 82 Mineral Inkstand
- 96-97 Oxidized, Leaf Pins
- 99 Shell Purse
- 119 Asparagus Roots
- 120 Cinnamon Vine
- 121 Strawberry Plants
- 122 The Niagara Grape
- 127 20 Books

Reduction in Prices.

We will send the following premiums or parts of premium, post-paid upon receipt of the following reduced prices:

No. 26 Book of Datas.....	\$.35
25 Book of Datas unperforated, with heavy Manila covers.....	.25
37 Egg Case of Periwinkle.....	.18
“ Lucky Tooth of Cod-Fish.....	.07
39 Tarantula Nest.....	.35
40 King Crab, small 10c; 4 to 6 in., 25c; 7 to 8 in.....	.35
42 Sea Cushion.....	.35
43 Sea Horse, from Italian Coast.....	.35
44 Club-spined Urchin.....	.30
46 Sand Dollar.....	.06
“ Starfish, 2 to 3 in.....	.06
“ Sea Urchin, spines.....	.15
47 “ “ no.....	.10
“ “ “ “.....	.15
“ “ “ with “.....	.20
49 Calliper Rule.....	.25
“ Colored Pencils.....	.05
51 Sea Plume.....	.10 to .35
52 Sea Fan, 6 in., 1 c; 12 in., 25c; extra large.....	.35
55 Ivory Apple.....	.35
56 Pod Ponciana Bean.....	.25
57 Betel Nut.....	.06
“ Red or Grey Sea Beans..... per doz.	.10
“ Long Red or Brown-banded do..... each	.03
58 Brazil-Nut Pod.....	.40
59 Trilobite.....	.25
62 3 Resurrection Plants.....	.20
64 Field Notes '87.....	.30
66 Sponges.....	.25
67 Rose Coral.....	.05 to .15
“ Organ Pipe.....	.25
“ Barnacle.....	.15
73 Three Semi Precious Stones.....	.25
90 Spar Scarf Pln.....	.25
91, 92, 93, 94, 95, Bangle Pins and Bracelets each.....	.25
98 Sea Bean Initial Watch Charm.....	.25
100 Magnifying Glass.....	.25
“ Tweezers.....	.10
101 Solograph.....	.25
“ Puzzle Whistle.....	.08
102 Revolving Trap.....	.25
104 Catapult (wood frame).....	.15
“ Bird Warbler.....	.06
105 Marker, Jugs and Eggs.....	.25
106 Flask.....	.30
109 Steel Trap.....	.35
110 Jackknife.....	.30
111 Magnet, 10c, 20c, and.....	.35
112 Ink.....	.25
13 Dictionary.....	.25

114 Trolling Hook.....	.30
115 Pearl-handle Knife.....	.25
116 “Snapper” Sounder.....	.15
117 Loofah.....	.15
118 Flower Seeds (Vick's best, worth 60c).....	.25
131 Vegetable “ “ “ “.....	.25
123 Sealing Wax outfit, “B”.....	.25
124 Pen and Pencil Stamp.....	.25
125 Rubber Stamp.....	.30
128 Call Bell.....	.25
129 Ink Stand.....	.20
132 Will mail any of the following No's of “Electric Series” at 15c, per copy—No's 2, 5, 30, 85, 86, 87, 102, 105, 118, 122, 142. Address,	

FRANK H. LATTIN, Albion, N. Y.

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DR. HUMPHREYS' SPECIFICS are scientifically and carefully prepared prescriptions; used for many years in private practice with success, and for over thirty years used by the people. Every single Specific is a special cure for the disease named.

These Specifics cure without drugging, purging or reducing the system, and are in fact and deed the **sovereign remedies of the World.**

LIST OF PRINCIPAL NOS.	CURES.	PRICES.
1	Fevers, Congestion, Inflammation...	.25
2	Worms, Worm Fever, Worm Colic...	.25
3	Crying Colic, or Teething of Infants...	.25
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5	Dysentery, Griping, Bilious Colic...	.25
6	Cholera Morbus, Vomiting...	.25
7	Coughs, Cold, Bronchitis...	.25
8	Neuralgia, Toothache, Faceache...	.25
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Vol. VI,

ALBION, N. Y., DEC., 1889.

No. 12

Exchanges and Wants.

Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash, with order.

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In the exchange of Alle R. Hutchinson, Gaines, N. Y., in Nov. OOLOGIST, Nos. 137, 187 and 228, should have been 181, 197 and 258.

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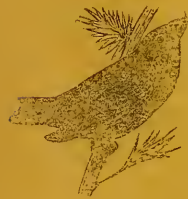
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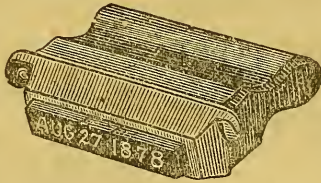
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THE OOLOGIST.

VOL. VI.

ALBION, N. Y., DEC., 1889.

NO. 12

Birds of Niagara County, N. Y.

We are indebted to J. L. Davidson, Esq., of Lockport, N. Y., for a reprinted list of the same, which prepared with annotations was for the *Forest and Stream*, September, 1889. It is a valuable paper and had we the space would reprint the same in the *OOLOGIST*. Niagara county joins Orleans county on the west and the list in main is similar to the one published in the *OOLOGIST* last May.

From Mr. Davison's list we take the following which will prove of interest to our readers:

In presenting the following list I do so knowing that it is not complete, as the 192 species given are only such as have come under my own observation within the past ten years. I think it is generally claimed that about 250 species occur in this vicinity. There are many sections of the county that I have not visited. In fact, most of my collecting has been confined to the central part. Among a collection of between 300 and 400 mounted specimens, 154 species are secured in the county. A few of the many species given as migrants may possibly remain through the summer, but I have found them only during migration.

FROM THE LIST OF BIRDS.

35. *Branta canadensis* (Linn.), Canada Goose (180).—A common migrant. Mr. Norman Pomeroy, living about four miles from Lockport, captured 13 a few years ago, which had alighted among his flock of tame geese during a severe storm, and all taking shelter in the barn, when the door was closed on them. They mated with his tame geese and he keeps a flock of 40 to 50 of the hybrid geese.

80. *Bubo virginianus* (Gmel.), Great

Horned Owl (375).—A common resident. Feb, 25, 1884, a live specimen was brought to my son to be mounted. It was killed by chloroform but not skinned for a week afterward. The body was a mass of fat, and my son wondering what it got to live on to keep in such good condition, thought he would make an inspection internally, and on cutting it open the knife passed through on egg just ready to be laid. Had she been kept alive she would have laid the egg during the day.

84. *Coccyzus erythrophthalmus* (Wils.), Black-billed Cuckoo (388).—A common summer resident. I have often found the eggs of this species in the nest of *C. americanus*, but only once have I found it in the nest of any other bird. June 17, 1882, I found a black-billed cuckoo and a mourning dove sitting on a robin's nest together. The cuckoo was the first to leave the nest. On securing the nest I found it contained two eggs of the cuckoo, two of the mourning dove and one robin egg. The robin had not quite finished the nest when the cuckoo took possession of it and filled it nearly full of rootlets, but the robin got in and laid one egg. Incubation had commenced in the robin and cuckoo eggs, but not in the mourning dove eggs. I have the nest and eggs in my collection. See *Forest and Stream*, Aug. 24, 1882, page 65. "A Strange Story." I am also quite certain that I have seen the black-billed and yellow-billed cuckoo feeding young in the same nest, an account of which was published in *Forest and Stream*, since when I have found a number of nests containing the eggs of both species, and have come to the conclusion that I was not mistaken in that observation. On Sept. 10, 1883, I found a nest of the black-billed cuckoo contain-

ing two young birds not more than one day out of the shell; the two previous nights we had severe frosts that destroyed vegetables.

101. *Empidonax acadicus* (Gmel.), Acadian Flycatcher (465).—A rare summer resident. June 14, 1887, I secured nest, eggs and female of this species. The nest is pensive, and composed of the fiber of thistle and dried grasses; a number of the latter hang from the nest, some as long as 18 inches. The nest is more shallow than that of the red-eyed vireo; outside measurement being 2.50 wide by 1.50 deep, inside 1.75 1.00, Eggs cream white with a few dark brown spots at large end. When I first saw the nest I took it for a wisp of grass caught on the limb, and should have passed it had I not seen the bird on the same limb.

116. *Loxia curvirostra minor* (Brehm.), American Crossbill (521).—An occasional spring visitor. On June 8, 1888, I secured a male specimen in a piece of heavy timbered wood. I concluded it was a "straggler," and did not look for its nest. On July 28 I saw another in the same place, but did not succeed in securing it, and I came to the conclusion that the male taken in June was of a pair breeding there.

148. *Vireo flavifrons* (Vieill.), Yellow-throated Vireo (628).—A rather rare summer resident. On June 8, 1888, I found a nest of this species, but was unable to get it.

150. *Mniotilta varia* (Linn.), Black and White Warbler (636).—A common migrant. June 14, 1888, I saw a male of this species and a male ruby-throated humming bird disputing as to the possession of a certain locality, and the humming bird "held the fort." As I had never before seen *M. varia* here later than the middle of May I concluded there must be a pair breeding, but I did not succeed in finding the nest.

155. *Dendroica caerulescens* (Gmel.), Black-throated Blue Warbler (654).—A

very common migrant. I think a few remain to breed as I have observed them in two instances as late as July 14 and 15.

158. *Dendroica caerulea* (Wils.), Cerulean Warbler (658).—Until the past season (1888) I have considered this a very rare migrant, having seen but two specimens, both males, in ten years collecting; but during the past season I found three nests, two of which I secured with three eggs each, and the two females taken as they left the nests. On Nov. 3 I sent to Capt. Chas. E. Bendire a nest and three eggs for the Smithsonian Institution collection, having learned that there was but one egg of this species the collection, and without data or locality. See *Auk* for October, 1888, p. 430, "Breeding of *D. caerulea* in Niagara county, N. Y."

163. *Dendroica circeus* (Gmel.), Black-throated Green Warbler (667).—A common migrant, and a few stop to breed. I have never yet found the nest and eggs but have seen the bird late in June, and on June 24, 1888, I found a young of this species unable to fly, the male parent being with it.

167. *Geothlypis philadelphia* (Wils.), Mounting Warbler (679).—A rare migrant. On June 8, 1888, I saw a male of this species and could have secured it, but thinking it had a nest near by I preferred watching it and to find its nest, but did not succeed. June 11 I again visited the same place and saw a female of this species, but after a search of three hours I failed to find the nest.

171. *Scelophaea ruticilla* (Linn.), American Redstart (687).—A common resident. June 14, 1888, I found a pair of this species occupying an old nest of the red-eyed vireo. They had relined it, and laid two eggs; and a cowbird had added another. I put the female off the nest three times before I could believe it to be a redstart, as this species is generally so particular about its nest. I have never known a nest to be

occupied after I had put my hand into it while it was being built.

174. *Troglodytes aedon* (Vieill.), House Wren (721).—A summer resident. Since the advent of the English sparrow this species has become quite rare in the city. A few years ago we had two or three pairs breeding in our yard in boxes put up on the side of the barn and on apple trees, but they were driven off by the sparrows. Afterward I put up boxes with holes only large enough to admit the wrens, and for three years a pair have occupied one of them. After the young had left the nest the past season, I saw the male removing the nest from the box piece by piece; he would bring them out and drop them to the ground. After watching him a long time I thought I would assist him in his labor, and putting a ladder up into the tree, I opened the box and threw out the rest of the nest, and had barely reached the ground when the bird again entered the box, and a moment after it came out, and mounting a limb within two feet of the box, and stretching up its neck, poured forth his song of gratitude. Wondering what the effect would be, I picked up the nest, and mounting the ladder placed it on top of the box. Hardly had I reached the ground before he again attacked the nest, and it was not a minute before he had thrown it to the ground, and again mounting the limb finished his song, and departed, and we saw nothing more of our little friends. But we expect them to return next season, or why were they so particular to remove their old nest from the box?

The Shore Lark.

With us the Horned, or Shore Lark is one of the most interesting of birds, especially during migrations. This country seems to be a sort of middle ground over which the wave of Larks flow twice a year—once in the spring when

the birds go north to breed, and once again in the fall when they go into winter quarters farther south.

Although most of these birds spend winter and summer beyond the bounds of this country, there are some who always stay with us. These are few, indeed during July and August, but in winter they are comparatively common.

The Horned Lark is at home only on the ground and seldom perches higher than the fence. So well does its livery of black and red-brown resemble the clods among which it dwells that it is often difficult to locate the bird, even when within a few feet of it. This Lark has many favorite feeding grounds, which are changed with the seasons. In autumn they are oftenest to be found in fields of young wheat, but in winter, when fields are snowed under, they must resort to the bare places, and so are found on southern slopes, along the roadsides, etc., when the snow is not too deep or there is a crust. They are often found among the weed growths in old fields. In spring they go back to the wheat fields again and at this season spend much time in old pastures also.

When feeding the horned lark runs restlessly about much after the manner of the Snow Bunting. Sometimes a flock will alight on the edge of a field and, spreading out, feed across it in an orderly manner, taking wing for other fields when the fence is reached.

From this bird we have the first bird-song of the year. It is often heard early in January, fully a month and a half before the Bluebird. The song consists of a few creaky notes, not especially pleasing to the ear, *Quit, quit, quit, you stlly rig and get away*, it seems to say. The first three or four syllables being slowly and distinctly uttered and the rest somewhat hurriedly run together. However, like the faces and voices of certain people, this ditty sweetens on acquaintance and finally becomes a

sound of real pleasure.* Early in the year the song is uttered from the ground but as winter wanes and the influence of coming spring is felt, the birds become livelier and mount up into the air, sometimes nearly out of sight, singing for minutes together.

There is no record of the nest of the Horned Lark being found in this county, yet it is very apparent that they breed here. It is probable that the nest will be found in the near future, since many of our oologists are looking especially for it each spring.

W. N. C.,
Binghamton, N. Y.

Incidents in Bird Life.

While taking a short walk one morning during the latter part of March, I noticed a conflict between a robin and a flock of cedar-waxwings. Snow still covered the ground and it was very difficult for the robin to obtain insects from the earth, so he had to seek elsewhere for his food. The first I noticed was the cedar-waxwings which were all on a tree in a private yard. They all seemed to be greatly excited, and were looking in the direction of a mountain ash which had many of last year's berries on it. At first I could not discover the cause of their excitement, but it soon became apparent when several of them flew towards the mountain ash, for a robin darted out from among the branches, where he had been eating berries, and chased them away. He would fly at one and peck at him and then at another until he was rid of all of them. He would then quietly resume his meal. I chased the robin away and he flew into a tree on the street. As soon as he was gone the whole flock of waxwings went for the berries as if they were very hungry, but no sooner had they started to eat than the robin charged in among them and the whole flock were obliged

to retreat before his savage pecks. Just then I was called away and when I returned a few hours later nothing was to be seen of either the robin or waxwings.

In the spring of '87 a phoebe built a nest in an old log house occupied by a farmer. He was away from home for a few days and when he returned the bird had her nest completed. She had entered the house through a crack above an imperfect fitting window. She laid three eggs. Whenever any one entered the room she would fly away but would return in a few minutes. As it was necessary to close the opening above the window, I obtained the eggs and nest. The phoebe then began to construct a nest in the cellar of the same house, but being disturbed here she abandoned it before it was finished.

I have noticed that whenever the eggs of a cat-bird are taken the birds destroy the nest and carry away some of the material, to construct a new nest, I think.

GUS. RAPP,
Milwaukee, Wis.

A Simple Contrivance.

When collecting eggs it has always bothered me until this summer, to find whether or not there were any eggs in a Woodpecker's nest. Of course it is an easy matter to break the hole away enough to see, but if there are no eggs in the nest, as is often the case, it makes one feel a little mean to have destroyed the poor bird's nest with no return. This summer it was suggested that I try a piece of looking-glass. I immediately procured a piece, one inch by two, and found it to be just the thing. By holding it in the top of the hole at the right angle, the eggs could be plainly seen in the bottom. I first tried this scheme on a flicker's nest, and although the hole was quite deep, it reflected enough light to discover seven eggs in the bottom.

Now if anyone can inform me as how to get eggs out without destroying the nest, and also how to tell when there are any eggs in a Kingfisher's nest, I would be much obliged if he would do so.

T. S. B.,

Northfield, Minn.

The Prairie Horne Lark.

This is a common species here and arrives before any other of our summer residents. It nests early, before the snow is fairly gone. I found a nest this season, '89, on the 29th of March, containing three fresh eggs. They rear at least two broods in a season, the first about time mentioned above and the second about the middle of June. Early in the spring they gather in large flocks and feed upon the wheat that has just been sown. From this they get the name of "Wheat Bird" in this locality. It also goes by the name of "Ground Bird" and "Snow Bird," the former from its nesting on the ground. A favorite nesting place is the growing corn. A slight hollow, beside a hill of corn or a clod, lined with grass serves as a nest. They also nest commonly on the prairie, but the nests are not so often found there as in the cornfield. The eggs are three to five in number, commonly four. In color they are hardly distinguishable from those of the Yellow-headed Blackbird. They are smaller, averaging about .83x.62 in. The general colors of this bird are dirty white underneath and grayish above, with a black patch at the throat. Above each eye is a tiny tuft of feathers which the bird can raise at will, and which when raised gives the bird the same appearance as a Horned Owl.

I have never taken note of its departure but I suppose it stays as late according as it arrives early.

J. V. CRONE,
Marathon, Iowa.

Connecticut Notes.

May 18th, 1889, while on a collecting trip, I found a newly made nest of the Catbird, but as yet no eggs.

May 23, I again looked at the nest, and was surprised to find instead of a complete set, only a very small runt egg measuring .48x.37, of the same shade of green as ordinary eggs of this bird, and on blowing was found to contain no yolk. The bird to my knowledge laid no other eggs in that nest, the same day.

May 18, I found an incomplete set of four Flicker eggs in a hole in a hollow tree ten feet up.

May 24, but six days later, I went to the tree, and began pounding on it with a club, expecting to see the old bird fly out, but instead an old Flying Squirrel popped out and ran up the tree, closely followed by her four, half-grown young. The hole was nearly full of the fine bark and leaves comprising the squirrels nest, but the Flickers eggs were gone. I have found the following late nests this year: Yellow-billed Cuckoo, Fresh eggs, July 22, 4; Aug. 4th, 2; Aug. 18, 2; Aug. 26, 2, and 1 Black-billed. Cedar Waxwing Aug. 1. 4 fresh eggs, Aug. 29. 4 young. July 26 Cat bird 3 fresh; July 27 Mourning Dove, 2 fresh.

W. I. C.

Norwalk, Conn.

Death to the English Sparrow.

Saturday evening, July 13th a very heavy thunder-storm struck this city, proving very disastrous to the English Sparrow. Hundreds were drowned and carried down the gutters to the river while others were conveyed from yards and public grounds in wheelbarrows. Probably several thousands were drowned during the storm.

Yours Respectfully,

C. E. C.,
Davenport, Ia.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
Sample Copies, - - - - - 5c each.
The above rates include postage and premium.

ADVERTISING RATES

Single insertion, 20 cents per line, nonpareil.

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1/2 column,	7 00	17 50	28 00	42 00
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ALBION, Orleans Co., N. Y.

Entered at the Post Office at Albion, N. Y., as second-class mail matter.

Jottings.

The OOLOGIST for 1890 will be what its patrons make it, and as in years past will virtually be edited by them. Should its pages fail to teem with interesting items and notes it will be because our patrons fail to send them in. The average number of copies printed of each issue of the OOLOGIST during the past year has been 2250 copies and it is safe to say that each issue has been read by over 2000 live collectors, each of which could relate some incident or could take from their note-book some item that would be of more than ordinary interest.

During 1890, we want these items and notes whether it be relating to the nesting of some rare species; something

unusual regarding our more common species, or whether it is advise, suggestions, receipts or descriptions of contrivances of value to the collector, we care not, only let it be something *new, original and interesting*. We do not want descriptions of common birds or the nestings of the same, these can be obtained in almost any book on the subject—White Bluebird Eggs—Spotted Robin Eggs—Runt Eggs—Double-yolked Eggs—Eggs on the ground—Long lists of birds or dates—have all been worn out and are of little interest to any one—every collector has either had, seen or at least heard of them.

The live collector wants *something new*; and this with the aid of its friends is what the OOLOGIST proposes to give its readers during 1890. It is a going to be "chuck" full of just such matter as every collector wants and needs. The present subscription list and the rate at which new subscriptions and renewals are now pouring in for 1890, silently, but surely, proves that the OOLOGIST is valued as it is, but with the aid and hearty co-operation of its readers, the publisher can make Vol. VII. so far a head of previous ones that comparison will be out of the question.

A copy of the "Wolverine Naturalist," hailing from Kalamazoo, Mich., edited by Morris Gibbs, M. D., "Scelopax," a well-known writer on Natural History, is before us. Should its publishers receive the financial encouragement from collectors that they deserve, its success is unquestionable.

GLEANINGS FROM OUR CORRESPONDENCE.

From a long list of notes from Mr. A. M. Linsley, of Northford, Conn., we take the following:

May 18th. Road-winged Hawk. Obtained 2 eggs from a nest in which there

was another with the youngster chipping the shell, one egg was rotten and the other had a young hawk inside that would have hatched in a week.

May 24th. Golden-crowned Thrush. Collected a set of five eggs and nest of this species, it was built in the *old nest* used last year by the same pair.

May 25th. Marsh Hawk. Found a fine set of five eggs to-day although a summer resident, it is hard to find many people that know about this Hawk, sometimes called "Fish Eagle," breeds also on salt meadows. Blue Jay resident throughout the year; found a fine set of five eggs of this bird to-day, this is my second set of eggs obtained in four years collecting.

May 27th. Great-crested Flycatcher. Obtained a fine set of seven fresh eggs.

May 30th. Canada Fly-catching Warbler. I found a nest containing five eggs of this species, in a raspberry bush in a pasture, the bird was very shy until after the set was completed, then I identified the male while on the nest.

June 12th. Black-billed Cuckoo. One egg three-fourths incubated from a nest in which there were two young birds with feathers on them; eggs of this and the Yellow-billed can be obtained, and I have found them from June 1st, till September 23rd.

Mr. L. also adds that on Aug. 27, 1888 he took a set of five fresh eggs of the Cedar Waxwing.

We are indebted to Mr. A. Darling, Sincor, Ont. for cleverly executed pencil-drawings of the Belted Kingfisher.

Mr. U. S. Grant, Minneapolis, Minn., will accept thanks for copies of his valuable articles. "Conchological Notes" and "Notes on the Molluscan Fauna of Minnesota" as issued in the annual report of the Geological and Natural History Survey of Minnesota in the years of 1885 and 1887 respectively.

C. C. T., Utica, N. Y., has a set of six eggs of the Black-billed Cuckoo which he collected during the past season.

Glen Gill, of Ottawa, Kans., writes that he has a beautiful set of two eggs of the Poor Will that he took near that place.

F. T. Darrow, Corning, Ia., writes that the Dickcissel or Black-throated Sparrow is commonly called "Whistling Sparrow" in his locality. He also writes: T. E. S., of this city, has a beautiful nest and set of four eggs of the Black-capped Chickadee. The nest is made of hair throughout, slightly hollowed on top in which lay the four eggs. There is a cover also made of hairs which covers the eggs when the bird was absent.

Geo. Lindsey, Sedalia, Mo., writes of successfully taking a nest with eggs of the Chimney Swift as follows: I took a small tin bucket filled with cotton, lowered it down the chimney and held it just under the nest, then taking a long pole (a rake handle will do) I broke the nest from the side of the chimney and all fell into the bucket of cotton. I drew them out of the chimney and found both nest and eggs in good condition.

W. B. Daley, Chatham, N. Y., writes: I would like to know if the American Quail breeds in eastern New York. I have never seen the bird in Columbia County where I reside. But on October 2, 1889, while a friend and I were crossing a corn field, we found an egg of this Bird lying on the ground. It had the appearance of having been laid about the middle of the summer.

G. M. L., Malone, N. Y.:

The bird which you call "Hang Bird," "Hanging Bird" and "Wood Warbler," is one of the Vireos, doubtless the Red-eyed.

Many correspondents write us that the Shrike is frequently called the "Mouse Hawk" in their locality.

In regards to the various Shrikes, we would say that the common species of the South Atlantic States is the Loggerhead; of the Central United States, the White-rumped and of the California coast, the Cala. In many localities it requires an expert to say positively to which species a set of eggs may belong. e. j., I have found nests of both the White-rumped and Loggerhead in Orleans Co., N. Y., the former however being much the more common.

Neil F. Posson, Medina, N. Y. writes:

On the afternoon of July 29th, while in the vicinity of Sandusky, Cattaraugus county, I saw a single Slate-colored Junco. There was no mistake in the identity. Isn't it something rare to see Juncos in New York at this season of the year?

From an interesting article from Mr. G. F. Mims, of Edgefield, S. C., we quote as follows, in regards to the nesting of English Sparrows:

"One would think at first sight of an oak tree in town, that the contents of a barn had been emptied into it, so numerous are the nests."

In speaking of the Kingbird (possibly Gray Kingbird) he says:

"The nest of this bird is generally placed in "no-gittum" places, being on long slender limbs at an altitude that no one cares to trust his neck; therefore their eggs are very scarce in the South. I never got to but one of these nests in my life. You could not exactly call me getting to that one, for I had to procure an egg by means of a spoon attached to a long stick."

Marsh Hawk.

This well-known and interesting bird is a common resident of Michigan.

and in the southern counties I believe it remains throughout the year, as I have seen them in swamps in at least two of the winter months. During the spring and summer this bird may be seen sailing across the fields from six to fifteen feet above the ground in search of its prey, which consists of mice, small animals and those small birds which it so often finds nesting in its path. For this reason I am undecided whether its presence or absence would be the greater benefit to the farmer. However, I wish that ornithologists and oologists would more carefully note its food habits. In the first half of April in this section the male goes through those motions so peculiar to this species before the nesting place is selected. It will rise one hundred and fifty or two hundred feet in the air, and then seem to fall and turn a somersault in so doing, while at the same time it makes a cackling noise which is hard to describe. When it has dropped about twelve or fifteen feet, it again uses its wings and rises to its former level, then drops and keeps this up (sometimes I have noticed) till out of sight, but more frequently perhaps keeps up his zigzag course, slightly descending each fall till it arrives to the place where its mate sits.

During the latter half of April or first half of May, it is busily engaged in making its nest. The nesting site seems to be very different in different localities. A friend of mine found a nest in his wheat field while engaged in cutting his grain. By the first week in May the eggs are generally laid in this section, according to my observation. On the 24th of May, '89, I took a set of eggs of this bird which was the second it had laid this season. The nesting place of the birds had been the same for a number of years. It was over a tract of land containing perhaps two acres on one side of a tamarack marsh. The ground was covered by the

Leather-leaf, a bush which grows to the height of two to two and one-half feet, scattered about in this are shrubs and bushes which are somewhat higher. As I approached a rather thin clump of bushes a hawk flew up, and after going fifteen or twenty rods, wheeled about and made a bee line for me till within about a rod's distance then turned and uttered a cackle. This it repeated a few times but finding I did not scare worth a cent, quietly flew away to a perch where she could watch me.

When I reached the bushes I found the nest which was composed of dry hay, lain on some sticks. The exterior diameter was fifteen inches, while the interior was six inches and it was hollowed an inch and a half. It was placed on the ground and as yet I have never found one on any sort of a hummock. In the nest were five eggs of a dirty white color with a bluish tint. There were some indistinct spots on them of a brownish color, and I might say that only one egg out of twenty-two that I have collected, had real distinct natural spots.

The ground was very dry about the hawk's nest and had been plowed within ten rods of it last spring, and as all of the nests which I have examined were in comparatively dry places, I conclude that the spots on eggs so often spoken of by collectors were in many cases caused by their coming in contact with the wet material of the nest and thus stained, as the eggs of the Quail often are. The measurement of the five eggs are as follows: 1.80x1.40, 1.75x1.39, 1.80x1.39, 1.79x1.41, 1.78x1.41. According to my observation the Marsh Hawk will not lay the third time in one season. The number of eggs is generally five, sometimes four or six.

ALFRED W. COMFORT,
Tecumseh, Mich.

Trying to Hatch Rotten Eggs.

I noticed in the OOLOGIST sometime ago, some one speaking of finding a Red-tailed Hawk sitting on a nest which contained a single rotten egg. July 18th of this year ('89) I had occasion to cross a pasture early in the morning, and was not a little surprised to see a Yellow-shafted Flicker's head projecting from a hole in a dead tree fifteen feet up. Wondering what business a Flicker could have in a hole this time a year, I determined to see. So with the aid of a fence-rail and a little climbing I was soon able to see into the hole. Upon tearing a portion of the wood away I beheld five shiny eggs, and as it was rather late in the season for eggs I took them, but when I came to blow them I found them all rotten. I have oftentimes found nests with one or perhaps two rotten eggs in, but never before the whole lot. The old bird must have sit on them for some considerable time, for the eggs were extremely slick and polished.

T. G. PEARSON,
Archer, Fla.

Odd Eggs of the Cala. Towhee.

Thinking the subject of albinism in eggs might be of interest to some of the readers of THE OOLOGIST, I quote the following from my note-book.

"On June 8th, '89, while collecting in Eaton's Canon, Cala., I found a set of albino eggs of the California Brown Towhee. The eggs were three in number and of the usual size. The ground color was white, marked with a few spots of chocolate. When I discovered the nest the bird was sitting on it, but to make sure of the identity I shot her. She proved to be an adult female, perfectly marked.

W. R.
Pasadena, Cala.

Thousands of Blackbirds.

In this portion of the state of Kansas there are thousands of Blackbirds. They build in orchards, and are so numerous as to kill and break down trees, causing a horticulturalist so much trouble that he hires boys to tear down their nests. In one orchard a count was kept of the eggs. Some 1000 were gathered, the nests being built in the usual way, some five or six to a tree.

After the young can fly they congregate in flocks and fly from and to their roosting places and feeding grounds. They feed in the low lands bordering the river, and at night-fall fly to their roosting places on the higher ground.

When the time comes for going south, they mass in one immense flock. A flock went over this town recently, and as far as the eye could see there were Blackbirds, which continued for nearly two hours, their direction being south by south-west.

The Robins are beginning to fill up the woods. They stay in the woods here all winter, though you never see one in town till spring, making the people think that they just arrived from the south.

JOHN MYKRANTZ,
Paola, Kans.

The Yellow-headed Blackbird.

This is not a very common species in my locality, although I collected a number of sets during the season of 1889.

The only place in this locality where I found it breeding was a small grassy lake, called Lake Ningra or Dead Lake. On the eastern portion of this lake there is a great patch of cat-tails and rushes out quite a way from the shore. This is a great breeding place of the Yellow-headed Blackbird, also of the Least Bittern.

The nest of the Yellow-headed Blackbird is a light bulky affair made of flags and grasses woven together, and is often twice as deep outside as in, with a very wide margin. The number of eggs in a set of this species ranges from four to six, but four is the usual number, rarely five.

A set of four eggs of this species, which I collected at Dead Lake, May 31, 1889, shows the following measurements: 1.04x71, 1.01x71, 1.03x71, 1.04x71. The eggs in the above set are of a dull grayish white, thickly spotted with drab and umber.

I will close now hoping to hear more about this beautiful bird through the columns of THE OOLOGIST.

F. S. N.
Madison, Wis.

Northern Phalarope.

October 25th I had a Northern Phalarope brought to me alive and apparently in good health but for a gash on the left side of its head which had entirely deprived that orb of sight. I was informed that several more had been found dead at the foot of one of the electric light towers, where it had probably been attracted by the brilliant light and flown against the wooden railing that surrounds the lights. The towers are 110 feet high and consists of five electric lights erected on an iron frame.

No doubt throughout the country there are many birds killed by these electric lights.

The Phalarope is a very rare specimen around here.

C. C. T., Utica, N. Y.

The Oven Bird's Song.—A Corrected Statement.

I beg to differ with B. H. S., who in the October OOLOGIST said that the Golden Crowned Thrush had no song.

I have several times seen it singing and have shot it the act, that there might be no mistake about it. For better proof I can do no better than to copy from John Burrough's book, "Wake-Robin;" "Mounting by easy flights to the top of the tallest tree, he launches into the air with a sort of suspended, hovering flight, like certain of the finches, and bursts into a perfect ecstasy of song, clear, ringing and copious, rivaling the goldfinches in vivacity, and the linnets in melody. This refrain is one of the rarest bits of bird melody to be heard, and is oftenest indulged in late in the afternoon or after sundown."

C. A. S.
N. Y. City.

The Cedar Waxwing Eating Potato Bugs.

My father called me one day last summer out to his potato patch and showed me a bird that was busily catching and eating potato bugs. I learned shortly after that it was a Cedar Waxwing. It built its nest a block or two away and continued to come and catch bugs from our potato vines all summer. I never knew before that a bird would eat potato bugs.

GEO. W. VOSBURG,
Columbus, Wis.

Wood Pewee.

Probably one of the best known birds in eastern United States is the Wood Pewee. In this country it is known as the "Moss Pewee," which name I think is very appropriate, as its nest is built almost entirely of moss.

The description of one set will come very near answering for them all, so similar are they to each other.

The nest is situated on the horizontal fork of a limb, generally so far out that you cannot reach it except by means of a net on the end of a long pole. It is

constructed of moss, lined with fine roots and ornamented on the outside with lichens. There is only one nest that excels it in beauty, that is the Blue-gray Gnatcatcher.

The eggs are three or four in number, of a beautiful creamy white, spotted around the large end with obscure lilac and rich brown.

J. A. B., Morgantown, N. C.

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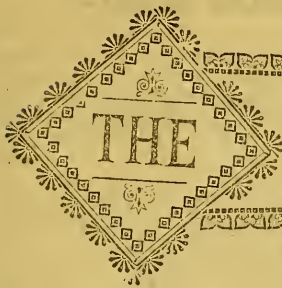
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VOL. VII.

ALBION, N. Y., JAN., 1890.

NO. 1

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

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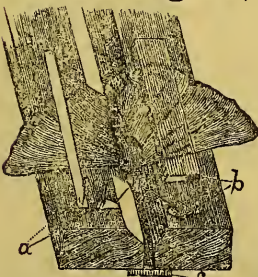
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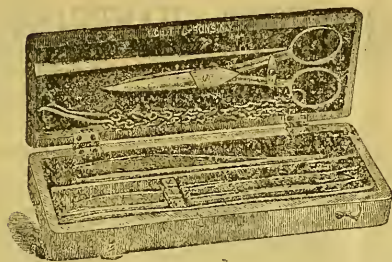
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The descriptions of the birds are all original and were written for the work, nothing which had ever appeared in print before. Every species is described in detail, beginning with the adult, and where it was known, specifically with that of the immature, while all the intermediate stages are given. The attention of especially is particularly directed to the point, as to every species which it is in obscure plumage, which particularly recommends the book to be given to the collector of birds. The illustrations which have been applied to the various parts of the birds, whenever it was also and that comparison was given between one species and others allied to it, thus greatly assisting in identification, especially in those cases where the plumage is not so distinctly marked.

The classification used, although similar to that in current use, presents some changes based upon the anatomical studies. Average dimensions are given for many species, and also, in every case, as well as the original and latest authorities are named. The distribution and extent of migration of each species is

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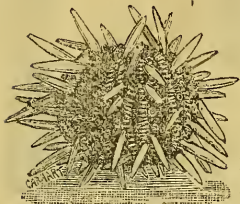


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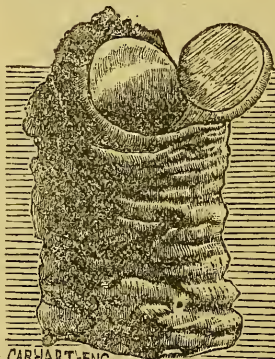


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| 3 35 var. Foreign Stamps | 81 Curio Sponge, Bahamas |
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| 7 "Blue Tree" Bark, Mariposa, Cal. | 34 Flexible Coral (Aloë), Tonga Isles |
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| 11 Orphanpipp Coral, Singapore | 39 Opencorn or Shell-Door, Bahamas |
| 12 Cypress Inx, Singapore | 40 Native Ledstone, Magnet Cove, Ark. |
| 13 Cypress Inx, Andros, Bahamas | 41 Olive Shell, Zanzibar |
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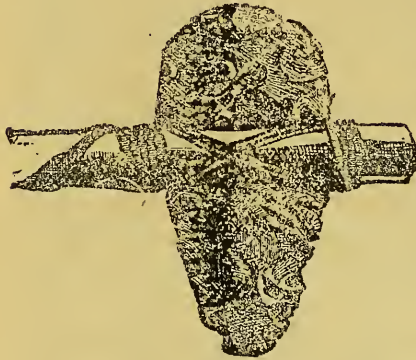


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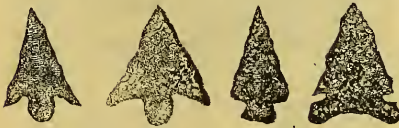
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This is a very desirable collection, and contains regular 2" c. specimens of each species. All are labeled with scientific name and locality.

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- 1 Trilobite, Ills.
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- 1 Polyp Coral, N. Y.
- 1 pc. Baculite, Black Hills.

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No. 78.

A Good Trilobite.

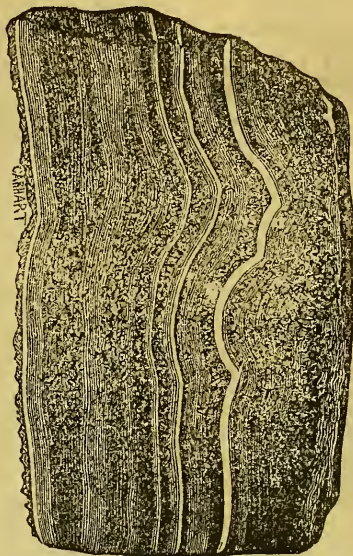
Calymene Niagarensis Var (*Blumenbachi*)

Tribolites are always in demand and collectors rarely have a chance to obtain one so reasonable.



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NO. 79.



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Tiger Eye, &c., Crystals of Amethyst Quartz, &c., &c.

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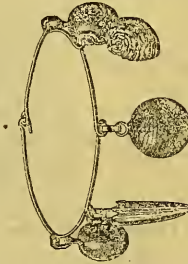
During the past few years we have retailed from our stores at Chautauqua nearly ever kind of pin made from Minerals, Gems, Shells' Beans or Teeth known to the resort trade, but we can honestly say that we never offered for sale an article in this line that proved half as popular as our Satin Spar Scarf or Lace Pin. The Spar from which these pins are manufactured is a very beautiful fibrous, white (almost translucent) mineral having a pearl or satin-like lustre, from Bridgford, England. (We will mail a fine sample in the rough for 5 cts.)

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With five assorted Sea Beans, Shell and Alligator-tooth Bangles. For our Bangles and Pins we use only the choicest Beans, Shells and Teeth, which are finished and polished in the highest perfection.

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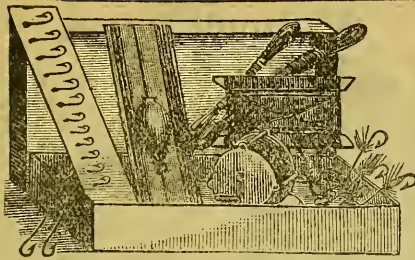
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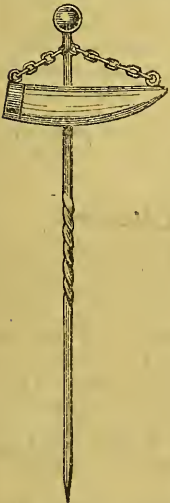


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The Oologist's Fisherman's Outfit contains 4 drab fish lines, each 16 ft. long, two of which are for trout and small fish, one for medium-size fish and the other for large and gamey fish; it also contains one extra fine quality 50 ft. drab line wound on a wooden block; this line is suitable for all ordinary fishing; one furnished line with double snell hook, 16 ft. of genuine linen line with a long fancy colored barrel-shaped float. This line cannot fall to suit everyone, and it's already for business. EIGHTEEN BEST STEEL KIRBY RINGED FISH-HOOKS (assorted sizes.) These are best grade of hooks, warranted strong, sharp in points and barbs and handy to use; anybody being able to tie their line into the ring of the hook. With this set of hooks the fisherman can try his luck for any size fish from a minnow to a 40 lb catfish. TWO SIZES SNELL HOOKS and two double-ringed sinkers of the size generally used, one round tin baitbox, size 2 1/2 x 1 in., can be carried in the vest pocket.

As much sport can be had from this outfit as from a \$10 one. Everything warranted as represented. The outfit is securely packed in a strong slide-cover wooden box, size 5 1/4 x 3 3/4 x 2 1/2 in. Just the thing for holding fishing tackle.

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No. 91.

ALLIGATOR TOOTH SCARF OR LACE PIN.

Powder-horn Design, one of the best and most popular pieces of jewelry into which the alligator's tooth is manufactured.

Strongly made and finely finished; cap of gold.

This pin is usually sold at for \$1.00 to \$1.50

Price post-paid, 75 cents, or with THE OOLOGIST one year, 90 cents. Given for 5 subscribers.

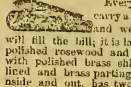
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It is a genuine Compass with attachments to indicate the time by the sun. Simply open the case and allow the sun to shine upon it and the time is indicated immediately. The compass is of the utmost value to Naturalists and Collectors, and useful to everybody, it is just the thing for the day.

Our illustration represents it accurately. The Time-keeper can be set and attached to a chain precisely as an ordinary watch. The case is of fine silver-plate. The compass alone is worth the amount. Price post-paid 20 cents, or with THE OOLOGIST one year 50 cents. Given for 2 subscribers.

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DIALOGUES AND DRAMAS FOR SCHOOL EXHIBITION.

The contents of this book comprise dialogues and dramatic plays among the birds, the mammals, the reptiles, and other animals, from seven to twelve years of age. They are designed for concrete or part-object instruction, and many of them improve upon the stories and plays accompanying the text, as may be indicated by the teacher or suggested by the spontaneous remarks of the pupils. In imitation of the natural movements of the animals represented, and after the manner of the kindergarten-plays, as prescribed by Froebel.

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The Loop, strap and Pocket are all made in one solid piece of the best kind of rubber.

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Containing choice crystals, a great mass of the following: Quartz, Pyrites, Garnet, Olivine, Epidote, Zircon, Selenite, Calcite, Pyrites, Selenite, Obsidian, Mica, Petrified Wood, Asbestos, Gypsum, "Forest" Rock, Rose Quartz, Barabrost.

The specimens in this collection always retail at five cents each.

Price post-paid, 40 cents, or with THE OOLOGIST one year 70 cents. Given for 3 subscribers.

The American Ornithologists' Abridged Check-List of North American Birds.

Containing the Latin and English names of all the Species and Sub-species, including those added in the Supplement. It gives the New A. O. U. No.'s, also those of Baird, Ridgway, and of Cones, both 1873 and 1882; Nearly 150 pages; size 6x9 in.; printed on one side of paper only; paper covers.

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Crispin's Awl.

This is a tool for everybody. It is a hollow handle made of hard wood, five inches long, and weighing three ounces. It contains inside, on a spool, 50 feet of best wax linen shoe thread. The spool is also hollow, and contains three awls and three needles of various shapes and sizes. The thread fits the needles, and the awls fit the handle, and are held by a set screw. It is for use in the house, stable, field, camp or on the road, for making immediate repairs, when one use of it will be worth more than its whole cost. Every collector and Taxidermist should have one in his kit.

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A New Work on Ohio Valley Earthworks
BY WARREN K. MOOREHEAD.

For a number of years Mr. Moorehead has spent his entire time in opening mounds and in photographing and surveying the earthworks of the pre-historic races that once inhabited the Ohio valley. He has prepared a work on Fort Ancient which differs from any ever published on antiquities. It has been the custom of those who wrote upon this subject to compile from the writings of others and do very little field work themselves. Mr. Moorehead in his work has not used an illustration that has been used by anyone else, his matter is new and is taken from the mounds and graves themselves, and not from what others have written. He makes field work a specialty.

No expense or pains have been spared to make this book attractive to the scientific public. The old archæologist will find it a valuable addition to his library. The young collector will find in it matter for his careful study and consideration.

It is a large book with 200 pages, containing 35 full page illustrations made from photographs taken in the field.

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This collection contains a choice polished specimen of Onyx, Agate, Moss Agate, Tiger-eye (*Crocidolite*) and Amethyst, size from one inch to two inches each. Western dealers charge \$1.00 for a similar but no better collection.

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Contains a fine small specimen of FIFTEEN different species of Coral. This collection contains specimens from all noted localities and shows a great variety of forms and color.

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A collection of 30 named species of small shells, average size about one inch. The following species

will be found in this collection:

Aporrhais pes-pelecani, *Murex pudoricolor*, *Fasciolaria tulipa*, *Purpura patula*, *Columbella mercatoria*, several species of *Olivas*, *Cypræus*, *Neritas*, *Marginella apicina*, *Asaphis coccinea*, *Tellina radiata*, *Chiton squamosus*, *Fissurella Barbadosis*, *Crepidula fornicata*, *Dentalium entalis*.



Pupa uca.

The following families also have representatives in this collection: *Comus*, *Turritella*, *Vermetus*, *Natica*, and others. A splendid collection, scientifically named, and offered at one-third the price usually charged for as good a one.

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Caliper Rule.



A Rule like this cut we can furnish you for \$2.50. The rule we offer as premium is a fine six-inch, brass-trimmed, folding rule with a brass caliper attachment, registering 16ths. Should you desire the results in 100ths you can readily obtain it by multiplying by 64.

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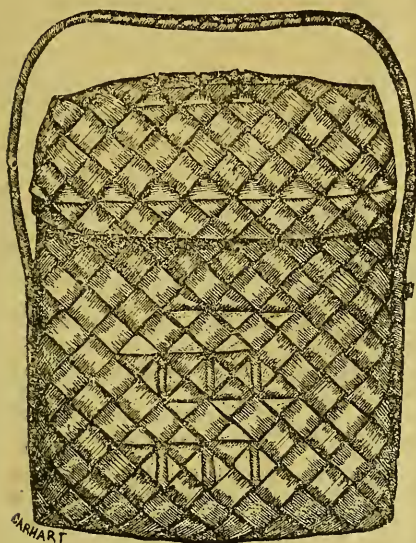
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One of the latest "rages." Perfectly shaped little jugs in exact imitation of a regular "vinegar holder." They are full glazed finish, natural color and correct miniatures in every respect. They are in great favor as charms or baubles, some people wearing four or five at a time of assorted sizes. We give 12 Jugs of assorted sizes and colors for this premium.

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A Palmetto Basket.



A genuine curiosity, and one of the most substantial, durable, and unique baskets made. This basket is hand-made, by the natives of the Bahamas, from the leaves of the palmetto growing there. The baskets are simply non-destructible, you can crush them, double them up, twist them into a rope, let them get water-soaked for a week, in fact use them about as rough as you please, straighten them out and they are just as good as new. The smaller sizes, ladies find a very convenient substitute for the popular hand-bag, while the larger ones, that of a satchel or basket. Collectors will find them indispensable for carrying lunch, instruments, tackle, game or specimens, in fact it is one of the best contrivances we have seen for these purposes. We keep them in four sizes, and offer them as follows, post-paid:

- No. 1, size 6 x 5½ x 3 in. 30 cents.
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If you desire THE OOLOGIST, add 25 cents to these prices. Given respectively for 2, 3, 4 and 5 subscribers.

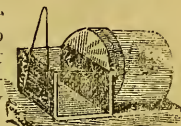
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A very fine specimen scientifically named, from Green Rivsr, Wyoming, and such as are usually sold for at least \$2.00. The slab on which it is imbedded, is about four inches by 8 inches.

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A very handy article for the naturalist to have on hand; that rare species *Mus musculus* can be readily captured in it, then using it as a cage you can profitably study its habits.



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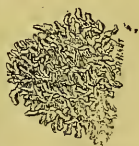
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Contains a choice 25 cent specimen of 12 different species. This makes a very fine and showy collection and one that we can guarantee to please. If

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A Good Microscope.



A good Three-legged Microscope with double-lens of very strong magnifying power.

This is the best microscope made, for examining ores, minerals, flowers and specimens of all kinds, and is the same

that is usually retailed at from 75 cts. to \$1.00.

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THE STUDENT'S MINERAL COLLECTION

IS COMPOSED OF

50 DIFFERENT MINERALS

From all parts of the World, viz: Europe, Asia, Africa, North America, South America, West Indies, etc.

And will be sent pre-paid, accompanied with complete Descriptive Hand Book for

ONLY \$1.25.

The following minerals are found in this collection, viz: Actinolite, Agate, Alabaster, Albite, Amethyst, Anhydrite, Argentiferous Galena, Asbestos, Asphaltum, Barite, Buhrstone, Calcite, Catlinite, Chalcedony, Chalk, Chalcocopyrite, Chromite, Coquina, Dendrite, Dolomite, "Electric Stone," Enstatite, Fibrolite, Flint, Garnet, Gold Ore, Gypsum, Indurated Clay, Hematite, Jasper, Leelite, Limonite, Lode-stone, Magnesite, Magnetite, Marble, Marcasite, Mex. Onyx, Muscovite, Milky Quartz, Coke, Obsidian, Wood Opal, Pearl Spar, Pet. Wood, Porphyry, Pyrites, Quartz Xtal, Rose Quartz, Satin Spar, Serpentine, Stibnite, Crocidolite, Tourmaline, Tufa, Variscite, Wavellite, Williamsite.

The specimens in this collection are not the chippings that are usually sent out in low-priced collections, but are good specimens that will average nearly 1 in. x 1 in. each, properly labeled and wrapped separately.

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Twenty-five Large Showy Shells.



From our large assortment of beautiful shells we have selected 25 species among which will be found the following. All are very beautiful and many, when necessary to add to their beauty, have been polished:

Magpie Trochus (*Livona pica*), Turk's Cap (*Turbo sarmaticus*), White Ear (*Haliotis tuberculata*), Cockle Shell (*Cardium magnum*), East Indian Horsefoot Clam (*Hippopus maculata*), Silver-lip (*Strombus lentiginosus*), Snipe-billed Murex (*Murex haustellum*), White Murex (*Murex ramosus*), Rose Murex (*Murex regius*), Harp Shell (*Harpa ventricosa*), Marlinspike (*Terebra maculata*), Lettered Cone (*Conus litteratus*), "Kid" Conch (*Strombus bituberculatus*), Spider Shell (*Pterocera lambis*), Hooked Scorpion (*Pterocera rugosa*), Mole Cowry (*Cypraea talpa*), Tiger Cowry (*Cypraea tigris*), Cameo Shell (*Cassia rufa*), Spotted Snail *Turbo marmoratus*, Pearl Trochus (*Trochus niloticus*).

The shells in this collection, in size, will range from three to six inches. They are of all colors and from all parts of the world. At ordinary prices they sell at an average of 25 cents each in the East and from 25 cents to 75 cents in the West. This collection is carefully packed in a light box and sent by express at the purchaser's expense.

Price \$4.00 or with THE OOLOGIST one year \$4.25. Given for 30 subscribers.



O O L O G I S T Y .

Monthly.

50c. per Year.

Vol. VII,

ALBION, N. Y., FEB, 1890.

No. 2

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash, with order.

THE EXCHANGE Notice in Jan. Oologist is working wonders, and I have received already more offers of exchange than I can very well attend to. Very truly yours, WILL A. MOORE. Norwalk, Ohio.

CURIOS wanted for my museum. SEEBACH Peru, Ills.

FOR SALE OR EXCHANGE.—100 minerals; 100 species fossils and lot of curiosities. Want fur overcoat, robe or field glass or offers. HOMER SQUYER, Missoula, Montana.

WANTED.—Reliable collectors in the United States and Canada, to collect Birds Eggs for this season ('90). Collectors will do well to write to me for terms before engaging elsewhere. WILLIS N. FLEMING, Natick, Mass.

TO EXCHANGE.—A Telegraph instrument, valued at \$3.50, for Birds eggs or one pair climbers. What offers? Correspondence solicited. Address, ALLEN OGDEN, Brocton, N. Y.

BOYS' Useful Pastimes, for Davie's Key. Rollo's Experiments and Museum, and Sunrise Lands; cost \$3.50, for Engle Spring gun, or Chicago air rifle or Climbers. J. C. GALLOWAY, Montgomery, Ohio.

WANTED.—To exchange the "Magicians Fun Book," 999 Startling Tricks. Edited by W. H. Cremer. (valued at \$1.) For the best offer of U. S. cents in good condition. GEO. VAIL, 438 Saratoga St. Chicago, N. Y.

EXCHANGE.—An International Stamp Album, contains 100 stamps, flags, rulers coats of arms. Small self-linking press, type, cuts, etc. Will exchange for microscope or sell. ELLIOT FIELD, Box 1, Wayne, Delaware Co., Pa.

WANTED.—To exchange a World Typewriter in good order for best offer of Bird Skins. Typewriter cost \$10.00 when new. WILLIAM T. SMITH, Box 94, Wayne, Del. Co., Pa.

A GOOD.—\$2.50 International Album, (8th ed.) with 450 var. stamps for perfect Indian relics, or for a fine first-class egg of Golden Eagle. Also some Iowa eggs to exchange. CHAS. KEYES, Mt. Vernon, Iowa.

WANTED.—TO PURCHASE COLLECTIONS OF INDIAN RELICS AND OTHER CURIOSITIES FOR WHICH CASH WILL BE PAID. PARTIES HAVING SUCH FOR SALE WILL PLEASE CORRESPOND WITH W. H. KING, JACKSONVILLE, ILLS. ay

American, European and Exotic Butterflies and Moths for cash and in exchange for Birds' Eggs, Birds' Skins. All mounted and perfect. Very rare and beautiful specimens from India, Africa and South America; also live cocoons from India and Europe to exchange for others of this country Send for catalogue. PROF. CARL BRAUN, Naturalist, Bangor, Me.

WANTED.—To exchange a House Scroll Saw and tools, also eggs and curiosities to exchange. F. B. WHITFIELD, Box 1.0, Clinton, Miss.

A FINE collection of over 100 kinds of eggs, also a fine set of egg blowing instruments in neat case to exchange for good single-barreled shot gun in good condition; side snap preferred. Eggs valued at \$2. Write for particulars. GEO. M. LINCOLN, Lock Box 713, Malone, N. Y.

WANTED.—Good Ornithology, (with colored plates preferred). Will give Mtd. Birds Mammals Birds skins, Birds eggs and some cash. OTTO L. BULLIS, Winnebago City, Minn.

TO EXCHANGE.—For every complete first-class set of Birds' Eggs, with data, sent me, I will give a receipt for making Rubber Stamps. FRED W. STACK, Poughkeepsie, N. Y.

COLLECTORS.—\$1.35 Steam Engine for \$1.00 in eggs; 13 var. Stamps for every egg sent; or Alaska and Wash. Curios. to exchange. U. L. HERTZ, Kent, Wash.

I WILL GIVE 32 good foreign stamps all different on sheet, for every twelve cents worth of eggs first-class sent me. GEO. A. FREEMAN, Natick, Mass.

WANTED.—A good Partridge dog, Pointer or Setter much preferred, but any good Partridge dog acceptable. Young dog preferred. I will give in exchange, Birds eggs in sets and mounted birds. Address, H. E. BERRY, Damariscotta, Me.

AMERICAN single-barrel breech loading shot gun. Trigger Action, Fine Stub Twist Barrel, No. 19 bore, 25 brass shells. Complete set of loading and cleaning implements. Mills' woven cartridge belt with shoulder straps. Gun and outfit are entirely new; worth \$25. Will exchange for Gular or Marlin repeating rifle model 1859, or sell for \$20. Reasons given for selling. D. H. SCHWACOFER, Ashtabula Harbor, Ohio.

Exchange Notices Continued on next page.

EXCHANGE NOTICES, — *Continued.*

TO EXCHANGE.—A good Baltimore, No. 1 printing press (self inker) with one font of type, and 2000 foreign stamps for first-class birds eggs in sets or singles. OSMUN LATROBE, Jr., 14 East Eager St. Baltimore, Md.

A WINCHESTER, single shot, plain sporting rifle, 28-55 cal., set trigger, Rocky Mountain sights and set of ideal reloading tools. All in good condition. Will exchange for desirable books on Natural History or Microscopy, choice Fossils or Sea Shells. J. W. GARBER, Rockwell, Iowa.

WANTED.—Collectors having well prepared and carefully identified eggs, specimens or curiosities for sale or exchange at low rates, in large or small quantities, will please send their lists and prices. All eggs must be blown through one hole smoothly drilled in the side, and without stains or ink-marks. FRANK H. LATTIN, Albion, N. Y. (16)

RARE EGGS for exchange. I have for exchange the following eggs in full sets, with data: Limpkin, Chestnut-bellied Scaled Quail, Chachalaca, Western Horned Owl, Harris' Hawk, White-winged Dove, Scissor Tail, Texas Night Hawk, Red-billed Pigeon, etc. THOMAS H. JACKSON, West Chester, Pa.

FOR EXCHANGE.—A collection of first and second-class bird eggs; 150 varieties; 800 eggs; Oologist for '84, '85, '86, '87 bound good as new; Also for '88 and '89 not bound; Also Davies 3rd Edition in good condition. Will dispose of the lot as a whole or in parts very cheap. Will exchange for good double-barreled breech loading shot gun or other eggs. For particulars, address. FRANK H. KREBS, Winchester, Va.

TO EXCHANGE.—10 species woods for every Indian Knife, Scraper, Arrows, War Clubs, Bird Arrows, Spear-head; 100 species for every Clay Idol, Vase, Urn, Pitcher, Plate, Bowl, Stone Implement or Pipe; 20 species woods for Plum or Grape shot from war; 10 species for every War Bullet; 50 species for Canteen. FRED M. ROSS, Candor, N. Y.

WANTED.—A set of Taxidermist's Instruments and supplies. In exchange, I will give about ten pounds of type that is in "pi." Will also exchange three eggs of No. 382 for Manton's "Taxidermy Without a Teacher." Address, L. C. FREENY, Pittsville, Wicomico, Co., Md.

Back Numbers of THE OOLOGIST Wanted at Once

We want at once 50 copies of the June 1888 issue of THE OOLOGIST. For each copy we will give a card good for 12c payable in anything we advertise. we also want 50 copies of April, 1889 issue, for which we will give 6c worth of anything we advertise. Mail your extra copies at once to publisher of THE OOLOGIST, Albion N. Y.

ONLY 13 LEFT!

We have just 13 complete sets of YOUNG OOLOGIST and OOLOGIST left. A complete set will be sent you by return mail for only \$2.50. This offer is good for 30 DAYS ONLY.



Your name and address will be inserted in any department, 1 month for 10 cts.; 3 months, 25 cts.; 6 months, 40 cts.; 1 year, 75 cts. Should you desire to have your name printed in more than one department, one-half of these rates will be charged for each additional one.

Live collectors will not be long in observing the importance of keeping their names circulating in this Directory. Collectors and dealers desiring to make sales, purchases or exchanges will not only write to the parties whose names appear in this directory for their wants, but will also keep them posted on "bargains" that they may have for sale cheap; publishers having papers, etc., that would be of interest to the persons whose names appear in this Directory, will recognize the importance of placing samples etc. in the hands of Live Collectors and will act accordingly.

Collectors receive as high as 25% Letters, Vouchs, Circulars, Samples etc. from having their names inserted one time at a cost of only 10 CENTS in this Directory. Address, THE OOLOGIST, Albion, N. Y.

BIRDS' EGGS.

- Chas. E. Cram, No. 410 Jefferson St., Burlington, Iowa. [J3]
- H. W. Davis, North Granville, N. Y. [y]
- William T. Smith, Box 94, Wayne, Delaware Co., Pa.
- Wm. Randall, Box 10, Belleville, Mich.
- D. S. Musser, Aberdeen, South Dakota.

TAXIDERMY.

- V. N. Marsh, Mount Union Coll., Alliance, Ohio.
- William T. Smith, Box 94, Wayne, Delaware Co., Pa.

INSECTS.

- Roy L. Lyle, Cedar Springs, Kent Co., Mich. [y]
- Eliot Field, Box 1, Wayne, Delaware Co., Pa.

STAMPS.

- Fleming & Freeman, Box 174 and 1267, Natick, Mass. [n2]

BIRD SKINS.

- V. N. Marsh, Lock Box 6, Mt. Union, Ohio. [n2]
- William T. Smith, Box 94, Wayne, Delaware Co., Pa.

CURIOSITIES.

- Ed. Van Winkle, Box 10, Escanaba, Mich. [3n]
- S. C. Wheeler, Waterbury Centre, Wash Co., Vt.
- F. M. Ross, Candor, N. Y.
- R. Waltz, Box 345, Green Castle, Putnam Co., Ind.

FOR SALE CHEAP.—A good collection of Californian eggs, sets and singles, all together or only part. List for stamp. Arthur Staley, Anaheim, Orange Co., California.

Cabinet Photos of a Dakota Sod Shanty

By mail post-paid 25c, 1 doz. for \$2.00. Address E. S. CHENEY, Pittrodie, So. Dakota.

THE OOLOGIST.

VOL. VII.

ALBION, N. Y., FEB., 1890.

NO. 2

Breeding Habits of the Brown-headed Nuthatch.

While spending a few days in Queen Anne Co., Va., in the early part of last May, I had an opportunity of becoming personally acquainted with this little bird, which, up to that time, had only been known to me from dried skins and still drier descriptions.

The country in this vicinity is well covered with pine and oak trees, intersected in all directions by numerous small creeks and ponds. It is in the pine groves only, however, that the Nuthatches are found, and here their harsh cries are heard continually, for the birds never seem to remain quiet for any length of time and succeed in making so much noise that one believes them to be much more numerous than they really are. Their notes differ greatly from those of either the White or Red-breasted species and it was this peculiarity which first attracted my attention.

I soon discovered that to take any number of their nests, I should have to do a great deal of hard walking, as each pair of birds seemed to monopolize the whole of their particular grove for nesting purposes, a habit which I have also noticed in their White-breasted cousins.

Both birds seem to keep pretty much confined to the immediate vicinity of their home and their continued chatter makes the locality of the nest, which otherwise would be a difficult matter, comparatively easy.

The site chosen consisted invariably of a hole in a dead and rotten pine stump at a height varying from 6 to 12 feet from the ground, although I suppose they sometimes select much higher situations, as some of the stumps had likely looking excavations as high up as 40 feet.

The "woods were full" of these dead stumps and most of the stumps were full of holes made by the Downy Woodpeckers which were breeding all around and I think that most of the holes occupied by the Nuthatches were the deserted nests of this bird, although I cannot be positive on this point as all the nests were found completed and contained either eggs or young.

The nests themselves were flimsy affairs, the bottoms of the holes being simply covered to a depth of perhaps an inch with short broken bits of a certain, peculiar kind of flat grass. Of this stuff the birds seemed particularly fond, for it was found in all the nests, mixed with a few shreds of pine bark, the whole so loosely put together that it could not be removed entire, and thus presenting a singular contrast to a couple of the closely felted nests of the Caroling (?) Chickadee which were found, one with young just hatched, the other with 5 eggs too far advanced to save.

The breeding date seems to vary somewhat, for on the 7th day of May, I found a nest with young, partly fledged, a set of 5 incubated eggs and another set perfectly fresh but probably most of the nests would hold fresh eggs about the last of April.

All the nests were in the vicinity of water (although more were actually surrounded by it) and I did not even see a bird in the higher and dryer pine lands. All the sets consisted of 5 eggs.

Of the eggs in general no detailed description is necessary, but I wish to speak more particularly of the set of 5 incubated eggs referred to above, as they are quite unique. Four of the eggs are quite similar, white ground color, dusted all over with very minute dots of light purplish pink. The fifth egg is

very different as the spots are so close as to entirely hide the ground color, like some specimens of the Cactus Wren, and the whole egg presents a delicate light pinkish appearance. They are different from any eggs of this species that I have seen, including the Smithsonian series, and I value them very highly.

THEODORE W. RICHARDS,
Washington, D. C.

The Prairie Horned Lark in Monroe County, N. Y.

I have seen but very little in the pages of THE OOLOGIST, on the nesting of the Prairie Horned Lark in the United States, and, as I have found several nests, I write this article hoping it will be of interest to some of the readers of this interesting magazine. I have seen the bird here every month of the year except December. If one has ever been seen here in December it has not come to my knowledge. They fly over us northward from January until April. A few stay to breed and from September until December they fly South. In this locality the bird certainly breeds twice each season, as my experience will show. It is a singular fact that though I have found seven nests in the last three years, yet I know positively that no other collector in this vicinity has found a single nest. The earliest nest I have found was on the 23d of March, 1889. (It is quite probable that they sometimes lay earlier, as a friend of mine found a young bird in the latter part of April that could fly some.) It was placed in a hole, evidently made for the purpose by the bird, in a field that had been used as a pasture the fall before. It was made entirely of thistle down and was very dry and snug. The bird was on the nest when found. It contained three fresh eggs. They were greenish white spotted so thickly with has and lavender as to give them a

cloudy appearance. On the 10th of April following I found another nest similarly situated and constructed. This contained three eggs like the first set which I took, but left the nest. On going back to the nest two days later I found another egg, but it had been frozen and cracked. After this I found no more nests until midsummer. On the 2nd of June I found a nest containing three fresh eggs. This was situated in a growing cornfield close under the edge of a sod, and was made very poorly of dead grass. On the 1st of July I found another nest in the same field containing four eggs; nest like the last. If the Horned Lark lays more than four eggs I would like to hear from some who has found a set of five through the columns of the THE OOLOGIST. I have found one set of two nearly hatched, the rest have all been sets of three and four. The average size is .87 x .65.

ERNEST SHORT.

Winter Birds of Hennepin Co., Minn.

I do not intend to give a complete list but only some of our less common winter visitors, which have fallen under my notice:

Evening Grosbeak. Plentiful. Reside here all winter, feeding on box elder seeds. These birds are rarely found without the city, but prefer to remain within the limits. This makes it difficult to obtain them, still the air guns and "nigger shooters" enable one to obtain any reasonable number.

Bohemian Waxwing. Common at times. Winter visitor. This I think is one of our handsomest birds. This year are very rare. Last year common.

Northern Shrike. Arrive about November. Same habits as White-rumped. Fairly abundant.

Lapland Longspur. A few stray birds are found in large flocks of Snow Buntings. Easily distinguished from

Buntings by being darker. Habits same as the Snow Buntings.

Pine Siskin. Noticed in company with Redpolls.

Pileated Woodpecker. Found generally in tamarack woods. This large and wary woodpecker is very difficult to get. These birds are generally found far from civilization, and choose the wildest places for their retreats.

Gos Hawk. Rare. Observed several specimens, one of which was pursuing a flock of tame doves, which, despite his frantic efforts managed to elude him.

Pine Grosbeaks. Rare. Shot several males in red plumage.

White-winged Crossbill. Obtained several of these out of a flock which were feeding in the top of a tamarack tree.

Snowy Owl. Rare. One of these birds remained all of last winter on a rocky island in the river until I found it out, and the chances are that he will now remain for some time to come, in my cabinet. The Red-bellied Nuthatch, Brown Creeper, Barred Owl, Long-eared Owl, American Crossbill and Redpolls are common.

W. DE LA BARRE.

Collecting Experience.

May 6th, about 10:30 o'clock in the morning I left home intending to go to a small lake a couple of miles distant. I was going to look at some Grackle nests that I had found a few days previous. After walking along the road for about a mile, I climbed a fence and started across a field. I soon came upon a Mockingbird nest in a small bush. Taking these, I proceeded on a short distance and soon noticed a hole in a dead tree a little in advance of me that had a feather floating at the entrance. This looked rather suspicious, so striking the tree with my climbers I had the satisfaction of seeing a female Sparrow

Hawk fly out. On reaching the nest I found it to contain four incubated eggs. The nest at some remote time had evidently been a Flicker's nest, but of late years the Sparrow Hawks had had it as their home in the far side of the same field. I flushed a Florida Nighthawk from the ground and was agreeably surprised on looking down to see two eggs. When I blowed them I found them to be slightly incubated. I soon reached the lake and going round to the south side saw a Sparrow Hawk fly from an old stub and seeing a hole near the top concluded at once that it flew out of it. So strapping on my climbers I started up and hearing a noise above me, looked up and saw a Flicker leaving the hole. However, I went on up and got five eggs. They were not smooth like Woodpecker eggs usually are, but were exceedingly rough, something like Turtle eggs. I then went down to the lake, got an old boat and was bailing the water out when a young colored boy coming down for water hailed me. "Ha dere white man, haint you de one dat gits bird eggs"? I of course answered in the affirmative and asked if he knew of any. "Yes saw, dere is a crow nest in dat big ole pine wonder, I jes no runded him of de nest when I hit de tree." That "big ole pine" was not so very big around, but was at least one hundred feet high. It was situated back up in the woods two or three hundred yards. I had to look at the nest a long time before I could make up my mind to climb it. But finally I could stand it no longer. As I saw the crow silently leave the nest and fly off over the tree tops, so up I went. The nest which was composed of sticks, twigs, grass, ect., and lined with cow hair contained five eggs. They were a great deal smaller than the common Crow eggs, and I am inclined to think they are eggs of the Fish Crow (*Corvus ossifragus*.) Putting three of the eggs in my mouth and taking two in my

hand I descended without mishap. I then went back to the boat and rowing out to the bushes in which the Grackle nests were situated, collected three sets of four and two sets of three eggs. Incubation was fresh in some, while in others it was well advanced. The Boat-tailed Grackle builds a large and bulky nest of straw which they weave to the bushes. In this is placed a quantity of soft mud, and without waiting for it to dry line the nest throughout with fine grass. The nest when built, thus is much deeper than when placed in trees on shore. The reason being that when built in the bushes if they were not deep the wind blowing the bushes about would cause the eggs to roll out. Landing the boat I started across lots home. While walking along I noticed a Sparrow Hawk fly down and grasping one of those striped lizzards that form a principal part of their food at this time a year fly to a dead tree. Knowing from the habits of this bird that if I would wait a little while I might be able to find its nest. I was right. In a minute or two he commenced calling and soon the female left her nest and flew to him for her dinner. The nest was about forty feet up and the dead tree in which it was placed was very hard to climb; but reaching it at last I was rewarded by finding five nice eggs. Going through an oat patch near home I found two Ground Dove nests; one containing two eggs the other two young. The nests were simply slight hollows scraped in the earth and lined with a few pieces of grass blades. I enjoyed my supper that night and of course went to bed like all other collectors to dream over the events of the day.

T. G. PEARSON,
Alachua Co., Fla.

The Snowy Owl.

My request for information as to the winter home of the Snowy Owl (*Nyctea*

nyctea), appearing in your issue of Nov. 28, 1889, has brought me such a considerable volume of information from many willing correspondents that I am encouraged in attempting to further ascertain all I possibly can concerning this bird. I shall be exceedingly obliged to any one who will send me facts about the Snowy Owl, telling particularly of early, late or extreme southern appearances.

I suggest the following heads as convenient for grouping the information to be sent, and as outlining the ground I wish to cover:

1. Where and when you have seen the Snowy Owl.
2. What you know of the observations of others in your vicinity.
3. If these birds occur in about the same numbers annually with you, and if they arrive and depart on uniform dates.
4. Of any local or common names for this bird, also of names in other languages than English.
5. Of the cry of the Snowy Owl.
6. Food of this Owl: state if information is from examined stomachs.
7. Measurements and weights.
8. Plumage of adults, albinos or melanistic specimens.
9. If its flesh is ever used as food by man, or by other animals, *i. e.*, its enemies.
10. If at any time they are gregarious.
11. Nests; eggs; plumage of young.
12. Newspaper clippings.
13. Thermometrical and barometrical records bearing on the movements of this species.
14. Of the life of the Snowy Owl in confinement.

L. S. FOSTER,

35 Pine St., New York City.

December 12, 1889.

From Forest and Stream, December 26th, 1889.

[We trust the readers of THE OOLO-

GIST will comply with Mr. Foster's request, as their notes and observations may be of considerable value to him.—Ed.]

An Albino Blue Jay.

While visiting a brother naturalist at Grinnell, Iowa, a short time since, he interested me considerably by bringing in a *white* Blue Jay. As it might interest some of the readers of the OOLOGIST, I will give a description of him. The Jay was presented to Mr. Wm. Berry, of Grinnell, Iowa, by his brother-in-law, Mr. Geo. B. Earp, of Monmouth, Ill. A neighbor of Mr. Earp found it in a nest in their front yard. When first hatched was perfectly white with pink eyes. There were three others in the nest, but they were blue like the parent bird. Is full grown now and in full plumage, which is all white except the wings and tail, which have a very light tinge of blue with a little darker shade of blue where it is black in other Jays; also a band of blue around topknot, with a little patch of blue at the base of bill, where it black in other Jays. Bill and legs perfectly white, eyes pink. He is confined in a cage but seems to enjoy himself as well as though at home in the woods.

R. D. Goss,
New Sharon, Iowa.

Blackbirds by the Million.

I read with much interest the communication of Neil F. Posson, Medina, N. Y., and was especially impressed with it as I do not believe there is anything at all strange in it. The blackbirds are merely going to their roost which in some localities cover many hundreds of acres. Now as if in intentional contradiction of the intimation of Mr. Posson when he says "always North-east" on Sunday evening, Nov. 24, '89. I saw a drove of blackbirds numbering up among the hundreds of

thousands flying directly South-east. The black line reached from far in the N-W to the S-E, as far as the eye could reach, and they continued to come for over an hour, until after sundown. Tuesday morning during a driving rain the drove lessened at least two-thirds; came away from south-east and were going due north-east.

Nov. 27, '89.

W. L. MCDANIEL,
Mincola, Tex.

Nest of the Texan Bobwhite. (*Colinus virginianus texanus.*)

On the 12th of May, as I was carelessly sauntering across a meadow, I accidentally came across a nest of this species.

It was the most beautiful nest that I ever saw of this species, or I may well say, of any other kind. It was on the ground in grass about six inches high. The parent bird had made a depression in the ground, and had constructed her nest. The nest was oven shaped and made of grass closely interwoven. It was fastened firmly to the hole by being interwoven with the neighboring grass. It was situated about forty feet from the woods. I was not long exploring its contents. In it I found two eggs. I came back four days after, and two more eggs were in. This time I caught the parent bird on the nest, so there is no doubt to the identity. I came back five days later and found three more eggs in it. I came back twice to see if she had not finished the set, and finding both times there were no more eggs in it, and that the birds were gone. I took the seven eggs. They measured 1.18x.94, 1.19x.94, 1.20x.98, 1.22x.95, 1.48x.91, 1.49x.945, 1.53x.95.

The last one was twisted at the smaller end, It also has a bubble on the the smaller end, caused by a deficiency of lime. All the eggs are pyriform, but some, more than others.

LEWIS KNOX,
Lee Co., Tex.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

FRANK H. LATTIN, - 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 New Book.

Eggs of North American Birds by Chas. J. Maynard. 159 pages 10 full page hand colored plates by Mrs. Maynard, representing the eggs of 82 species. Boston: De Wolfe, Fiske & Co. 1890.

It is with pleasure that we announce this valuable work from the pen of this well-known Author and Naturalist but we too regret that it could not have been placed on the market at least a year or more ago for now owing to Davie's Work, Maynard's can only be expected to secure the patronage of collectors that can afford more than one work. We have not had the time to examine the text carefully, as yet, so can add no positive testimony as to the correctness of the descriptions, but owing to the author's standing as an oologist we have but little hesitancy in pronouncing it both reliable and accurate. It is a difficult matter to "pic-

ture an egg" to suit one that "lives among them" so that if we speak too harshly of the plates, it is trusted that we are excusable on that ground.

Plate I is excellent and is a credit to the Work. Some may think the Murre's egg too high colored, but then it is to be remembered that an egg of this species is of almost any color.

Plate II is fair and unquestionably much better than the writer could have produced. The balance of the ten plates are in our opinion "horrid" and as a work of reference they have a tendency to lower rather than increase its value. Perhaps one-half the eggs represented on the last eight plates are very fair but as to the other half, well, the writer had to look them up to find what they were intended to represent. We first "guessed" at what they were but almost invariably found ourselves "way off" and even now it is rather a "sticker" for us to believe that the egg intended to represent either the Red-tailed or Red-shouldered Hawk was not through an error numbered to represent the Limpkin.

The following description, which we copy in full, of well known species will give the readers of THE OOLOGIST an accurate idea of the plan and scope of the work:—

519. HOUSE FINCH, *Carpodacus mexicanus frontalis*. Eggs, 4 to 6, oblong oval, pale bluish green, sparingly dotted and lined with dark brown and black; .60 x .80 to .65 x .85. Nests placed in tree and bushes, composed of twigs, grass, and weeds, lined with soft grass and hair. Breeds in the middle of the United States, in May.

683. YELLOW-BREADED CHAT, *Icteria virens*. Eggs, usually 4, often 3, and rarely 5, oval, glossy white, spotted and blotched with reddish brown and lilac, often more thickly on the larger end, where there is sometimes a ring; .65 x .85 to .70 x .95. Closely resemble those of No. 674. Nests placed in bushes, composed of coarse grasses, leaves, and the stems of plants, lined with finer material. Breeds in Eastern United States west to the plains, from Georgia north to Ontario and Massachusetts, where it is locally distributed.

The Blue Jay.

As one walks along through the woods on a summer day, he will invariably hear the well-known, but harsh cry of the Blue Jay; this bird is very abundant in almost all parts of the United States; they are somewhat gregarious in their feeding, but unusually solitary in their nesting habits; the nest of the Blue Jay is a very bulky affair, composed of twigs and an occasional rag; they always line their nest with string and fine roots; they lay from four to six eggs of a dull green color, spotted all over with blotches of olive-green. The only fault I have to find with this bird is its natural propensity for nest robbing. Most farmers consider this bird as a great nuisance, but in my estimation this is a mistaken idea, for the reason that the Blue Jay destroys innumerable insects that would otherwise eat up the crops. The Blue Jay is very pugnacious, often fighting with birds a great deal larger than itself. The Blue Jay is often confined in cages and I have heard that they can be learned to talk, but I have never heard one myself. I have noticed that the Blue Jay, in finding material for its nest, breaks dead twigs from the trees instead of picking them up from the ground. The majority of the Blue Jays pass the winter in the same vicinity as they do the breeding season.

H. E. HERSHEY,
Otoe Co., Neb.

Harris's Woodpecker in Nebraska.

Along the latter part of December, I was walking through a strip of timber about one-half mile west of town, when right in front of me, I heard the rapping of some Woodpecker. I walked nearer as silently as possible, when a Flicker flew up and away. I walked on more rapidly, then thinking that was all there was, when out jumped

what I thought at first sight, was a Downy Woodpecker. It lit on a stump about ten yards ahead of me and I could see it plainly. It was much too large for a Downy and I thought to dark for a Hairy. I watched it for almost an hour. It came quite near me several times, but flew away almost as soon as it saw me.

At last the mate (a male I think) came up and I saw them no more that day.

I went home not knowing what I had seen.

The following Thursday a traveling-man, who is quite a "bird crank," came around and I took him out. As soon as he laid eyes on my bird he said, "Boy, thats a Harris's Woodpecker." Well I was glad to hear that, for several of our local sages (?) had declared that I had only seen a Downy or perhaps a Hairy Woodpecker.

M. H. REED,
Otoe Co., Neb.

Unusual Nesting of the Downy Woodpecker.

As the editor of the OOLOGIST asks, among other things, for articles on peculiarities of the nesting of our birds, I will give an instance of unusual nesting of the Downy Woodpecker.

On April 23, I found a Yellow-shafted Flicker's nest, apparently finished in a rotten stub of an apple tree in an old orchard. As I was passing the orchard June 10, I went to the tree and found the upper part of the stub had been broken off, leaving the hole open. I looked inside and saw three pure white fresh eggs measuring 80 x 60 lying on a rather bulky nest of grass stalks and horse hair, the latter being pretty well distributed through the grass and not in any way forming a lining to the nest. The nest is rather shallow and loosely made. I took the eggs and nest, and the birds immediately made another nest, and laid more eggs, which

were robbed several times by rascally boys.

On July 4th, I heard the bird had made a third nest, and had laid four eggs. I visited it the next day and found it to contain two eggs and one young bird. The nest in this case exactly resembled the first.

During all this time neither the boys nor myself saw any bird near the nest, so I am not positive as to the identification being correct, but I think they could be nothing else except white eggs of the Blue Bird, which I think is not likely, as the eggs are smaller, and Blue Birds usually stay near their nest when it contains eggs.

J. C. GALLOWAY,
Hamilton Co., Ohio.

Evening Grosbeak.

I found a flock of about fifty in a long bushy swale, through which a small creek flowed. When first discovered many were on the ground; although the greater number were engaged in devouring the red berries that grew plentifully on the bushes. On my approach those on the ground flew into the trees uttering an alarm like an exaggerated note of the cherry bird. I was very much surprised to find none but females; not a male in sight, although I hunted the valley through.

Next day on returning to the same place I found another flock, slightly less in numbers than the one seen on the previous day, but consisting entirely of males old and young. Determined to sift the matter to the bottom I hunted the whole country over and at last in a patch of woods I discovered the recalcitrant troop of females. I heard one bird sing; he started out with a thin quavering warble, suddenly increasing in power and as suddenly bringing up as though out of breath. These are not such cold weather birds as has generally been supposed.

I have seen small bands in this country as late as May 13th.

This bird seems to be the height of stupidity, the indifference it manifests when its companions are shot down, its slow movements and meditative posture give the false idea of its intellectual powers. Take them when they are unaware of your presence and they form a lively, pleasant party, busily searching for food.

STEWART E. WHITE
Kent Co., Mich.

Blue-gray Gnatcatcher and Tufted Tit in Belmont County, Ohio.

May 17th. Found seven nests of Blue-gray Gnatcatcher. Took two sets of four. Visited the remaining nest in ten days and found two contained sets of four and the others four young each.

This is the first time I have taken eggs of this species and I believe the first time they have been taken in this county.

The nest of these birds is a beautiful structure, composed of the red catkins of the willow and covered with star shaped lichens, fastened to the next by means of spiders web. The cavity, in which the eggs were placed, was lined with thistle down and vegetable fibre. These birds are not particular about the site of their nests. I found them in beech and maple trees and as high up as fifty feet and found one nest in an apple tree ten feet from the ground. The nests were always placed on small dead branches near the tops of the trees; I believe four is the usual number of eggs in a set in this locality.

May 2nd. Took a set of six Tufted Tit. Nest placed in a natural cavity of an apple tree one foot from the ground composed of a mass of grass and leaves, lined with hair and snake skin. On May 1st of '88, I took the first eggs of this species ever collected in this locality. I took three sets of five, six and seven eggs. Is not seven an unusual number? Nests of this species always contain pieces of snake skins.

FRED JONES.

A COMPLETE LIST

OF

THE BIRDS OF NORTH AMERICA,

Arranged according to the A. O. U. Check List,

With values for 1890 given for the Skins of each species as far as known. Collectors should adopt this list as a basis for making all exchanges, as it is the latest list published and the prices quoted have received the approval of the best American authorities. Any American dealer will fill orders for Skins at the prices quoted.

Duplicate copies of this Oologist can be obtained from the publisher at 4 cents per copy, 3 copies for 10 cents, 10 for 30 cents, 100 for \$2.50. Every collector should have at least a few extra copies.

The numbers in the first column correspond to the A. O. U. Check List of North American Birds revised; those in the second column to Ridgway's Nomenclature.

SKINS		SKINS	
1	720	Western Grebe	\$1 25 \$2 00
2	731	Holboell's Grebe	1 50 2 50
3	732	Horned Grebe	75 1 50
4	733a	American Eared Grebe	1 00 1 50
5	734	St. Domingo Grebe	1 50 2 00
6	735	Pied-billed Grebe	75 1 25
7	736	Loon	2 00 4 00
8	737	Yellow-billed Loon	
9	738	Black-throated Loon	4 00 7 00
10	739	Pacific Loon	4 00 6 00
11	740	Red-throated Loon	1 50 3 00
12	745	Tufted Puffin	1 50 2 50
13	743	Puffin	1 25 2 00
13a	743a	Large-billed Puffin	
14	744	Horned Puffin	3 50 4 50
15	746	Rhinoceros Auklet	
16	751	Cassin's Auklet	
17	747	Paroquet Auklet	3 00 5 00
18	748	Crested Auklet	3 50 4 50
19	749	Whiskered Auklet	3 00 4 50
20	750	Least Auklet	
21	753	Ancient Murrelet	
	759		
23	755	Marbled Murrelet	
24	756	Kittlitz's Murrelet	
25	757	Xantus's Murrelet	
26	758	Craveri's Murrelet	
27	760	Black Guillemot	1 00 2 00
28	760	Mandt's Guillemot	2 00 3 50
29	761	Pigeon Guillemot	1 50 2 00
30	763	Murre	1 00 2 00
30a	763a	California Murre	1 50 2 00
31	764a	Brunnich's Murre	1 00 2 00
31a	764	Pallas's Murre	
32	742	Razor-billed Auk	1 50 2 00
33	741	Great Auk (cast of egg)	
31	752	Dovekie	1 00 1 50
35	696	Skua	3 50 5 00
36	697	Pomarine Jaeger	2 00 3 50
37	638	Parasitic Jaeger	1 25 2 00
38	699	Long-tailed Jaeger	2 50 3 50
30	657	Ivory Gull	3 50 4 50
40	658	Kittiwake	75 1 50
40a	658a	Pacific Kittiwake	1 25 2 50
41	659	Red-legged Kittiwake	
42	660	Glaucous Gull	2 00 4 00
42.1		Point Barrow Gull	
43	661	Iceland Gull	3 00 4 00
44	662	Glaucous-winged Gull	2 00 3 00
45		Kumlien's Gull	
46		Nelson's Gull	
47	663	Great Black-backed Gull	2 00 3 00
48		Slaty-backed Gull	
49	664	Western Gull	2 00 3 00
[50]	665	Siberian Gull	
51	666	Herring Gull	1 50 2 00
51a	666a	American Herring Gull	1 50 2 00
52	667	Vega Gull	
53	668	California Gull	1 50 2 00
54	66j	Ring-billed Gull	1 50 2 00
55	670	Short-billed Gull	2 00 3 00
[56]	671	Mew Gull	1 25 1 75
57	672	Heermann's Gull	3 50 5 00
58	673	Laughing Gull	1 50 2 00
59	674	Franklin's Gull	2 00 3 00
60	675	Bonaparte's Gull	75 1 50
60.1		Little Gull	
61	676	Ross's Gull	
62	677	Sabine's Gull	1 00 5 00
63	679	Gull-billed Tern	1 00 1 50
61	680	Caspian Tern	\$1 50 \$2 50
65	681	Royal Tern	1 25 2 00
66	682	Elegant Tern	
67	683	Cook's Tern	25 2 00
[68]	684	Trudeau's Tern	
69	685	Forster's Tern	75 1 00
70	686	Common Tern	50 1 00
71	687	Arctic Tern	75 1 00
72	688	Roseate Tern	75 1 25
73	689	Alentian Tern	2 00 3 00
74	690	Least Tern	60 1 25
75	691	Sooty Tern	1 25 2 50
[76]	692	Bridled Tern	2 00 3 00
77	693	Black Tern	60 1 25
[78]	694	White-winged Black Tern	1 50 2 00
79	695	Noddy	2 00 3 00
80	656	Black Skimmer	50 1 50
81	700	Black-footed Albatross	
82	701	Short-tailed Albatross	6 00 8 00
[83]	702	Yellow-nosed Albatross	
84	703	Sooty Albatross	
[85]	704	Giant Fulmar	
86	705	Fulmar	3 00 4 50
86a		Lesser Fulmar	
86b	705a	Pacific Fulmar	
86c	705b	Rodgers's Fulmar	
87	706	Slender-billed Fulmar	
88		Cory's Shearwater	3 00 5 00
89	709	Greater Shearwater	1 50 2 50
[90]	711	Manx Shearwater	2 50 3 00
91	710	Pink-footed Shearwater	
92	712	Audubon's Shearwater	3 00 4 00
93	713	Black-vented Shearwater	
94	714	Sooty Shearwater	3 00 4 00
95	715	Dark-bodied Shearwater	
96	716	Slender-billed Shearwater	
[97]	707	Black-tailed Shearwater	
[98]	717	Black-capped Petrel	
[99]		Scaled Petrel	
100		Fisher's Petrel	
[101]	718	Bulwer's Petrel	
[102]	719	Pintado Petrel	
103	720	Least Petrel	3 00 5 00
104	721	Stormy Petrel	1 50 3 00
105	726	Fork-tailed Petrel	2 50 4 00
106	723	Leach's Petrel	1 00 1 25
106.1		Guadalupe Petrel	
107	724	Black Petrel	
108	725	Ashy Petrel	
109	722	Wilson's Petrel	1 00 1 50
[110]	723	White-bellied Petrel	
[111]		White-faced Petrel	
112	654	Yellow-billed Tropic Bird	3 50 5 00
113	655	Red-billed Tropic Bird	3 50 5 00
[114]	651	Blue-faced Booby	
114.1		Blue-footed Booby	
114.2		Cory's Booby	3 00 5 00
115	652	Booby	
115.1		Brewster's Booby	
[116]	653	Red-footed Booby	
117	650	Gannet	3 00 4 00
118	649	Anhinga	2 00 3 50
119	642	Cormorant	3 00 3 50
120	643	Double-crested Cormorant	2 00 3 00
120a	643a	Florida Cormorant	1 50 2 50
120b	643b	White-crested Cormorant	
120c		Farrallone Cormorant	
121	644	Mexican Cormorant	2 00 3 00
122	645	Brandt's Cormorant	1 75 3 50
123		Pelagic Cormorant	

SKINS

23a 646	Violet-green Cormorant	\$3 00	\$4 00
23b 646a	Baird's Cormorant	2 00	3 50
24 647	Red-faced Cormorant		
25 640	American White Pelican	6 00	8 00
26 641	Brown Pelican	3 00	5 00
27	California Brown Pelican	3 00	6 00
28 639	Man-o'-War Bird	4 00	6 00
29 636	American Merganser	1 25	1 75
30 637	Red-breasted Merganser	1 00	1 50
31 633	Hooded Merganser	1 00	2 00
32 601	Mallard	1 25	1 75
33 602	Black Duck	1 25	1 75
34 603	Florida Duck	1 50	2 50
35 604	Gadwall	1 25	2 00
36 606	Widgeon	1 50	2 00
37 607	Baldpate	1 50	2 00
138]611	European Teal	1 50	2 00
39 612	Green-winged Teal	1 00	1 50
40 609	Blue-winged Teal	75	1 25
41 610	Cinnamon Teal	1 50	2 00
42 608	Shoveller	1 25	2 00
43 605	Pintail	1 50	2 00
44 613	Wood Duck	1 50	2 50
145]	Rufous-crested Duck	2 00	2 75
46 618	Redhead	1 50	2 50
47 617	Canvas-back	1 50	2 50
48 614	American Scaup Duck	1 50	2 00
49 615	Lesser Scaup Duck	1 50	2 00
50 616	Ring-necked Duck	1 25	1 75
51 620	American Golden-eye	1 25	1 75
52 619	Barrow's Golden-eye	1 50	2 25
53 621	Buffle-head	1 00	1 50
54 623	Old-squaw	1 00	2 00
55 622	Harlequin Duck	1 50	3 00
56 624	Labrador Duck	1 50	3 00
57 625	Steller's Duck	4 00	6 00
58 626	Spectacled Eider		
59 627	Greenland Eider	2 50	3 50
60 627a	American Eider	2 00	3 00
61 628	Pacific Eider	2 00	4 00
62 629	King Eider	5 00	7 00
63 630	American Scoter	1 50	2 25
164]631	Velvet Scoter	2 00	2 50
65 632	White-winged Scoter	2 00	2 50
66 633	Surf Scoter	1 75	2 25
67 634	Ruddy Duck	75	2 00
168]635	Masked Duck		
69 591a	Lesser Snow Goose	3 00	4 00
69a 591	Greater Snow Goose	3 00	4 00
69.1590	Blue Goose	3 00	4 00
70 592	Ross's Snow Goose	4 50	6 00
171]533	White-fronted Goose	2 50	3 50
71a 533a	Amer. White-fronted Goose	2 50	3 50
72 594	Canada Goose	2 50	3 50
72a 594a	Hutchin's Goose	2 50	3 50
72b 594b	White-checked Goose	3 50	4 50
72c 594b	Cackling Goose		
73 595	Brant	2 00	3 00
74 596	Black Brant	3 00	4 00
175]597	Barnacle Goose	3 00	3 50
76 598	Emperor Goose	10 00	15 00
77 599	Black-bellied Tree-duck	2 00	3 50
78 600	Fulvous Tree-duck	2 00	3 50
179]599	Whooping Swan	8 00	10 00
80 588	Whistling Swan	5 00	7 00
81 589	Tumpeter Swan	5 00	8 00
82 585	American Flamingo	8 00	15 00
83 505	Roseate Spoonbill	2 00	7 00
84 501	White Ibis	1 50	3 00
185]502	Scarlet Ibis	5 00	8 00
86 503	Glossy Ibis	2 50	3 50
87 504	White-faced Glossy Ibis	2 50	3 50
88 500	Wood Ibis	3 00	6 00
189]499	Jabiru		
90 497	American Bittern	1 00	1 50
91 498	Least Bittern	75	1 50
91.1	Cory's Least Bittern		
92 486	Great White Heron	10 00	15 00
93	Ward's Heron	3 00	5 00
94 487	Great Blue Heron	2 00	4 00
135]488	European Blue Heron	2 00	2 50
96 489	American Egret	2 00	3 50
97 490	Snowy Heron	2 00	3 50
98 491	Reddish Egret	1 75	2 25
99 492	Louisiana Heron	75	1 25
200 493	Little Blue Heron	1 00	1 50
201 494	Green Heron	60	1 00
201a	Frazar's Green Heron		
202 495	Black-crowned Night Heron	1 00	1 50
203 496	Yellow-crowned Night Heron	1 50	2 50

SKINS

204 582	Whooping Crane	\$8 00	\$18 00
205 584	Little Brown Crane		
206 583	Sandhill Crane	4 00	6 00
207 581	Limpkin	4 00	6 00
208 569	King Rail	2 00	3 50
209	Belding's Rail	1 00	1 50
210 570	California Clapper Rail		
211 571	Clapper Rail	1 50	2 50
211a 571a	Louisiana Clapper Rail	75	1 00
211b	Scott's Rail	75	1 50
211c	Caribbean Clapper Rail	1 00	1 50
212 572	Virginia Rail		
[213]573	Spotted Crane	50	75
214 574	Sora	1 25	1 50
215 575	Yellow Rail	20	60
216 576	Black Rail	2 00	3 00
216a 576a	Farallone Rail	3 00	5 00
[217]577	Corn Crane		
218 578	Purple Gallinule	75	1 25
219 579	Florida Gallinule	1 00	2 00
[220]	European Coot	50	1 00
221 580	American Coot	1 00	1 25
222 563	Red Phalarope	50	1 00
223 564	Northern Phalarope	2 00	3 50
224 565	Wilson's Phalarope	75	1 50
225 566	American Avocet	75	1 00
226 567	Black-necked Stilt	1 00	2 00
[227]524	European Woodcock	1 00	1 50
228 525	American Woodcock	1 75	2 25
[229]526	European Snipe	75	1 50
230 526a	Wilson's Snipe	1 00	1 25
231 527	Dowitcher	50	75
232 527a	Long-billed Dowitcher	60	1 00
233 528	Stilt Sandpiper	75	1 25
234 529	Knot	50	1 00
235 530	Purple Sandpiper	50	75
236 531	Aleutian Sandpiper	40	60
237 532	Prybilof Sandpiper		
238 533	Sharp-tailed Sandpiper		
239 534	Peertal Sandpiper	30	50
240 536	White-rumped Sandpiper	50	75
241 537	Baird's Sandpiper	60	1 00
242 538	Least Sandpiper	20	30
242.1	Long-toed Stint		
[243]533	Dunlin	1 00	1 50
243a 533a	Red-backed Sandpiper	35	75
244 540	Curlew Sandpiper	1 00	1 50
[245]542*	Spoon-bill Sandpiper		
246 541	Semipalmated Sandpiper	25	40
247 541a	Western Sandpiper	75	1 00
248 542	Sanderling	35	75
249 543	Marbled Godwit	1 00	1 50
250 544	Pacific Godwit	3 00	4 50
251 545	Hudsonian Godwit	1 00	1 75
[252]546	Black-tailed Godwit	1 25	1 50
[253]547	Green-shank	1 25	2 00
254 548	Greater Yellow-legs	75	1 00
255 549	Yellow-legs	50	75
256 550	Solitary Sandpiper	25	75
[257]551	Green Sandpiper	1 25	2 00
258 552	Willet	75	1 50
258a 552	Western Willet	75	1 50
259 553	Wandering Tattler	1 50	2 50
[260]551	Ruff	1 25	1 50
261 555	Bartramian Sandpiper	75	1 00
262 556	Buff-breasted Sandpiper	1 00	1 50
263 557	Spotted Sandpiper	20	40
264 558	Long-billed Curlew	1 50	2 00
265 559	Hudsonian Curlew	1 00	1 50
266 560	Eskimo Curlew	1 00	2 00
[267]561	Whimbrel	1 00	1 50
[268]562	Bristle-thighed Curlew		
[269]512	Lapwing	1 00	1 50
270 513	Black-bellied Plover	75	2 00
[271]514	Golden Plover	1 25	2 00
272 515	American Golden Plover	75	2 00
272a 515a	Pacific Golden Plover	1 50	2 50
273 516	Killdeer	30	75
274 517	Semipalmated Plover	25	40
275 518	Ring Plover	75	1 00
[276]519	Little Ring Plover	1 00	1 25
277 520	Piping Plover	50	75
277a 520a	Belted Piping Plover	50	1 00
278 521	Snowy Plover	75	2 00
[27]	Mongolian Plover		
279 522	Wilson's Plover	50	75
281 523	Mountain Plover	1 00	1 50
282 511	Surf Bird	1 50	2 50
283 509	Turnstone	30	1 00
284 510	Black Turnstone	1 00	1 50

SKINS

SKINS

285] 506	Oyster-catcher	\$1 25	\$1 50
286	American Oyster-catcher	1 00	1 50
286.1	Frazar's Oyster-catcher		
287	508 Black Oyster-catcher	2 00	3 00
[288] 508	Mexican-Jacana	1 00	2 00
289	480 Bob-white	40	1 00
289a	480a Florida Bob-white	50	1 00
289b	480b Texas Bob-white	50	75
289c	Cuban Bob-white	3 00	4 00
291	Masked Bob-white	2 50	5 00
292	481 Mountain Partridge	1 00	1 50
292a	481a Plum'd Partridge	1 00	1 50
293	484 Scaled Partridge	75	1 00
293a	Chestnut-bellied Scaled Partridge	50	75
294] 482	California Partridge	50	1 00
294a	Valley Partridge	75	1 00
295	483 Gambel's Partridge	1 00	1 50
296	485 Massena Partridge	2 50	5 00
297	471 Dnsky Grouse	3 00	4 00
297a	471a Sooty Grouse	3 00	4 00
297b	471b Richardson's Grouse	3 00	4 00
298	472 Canada Grouse	1 00	1 50
299	472a Franklin's Grouse		
300	473 Ruffed Grouse	75	1 25
300a	Canadian Ruffed Grouse	1 00	1 25
300b	473a Gray Ruffed Grouse	2 00	3 00
300c	473b Oregon Ruffed Grouse	1 75	2 25
301	474 Willow Ptarmigan	1 50	1 75
301a	Allen's Ptarmigan		
302	475 Rock Ptarmigan	2 00	3 00
302a	Reinhardt's Ptarmigan		
302b	Nelson's Ptarmigan		
302c	Turner's Ptarmigan		
303	Welch's Ptarmigan		
304	476 White-tailed Ptarmigan	2 00	3 00
305	477 Prairie Hen	1 00	1 25
306	477a Heath Hen		
307	477a Lesser Prairie Hen	1 50	2 25
308	478 Sharp-tailed Grouse	2 00	3 00
308a	478a Columb. Sharp-tailed Grouse,	1 00	1 50
308b	Prairie Sharp-tailed Grouse	2 00	3 00
309	479 Sage Grouse	3 00	5 00
310	470a Wild Turkey	6 00	8 00
310a	470 Mexican Turkey	6 00	8 00
311	469 Chachalaca	1 50	2 50
312	456 Band-tailed Pigeon	1 25	1 50
312a	Viosca's Pigeon	2 00	3 00
313	457 Red-billed Pigeon	1 00	2 00
314	458 White-crowned Pigeon	1 50	3 00
315	459 Passenger Pigeon	1 50	3 00
316	460 Mourning Dove	25	75
317	462 Zenaida Dove	2 00	3 50
318	463 White-fronted Dove	1 50	2 50
319	464 White-winged Dove	1 00	2 00
320	465 Ground Dove	30	75
320a	465 Mexican Ground Dove	50	1 00
321	466 Inca Dove	75	1 50
[322] 467	Key West Quail-Dove	3 00	5 00
[323] 468	Blue-headed Quail Dove		
324	453 California Vulture		
325	454 Turkey Vulture	2 00	2 50
326	455 Black Vulture	2 50	3 50
327	426 Swallow-tailed Kite	2 50	4 00
328	427 White-tailed Kite	2 50	3 50
329	428 Mississippi Kite	2 50	3 50
330	429 Everglade Kite	4 00	6 00
331	430 Marsh Hawk	40	2 50
332	432 Sharp-shinned Hawk	40	75
333	431 Cooper's Hawk	40	1 00
334	433 American Goshawk	1 50	3 50
334a	433a Western Goshawk	3 00	4 00
335	434 Harris's Hawk	1 50	2 50
[336] 435	European Buzzard	1 50	2 00
337	436 Red-tailed Hawk	75	1 50
337a	436a Krieger's Hawk		
337b	436b Western Red-tail	1 00	1 75
337c	436c Saint Lucas Red-tail		
338	438 Harlan's Hawk	3 00	5 00
339	439 Red-shouldered Hawk	1 00	1 75
339a	Florida Red-shouldered Hawk,	1 00	1 75
339b	439a Red-bellied Hawk	2 00	3 00
340	440 Zone-tailed Hawk	2 00	4 00
341	441 White-tailed Hawk	2 00	3 50
342	442 Swainson's Hawk	1 50	2 50
343	443 Broad-winged Hawk	1 00	1 75
[344]	Short-tailed Hawk		
345	444 Mexican Black Hawk	4 00	5 00
346	445 Mexican Goshawk	2 00	3 00
[347]	Rough-legged Hawk	2 00	2 50

547a	447 Amer. Rough-legged Hawk	\$1 25	\$2 50
348	448 Ferruginous Rough-leg	2 00	3 00
349	449 Golden Eagle	6 00	10 00
[350] 450	Harpy Eagle	6 00	12 00
351] 452	Gray Sea Eagle	6 00	8 00
352	451 Bald Eagle	3 00	8 00
353	412 White Gyrfalcon	10 00	15 00
354	412a Gray Gyrfalcon	10 00	15 00
354a	412b Gyrfalcon	10 00	15 00
354b	412c Black Gyrfalcon	10 00	15 00
355	413 Prairie Falcon	1 50	3 00
356	414 Duck Hawk	1 50	3 00
356a	414a Peale's Falcon		
357	417 Tigeon Hawk	40	1 00
357a	417a Black Merlin	2 00	3 50
358	418 Richardson's Merlin	1 75	2 50
[358.1]	Merlin	1 25	1 75
359	419 Aplomado Falcon		
359.1	422 Kestrel	1 00	1 50
360	420 American Sparrow Hawk,	40	1 00
[361] 421	Cuban Sparrow Hawk		
362	423 Audubon's Caracara	1 50	3 00
363	424 Guadalupe Caracara		
364	425 American Osprey	2 00	3 00
365	394 American Barn Owl	2 00	3 00
366	395 American Long-eared Owl	75	1 50
367	346 Short-eared Owl	75	1 25
368	397 Barred Owl	1 00	1 50
368a	397a Florida Barred Owl	1 75	2 25
369	398 Spotted Owl		
370	399 Great Gray Owl	7 00	8 00
[370a]	399a Lapp Owl		
371	400 Richardson's Owl	2 00	3 00
372	401 Saw-whet Owl	1 00	1 50
373	402 Screech Owl	75	1 25
373a	402a Florida Screech Owl	1 00	1 25
373b	402b Texas Screech Owl	1 00	1 50
373c	California Screech Owl	1 00	1 50
373d	402d Kennicott's Screech Owl	1 25	2 00
373e	402e Rocky Mountain Screech Owl,	1 50	2 00
374	403 Mexican Screech Owl	1 50	2 00
374	404 Flammulated Screech Owl		
375	405 Great Horned Owl	2 00	3 00
375a	405a Western Horned Owl	2 50	3 50
375b	405b Arctic Horned Owl	6 00	15 00
375c	405c Dusky Horned Owl	4 00	8 00
376	406 Snowy Owl	6 00	8 00
[377] 407a	Hawk Owl	2 50	3 00
377a	407b American Hawk Owl	2 00	3 00
378	408 Burrowing Owl	75	1 00
378a	408a Florida Burrowing Owl	2 00	4 00
379	409 Pygmy Owl	1 50	2 50
379a	409 California Pygmy Owl	1 50	2 50
379.1	Hoskin's Pygmy Owl	8 00	10 00
380	410 Ferruginous Pygmy Owl	4 00	6 00
381	411 Elf Owl	2 00	3 00
382	392 Carolina Parouquet	2 50	5 00
[383] 389	Ani	1 50	2 00
384	390 Groove-billed Ani	1 50	2 25
385	385 Road-runner	75	1 50
386	386 Mangrove Cuckoo	1 50	2 50
386a	386 Maynard's Cuckoo	2 00	3 00
387	387 Yellow-billed Cuckoo	30	60
387a	387 California Cuckoo	50	75
388	388 Black-billed Cuckoo	30	50
[389] 384	Cooper's-tailed Trogon	2 00	5 00
389	382 Leticed Kingfisher	25	50
391	383 Texan Kingfisher	1 50	2 50
392	359 Ivory-billed Woodpecker	7 00	15 00
393	360 Hairy Woodpecker	20	30
393a	360a Northern Hairy Woodpecker	20	30
393b	360b Southern Hairy Woodpecker	20	30
393c	360b Harris's Woodpecker	50	75
394	361 Cabanis's Woodpecker	40	75
394	361 Downy Woodpecker	15	25
394a	361a Gairdner's Woodpecker	30	45
394b	Smoky Woodpecker	50	1 00
395	362 Red-cockaded Woodpecker	40	50
396	363 Baird's Woodpecker	40	75
396a	363a Saint Lucas Woodpecker	1 00	1 50
397	364 Nuttall's Woodpecker	1 00	1 50
398	365 Arizona Woodpecker	1 50	2 00
399	366 White-headed Woodpecker	1 00	1 50
400	367 Arctic Three-toed Woodp'kr,	50	75
401	368 Am. Three-toed Woodpecker,	2 00	2 50
401a	Alaskan Three-toed W'p'kr,		
401b	368a Alpine Three-toed Woodp'kr	1 50	2 00
402	369 Yellow-bellied Sapsucker	20	40
402a	369a Red-naped Sapsucker	50	75
403	369b Red-breasted Sapsucker	75	1 00

SKINS

404	370	Williamson's Sapsucker	\$1 00	1 50
405	371	Pileated Woodpecker	40	1 00
406	372	Red-headed Woodpecker	25	40
407	377	Californian Woodpecker	35	50
407a	377a	Narrow-fronted Woodpecker	80	1 25
408	376	Lewis's Woodpecker	75	1 00
409	372	Red-bellied Woodpecker	25	40
410	373	Golden-fronted Woodpecker	25	50
411	374	Gila Woodpecker	75	1 00
412	378	Flicker	25	35
413	378b	Red-shafted Flicker	40	50
413a		Northwestern Flicker	45	60
414	379	Gilded Flicker	50	1 00
415	380	Guadalupe Flicker		
416	353	Chuck-will's-widow	1 50	2 00
417	354	Whip-poor-will	60	1 00
417a		Stephen's Whip-poor-will	3 00	4 00
418	355	Poor-will	1 50	2 00
418a	355	Frosted Poor-will	1 50	2 00
418b	355	California Poor-will	1 50	2 00
419	356	Parakee	2 00	3 00
420	357	Nighthawk	30	50
420a	357a	Western Nighthawk	10	65
420c	357b	Florida Nighthawk	90	1 25
421	358	Texan Nighthawk	50	65
422	350	Black Swift	3 00	4 50
423	351	Chimney Swift	20	70
424	352	Vaux's Swift	1 50	2 00
425	349	White-throated Swift	1 50	2 50
426	354	Rivoli Hummingbird	1 75	3 00
427		Blue-throated Hummingbird	1 75	3 00
428	335	Ruby-throated Hummingbird	50	1 00
429	336	Black-chinned Hummingbird	75	1 00
429.1		Violet-throated Hummingbird		
430	337	Costa's Hummingbird	75	1 25
431	338	Anna's Hummingbird	50	75
431.1		Flores's Hummingbird		
432	339	Broad-tailed Hummingbird	75	1 25
433	310	Rufous Hummingbird	50	75
434	341	Allen's Hummingbird	50	75
435	342	Heloise's Hummingbird		
436	343	Calliope Hummingbird	75	1 25
437	344	Lucifer Hummingbird	1 00	1 50
438	345	Rufous Hummingbird		
439	346	Buff-bellied Hummingbird		
440	347	Xantus's Hummingbird	2 00	3 00
441	348	Broad-billed Hummingbird	1 00	1 50
[442]	302	Fork-tailed Flycatcher	1 00	1 50
443	301	Scissor-tailed Flycatcher	50	75
444	304	Kingbird	15	30
445	303	Gray Kingbird	75	1 00
446	305	Couch's Kingbird	75	1 50
447	306	Arkansas Kingbird	30	45
448	307	Cassin's Kingbird	35	50
449	308	Derby Flycatcher	1 75	3 00
[450]	309	Giraud's Flycatcher	1 00	1 25
451	310	Sulphur-bellied Flycatcher		
452	312	Crested Flycatcher	15	30
453	311	Mexican Crested Flycatcher	75	1 00
453a		Arizona Crested Flycatcher	1 00	1 25
454	313	Ash-throated Flycatcher	25	40
[455]	314	Lawrence's Flycatcher	1 50	2 00
455a		Olivaceous Flycatcher	1 00	1 50
456	315	Phoebe	15	25
457	316	Say's Phoebe	25	35
458	317	Black Phoebe	30	50
459	318	Olive-sided Flycatcher	50	70
460	319	Cone's Flycatcher	1 00	2 00
461	320	Wood Pewee	15	25
462	321	Western Wood Pewee	20	30
463	322	Yellow-bellied Flycatcher	25	35
464	323	Western Flycatcher	25	35
464.1		St. Lucas Flycatcher	2 00	4 00
465	324	Acadian Flycatcher	25	35
466	325	Little Flycatcher	75	1 25
466a	325a	Trail's Flycatcher	25	35
467	326	Least Flycatcher	15	25
468	327	Hammond's Flycatcher	50	75
469	328	Wright's Flycatcher	30	40
[470]	329	Fulvous Flycatcher		
470a	329a	Buff-breasted Flycatcher	1 75	2 50
471	330	Vermilion Flycatcher	75	1 25
472	331	Beardless Flycatcher	2 00	3 00
472a		Ridgway's Flycatcher	2 00	3 00
[473]	200	Skylark	50	60
474	300	Horned Lark	25	40
474a	300a	Pallid Horned Lark	30	50
474b		Prairie Horned Lark	30	50
474c		Desert Horned Lark	25	40

474d		Texan Horned Lark	\$	30	50
74e	300b	Mexican Horned Lark		30	50
74f		Ruddy Horned Lark		30	50
254g		Streaked Horned Lark		30	50
275	286	American Magpie		75	1 00
476	287	Yellow-billed Magpie	1 00	1 50	
477	283	Blue Jay		20	30
477-		Florida Blue Jay		25	35
478	90	Steller's Jay	1 25	1 75	
478-		Coast Jay	1 00	1 50	
478	290a	Blue-fronted Jay	30	50	
478o	290c	Long-crested Jay	40	60	
478c	200b	Black-headed Jay	40	60	
479	291	Florida Jay	55	50	
480	292	Woodhouse's Jay	1 00	1 50	
481	293	California Jay	35	50	
481a	293	Nantux's Jay			
481.1		Santa Cruz Island Jay			
482	295	Arizona Jay	75	1 00	
483	296	Green Jay	40	75	
484	297	Canada Jay	40	60	
484a	297a	Rocky Mountain Jay	75	1 00	
484b	297b	Alaskan Jay			
484c		Labrador Jay	1 00	1 50	
485	298	Oregon Jay	1 25	2 00	
486	280	American Raven	2 00	3 00	
486a	280	Northern Raven	2 00	3 00	
487	281	White-necked Raven	2 00	3 00	
488	282	American Crow	50	75	
488a	282a	Florida Crow	50	1 00	
489	282b	Northwest Crow	1 00	1 25	
490	283	Fish Crow	50	1 00	
491	284	Clark's Nutcracker	1 00	1 50	
492	285	Pinon Jay	75	1 00	
[493]	279	Starling	35	60	
494	257	Bobolink	15	30	
494a		Western Bobolink	30	50	
495	258	Cowbird	15	25	
495a	258a	Dwarf Cowbird	60	75	
496	259	Bronzed Cowbird	60	1 00	
497	260	Yellow-headed Blackbird	25	40	
498	261	Red-winged Blackbird	15	25	
498a	261	Sonoran Red-wing			
498b	261	Bahaman Red-wing	75	1 00	
499	261a	Bicolored Blackbird	30	45	
500	262	Tricolored Blackbird	30	50	
501	263	Meadowlark	30	50	
501a	263a	Mexican Meadowlark	50	75	
501b	264	Western Meadowlark	25	40	
[502]	263	Troupial			
503	266	Audubon's Oriole	1 00	1 50	
504	268	Scott's Oriole	1 00	1 50	
505	269	Hooded Oriole	50	75	
505a		Arizona Hooded Oriole	60	1 00	
506	270	Orchard Oriole	20	40	
507	271	Baltimore Oriole	20	50	
508	272	Bullock's Oriole	25	60	
509	273	Rusty Blackbird	20	40	
510	274	Brewer's Blackbird	20	40	
511	278	Purple Grackle	20	40	
511a	278a	Florida Grackle	20	40	
511b	278b	Bronzed Grackle	20	40	
512	275	Great-tailed Grackle	50	75	
513	277	Boat-tailed Grackle	30	50	
514	165	Evening Grosbeak	60	1 00	
515	166	Pine Grosbeak	20	75	
[516]	167	Cassin's Bullfinch			
517	108	Purple Finch	15	25	
517a	168a	California Purple Finch	25	40	
518	169	Cassin's Purple Finch	25	40	
519	170	House Finch	25	40	
519c	170a	St. Lucas House Finch	25	40	
520	171	Guadalupe House Finch			
521	172	American Crossbill	15	35	
521a	172a	Mexican Crossbill	50	75	
522	173	White-winged Crossbill	25	60	
523	174	Aleutian Leucosticte	1 25	2 00	
524	175	Gray-crowned Leucosticte	75	1 00	
524a	175a	Hepburn's Leucosticte	75	1 25	
525	176	Black Leucosticte			
526	177	Brown-capped Leucosticte	75	1 00	
527	178	Greenland Redpoll	1 75	2 50	
527a	178a	Hoary Redpoll	1 75	2 50	
528	179	Redpoll	15	25	
528a	179a	Holbein's Redpoll			
528b	179a	Greater Redpoll	75	1 00	
529	181	American Goldfinch	10	25	
530	182	Arkansas Goldfinch	25	35	
530a	182a	Arizona Goldfinch	30	40	
530b	182b	Mexican Goldfinch			

SKINS

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531	183	Lawrence's Goldfinch	\$	40	\$	50	587	237	Towhee		
[532]	184	Black-headed Goldfinch		75	1	25	587a	237a	White-eyed Towhee	\$	15
533	185	Pine Siskin		15	25		588	238	Arctic Towhee		30
534	186	Snowflake		20	35		588a	238a	Spurred Towhee		30
534a	186	Prybilof Snowflake		50	75		588b	238b	Oregon Towhee		30
535	187	McKay's Snowflake	8	00	10	00	589	228c	Guadalupe Towhee		30
536	187	Lapland Longspur		20	50		590	239	Green-tailed Towhee		30
537	188	Smith's Longspur		30	50		591	240	Canon Towhee		30
538	189	Chestnut-collared Longspur		20	40		591a	240a	St. Lucas Towhee		30
539	190	McCown's Longspur		25	40		591b	240b	Californian Towhee	1	00
540	197	Grass Finch		15	25		592	241	Albert's Towhee		30
540a	197a	Western Vesper Sparrow		25	30		593	242	Cardinal		75
540b	197b	Oregon Vesper Sparrow		25	30		593a	242a	Arizona Cardinal		25
541	192	Ipswich Sparrow		25	50		593b	242a	St. Lucas Cardinal		60
542	193	Sandwich Sparrow					594	243	Texan Cardinal	60	1
542a	193a	Savanna Sparrow		15	25		594a	243	Arizona Pyrrhuloxia		40
542b	193b	Western Savanna Sparrow		20	30		594b	243	St. Lucas Pyrrhuloxia		40
542c	194	Bryant's Marsh Sparrow		50	1	00	595	244	Rose-breasted Grosbeak	60	1
543	194	Belding's Marsh Sparrow	1	00	1	50	596	245	Black-headed Grosbeak		20
544	196	Large-billed Sparrow	1	50	2	50	597	246	Blue Grosbeak		30
544a	195	St. Lucas Sparrow	1	00	1	50	597a	246	Western Blue Grosbeak		40
545	191	Baird's Sparrow		75	1	00	598	248	Indigo Bunting		40
546	198	Yellow-winged Sparrow		20	30		599	249	Lazuli Bunting		20
546a	198a	West. Yellow-winged Sparrow		20	35		600	250	Varied Bunting		30
547	199	Henslow's Sparrow		60	75		600a	250	Beautiful Bunting	1	50
548	200	Leconte's Sparrow		40	60		601	251	Painted Bunting	2	00
549	201	Sharp-tailed Sparrow		25	35		602	252	Sharpe's Seed-eater		40
549a	201a	Nelson's Sparrow		40	60		603	253	Grassquit		75
549b	201	Acadian Sharp-tailed Sparrow		25	35		[603.1]		Melodious Grassquit		75
550	202	Seaside Sparrow		30	40		604	254	Black-throated Bunting		
550a	202	Scott's Seaside Sparrow	1	00	1	25	605	256	Lark Bunting		15
550b	202	Texas Seaside Sparrow	1	50	2	00	606	160	Blue-headed Euphonia		25
551	203	Dusky Seaside Sparrow	1	00	1	25	607	162	Louisiana Tanager	1	00
552	204	Lark Sparrow		25	40		[607.1]		Gray's Tanager		25
552a	204a	Western Lark Sparrow		20	30		608	161	Scarlet Tanager		
553	205	Harris's Sparrow		40	50		609	163	Hepatic Tanager		20
554	206	White-crowned Sparrow		20	35		610	164	Summer Tanager	1	00
555	207a	Intermediate Sparrow		20	35		610a	164a	Cooper's Tanager		40
556	207	Gambel's Sparrow		20	35		611	153	Purple Martin	1	00
557	208	Golden-crowned Sparrow		30	50		611a		Western Martin		20
558	209	White-throated Sparrow		15	25		[611.1]	152a	Cuban Martin		30
559	210	Tree Sparrow		15	25		612	153	Cliff Swallow		75
559a	210	Western Tree Sparrow		25	35		613	154	Barn Swallow		15
560	211	Chipping Sparrow		15	25		614	155	Tree Swallow		15
560a	211a	Western Chipping Sparrow		20	30		615	156	Violet-Green Swallow		15
561	212	Clay-colored Sparrow		20	30		616	157	Bank Swallow		40
562	213	Brewer's Sparrow		30	40		617	158	Rough-winged Swallow		15
563	214	Field Sparrow		15	25		618	150	Bohemian Waxwing		30
563a		Western Field Sparrow		50	75		619	151	Cedar Waxwing		75
564		Worthen's Sparrow	1	25	2	00	620	26	Phainopepla		15
565	215	Black-chinned Sparrow	1	00	2	00	621	148	Northern Shrike		75
566	216	White-winged Junco		50	75		622	149	Loggerhead Shrike		30
567	217	Slate-colored Junco		15	25		622a	149a	White-rumped Shrike		25
567a	218	Oregon Junco		30	50		622b	149a	California Shrike		20
567.1	217	Carolina Junco		50	1	00	[623]	137	Black-whiskered Vireo		20
568	219	Pink-sided Junco		35	50		624	135	Red-eyed Vireo		50
569	220	Gray-headed Junco		40	60		625	136	Yellow-green Vireo		15
570	222	Arizona Junco		40	60		626	138	Philadelphia Vireo		75
570a	221	Red-backed Junco		40	60		627	139	139a Warbling Vireo		40
571		Baird's Junco	2	00	3	00	628	140	Yellow-throated Vireo		15
572	223	Guadalupe Junco					629	141	Blue-headed Vireo		15
573	224	Black-throated Sparrow		30	50		629a	141a	Cassin's Vireo		20
574	225	Bell's Sparrow		35	50		629b	141b	Plumbeous Vireo		40
574a	225a	Sage Sparrow		75	1	00	629c	141	Mountain Solitary Vireo		30
575	226	Pine-woods Sparrow		75	1	00	630	142	Black-capped Vireo		30
575a	226a	Bachman's Sparrow		75	1	00	631	143	White-eyed Vireo		75
576	227	Arizona Sparrow		75	1	00	631a		Key West Vireo		15
577		Mexican Sparrow	1	00	1	50	632	144	Hutton's Vireo	1	00
578	228	Cassini's Sparrow		50	75		632a		Stephen's Vireo		50
579	229	Rufous-winged Sparrow		75	1	00	633	145	Bell's Vireo		35
580	230	Rufous-crowned Sparrow		50	75		633a	146	Least Vireo		50
580a	230a	Boncard's Sparrow		75	1	00	634	147	Gray Vireo		75
580b		Rock Sparrow		75	1	00	635	159	Bahama Honey Creeper	1	00
581	231	Song Sparrow		15	25		636	747a	Black and White Warbler		2
581a	231a	Desert Song Sparrow		25	35		637	75	Prothonotary Warbler		20
581b	231a	Mountain Song Sparrow		25	35		638	76	Swainson's Warbler		50
581c	231b	Heermann's Song Sparrow		25	35		639	77	Worm-eating Warbler	1	50
581d	231c	Samuel's Song Sparrow		20	30		640	78	Bachman's Warbler		60
581e	231d	Rusty Song Sparrow		40	1	00	641	79	Blue-winged Warbler	2	00
581f	231e	Sooty Song Sparrow		60	50		642	81	Golden-winged Warbler		60
581g		Brown's Song Sparrow					643	83	Lucy's Warbler		40
582	232	Alentian Song Sparrow	3	00	5	00	644	84	Virginia's Warbler	1	25
583	234	Lincoln's Sparrow		20	30		645	85	Nashville Warbler	1	75
583a	e	Forbush's Sparrow					645a	85	Calaveras Warbler		20
584	233	Swamp Sparrow		20	30		646	86	Orange-crowned Warbler		20
585	235	Fox Sparrow		15	25		646a	86a	Lutescent Warbler		50
585a	235a	Townsend's Sparrow		25	40		647	87	Tennessee Warbler		40
585b	235b	Thick-billed Sparrow		35	50		648	88	Parula Warbler		50
585c	235c	Slate-colored Sparrow					649	89a	Sennett's Warbler		15
586	236	Texas Sparrow		50	75		650	90	Cape May Warbler	1	75

SKINS

651	92	Olive Warbler	\$1	75	\$2	50
652	93	Yellow Warbler		20		30
652	93	Sonora Yellow Warbler		30		50
653		Mangrove Warbler	5	00	8	00
654	94	Black-throated Blue Warbler		20		35
655	95	Myrtle Warbler		10		25
655	95	Audubon's Warbler		30		50
657	97	Magnolia Warbler		20		30
658	93	Cerulean Warbler		50		75
659	91	Chestnut-sided Warbler		10		25
660	100	Bay-breasted Warbler		40		75
661	101	Black-poll Warbler		15		25
662	102	Blackburnian Warbler		20		50
663	103	Yellow-throated Warbler		40		60
663a	103a	Sycamore Warbler		50		65
664	104	Grace's Warbler	2	00	3	00
665	105	Black-throated Gray Warbler		75		1 00
666	103	Golden-cheeked Warbler	4	00	6	00
667	107	Blk-throated Green Warbler		20		30
668	103	Townsend's Warbler	1	50	2	50
669	109	Hermit Warbler	1	50	2	50
670	119	Kirtland's Warbler	4	00	6	00
671	111	Pine Warbler		15		25
672	113	Palm Warbler		30		50
672a	113a	Yellow Palm Warbler		15		25
673	114	Prairie Warbler		20		40
674	115	Oven-bird		15		25
675	116	Water-Thrush		20		30
675a	116a	Grinnell's Water-Thrush		50		75
676	117	Louisiana Water-Thrush		45		60
677	119	Kentucky Warbler		50		1 00
678	118	Connecticut Warbler		50		1 00
679	120	Mourning Warbler		50		75
680	121	Macgillivray's Warbler		50		75
681	122	Maryland Yellow-throat		15		25
681a	122a	Western Yellow-throat		40		50
682		Balding's Yellow-throat	2	50	4	00
683	123	Yellow-breasted Chat		30		40
683a	123a	Long-tailed Chat		30		40
684	124	Hooded Warbler		40		60
685	125	Wilson's Warbler		30		50
685a	125a	Pileolated Warbler		30		50
686	127	Canadian Warbler		20		40
687	123	American Redstart		15		25
688	129	Painted Redstart	1	50	2	00
[689]	130	Red-bellied Redstart	1	50	2	00
690	131	Red-faced Warbler	1	50	2	50
[691]	132	Red Warbler	2	00	3	00
[692]	133	Brasher's Warbler	2	00	3	00
[693]	134	Bell's Warbler	2	00	3	00
[694]	69	White Wagtail		30		60
[695]		Swinhoe's Wagtail				
696	79	Siberian Yellow Wagtail		60		75
697	71	American Pipit		20		30
[698]	72	Meadow Pipit		50		60
[699]		Red-throated Pipit	1	50	2	00
700	73	Sprague's Pipit	1	00	1	50
701	19	American Dipper		50		75
702	10	Sage Thrasher		40		50
703	11	Mockingbird		20		35
704	12	Catbird		15		25
705	13	Brown Thrasher		20		30
706	13a	Texas Thrasher		40		75
707	15	Curve-billed Thrasher		40		75
707a	15a	Palmer's Thrasher	1	50	2	00
708	14a	Bandire's Thrasher	1	50	2	00
709	14	St. Lucas Thrasher	1	00	1	50
710	16	Californian Thrasher		60		75
711	13a	Leconte's Thrasher	1	50	2	00
712	17	Crisall Thrasher	1	00	1	50
713	53	Cactus Wren		40		50
714	57	St. Lucas Cactus Wren	1	25	2	00
715	58	Rock Wren		30		40
716	58a	Guadalupe Rock Wren				
[717]	59	White-throated Wren	1	00	1	25
717a	59a	Canon Wren	1	00	1	25
717b	59	Dotted Canon Wren	1	00	1	25
718	60	Carolina Wren		30		40
718a	60b	Florida Wren	75		1	00
719	61	Bewick's Wren		60		75
719a	61a	Vigors's Wren		45		55
719b	61b	Baird's Wren		45		55
720	62	Guadalupe Wren				
721	63	House Wren		20		30
721a	63a	Parkman's Wren		25		35
721b	63a	Western House Wren		25		35
722	65	Winter Wren		20		40
722a	65a	Western Winter Wren		40		50
723	66	Alaskan Wren	2	00	3	00
724	68	Short-billed Marsh Wren		60		75

SKINS

725	67	Long-billed Marsh Wren	\$	20	\$	25
725a	67a	Tule Wren		30		40
725.1		Marian's Marsh Wren		30		40
726	55	Brown Creeper		20		30
726a	52a	Mexican Creeper		50		75
726b	55	Rocky Mountain Creeper		30		45
726c	55	California Creeper		30		45
727	51	White-breasted Nuthatch		20		30
727a	51a	Slender-billed Nuthatch		30		40
728	52	Red-breasted Nuthatch		25		35
729	53	Brown-headed Nuthatch		25		35
730	54	Pygmy Nuthatch		25		35
731	35	Tufted Titmouse		20		35
731a		Texas Tufted Titmouse		20		35
732	37	Black-crested Titmouse		40		60
733	38	Plain Titmouse		60		70
733a	33	Gray Titmouse		60		75
733b		Ashy Titmouse		75		1 00
734	39	Bridled Titmouse		60		75
735	41	Chickadee		15		25
735a	41a	Long-tailed Chickadee		40		50
735b	41b	Oregon Chickadee		50		65
736	42	Carolina Chickadee		25		35
[737]	43	Plumbeous Chickadee		75		1 00
738	44	Mexican Chickadee		1 00		2 00
738	44	Mountain Chickadee		60		75
739	44	Siberian Chickadee		4 00		5 00
740	45	Hudsonian Chickadee		30		40
740a		Kowak Chickadee		60		80
741	46	Chestnut-backed Chickadee		75		1 00
741a	46a	Californian Chickadee		50		65
742	35	Wren-Tit		40		60
742a	35	Pallid Wren-Tit		1 00		1 25
743	47	Bush-Tit		25		35
743a	47	Californian Bush-Tit		25		35
743b		Grinda's Bush-Tit		1 00		1 50
744	48	Lead-colored Bush-Tit		25		30
744.1		Santa Rita Bush-Tit		1 00		1 50
745	49	Lloyd's Bush-Tit		80		1 25
746	50	Verdin, Yellow-headed Tit		75		1 00
747	34	Kennicott's Willow Warbler	3	00	5	00
748	33	Golden-crowned Kinglet		20		30
748a	33a	West. Gold.-crowned Kinglet		27		40
749	39	Ruby-crowned Kinglet		35		45
750	31	Dusky Kinglet		50		75
751	27	Blue-gray Gnatcatcher		20		30
752	28	Plumbeous Gnatcatcher		40		65
753	29	Black-tailed Gnatcatcher		50		75
754	25	Townsend's Solitaire		40		50
755	1	Wood Thrush		25		40
756	2	Wilson's Thrush		20		30
756a		Willow Thrush		50		75
757	3	Gray-cheeked Thrush		20		35
757a	3	Bicknell's Thrush		50		75
758	4	Russet-backed Thrush		35		45
758a	4a	Olive-backed Thrush		20		30
759	5	Dwarf Hermit Thrush		30		40
759a	5a	Audubon's Hermit Thrush		30		40
759b	5b	Hermit Thrush		20		35
[760]	6	Red-winged Thrush		60		75
761	7	American Robin		20		30
761a	7a	Western Robin		30		50
762	8	St. Lucas Robin		3 00		4 00
763	9	Varied Thrush		60		75
[764]	20	Red-spotted Bluethroat		1 00		1 25
765	21	Wheatear		40		50
766	22	Bluebird		10		25
766a		Azure Bluebird		1 00		2 00
767	23	Western Bluebird		25		30
768	24	Mountain Bluebird		30		50

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		English Sparrow		15		25	
		European Tree Sparrow		35		60	
		Skylark		35		60	

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		African Ostrich, small					
		" " large					
		East African Ostrich					
		Emu					
		Reha					
		Alligator					
		Turtles					
		Snakes					

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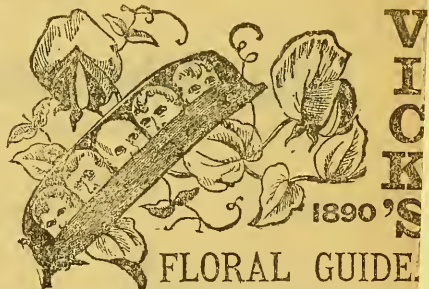
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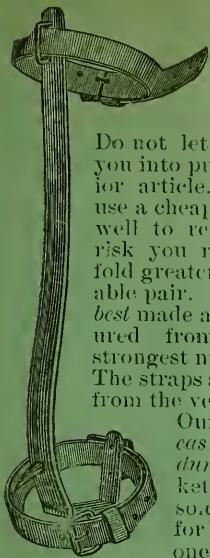
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Our climbers are the easiest, safest and most durable on the market and cannot be sold at a living profit for less money by anyone.

During the past five years we have sold hundreds of pairs of climbers; have sent them to nearly every state and territory in the Union and have yet to hear of the first dissatisfied purchaser.

From many testimonials, we select the following:

"The climbers that you sent give entire satisfaction and are well made in every particular."

T. V. W., Austin, Ills.

"Received my climbers all right on the 21st of last month. Have deferred writing to you till I had used them. They are as good as spurs I ever tried and I think I am safe in saying that if you buy your spurs of Lattin, you get good ones."

J. P. J., Kelton, Pa.

"All the supplies ordered came duly to hand all O. K. Am more than pleased with them all. The climbing irons are just what I wanted: the book of data is immense and the Naturalist's Guide is well worth the price. I wish to compliment you on your method of packing. The goods that I received could hardly have been better fixed for transportation. Am more impressed with your promptness every time I order; and in future, let me say, if there is anything in your line that I need, you may be sure that I shall give you the preference."

H. C. O., Shelburne Falls, Mass.

Our prices are as follows: Strapped, ready for use, by express, at purchaser's expense, \$2.50, or prepaid to any part of the United States, \$3.25. Climbers without straps by express, \$1.50, prepaid, \$2.00.

FRANK H. LATTIN,
ALBION, N. Y.

Improved Pocket Gun or Snip Snap.



The new improved Pocket Gun requires no powder, no caps, is neatly finished, durable and can be carried in the pocket, as it weighs only three ounces. Will shoot shot or bullets with accuracy and force and with a little practice will kill birds on the wing or bring them down from the highest tree.

It is just the thing for taxidermists, as it will kill without spoiling the game and makes no report.

Iron frame, leather loop, straps of best kind of rubber. Send for sample at once and practice on the Sparrows. Address,

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AN EXPLANATION.

In the last issue of THE OOLOGIST this cut appeared to "fill up":—

BIRDS' EGGS

Shells, Corals, Minerals, Fossil Bones, Marine and Land Curious and Specimens of all kinds, Naturalists and Taxidermists Supplies. Largest Stock, Lowest Prices. Send for new list. - Lattin. FRANK H. LATTIN, Albion, N. Y.

We have a new large illustrated catalogue in press, it will be ready to mail about March 1st. Our patrons need not write for a copy as we shall send them one as soon as issued, until that time our prices for everything except eggs remain as advertised in the Sept. '88 Bulletin. The prices for Eggs are as listed in Nov. '89 OOLOGIST or as printed on our new "OOLOGIST'S CHECKING LISTS".

Faithfully,

FRANK H. LATTIN.

Exotic Butterflies and Moths

In brilliant colors and of rare beauty, from India, Australia, Africa and South America for cash or half cash and half in rare eggs or fine bird skins. Also fine cocoons from other countries. Send for catalogue. State what you want distinctly. Absolutely no attention paid to postal cards. Collections made up in cabinets for museums and colleges, containing all the classes of insects from every climate. We have the largest stock of Lepidoptera in New England and charge the lowest prices in the United States.

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BIRDS, MAMMALS & EGGS,
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A Manual of the Vertebrates of the United States.

BY DAVID S. JORDON.

A work by which anyone can identify a specimen belonging to the Vertebrata.

It is arranged on the same plan as Grey's Botanies, i. e. an analytical key, and is indispensable to anyone studying zoology in any of its divisions. It is a 275 page, cloth bound book containing accurate descriptions of all North American Birds, by means of which one can determine a parent bird very easily.

"It is indispensable to the working zoologist." A. A. Handbook.

It is the cheapest work yet offered to the Ornithologist and Oologist, and is needed by all.

To each purchaser in the next 30 days, we will present a year's subscription to THE OOLOGIST, price, 50c.

To those purchasing in ten days, we will also give the Oologist's Handbook and six new Check lists, 25cts; making a total of \$1.25, which we will send, post-paid for \$2.50.

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I am constantly needing first-class skins and eggs and will give good exchange for the above.

I generally have a few stuffed birds to exchange for desirable eggs and skins.

NOTE:—Send list of what you have to exchange, stating about what you would like in exchange and I will make an offer: always enclose stamp.

10 Hodges Ave., Taunton, Mass.

Catalogue will be ready in April.



O O L O G I S T

Monthly.

50c. per Year.

Vol. VII,

ALBION, N. Y., MARCH, 1890.

No. 3

Exchanges and Wants.

Brief special announcements. "Wants." "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

THE EXCHANGE Notice in Jan. Oologist is working wonders, and I have received already more offers of exchange than I can very well attend to. Very truly yours, WILL A. MOORE, Norwalk, Ohio.

CURIOS wanted for my museum. SEEBACH Fern. Ills.

TO EXCHANGE.—Five pairs Evening Grosbeak Skins and a Chicago Air Rifle (new) for best offer in Bird Skins (Southern birds preferred.) Address all offers to H. L. MERRITT, Box 116, Chatham, Ont.

ATTENTION.—A first-class Rogers Scroll Saw with modern attachments, also a Magic Lantern and outfit used only five times, cost \$2.00, for Curios, Relics or Birds' Eggs. Address offers and inquiries to H. W. ESTABROOK, Box 51, Natick, Mass.

EXCHANGE.—I will give 30 good Stamps, 100 fine Minerals for the best offer of Printing Press and outfit. Give size of chase and how many fonts of type. HIRAM F. JOHNSON, Lock Box 646, New Milford, Conn.

For every 50c worth of first class Eggs in sets or single I will send receipt for embalming birds; also eggs to exchange. A. W. NOLTE, W. 16th St., Los Angeles, Cal.

I will give 75 Foreign Stamps, all different, for every 30c worth of first-class Birds' Eggs sent me. GEO. A. FREEMAN, Natick, Mass.

WANTED.—To exchange Specimens of Wood Minerals, Insects, Marine Curiosities, Bird Eggs and Skins, Stamps and Coins, for Eggs, Insects, Butterflies and Moths. Write, sending list of what you have. First-class specimens given and expected in exchange. No postal cards. Address COLLECTOR, care of Lock Box 628, Paris, Ill.

WANTED.—A Printing Press, size not less than 6x9 in. chase, foot or hand power, self-inker. Will give a collection of Birds' Eggs valued at \$100 or give same amount from large list. Also want complete outfit. First-class Eggs to exchange for a good Gun, Revolver or Typewriter. F. T. CORLESS, Los Gatos, Cal.

WANTED.— TO PURCHASE COLLECTIONS OF INDIAN RELICS AND OTHER CURIOSITIES FOR WHICH CASH WILL BE PAID. PARTIES HAVING SUCH FOR SALE WILL PLEASE CORRESPOND WITH W. H. H. KING, JACK SONVILLE, ILLS. ayt

American, European and Exotic Butterflies and Moths for cash and in exchange for Birds' Eggs, Birds' Skins. All mounted and perfect. Very rare and beautiful specimens from India, Africa and South America; also live cocoons from India and Europe to exchange for others of this country. Send for catalogue. PROF. CARL BRAUN, Naturalist, Bangor, Me.

Vol. 8 of Golden Days, vol. 8 of Argosy and Scott's International Postage Stamp Album, 5th edition, cost \$3.50, entirely new, for the best offer of first-class Birds' Eggs. RONALD BATES, Clyde, N. Y.

Double glass door, cork lined Walnut Case, 2 x 19 x 27 inches, with 72 kinds Moths and Butterflies; also same case in Antique Oak, 2 x 15 x 22 inches, with 127 kinds Insects, including pair Hercules Beetle from Guadalupe, for best offer Indian Relics in perfect condition. Wm. H. FISHER, 14 W. North Ave., Baltimore, Md.

WANTED in large quantity, Eggs and Skins of many common and rarer American Birds. Will give in exchange Eggs of British Birds in sets or singles. JOHN A. MORDEN, Hyde Park Corners, Ontario.

WANTED.—Collectors having well prepared and carefully identified eggs, specimens or curiosities for sale or exchange at low rates, in large or small quantities, will please send their lists and prices. All eggs must be blown through one hole smoothly drilled in the side, and without stains or ink-marks. FRANK J. LATTIN, Albion, N. Y. (6)

WANTED.—Davie's "Egg Check List," Cloth binding, third edition. Will give cash. L. C. FREENY, Pittsville Maryland.

WANTED.—Stamps, Minerals, Birds' Eggs, Indian relics and Birds' Skins. I especially desire U. S. 90c Purple '88 and Match, Medicine and Playing card stamps. I have to exchange Stamp, Minerals, Birds' Eggs and Botanical Specimens. J. D. SORNBORGER, Andover, Essex Co., Mass.

TO EXCHANGE.—For every set of birds' eggs with full data or 10c worth of any other natural history specimens with data, sent me I will send a receipt for petrifying wood and other articles. GUS RAPP, 465, 9th St., Milwaukee, Wis.

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Each card is beautifully lithographed in many colors—in most cases—as true to nature as small lithographs can be made of the species represented. The size of each card is $1\frac{1}{2} \times 2\frac{1}{4}$ inches. On the back of each is the manufacturing firm's advertisement and on the bottom of the face—but entirely distinct from the lithograph, so that it can be trimmed, if desired, without injuring the beauty of the card in the least—is their trade mark.

The following is a complete list of the species represented. One species, usually both male and female on each card:

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Black-throated Blue Warbler	Western Bluebird	Great Blue Heron
Bluebird	Barn Swallow	Louisiana Tanager
Redstart	Black-cap Titmouse	Lesser Redpoll
Black-throated Bunting	Belted Kingfisher	Canada Goose
Catbird	American Crow	American Swan
Hermit Thrush	Crested Titmouse	Red-headed Duck
Tree Sparrow	Black-headed Goldfinch	Red-breasted Rail
Ruby-crowned Kinglet	Carolina Wren	American Coot
Savannah Sparrow	Mealy Redpoll	Ruby-throated Hummingbird
Red-bellied Woodpecker	Cal. Partridge	Bob-white
Curlew Sandpiper	Am. Flamingo	Downy Woodpecker
Purple Grackle	Meadow Lark	Robin
Piping Plover	Bobolink	Black-crowned Night Heron
Killdeer	Blue Jay	Wood Duck
Chestnut-backed Titmouse	Painted Bunting	Goosander
Turtle Dove	Pine Finch	American Egret
Hudsonian Chickadee	Red-winged Blackbird	Cormorant
Chestnut-crowned Titmouse	Oregon Snowbird	Hooded Merganser
Song Finch	Am. Widgeon	Mallard

During 1890 we will present a complete set of these beautiful cards to each of our patrons accepting any one of the following offers:

1st. A complete set will be given without any additional expense whatever, to every purchaser of \$1.00 worth of Birds' Eggs at prices quoted in this OOLOGIST.

2d. A complete set will be given for each new subscriber you may obtain for the OOLOGIST.

3d. For *only sixty cents (60cts.)* we will send you the OOLOGIST for 1890, a copy of the Oologists' Handbook and a complete set of the cards. If you obtain any of your friends to accept this offer it will entitle you to a set of the cards according to offer No. 2.

In case you do not care to accept either offers, No. 1, 2 or 3, but desire a set of the cards, we will furnish them to you as follows: Any one card, your selection, 2cts.; two cards, 3cts.; 12 for 6cts.; 20, our selection, 6cts., or for 12cts. we will send the complete set of sixty cards. Address plainly,

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Also Birds' Eggs, Birds' Skins and Stuffed Birds. I make a specialty of fine English Eyes for birds, animals and fishes. Parties ordering in large quantities, will find it to their interest to send for ds. before ordering elsewhere.

I have found that there is a large number of persons just beginning to learn Taxidermy that do not know how to order eyes to get just what they want. To overcome this, I am having a catalogue printed that will describe eyes, size, color, styles of eyes that I carry. I expect this catalogue to be ready in April. Send stamp for copy. I have made up two packets of eyes especially for beginners, four colors of eyes, Red, Yellow, Brown or Hazel and Black, eight sizes of each color, in all thirty-two pairs. With this packet the beginner has an eye from a Hummingbird to a Crow. These eyes are listed at \$1.40. Till I get out my catalogue, I will send the above postpaid for 72c. No. 2, Four colors like the above, 5 pairs each color, good for Hummingbirds to Robin or Blue Jay, in all twenty pairs, listed 65c, postpaid 43c. These eyes are cheaper and far superior to Am. Eyes and will greatly improve your work. Stamp for reply in all cases.
10 Hodges Ave., Taunton, Mass.

WE FORGOT TO ANNOUNCE THEM.

In December we issued a new Checking list, which we called "The Oologist's Checking List." It contains the name of every North American Bird, arranged and numbered according to the A. O. U. List. Ridgeway's No's are also given and also the value of the egg of every Bird as far as known. They are giving immense satisfaction; are printed on extra heavy paper, eight pages, three foldings, and will go nicely into an ordinary envelope. The first two pages are left blank for correspondence or other purposes.

Sample, 2c; 12 for 20c; 100 for \$1.50.

Or we will send you a sample of both styles of Checking Lists and all of the Datas we publish for only five cents.

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Lets collectors will not be long in observing the importance of keeping their names and addresses in this Directory. Collectors and dealers desiring to make sales, purchases or exchanges will not only write to the parties whose names appear in this directory for their orders, but will also keep them posted on "business" that they may have for sale cheap; appear in this Directory, will recognize the importance of placing samples etc. in the hands of few collectors and will act accordingly.

Collectors receive as high as Fifty Letters, Vostals, Circulars, Samples etc. from having their names inserted one time at a cost of only 10 CENTS in this Directory.
Address: THE OOLOGIST, Albion, N. Y.

BIRDS' EGGS.

Chas. E. Cram, No. 410 Jefferson St., Burlington, Iowa. [J3]

H. W. Davis, North Granville, N. Y. [Y
Roy H. Dosh, Stuart, Guthrie Co., Iowa

Back Numbers of THE OOLOGIST Wanted at Once

We want at once 50 copies of the June 1888 issue of THE OOLOGIST. For each copy we will give a card good for 12c payable in anything we advertise. We also want 50 copies of April, 1889 issue, for which we will give 6c worth of anything we advertise. Mail your extra copies at once to publisher of THE OOLOGIST, Albion N. Y.

Chas. K. Worthen,

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Faithfully Frank H. Lattin

THE MARCH 1889 OOLOGIST contains full and instructions for making a Bird or Mammal Skins. A copy will be mailed you for 5 cts., or 6 copies for 25 cts. 2ft

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Davie's Nests and Eggs

—OF—

NORTH AMERICAN BIRDS,

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This work is descriptive of the Nests and Eggs of the Land and Water Birds of North America, which includes all the species known to exist—those that occur or are indigenous north of the Southern United States boundary, including Greenland and the peninsula of Lower California. The breeding range of each species is given, the time of nesting, the exact number of eggs laid, their color and size together with the chief characteristics of the birds.

The arrangement of the work is according to the new nomenclature of the A. O. U. Code and Check List, and the old numbers (Ridgeway's), as used in former editions, are placed to the right of each species. Throughout the text all the common names of the birds are to be found, and a COMPLETE ANALYTICAL INDEX of these is given.

An invaluable book as an aid for the identification of specimens to all those collecting in the field.

The work consists of 475 pages and 13 full page illustrations.

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86 Pages of Valuable Information.

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AN EXPLANATION.

In the Jan. issue of **THE OOLOGIST** this cut appeared to "fill up":—

BIRDS' EGGS

Shells, Carcasses, Mirrors, Edison Tullies, Marine and Land Curio and Specimens of all kinds, Naturalists' and Taxidermists' Supplies. Largest Stock, Lowest Prices. Send us for new list. Lists. **FRANK H. LATTIN,** Albion, N. Y.

We have a new large illustrated catalogue in press, it will be ready to mail about March 15th. Our patrons need not write for a copy as we shall send them one as soon as issued, until that time our prices for everything except eggs remain as advertised in the Sept. '88 Bulletin. The prices for Eggs are as listed in Nov. '89 **OOLOGIST** or as printed on our new "OOLOGIST'S CHECKING LISTS".

Faithfully,

FRANK H. LATTIN.

THE OOLOGIST.

VOL. VII.

ALBION, N. Y., MARCH, 1890.

NO. 3

Summer Residents of Buena Vista Co., Iowa.

This list does not pretend to be complete, as I have had no opportunity to visit the southern and western portions of the county during the breeding season.

1. (*Podilymbus podiceps*) Pied-billed Grebe. Breeds abundantly in the ponds and sloughs.

2. (*Hydrochelidon nigra surinamensis*) Black Tern. Nests commonly on the floating vegetation and bogs of the sloughs.

3. (*Anas boscas*) Mallard. Common but getting scarcer. Nests in fields, meadows and marshes.

4. (*Anas obscura*) Black Duck. Two nests were found during 1888. One was built well above the water in the edge of a slough and contained thirteen eggs. The other was built on a marsh.

5. (*Anas carolinensis*) Green-winged Teal. One nest was found in 1887, built in the prairie grass and contained eleven eggs. Bird was shot, but not very well identified.

6. (*Anas discors*) Blue-winged Teal. Common. Lays from eight to eleven eggs in a nest in the prairie grass.

7. (*Spatula clypeata*) Shoveler. Common during migrations. One nest was found in 1888.

8. (*Dafila acuta*) Pintail. Very abundant during the spring migration. Some remain to breed.

9. (*Branta canadensis*) Canada Goose. Was formerly very common, and bred. Now is only with us during spring and fall migration. Perhaps a few still breed in the county joining this on the north (Clay).

10. (*Botaurus lentiginosus*) Am. Bittern. Common. Makes its nest in the edges of ponds, in the high grass. Lays from three to five drab eggs.

11. (*Botaurus exilis*) Least Bittern. Not as common as the preceding species. Makes its nest over water. Lays three to five pale blue eggs.

12. (*Grus Mexicana*) Sandhill Crane. Formerly bred, but now is only seen during migrations.

13. (*Rallus elegans*) King Rail. Not very common. Nests are well concealed and hard to find.

14. (*Rallus virginianus*) Virginia Rail. Scarce. One nest found in 1889, but eggs were destroyed.

15. (*Porzana carolina*) Sora. The most common of the Rails which breed here. Lays from eight to fifteen eggs. Makes a nest of grass in the edges of sloughs.

16. (*Fulica americana*) American Coot. Abundant. Nest is a pile of rushes in the edge of ponds. Eggs are from ten to fifteen in number.

17. (*Bartramia longicauda*) Bartramian Sandpiper. Formerly abundant, but the last few years they have been killed in great numbers for eastern markets. Still common. Makes its nest in the prairie grass. Lays four spotted eggs.

18. (*Numenius longirostris*) Long-billed Curlew. Have record of one nest found several years ago. Very rare now.

19. (*Aegialitis vocifera*) Killdeer. Common. Makes its nest in fields and on top of hills. I have never found one near water.

20. (*Colinus virginiana*) Bobwhite. Not abundant as yet, but seems to be getting more numerous. Two nests were found last year.

21. (*Tympanuchus americanus*) Prairie Hen. Common. Nests in the prairie grass. Laying from ten to fifteen eggs.

22. (*Zeniadura macroura*) Mourning

Dove. Nests abundantly in the groves.

23. (*Circus hudsonius*) Marsh Hawk. Somewhat common. Found three nests last year: May 1st, one containing two eggs; June 5th, one containing five eggs, and one July 1st, containing young birds. I have information of at least two other kinds of Hawks that breed in the woods west of here, but do not know which kind as yet.

24. (*Asio accipitrinus*) Short-eared Owl. One nest was found last year. It contained five eggs. They had been run over by a prairie fire. Two were quite badly burned and one was cracked, but the other two are fine specimens.

25. (*Coccyzus americanus*) Yellow-billed Cuckoo. Quite common.

26. (*Coccyzus erythrophthalmus*) Black-billed Cuckoo. Not so common as the preceding species.

27. (*Colaptes auratus*) Flicker. One nest found last year.

28. (*Chordeiles virginianus*) Night Hawk. Common, but the nests are not often found, as the bird will not fly unless nearly stepped upon and the eggs look so much like the ground that they can hardly be found.

29. (*Tyrannus tyrannus*) Kingbird. Very common. Nests in the groves and along the shores of lakes.

30. (*Empidonax minimus*) Least Flycatcher. Found several nests last year and some before. The nest cannot be distinguished from that of the Yellow Warbler. The eggs are four pure creamy white, very handsome.

31. (*Otocoris alpestris praticola*) Prairie Horned Lark. Abundant. Makes its nest in the fields and on the prairie.

32. (*Cyanocitta cristata*) Blue Jay. Not very common.

33. (*Corvus americanus*) American Crow. Heard of a young one being captured in the woods west of here.

64. (*Dolichonyx oryzivorus*) Bobolink. Abundant, but nests are very hard to find, because so well concealed in the grass.

35. (*Molothrus ater*) Cowbird. Quite common.

36. (*Xanthocephalus xanthocephalus*) Yellow-headed Blackbird. Very abundant. Breeds in the canes and rushes of the ponds and sloughs.

37. (*Agelaius phoeniceus*) Red-winged Blackbird. Exceedingly abundant. Breeds by the hundreds in the grass around ponds.

38. (*Sturnella magna*) Meadow Lark. Common. Nests in prairie grass and under piles of hay.

39. (*Icterus spurius*) Orchard Oriole. Not very common. A favorite nesting place is around the shores of a small lake. Hangs its nests in the scrub trees.

40. (*Quiscalus quiscula aeneus*) Bronzed Grackle. Abundant. Nests high up in maples, etc.

41. (*Spinus tristis*) American Goldfinch. Have found two nests containing eggs and several nests supposed to be Goldfinches after the leaves were off the trees.

42. (*Spiza americana*) Dickcissel. Abundant. Nests anywhere, on the ground or quite high in the trees.

43. (*Progne subis*) Purple Martin. Quite common. Will occupy all houses put up for their accommodation.

44. (*Chelidon erythrogaster*) Barn Swallow. Common.

45. (*Vireo gilvus*) Warbling Vireo. Not uncommon. Several nests were found this year.

46. (*Dendroica aestiva*) Yellow Warbler. Abundant.

47. (*Galeoscoptes carolinensis*) Catbird. Not very common.

48. (*Harporhynchus rufus*) Brown Thrasher. Quite common.

49. (*Troglodytes cedon*) House Wren. Three nests have been found, one in the pocket of a coat that was hanging in a tree, one in a shed and one in a bird-box.

50. (*Cistothorus stellaris*) Short-billed Marsh Wren. Rather Abundant. Found

several nests during 1889. Nests were made of grass, in the shape of a cocoon. Eggs six in number, pure white.

51. (*Cistothorus palustris*) Long-billed Marsh Wren. Abundant. Breeds in the dry grass in sloughs,

52. (*Merula migratoria*) American Robin. Very common.

Would like to see lists from other counties of Iowa.

JOHN V. CRONE,
Buena Vista Co., Iowa.

A Day in the Woods of Florida.

On the banks of the Indian River there is a field of study and delight for the Naturalist, although perhaps tinctured with some little danger, in searching for the variety of natural products of this semi-tropical country during the spring months. The deep, gloomy forests of cypresses and pines, interspersed with tracts of live oaks, maples, varieties of palms and flowering vines in full blossom, the open tracts of country and vast swamps, penetrated by the lagoons and creeks of the Indian River, furnish an abundant variety of specimens for the Ornithologist, Entomologist and Botanist. Venomous serpents present the only danger. The Water Moccasin (*Toxicophis piscivorus*) is the most abundant, inhabiting the low, swampy district, the Land Moccasin (*Ancistrodon contortrix*) or Copperhead being less numerous, found on the dry lands and fields, and that terrible reptile, the Diamond Rattlesnake (*Crotalus adamantens*) which attains the length of over nine feet with a diameter of five inches and more, is liable to be encountered in any locality except the most swampy tracts where the Water Moccasin is found. These serpents and the Harlequin snake found on the higher lands are the only ones to be viewed with dread. The Rattlesnake is the least common of the *Crotalidae*. The Moccasin is quite

abundant and equally to be dreaded. With the exception of these reptiles together with centipedes, some large spiders and an occasional scorpion, there are no other drawbacks to the field naturalist and collector. The timid may exclaim that these were surely enough drawbacks and should serve to dampen the ardor of the Naturalist, but there are always dangers and obstacles to the student of Nature which increase to a great extent in more tropical countries, where one has to be on almost constant guard against the larger beasts of prey, enormous serpents, the Boas and Pythons as well as the smaller venomous snakes, and innumerable swarms of spiders, scorpions and centipedes and other pests which deter all but the most enthusiastic naturalist from thorough investigation. Florida is comparatively exempt from dangerous animals. An occasional Panther or Bear may rarely be encountered in the dense forests, but which are of a more cowardly disposition than otherwise, seldom attacking man unless wounded and at bay. All danger is forgotten by the naturalist eager in pursuit of some rare object. I remember encountering a large moccasin while threading my way through a villainous swamp in search of the beautiful Hooded Warbler (*Sylvia mitratus*) which frequents low, swampy woods. The serpent was coiled and ready to strike when I noticed it. I hastily retreated a few paces and shot it. I decided to retrace my steps and not penetrate farther into the morass when my mind was diverted by a few tinkling notes. Looking in the direction from which they proceeded I saw the object of my search flitting among the bushes, and forgetting my decision to turn back, and intent on securing the warbler, I started in pursuit. The bird led me a long chase, and eventually disappeared for good and I was left a quarter of a mile farther in the swamp, vexed and

disappointed. It was April. The sun had reached a point nearly overhead and the heat was intense, certainly over one hundred degrees and the air was suffocating with the effluvia of the coarse rank vegetation. Before me was a dense thicket of green briar or chapperal utterly impassable. I retraced my steps, fortunately, without losing my bearings. To lose one's self in these vast swamps and forests would be a very serious matter. Cutting a light pole I parted the dense mass of vegetation ahead of me and before I had advanced a dozen rods I discovered another ugly moccasin coiled and ready to strike. I speedily despatched the reptile and just before reaching higher and dryer ground espied another, who, contrary to their usual habit beat a hasty retreat before I could shoot it. These swamps during the spring, summer and early autumn must be a very hotbed of these hideous venomous reptiles, which are more dreaded than even the rattlesnake, for they give no warning when approached, and seldom retreat. They attain the length of five and six feet and their largest diameter is often over four inches. Still notwithstanding the hidden dangers under foot, the eye is entranced and bewildered at times with the profusion of flowers one meets. Large areas of the fragrant yellow jessamine and other beautiful flowering vines and flowers of different kinds are met with in all directions, the beautiful four-leaved Cherokee rose, a pure white flower nearly four inches in diameter being very conspicuous. But it is here where the deadly moccasin lurks, and here as well as elsewhere the venomous crawling centipedes make their home in the rotten timber. Upon emerging from this vast tract of danger and beauty, most suffocating heat, fragrant flowers and noxious vegetable gases, I enter upon a space of open country interspersed with shrubbery and trees. Here

the birds, the most beautiful forms of all animal life, are more abundant. I walk along the edge of the swamp. Among the tree tops and bushes many species of migrating birds are seen, which in the course of a few weeks with the exception of those indigenous to the Southern States, will wend their way to the far north to breed. Nearly all of the migratory land birds and many of the shore and water birds winter here; many species, however, passing still further south to the West Indies, the Bahama Islands and probably a few extend their migrations into South America. In the course of my rather limited observations from January to the first week in April, I have met with nearly every land bird that is found in New England, with the exception, of course, of the few winter birds that visit those states and return to the far north at the approach of warm weather. The Mockingbird (*Mimus polyglottus*) is one of the most conspicuous among the birds here, is now in full song, and is met with every few rods. They are almost domesticated, unsuspecting and familiar to a degree that is surprising and pleasing. They repose the utmost confidence in man, and well they may, for they are never molested and make their rendezvous and homes near the houses being seldom met with in the unsettled districts.

CLARENCE W. ROWLEY,
Ellis, Mass.

Birds of Mackinac Island, Mich.

As observed by Mr. T. Gilbert White during the summer of 1889. The figures at the left of the rarer species indicates the number of specimens seen. B, breeds; M, migrant.

Am. Robin,	Common.	B.
Wilson's Thrush,	Uncommon.	B.
Hermit	"	Common. B.
Olive-backed	"	" B.
Bluebird	"	" B.
Golden-crowned Kinglet,	"	"
9 Ruby	"	Rare. B.

- 2 Blue-gray Gnatcatcher, " M.
 1 White-bellied Nuthatch, " M.
 Red " " Common.
 Chickadee, Abundant. B.
 2 Brown Creeper, Rare. M.
 Brown Thrush, Uncommon. B.
 House Wren, Common. B.
 Winter Wren, Common.
 Horned Lark, Abundant. M.
 2 Purple Martin, Rare.
 7 Cliff Swallow, Uncommon.
 Tree Swallow, Abundant. B.
 Barn Swallow, Abundant. B.
 3 Bank Swallow, Rare.
 Cedar Waxwing, Abundant. B.
 1 Scarlet Tanager, Rare.
 Black and White Creeper, Common. B.
 Nashville Warbler, Common. M.
 Tennessee Warbler, Common. M.
 Parula Warbler, Uncommon. M.
 Yellow Warbler, Common. B.
 Black-throated Blue Warbler, Com. M.
 Yellow Rumped Warbler, Common. B.
 Black and Yellow Warbler, Com. B.
 Bay-breasted Warbler, Uncommon. M.
 Black-poll Warbler, Rare. M.
 Blackburnian Warbler, Common. M.
 Black-thr. Green Warbler, Abund. B.
 4 Pine-creeping Warbler, Rare. M.
 Yellow Red-poll Warbler, Common. M.
 2 Prairie Warbler, Rare. M.
 Oven Bird, Common. B.
 Canadian Warbler, Common.
 Am. Redstart, Common. B.
 2 Blue-winged Yellow Warbler Rare. M.
 3 Wilson's Warbler, Rare. M.
 1 Connecticut Warbler, Rare. M.
 Red-eyed Vireo, Common. B.
 1 Warbling Vireo, Rare.
 Purple Finch, Common. B.
 Am. Cross-bill, Uncommon. M.
 American Goldfinch, Common. B.
 Vesper Sparrow, Common. B.
 2 White-crowned Sparrow, Rare. M.
 White-throated Sparrow, Common. B.
 Chipping Sparrow, Abundant. B.
 8 Field Sparrow, Uncommon.
 State-colored Junco, Common. B.
 Song Sparrow, Uncommon. B.
 Indigo Bunting, Uncommon. B.
 3 Meadow Lark, Rare.
 Rusty Grackle, Common. M.
 3 Purple Grackle, Rare. M.
 Blue Jay, Common. B.
 8 Canada Jay, Uncommon. M.
 American Crow, Abundant. B.
 Kingbird, Uncommon. B.
 Phoebe, Uncommon. B.
 Wood Pewee, Common. B.
 1 Acadian Flycatcher, Rare. M.
 4 Least Flycatcher, Rare.
 Downy Woodpecker, Common. B.
 Pileated Woodpecker' Rare.
- 2 Red-headed Woodpecker, Rare.
 Flicker, Common. M. (B.)
 Whip-poor-will, heard some.
 Night Hawk, Common. B.
 Chimney Swift, Uncommon.
 3 Ruby-throated Hummingbird, Rare.
 1 Yellow-billed Cuckoo, Rare.
 1 Black-billed Cuckoo, Rare.
 3 Kingfisher, Rare.
 Sora; Carolina Rail, Common. B.
 2 Marsh Harrier, Rare.
 Sharp-shinned Hawk, Common.
 5 Cooper's Hawk, Uncommon.
 3 American Goshawk, Rare.
 7 Broad-winged Hawk, Rare.
 3 Bald Eagle, Uncommon.
 Sparrow Hawk, Common. B.
 American Osprey, Common.
 1 Barred Owl, Rare.
 Passenger Pigeon, Common. M.
 Wood Duck, Rare. M.
 Wilson's Snipe, Common. M.
 2 American Woodcock, Rare. M.
 1 Semi-palmated Sandpiper, Rare.
 Spotted Sandpiper, Common. B.
 American Herring Gull, Common. M.
 Ring-billed Gull, Uncommon. M.
 3 Kittiwake Gull, Rare. M.
 Caspian Tern, Common. M.
 Royal Tern, Common. M.
 Great Blue Heron, Rare. M.
 Total, 101 species of which 41 breed
 and 32 were observed only as migrants.

Among the Gulls on Isle Royale.

Isle Royale, of Lake Superior, is a long narrow island surrounded by small barren rocks rising seven or eight feet out of the water. These rocks prove an excellent home for the American Herring Gull and immense numbers come here every summer, to rear their young. As the island is only inhabited by fishermen, the birds are rarely molested; the men gathering only a few eggs for their own use. Although the birds are found all around the island, in more or less numbers, they have two or three places where they form large colonies, such for instance is Gull Island, at the north-eastern extremity of of the main island and the Gull Rocks along the northern coast.

It was my good fortune to make a trip to this island last season and carry

away some very handsome sets of their eggs. Having got my outfit together, I started on the morning of June 3rd, on board a small steamer, of the Booth Packing Co., that runs between here and the island, gathering up the fish that are caught. I arrived at the collecting grounds early on the morning of the 4th and immediately set about business. Having made a bargain with one of the fishermen, to take me around in his boat, we set out about 5 a. m. for the Rock of Ages, a colony at the western extremity of the main island. While we were yet 300 or 400 feet from the rock, the Gulls commenced to rise in dense clouds and to utter piercing cries, which in fact they kept up all day and which have a most tiresome effect on a person. Having landed, we set to work to fill our baskets, I here found that it was somewhat late in the season; as a few young birds were seen and quite a number of eggs afterwards proved to be partly incubated. We soon had our baskets full and our hats also and so thought it was time to return. Having put the eggs aboard we steered for camp, but while passing a small rock somewhat wooded we saw a pair of Red-breasted Mergansers fly off. We immediately landed and after a little searching found their nest, placed on the ground and nearly covered with down and dry grass, so that we almost stepped on it before we saw it. It contained 11 fresh eggs; these having been packed away we again got aboard and arrived at camp, pretty well tired out but very well pleased with the day's work. The next day I spent in blowing my eggs and packing them for carrying to town. About 4 a. m. next morning, the steamer came along and I decided to go further along the island. I got to the eastern extremity about evening and went to bed early expecting a good days work on the morrow. I was up bright and early next morning and

things having been prepared the previous evening we set out at once for a rock about seven miles away.

Arrived there we went through the same performance as before and came back loaded with eggs. In nearly every case there was no attempt at any nest building, the eggs being deposited in some hollow on the bare rock, although after the bird has set a while on them refuse collects around and forms somewhat of an excuse for a nest.

The usual complement is three, but occasionally only two. In a large number of eggs there is great variation in size, shape and color, ranging from 2.50 x 1.60 to 3.00 x 2.00 in size and from deep brown to nearly white, blotched all over with brown and lilac of various shades. The next day was spent in preparing the eggs and then I moved further around the island and repeated the operation, arriving home on the 11th, after one of the most pleasant collecting experiences of my life. I believe Loons also breed around this island but in comparatively small numbers. I saw no nests on my trip but saw a good many birds and the fishermen tell me they have found their eggs.

CHAS. A. DAVIS,

Duluth, Minn.

An Albino Grackle.

Mr. E. L. Kendall, of Orange Co., Texas, reports a "White Blackbird." The bird is white all over and is of the Bronze Grackle species. It is very shy and all attempts to shoot it have failed.

The bird has also been seen by Mr. C. R. Walter, who says that the bird is in a flock of a hundred or more and that to get near enough to shoot it is an impossibility.

Are White Blackbirds common?

This is the first one I have ever heard of.

W. E. G., an oologist of Galveston, reports a half completed Red bird's nest, Feb. 9, '90.

Will someone through the columns of the OOLOGIST, inform me how to make a good collecting box or case to take on an eggging trip.

A. DROUET, JR.,
Galveston, Texas.

Early Nesting of the Great Horned Owl.

Feb. 17, of this year (1890) a nest of this species was found here which contained three young at least a week old.

The eggs in this case must have been laid by the middle of January.

On the 5th of this month (Feb.) a nest was found which contained one egg which was broken, probably by a squirrel.

On the 15th, two more nests were found, one containing two badly incubated eggs and the other a set of four fresh eggs, a large set, for this locality at least.

J. H. BROWN,
Powerskirk Co., Ia.

On February 10th, I got out my outfit to take a trip to French Island where I knew a pair of Great Horned Owls had a nest. When I got to the roost, I found that Mr. and Mrs. Owl were not at home, so I commenced to hunt them up. After rapping and throwing clubs at a number of hollow trees and old stumps in the vicinity, I started for an old elm tree where I found a nest and took a set of eggs last year. After rapping on the tree, I looked up and was surprised to see a pair of ears sticking up above the edge of the hole. I threw a stick up and out came Mrs. Owl and lit on a tree near by. The nest was only twenty feet up and I was twenty feet up too in a very few minutes to find four nice white eggs. Incubation had just commenced. I have taken sets of eggs in March when the snow was two feet deep on the ground. Isn't the tenth of Febru-

ary early to commence collecting?

WHIT HARRISON,
Houston Co., Minnesota.

On Friday, January 31, 1890, I thought I would take a trip to the timber to see what prospect there was for Owls' nests this season. I succeeded in locating several and was very well satisfied with my day's work, when I looked over across the woods a little ways, I saw a large bunch of sticks in a large hickory tree. I at once went over to examine the tree to see if I could climb it in case the Hawks ever occupied it. When I got at the foot of the tree and looked it thoroughly over, I spied a half dozen or more yellowish downy feathers clinging to the side of the nest, so I at once procured a club and tossed it towards the nest. When, to my surprise, a *Bubo Virginianus* flew off and alighted on a tree near by. I thought her movements peculiar, so I adorned my climbers and ascended. When I reached the nest after a hard climb, I was rewarded by finding one egg with a young owl ready to greet me, for he had a hole picked large enough to admit my finger. I let him remain in the nest, thinking to call when he was older and secure him as my reward instead of nothing or a worthless shell. This I consider very early for the Owl to lay; usually in this latitude about Feb. 15th. Let me hear who has had like experience.

C. B. VANDYCOOK,
Marion Co., Ills.

Large Numbers of Sandhill Cranes.

I am of the opinion that the readers of the OOLOGIST, have never seen so many and so large Sandhill Cranes as we had the pleasure of seeing and shooting on the 9th of Feb., 1889. They were crossing White River Valley in a Northerly direction, in a continuous stream all the afternoon, and toward

night they settled down in a swampy pasture, as if tired of flight. Many boys had been watching them before they came down and accordingly made a detour around them with shotgun and rifle. In spite of their caution, only three or four fat fellows were bagged, the rest rising in a huge dark mass of necks and wings out of range. The excitement, however, kept many banging away with rifles, some parties taking them for geese and thinking to have a treat. I secured one for mounting, but he was very badly torn with someone's charge of buckshot. They were probably following the warm rains, northward finding the climate on this side of the range more agreeable. To-day, Feb. 4th, at dark, saw a small band of Cranes flying low, answering their leader's deep cry with weary voices, as it was stormy weather. They, like the Loon, haunt the marshy lakes in this locality. This summer I found two Ruby-throated Hummingbirds dead in the window of an old house, having killed themselves against the window. They were male and female. I put them in my cabinet as they were perfectly preserved.

URIAH L. HERTZ,
Kent, Wash.

The Abnormal Coloration of the Eggs of a Pair of *Passer Domesticus* Kept in Confinement.

Upon reading Mr. George N. Lawrence's article on the change in the coloration of certain parrots, which he considers is caused by the birds being kept in confinement (see *Auk* vol. 6, No. 1) brings to my mind the change in coloration of the eggs of a pair of English Sparrows kept in confinement.

One winter a pair of Sparrows entered the kitchen of a friend of ours through an open door, whereupon the door was shut and the birds were caught and put into a cage, where they thrived very well. The female laid three or four clutches of eggs every season, which

were not as other eggs of this species, dull whitish, thickly speckled and dashed with dark brown and purplish gray, but of a pure, clear white color, evenly and thinly spotted with a light purplish gray.

I think that the change in the coloration of the eggs in this case is due to the same cause that caused the plumage of the parrots to change and that is, being kept in confinement.

JOHN LUHRMAN,
Jersey City, N. J.

The Evening Grosbeak.

This beautiful bird is not a very plentiful one here, but they may be seen in flocks in winter and early spring and sometimes fall, but generally about the time cherry trees begin to blossom, as they are fond of the blossoms. They also eat maple buds a great deal.

On Jan. 26th, I run across a flock of about twenty Grosbeaks, mostly males and I picked out one and tapped him over with a load of shot from my catapult and afterwards made a skin of him which now adorns my cabinet. I find the pocket catapult comes in handy when you suddenly run across a bird you want.

The specimen before me measures 7 3-10 inches long and the wing is 4 3-10 inches. The forward half of the body is yellowish-olive shading into yellow on the rump and under tail coverts; the crown, wings, upper tail coverts, and tail, black; frontal band, bright yellow. The beak is very thick and powerful. I found this out while attempting to catch a wounded bird when he caught me instead.

The nest is very rare as only a few are on record, but no doubt they nest in some of the pine forests in or near the mountains.

CLYDE L. KELLER,
Marion Co., Oregon.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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Single Subscription, 50c per annum.
Sample Copies, 5c each.

The above rates include postage and premium.

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Single insertion, 20 cents per line, nonpareil.

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Jottings.

Reports from all quarters indicate an early season.

All matter intended for April OOLOGIST, should be in not later than March 20th.

A very agreeable surprise is in store for the patrons of the OOLOGIST—full particulars next month.

A Query Column will be inaugurated in April issue, through which any query of interest will be answered.

Among early arrivals, we were pleased to record on Feb. 22nd, a very pleasant visit from our Niagara Co. Orni-

thologist, Mr. J. L. Davison of the First National Bank, Lockport.

If you observe anything unusual or interesting, write it up for the OOLOGIST or drop us a line on a postal giving the facts. We expect to publish a page or more of these interesting items in each future OOLOGIST.

Unquestionably one of the most valued testimonials ever accorded the OOLOGIST, was the five page bibliographical list, that appeared in the January *Auk* of "items of considerable interest and value which ought not be overlooked." The Doctors find that *one hundred and seventeen* of these item have appeared in the OOLOGIST during the past few years.

Early Nesting.

Found a set of two eggs of Costa's Hummingbird, Feb. 13, and a nest of Least Tit nearly finished.

A. W. NOLTE,
Los Angeles, Cala.

A Correction.

I wish you would set J. C. G. right in regard to his "Unusual Nesting of Downy Woodpecker" in last OOLOGIST, for without a shadow of a doubt they are the Albino form of Bluebirds' eggs.

C. W.,
Brooklyn, O.

Only 13 Left.

We have just 13 complete sets of YOUNG OOLOGIST and OOLOGIST left. A complete set consisting of every number published since May 1st, 1884, will be sent you by return mail for only \$2.50. This offer is good for 30 DAYS ONLY.

The Cowbird.

Everybody is too well acquainted with this meanest of bird kind to need any description of it or, its eggs and so it will not be necessary to describe it. What collector has not seen its eggs in other birds' nests? In fact it is hard to find a nest without from one to four eggs of this bird in it. I have seen nests of the Chewink with four Cowbird's and one of their own eggs in, I also have a nest of the Indigo Runting in my collection that has a bottom built over a Cowbird's and one of its own eggs, the Indigo laid two more eggs, which were thrown out (probably by the Cowbird) and two of the Cowbird's eggs laid in the nest. I always hrow out all the Cowbird eggs that I find in nests, while collecting and advise everybody else to do the same. The question is who ever saw a Cowbird sitting on a nest? If anybody ever did I would like to hear from them through the OOLOGIST.

R. C. ALEXANDER,
Wayne Co, Mich.

Ruby-crowned Kinglet.

This delicate bit of bird life seeming to know that he is a little more choice than the Golden-crowned, is more chary of his company than the soberer and smaller relative. When, however, he deigns to grace the twigs of your orchard with his presence it is a visit worth remembering, especially if perching on the topmost spray, he gives utterance to his pleasing warble. This sounds so loud and sweet that one almost involuntarily looks around for some larger author than the diminutive musician there above. He is very tame and unsuspecting. He thinks no doubt

that no one would hurt such a fine fellow, and will admit of the closest scrutiny without alarm. He is a very busy little bird rarely quiet for an instant and always searching for food; his movements are spry and he is not averse to anything in the insect line that comes his way, beetles, ants, slugs, borers, all disappear and ever and anon he flashes from the limb to seize some luckless fly.

On the 20th of last July, my brother and I were slowly sauntering along a road on the island of Mackinac, headed for "my collecting place." (What collector has not a spot that he calls so, in his own mind at least?) when my attention was attracted by a great commotion in an evergreen tree near at hand. You may be sure that I lost no time in investigating its cause and, on running to the the spot, I beheld two adult Kinglets busily engaged in coaxing two fully fledged young ones from a nest; three other youngsters were sitting on a limb by the nest, mortally afraid, no doubt, of a fall. I secured two of the young and climbed the tree to look at the nest; this was constructed on top of the "fan" at the end of the branch. It was a very bulky structure, a great deal longer than broad, composed of pine needles and moss, lined with grass and down. It was so loosely constructed that a few blows of the hatchet on the limb were sufficient to send the nest to irredeemable smash. The identity of the parents was nearly perfect. I did not wish to shoot them, so contented myself with the very good view offered when climbing the tree.

STEWART E. WHITE,
Kent Co., Mich.

The Cactus Wren.

The Cactus Wren breeds abundantly in Southern California. They usually nest in colonies. The site selected being a rocky mesa over-grown with cacti and chaparral. The name Cactus

Wren is derived from the peculiar habit of their nesting in the cacti. The nest is a bulky affair made of dried grass and weeds and lined with feathers.

Many of the nests I examined contained a lining of two or more inches in thickness, I suppose this to be partly to protect the eggs from the cactus thorns and as the outside of the nest is not very compact, to protect the eggs from the cold. The typical nest will measure 8 x 14 inches. It is purse shaped, with an entrance near the top. Some extraordinary specimens, I have seen had a neck like a bottle attached to the nest, but this is seldom. They most always build in the cacti, but some times I have found their nests in the chaparral. The Cactus Wren begins to build about the first of March, patching up the old nest or building a new one on top of the old. Like most other birds that breed in colonies, they all begin to lay about the same date. That is, if you find one nest in a colony containing three or four eggs, you can calculate on finding all of the others containing the same complement.

When fresh, the eggs are of a deep salmon color, but on being blown fade to dull carmine. The average complement is five. I believe they rear three broods during a season, as I have found fresh eggs as late as June.

WALTER RICHARDSON,
Los Angeles Co., Cal.

Habits of a Screech Owl in Captivity.

I had the good fortune of having the opportunity afforded me last fall, to study the habits of a Screech Owl in captivity, and I thought that it might interest some of the readers of the OOLOGIST.

He was about eight or ten inches in length, and his wings measured eighteen inches from tip to tip. His plumage was the usual grey.

He had a marvellous appetite, de-

vouring anything, whether cooked or raw. He was very fond of mice, catching them by the neck he would commence swallowing them, but it was or seemed to be very difficult for he strained and forced until his mouseship disappeared. When all had been swallowed but the tail, the owl quit swallowing and the weight of the mouse would pull it in slowly.

It required from four to five hours to digest a mouse, at the end of that time he disgorged the fur which looked like chewed felt; it was oblong, about an inch and a half in length by half an inch in diameter. When I examined the ball, I found no trace of the bones, which as I have read are thrown up with the fur. This surprised me. Therefore, I came to the conclusion that the mice must have been very young and the bones had not hardened, or that his gastronomical construction must have been very powerful.

His temper was fearful. He fought and snapped his bill at a great rate when anyone came near the cage. If a stick was put through the bars of the cage he would fly at it with force enough to knock it out of your hand. The climax was reached one day when a dog came near his cage; he flew from one side to the other snapping and clawing furiously. He would keep this up until the dog would get out of sight, then he would settle down and become as sober as a judge.

He was very sensitive to light and on being brought near a whitewashed fence on which the sun was shining the pupil of the eye next to the fence would contract till it appeared to be a mere speck while the other was some what larger. If taken into a darkened room you could see the pupils dilate until it seemed as if his eye was all pupil.

This was his most interesting trait.

R. W. PATTERSON,
Wood Co., W. Va.

Taking of Birds' Nests.

In a late number of the OOLOGIST is an article based upon the scientific studying of Birds' Nests and the collecting of the same. From what is said in this article it seems as if its writer has chosen the winter months in which to collect nests. It is here I wish to differ in the time, that nests should be taken, it is true. The nests of different birds afford a great deal of study; something may be learned from each tiny little nest as has been said by Alexander Wilson: "Some nest by the roadside, some in the thorn, others on the mountain side, some by the sea, etc., etc." It will generally be seen each variety seeks a different place to construct its nest after its own pattern. And to look upon a fine collection of nests taken in proper season, all neatly labeled, is a sight worthy to behold.

From the green ball of moss neatly lined placed among growing moss by the side of some waterfall snugly hid away, shows the instinct of the Water Ouzel. Far up 300 feet or more aloft on the face of some cliff, shows the wonderful powers to select a nesting site of the Golden Eagle.

How neatly saddled on some dead limb is the nest of the Wood Pewee.

Nests should be taken in the summer when the eggs are removed.

The nest is then neat and new, as an example: The nest of the Orchard Oriole when first made is a neat construction of green grass woven into a hanging position. After the nest has been exposed to a shower of rain it at once becomes dull and faded, assuming a sunburnt yellow color. Leave it now until the young have been hatched and flown and the gales of autumn and winter have tried their strength upon it and the bugs and other insects have taken refuge in it to get away from the cold of winter, then go out and collect the nest; put it in your cabinet, com-

pare it with one you have taken in the summer and see if not greatly preferred than the one that hung in the tree five months after the young were reared in it. The Cliff Swallow may be another that each collector would only want "one nest" taken after the young had flown.

GEO. F. BRENINGER,
Fort Collins, Colorado.

The Blackbird Problem.

I saw the statement and query made by Mr. Posson of Medina, N. Y., in the OOLOGIST, also the answer given by Mr. Hanaford of Grand Rapids, Mich.

I have had excellent opportunities and have spent considerable time in observing the habits of these birds during the fall migrations, I find as a result that they collect in immense flocks in certain localities where there is plenty of food and a good roosting place.

There is a large crow roost about ten miles north-east of here where about 6000 crows roost every fall.

Every night during October thousands of blackbirds rise from our fields and fly north-east with the long strings of crows to the roost. Probably the reason why this explanation did not occur to Mr. Posson, is the fact that they are not often seen returning with the crows in the morning, as I think there need be no doubt, but that there is another similar roost north-east of Medina or that they fly to the roost of which I speak, which seems improbable from the great distance. Either the flocks fly south from the roost to their feeding grounds before the crows go and thereby escape observation, or else they fly a different route mornings from that taken at night, and I do not see them. I think the first is most likely as they commence coming from the south before noon on fair days, and they might easily fly over early in the morning before it is very light without being seen as they fly very high when taking long flights.

ERNEST SHORT,
Monroe Co., N. Y.

BIRDS' EGGS.

Eggs are numbered to correspond with Ridgeway's Nomenclature.

All eggs are carefully prepared, being blown from one smoothly drilled hole in the side and are warranted true to name.

All specimens will be carefully packed in strong tin or wooden boxes and sent at *purchasers'* risk by mail or at *our* risk by express.

Small orders under 50 cents must contain 5 cents for packing and return postage.

Eggs in original sets, with data, can be furnished when desired.

The following discounts will be allowed on orders for single eggs:—

Ten per cent. on orders amounting to two dollars.

Fifteen per cent. on orders amounting to three dollars.

Twenty per cent. on orders amounting to five dollars.

Twenty-five per cent. on orders amounting to ten dollars or over.

SECOND-CLASS SPECIMENS can be furnished of most species at one-half the price of a first-class one. Parties ordering second-class eggs must name a list of extra eggs to be used as substitutes, in case we are out of those ordered.

Western Grebe.....	\$ 70	Gannet.....	35	Yellow-cro'ed Night Heron.....	25
Hobcock's Grebe.....	50	Anhinga.....	25	Limpkin.....	1 25
Horned Grebe.....	35	Cormorant.....	50	King Rail.....	20
American Eared Grebe.....	25	Double-crested Cormorant.....	35	Clapper Rail.....	10
Pied-bill'd Grebe.....	10	Florida Cormorant.....	25	Virginia Rail.....	20
Loon.....	1 50	Brandt's Cormorant.....	50	Spotted Crane.....	30
Black-throated Loon.....	1 50	Baird's Cormorant.....	50	Sora.....	10
Red-throated Loon.....	75	American White Pelican.....	50	Corn Crane.....	20
Tufted Puffin.....	1 00	Brown Pelican.....	25	Purple Gallinule.....	30
Puffin.....	20	American Merganser.....	1 00	Florida Gallinule.....	12
Cassin's Auklet.....	3 00	Red-broasted Merganser.....	30	European Coot.....	15
Black Guillemot.....	20	Mallard.....	20	American Coot.....	10
Murre.....	20	Black Duck.....	40	Red Phalarope.....	1 00
California Murre.....	25	Florida Duck.....	2 00	Northern Phalarope.....	50
Brunnich's Murre.....	25	Gadwall.....	50	American Avocet.....	75
Great Auk (cast of egg).....	1 50	Widgeon.....	25	Black-necked Stilt.....	75
Razor-billed Auk.....	20	Baldpate.....	75	European Woodcock.....	1 75
Skua.....	75	European Teal.....	20	American Woodcock.....	1 25
Parasitic Jaeger.....	60	Blue-winged Teal.....	25	European Snipe.....	25
Long-tailed Jaeger.....	1 25	Shoveller.....	40	Dunlin.....	3 5
Kittiwake.....	40	Pintail.....	40	Black-tailed Godwit.....	50
Glaucous Gull.....	55	Wood Duck.....	75	Willet.....	40
Iceland Gull.....	1 50	Redhead.....	25	Ruff.....	20
Great Black-backed Gull.....	50	American Scaup Duck.....	60	Bartramian Sandpiper.....	40
Western Gull.....	2 5	American Golden-eye.....	75	Spotted Sandpiper.....	15
Herring Gull.....	20	Barrow's Golden-eye.....	1 00	Long-billed Curlew.....	75
American Herring Gull.....	20	Old-Squaw.....	40	Whimbrel.....	40
California Gull.....	30	Harlequin Duck.....	1 25	Lapwing.....	15
Ring-billed Gull.....	30	Greenland Elder.....	30	Golden Plover.....	40
Mew Gull.....	35	American Elder.....	20	Killdeer.....	20
Laughing Gull.....	20	American Scoter.....	2 00	Ring Plover.....	20 1/2
Franklin's Gull.....	75	Ruddy Duck.....	50	Little Ring Plover.....	25
Gull-billed Tern.....	15	White-fronted Goose.....	1 50	Wilson's Plover.....	25
Caspian Tern.....	50	Canada Goose.....	1 00	Oyster-catcher.....	25
Royal Tern.....	40	Whooping Swan.....	1 50	American Oyster-catcher.....	70
Cabot's Tern.....	40	Whistling Swan.....	2 50	Bob-white.....	10
Forster's Tern.....	15	American Flamingo.....	1 00	Florida Bob-white.....	15
Common Tern.....	05	Roseate Spoonbill.....	1 00	Texas Bob-white.....	10
Arctic Tern.....	15	White Ibis.....	35	Chestnut-bellied Scaled Partridge.....	50
Roseate Tern.....	15	American Bittern.....	1 25	California Partridge.....	10
Least Tern.....	05	Least Bittern.....	20	Valley Partridge.....	20
Sooty Tern.....	35	Great White Heron.....	1 25	Gambel's Partridge.....	25
Bridled Tern.....	2 00	Ward's Heron.....	40	Ruffed Grouse.....	15
Black Tern.....	12	Great Blue Heron.....	25	Willow Ptarmigan.....	75
White-winged Black Tern.....	40	European Blue Heron.....	20	Rock Ptarmigan.....	1 00
Noddy.....	75	American Egret.....	2	Prairie Hen.....	75
Black Skimmer.....	12	Snowy Heron.....	15	Sharp-tailed Grouse.....	75
Fulmar.....	75	Reddish Egret.....	40	Sage Grouse.....	50
Manx Shearwater.....	1 00	Louisiana Heron.....	10	Wild Turkey.....	75
Audubon's Shearwater.....	2 00	Little Blue Heron.....	10	Chachalaca.....	1 50
Stormy Petrel.....	60	Green Heron.....	10	Red-billed Pigeon.....	2 00
Leach's Petrel.....	15	Black crowned Night Heron.....	10		

FRANK H. LATTIN, ALBION, N. Y.

Mourning Dove.....	05	Prairie Horned Lark.....	20	Bank Swallow.....	04
White-winged Dove.....	30	Desert Horned Lark.....	20	Rough-winged Swallow.....	20
Ground Dove.....	25	Ruddy Horned Lark.....	25	Cedar Waxwing.....	10
Leuca Dove.....	75	American Magpie.....	35	Phainopepla.....	50
Turkey Vulture.....	75	Yellow-billed Magpie.....	75	Loggerhead Shrike.....	15
Black Vulture.....	75	Blue Jay.....	05	White-rumped Shrike.....	08
Mississippi Kite.....	10 00	Florida Blue Jay.....	50	California Shrike.....	08
Marsh Hawk.....	40	Florida Jay.....	1 50	Red-eyed Vireo.....	10
Sharp-shinned Hawk.....	1 00	California Jay.....	25	Warbling Vireo.....	20
Cooper's Hawk.....	75	Northern Raven.....	1 50	Yellow-throated Vireo.....	35
Harris' Hawk.....	75	American Crow.....	05	White-eyed Vireo.....	20
European Buzzard.....	35	Florida Crow.....	50	Bell's Vireo.....	15
Red-tailed Hawk.....	75	Northwest Crow.....	50	Prothonotary Warbler.....	50
Western Red-tail.....	60	Fish Crow.....	25	Golden-winged Warbler.....	75
Red-shouldered Hawk.....	50	Starling.....	20	Nashville Warbler.....	75
Red-bellied Hawk.....	1 00	Bobolink.....	05	Parula Warbler.....	25
Swainson's Hawk.....	75	Cowbird.....	03	Yellow Warbler.....	05
Broad-winged Hawk.....	1 25	Dwarf Cowbird.....	05	Black-throated Blue Warbler.....	75
Tough-legged Hawk.....	50	White-headed Blackbird.....	05	Magnolia Warbler.....	50
Golden Eagle.....	8 00	Red-winged Blackbird.....	02	Chestnut-sided Warbler.....	20
Gray Sea Eagle.....	2 00	Bicolored Blackbird.....	10	Black-poll Warbler.....	75
Bald Eagle.....	5 00	Tricolored Blackbird.....	20	Black-throated Green Warbler.....	75
Duck Hawk.....	3 00	Meadowlark.....	12	Prairie Warbler.....	50
Merlin.....	50	Western Meadowlark.....	12	Oven-bird.....	15
Kestrel.....	25	Hooded Oriole.....	50	Louisiana Water-thrush.....	50
American Sparrow Hawk.....	25	Orchard Oriole.....	20	Maryland Yellow-throat.....	15
Audubon's (Caracara).....	1 25	Baltimore Oriole.....	10	Western Yellow-throat.....	25
American Osprey.....	50	Bullock's Oriole.....	05	Yellow-breasted Chat.....	10
American Barn Owl.....	30	Brewer's Blackbird.....	15	Long-tailed Chat.....	15
American Long-eared Owl.....	35	Purple Grackle.....	04	American Redstart.....	15
Short-eared Owl.....	1 25	Bronzed Grackle.....	20	White Wagtail.....	10
Barred Owl.....	1 00	Great-tailed Grackle.....	10	Meadow Pipit.....	10
Florida Barred Owl.....	1 00	Boat-tailed Grackle.....	10	American Dipper.....	1 00
Screech Owl.....	40	Purple Finch.....	15	Mockingbird.....	05
Florida Screech Owl.....	40	House Finch.....	06	Catbird.....	02
Texas Screech Owl.....	50	Redpoll.....	50	Brown Thrasher.....	03
California Screech Owl.....	50	American Goldfinch.....	68	Texas Thrasher.....	30
Great Horned Owl.....	1 25	Arkansas Goldfinch.....	20	Curve-billed Thrasher.....	25
Western Horned Owl.....	1 25	Lawrence's Goldfinch.....	25	Californian Thrasher.....	25
Hawk Owl.....	1 00	Snowflake.....	50	Cactus Wren.....	12
Burrowing Owl.....	25	Lapland Longspur.....	75	Carolina Wren.....	15
Goose-billed Ant.....	1 00	Grass Finch.....	15	Bewick's Wren.....	50
Road-runner.....	27	Western Vesper Sparrow.....	12	Vigors' Wren.....	25
Yellow-billed Cuckoo.....	10	Savanna Sparrow.....	15	Band's Wren.....	25
California Cuckoo.....	25	Western Savanna Sparrow.....	20	House Wren.....	06
Black billed Cuckoo.....	12	Yellow-winged Sparrow.....	20	Western House Wren.....	06
Belted Kingfisher.....	20	W. Yellow-winged Sparrow.....	35	Long-billed Marsh Wren.....	06
Harpy Woodpecker.....	50	Sharp-tailed Sparrow.....	25	Tule Wren.....	15
Dowry Woodpecker.....	20	Seaside Sparrow.....	25	White-breasted Nuthatch.....	50
Red-ockaded Woodpecker.....	1 25	Lark Sparrow.....	05	Brown-headed Nuthatch.....	35
Pileated Woodpecker.....	1 00	W. Lark Sparrow.....	05	Tufted Titmouse.....	35
Red-headed Woodpecker.....	08	Gambel's Sparrow.....	25	Plain Titmouse.....	50
Leucis Woodpecker.....	40	White-throated Sparrow.....	35	Chickadee.....	12
Red-bellied Woodpecker.....	30	Chipping Sparrow.....	02	Carolina Chickadee.....	15
Golden-fronted Woodpecker.....	75	Western Chipping Sparrow.....	03	Californian Bush-Tit.....	15
Flicker.....	03	Field Sparrow.....	04	Verdin.....	50
Red-shafted Flicker.....	10	Slate colored Junco.....	20	Blue-gray Gnatcatcher.....	20
Chuck-will's-widow.....	1 50	Black-throated Sparrow.....	50	Western Gnatcatcher.....	50
Whip-poor-will.....	1 50	Song Sparrow.....	02	Wood Thrush.....	06
Nighthawk.....	40	Desert Song Sparrow.....	10	Wilson's Thrush.....	15
Western Nighthawk.....	50	Heermann's Song Sparrow.....	50	Russet-backed Thrush.....	15
Chimney Swift.....	15	Samuel's Song Sparrow.....	08	Olive-backed Thrush.....	40
Ruby-throated Hummingbird.....	60	Swamp Sparrow.....	15	Hermite Thrush.....	40
Costa's Hummingbird.....	1 00	Towhee.....	25	American Robin.....	02
Anna's Hummingbird.....	50	Spurred Towhee.....	25	Western Robin.....	15
Scissor-tailed Flycatcher.....	10	Oregon Towhee.....	02	Red-spotted Bluethroat.....	60
Kingbird.....	03	Californian Towhee.....	08	Wheatear.....	10
Gray Kingbird.....	40	Cardinal.....	05	Bluebird.....	02
Arkansas Kingbird.....	05	Texas Cardinal.....	06	Western Bluebird.....	15
Cassin's Kingbird.....	25	Rose-breasted Grosbeak.....	15	Mountain Bluebird.....	15
Ash-throated Flycatcher.....	25	Black-headed Grosbeak.....	20	English Sparrow.....	01
Crested Flycatcher.....	12	Blue Grosbeak.....	25	European Tree Sparrow.....	15
Phoebe.....	05	Indigo Bunting.....	03		
Say's Phoebe.....	20	Lazuli Bunting.....	20		
Black Phoebe.....	20	Palated Bunting.....	10		
Wood Pewee.....	15	Grassquit.....	75		
Western Wood Pewee.....	20	Black-throated Bunting.....	05	SUNDRIES.....	
Western Flycatcher.....	25	Lark Bunting.....	50	African Ostrich, small.....	1 25
Acadian Flycatcher.....	20	Scarlet Tanager.....	25	" " large.....	1 50
Little Flycatcher.....	40	Summer Tanager.....	20	Emu.....	2 50
Trall's Flycatcher.....	20	Purple Martin.....	15	Rhea.....	3 00
Least Flycatcher.....	10	Cliff Swallow.....	04	Alligator.....	27
Skylark.....	12	Barn Swallow.....	05	Turtle.....	10
		Tree Swallow.....	05	Snake.....	10
				Gopher.....	25

PAGES

FROM

THE NEW CATALOGUE

OF

SPECIMENS AND SUPPLIES

FOR SALE BY

FRANK H. LATTIN,

ALBION,

Orleans Co.,

N. Y.

In this issue of THE OOLOGIST we give our regular prices for

BIRDS' EGGS, GLASS EYES,

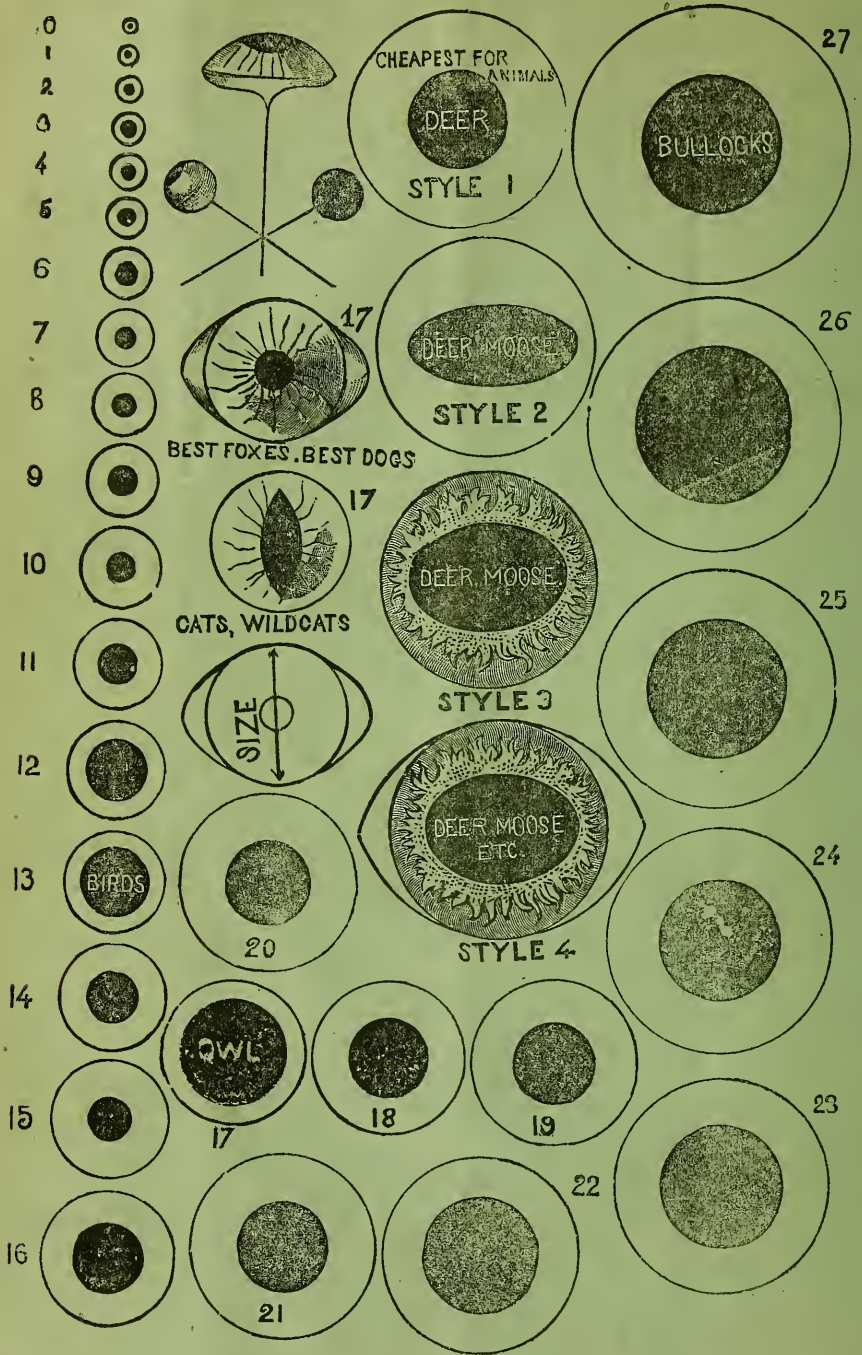
AND SHELLS,

FOR 1890.

If you are not already a subscriber of THE OOLOGIST it will be mailed you during 1890 as a premium with your first order of \$2.00 or over—this offer holds good until 1890. Send in your orders early and often. Make your remittances in most convenient manner. Remember we always

⇒! Guarantee © Satisfaction! ⇐

With every order we fill. "Extras" are usually packed with orders of \$1.00 or over in order to keep our patrons good natured.



PRICE-LIST OF GLASS EYES

—FOR—

TAXIDERMISTS, MILLINERS, JEWELERS, ETC.

Our eyes are of the best average make in the world, accurate to nature, free from defects, durable, and uniform in color, size and shape.

SIZES.		STYLE 1 FOR BIRDS ETC.		STYLE 2 1 EXTRA.	STYLE 3 2 EXTRAS.	STYLE 4 3 EXTRAS.	BLACK, CHEAP FOR BIRDS, ETC.		Diagram Numbers.
NO. ON DIAGM	DIAM. IN INCHES.	1 PR.	10 PPS.	1 PR.	1 PR.	1 PR.	1 PR.	10 PR.	
0	2-32	.02	.20	....	....	....	.01	.01	0
1	3-32	.03	.25	.03	....	....	.01	.04	1
2	4-32	.03	.25	.03	....	....	.01	.04	2
3	5-32	.03	.30	.04	....	....	.01	.04	3
4	6-32	.03	.30	.04	....	....	.01	.07	4
5	7-32	.04	.35	.05	....	....	.01	.07	5
6	8-32	.04	.40	.05	.08	....	.01	.08	6
7	9-32	.05	.40	.06	.08	....	.02	.10	7
8	10-32	.06	.50	.06	.10	....	.02	.12	8
9	11-32	.07	.60	.07	.10	....	.02	.13	9
10	13-32	.07	.65	.09	.12	.13	.02	.15	10
11	14-32	.09	.85	.10	.13	.14	.03	.17	11
12	15-32	.10	.95	.11	.14	.16	.03	.18	12
13	16-32	.12	1.10	.14	.18	.20	.03	.21	13
14	17-32	.13	1.25	.18	.19	.22	.04	.29	14
15	18-32	.15	1.45	.19	.21	.24	.05	.37	15
16	10-16	.17	1.65	.22	.23	.27	.05	.42	16
17	11-16	.19	1.85	.24	.26	.29	.06	.50	17
18	12-16	.22	2.10	.26	.29	.34	.07	.58	18
19	13-16	.26	2.50	.29	.32	.37	.08	.61	19
20	14-16	.30	2.90	.32	.37	.46	.11	.92	20
21	15-16	.32	3.15	.37	.40	.51	.12	1.00	21
22	1	.41	4.00	.48	.56	.64	.15	1.25	22
23	1 2-16	.45	4.40	.58	.64	.72	.18	1.45	23
24	1 3-16	.54	5.25	.67	.76	.88	.20	1.65	24
25	1 4-16	.58	5.65	.72	.80	.96	.25	2.10	25
26	1 5-16	.72	7.10	.76	.96	1.04	.30	2.50	26
27	1 7-16	.80	7.90	.96	1.04	1.12	.35	2.90	27

For Sizes, see preceding page. For full description of Styles, see next page.

DISCOUNTS.

Orders of \$1.00 or under at list price.

Orders of over \$1.00, 20 per cent. off list.

Orders of over \$5.00, 20 & 10 per cent. off list.

EXAMPLE:—A selection of Eyes at \$2.00 list, less 20 per cent., will cost you \$1.60 net; a selection of Eyes at \$8.00 list, less 20 and 10 per cent., will cost you \$5.76 net (e. g. \$8.00 less 20 per cent., = \$6.40; \$6.40 less 10 per cent., = \$5.76).

All orders for less than ten pairs of one number will be figured at single pair rates. We *prepay* postage or express charges on all eye orders.

When ordering, always give size, color, style (naming the extras) and name of animal if possible, then we will be sure to send you exactly what you want. Cornered eyes are measured the narrow way.

DESCRIPTION OF STYLES.

BLACK EYES are used extensively for manufacturing purposes and for small birds. Some taxidermists use them in cheap work for animals and a few of the larger birds.

STYLE 1 is a plain eye with clear or colored irises and round black pupil. This style is best for birds and is the plainest for animals.

STYLE 2, the following come under this style:—All eyes for Albino Birds and small Albino Animals; *ONE extra*, elongating pupil or veining iris, added to style 1; Common Eyes for Fish, Frogs and Alligators. This style is considered fair for Animals.

STYLE 3. Eyes having Two *extras* added to style 1 and best eyes for Fish and Alligators. This style is considered fine for Animals.

STYLE 4. Eyes having THREE *extras* added to style 1 and for large Albino Animals come under this style. Finest grade for Animals.

EXTRAS. The grading of styles is based chiefly upon the *extras*, which consist of *Veining the Iris*; *Elongating the Pupils*; or *White Corners*.

The addition of any one *Extra* to the common Eye, Style 1, makes it **STYLE 2**; Two *Extras*, **STYLE 3**; Three *Extras*, **STYLE 4**.

DESCRIPTION OF THE EYES THAT WE KEEP IN STOCK.

STYLE 1.

Brown Iris, sizes.....	1 to 27
"Dark" hazel " ".....	1 to 27
Yellow " ".....	1 to 23
Straw " ".....	1 to 22
Carmine " ".....	1 to 18
White " ".....	1 to 16
Red-brown " ".....	1 to 16
Green " ".....	1 to 16
Blue " ".....	1 to 15
Clear, transparent flint iris, sizes.....	1 to 27

The Flint eyes can be painted any color desired; with a stock of them and tube paints, any variety of color can be had at once.

STYLE 2.

Albino.—Pink pupil, pink iris, sizes.....	1 to 17
Elk, Moose or Caribou.—Long pupil, brown iris, sizes.....	16 to 27
Sheep or goat.—Long pupil, very light brown iris, sizes.....	16 to 27
Fox.—Brown veined iris, sizes.....	14 to 18
Dog or Bear.—Hazel veined iris, sizes.....	10 to 20

Clear Glass, Flint Iris for Painting.

Long pupils, for goat, sheep, deer, cat, lynx, frogs, alligator, etc., etc., sizes.....	6 to 27
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White Corners, for various Animals, sizes.....	6 to 27
Fish Eyes, irregular pupil, sizes.....	6 to 21

STYLE 3.

Long pupil with veined green, yellow, straw or brown iris. For cat, leopard, lynx, panther, etc., sizes.....	6 to 26
Round pupil, veined yellow iris. For tiger and lion, sizes.....	16 to 27
Round pupil, veined brown or hazel iris, white corners. For fox, dogs, bears, large animals sizes.....	10 to 27
Irregular pupils, silver, gold, green or bronze iris. For fish, sizes.....	8 to 24

Painted Eyes.

Long pupil, veined iris for alligator, cat, tiger, lynx, etc. Sizes.....	6 to 27
Round pupil, veined iris, white corners. For Animals, sizes.....	10 to 27

STYLE 4.

Long pupils, veined iris, white corners. For elk, moose, deer, antelope, sheep, goat, fox, etc. Sizes.....	15 to 27
Pink pupil, pink iris, white corners. For large Albino animals. Sizes.....	18 to 27

List of the Sizes and Colors of Eyes Usually Ordered by Leading Taxidermists for Various Birds and Animals.

12 to 14 Red, Loon.	1	Black, Canary.	20 to 22 Antelope.
18 to 21 Yellow or Straw, Horned Owl.	8 to 9	Yellow or Brown, Sharp-shinned Hawk.	15 to 17 Common Bear.
17 Hazel or Blue-black, Barred Owl.	12	Red, Goshawk.	17 to 18 Grizzly Bear.
12 to 14 Yellow or Straw, Long Eared Owl.	12	Yellow, Young Goshawk.	23 to 25 Lion.
14 to 15 Yellow or Straw, Screech Owl.	2	Black, Warblers.	20 to 22 Puma.
11 Straw, Common Gull.	10	Hazel, Night Hawk.	16 to 18 Wild Cat.
8 to 9 Various Colors, Ducks.	15	Hazel, Ostrich.	17 to 18 Lynx.
10 to 11 Red, Wood Duck.	3 to 5	Hazel, Sparrows.	25 Buffalo (African).
13 Hazel, Goose.	3 to 5	Black, "	26 to 27 Ox.
10 Hazel, Woodcock.	7	Hazel, Blue Jay.	16 to 18 Wolf.
8 Hazel, Snipe.	7 to 8	Red, Yellow, or Brown "	17 to 18 Pug Dog.
7 Brown or Hazel, Quail.	14 to 16	White or Straw, Pelican.	15 to 16 Black and Tan Dog.
9 Brown or Hazel, Grouse.	15	Yellow, Sandhill Crane.	16 to 18 Setter Dog.
12 to 13 Brown, Peacock.	8	Straw, Acadian Owl.	17 to 18 Bull Dog.
13 to 14 Straw or Yellow, Great Blue Heron.	12	" Hawk Owl.	16 to 17 Fox.
8 Straw, Egrets.	8	Parrot.	6 White Rats.
10 Yellow or Straw, Bittern.	15	Albatross.	7 Mink.
12 to 14 Brown, Red Tail Hawk.	10 to 12	Straw, Cooper's Hawk.	8 Skunk.
12 to 14 Yellow, Osprey.	18	Yellow or Straw, Snowy Owl.	10 Gray Squirrel.
13 Straw, Adult Eagle.	22 to 23	Camel.	11 Fox Squirrel.
15 Hazel, Young "	21 to 25	Deer.	8 Red Squirrel.
9 Hazel, Crow.	24 to 25	Caribou.	15 to 17 Cat.
7 Hazel, Robin.	26 to 27	Moose and Elk.	16 Coyote.
6 to 7 Straw, Grackle.	24 to 25	Black Tail Deer.	16 Arctic Fox.
	24 to 25	Buffalo.	24 Bengal Tiger.
	25 to 26	Horse.	9 to 12 Monkey.

ILLUSTRATIONS OF SHELLS.

The numbers beneath each illustration correspond with numbers used in price-list



SHELLS.

Our Stock of Showy and Ornamental Shells is very large and from July to October, annually, we undoubtedly retail at our Resort and Exposition trade, more shells in number than any other American Dealer. We obtain most of our shells in the original case, direct from the collector and clean and prepare the bulk of them ourselves. Owing to these facts we can and do sell shells as cheap as any dealer in America. If you want shells by the dozen, hundred or barrel to sell again, we can furnish many species at prices that cannot be duplicated in America.

From our extensive experience in the Resort and Fair trade, we can put up wholesale assortments at \$5, \$10, \$15, \$25, \$35 or \$50 that will not only contain more, better, and a greater variety of shells than any similar assortment on the market, but we can guarantee them to sell as well and at a better profit.

At the date of issuing this catalogue, March 1, 1890, we have actually in stock specimens of every species catalogued and fair prospects of replenishing our stock from time to time as needed.

In arranging the list we have given first a number for our own and patrons' convenience, then in regular order, the common name, scientific name, authority, locality where found, greatest extent in inches, and price. The price varies according to the quality, beauty and other points of perfection.

Large and heavy shells must go by express or freight at purchaser's expense. Small shells, about 4 to 5 in. and under, we send by mail post-paid at prices quoted, except on small orders of 50c or less, in which case from 5c to 10c must be added for postage. We guarantee safe delivery by express and, as we usually put in "extras" either in quality or number, to help pay the charges, we think it advisable for our patrons to have orders of \$2.00 or over go by express.

The shells we offer are mostly in their natural state, some however, have been polished or otherwise treated to bring out their colors or patterns.

We are almost daily adding to our stock of shells. Supplementary lists will be issued from time to time. For the benefit of our patrons not familiar with the names of shells, we have had illustrations made of many leading varieties. The numbers accompanying the cuts refer to the No. on list.

No. 1, PAPER NAUTILUS, ARGONAUTA ARGO, Linn. Mediterranean, 1 in. to 5 in. \$1.00 to \$5.00	20 FULGUR CANALICULATIS, Linn., Atlantic, 3 to 6 in.10 to .40
2 PEARLY NAUTILUS, NAUTILUS POMPILIUS, Linn., Polynesia, 5 to 9 in.75 to 2.50	21 CROWN VOLUTE or MELON SHELL, MERO DIADEMA, Lam., Australia, 3 to 10 in. .20 to 2.90
3 WHITE MUREX, MUREX RAMOSUS, Linn., Zanzibar, 3 to 9 in.10 to 2.00	22 MITRE SHELL, MITRA EPISCOPALIS, Linn., Singapore, 2 to 5 in.10 to .50
4 ROSE MUREX, MUREX (PHYLLONOTUS) REGIUS, Wood, Panama, 2 to 4 in.15 to 1.00	23 VOLUTA VESPERTILIO Linn., Singapore, 2 to 3 in.10 to .35
5 PINK MUREX, MUREX (PHYLLONOTUS) PRINCEPS, Brod., Panama, 2 to 4 in. .25 to 1.00	24 FOXHEAD, VOLUTA (AULICA) SCAPHA, Gmel., Singapore, 4 to 5 in.20 to .50
6 BLACK MUREX, MUREX, (PHYLLONOTUS) RADIX, Gmel., Panama, 2 to 4 in.15 to .75	25 GEM SHELL, MARGINELLA APICINA, Menke, Bahamas, $\frac{1}{2}$ in.02 to .05
7 ROCK MUREX, MUREX PONUM, Bahamas, $1\frac{1}{2}$ to 3 in.10 to .35	26 TENT SHELL, OLIVA PORPHYRIA, Linn., Lower California, 2 to 4 in.50 to 1.00
8 MUREX PUDORICOLOR, Reeve, Bahamas, 1 to $1\frac{1}{2}$ in.05 to .15	27 OLIVA INFLATA Lam, Singapore, $1\frac{1}{2}$ in.03 to .10
9 THORNY WOODCOCK, MUREX TENUI SPINA Law, Molucas small to 5 in.50 to 4.00	28 OLIVA RETICULARIS, Lam., Bahamas, $1\frac{1}{2}$ in.03 to .10
10 SNIPE-BILLED MUREX, MUREX HAUSTELUM, Linn., Singapore, $4\frac{1}{2}$ to $5\frac{1}{2}$ in. .25 to .75	29 OLIVE or KEY SHELL, OLIVA LITTERATA, Lam., Florida, $1\frac{1}{2}$ to 3 in.03 to .20
11 AFRICAN MUREX, MUREX SAKATILIS, Linn., Africa, 4 to 5 in.35 to .75	30 HARP SHELL, HARPA VENTRICOSA, Lam., Zanzibar, 2 to $3\frac{1}{2}$ in.15 to .60
12 MUREX BREVIS PINA, Lam., Arabia $1\frac{1}{2}$ to 2 in.05 to .20	31 COLUMBELLA MERCATORIA, Linn., W.I. $\frac{1}{2}$ in. 02.00.95
13 PURPURA PATULA, Linn., Bahamas, $\frac{1}{2}$ to 2 in.03 to .25	32 MARLINSPIKE, TEBREBRA MACULATA, Linn., Sandwich Isles, 3 to 7 in.10 to .50
14 TRUMPET SHELL, TRITON TRITONIS, Linn., Pacific, 6 to 13 in.50 to 4.00	33 AUGER SHELL, TEBREBRA PUNCTULATA, E. I., 3 to $4\frac{1}{2}$ in.20 to .36
15 TRITON (<i>Cymatium</i>) FEMORALIS, Linn., West Indies, 3 to $5\frac{1}{2}$ in.25 to .75	34 MARBLED CONE, CONUS MARMORRUS, Linn., Polynesia, 2 to 4 in.10 to .40
16 TRITON, Bahamas, 9 to 11 in.1.00 to 2.00	35 LETTERED CONE, CONUS LITTERATUS, Linn., Singapore, 3 to 4 in.15 to .50
17 FASCIOLARIA TULIPA, Linn., Florida, 2 to 6 in.05 to .50	36 VIRGIN CONE, CONUS VIRGO, Linn., Mauritius, $2\frac{1}{2}$ to 4 in.15 to .75
18 FASCIOLARIA DISTANS, Lam., Florida, 2 to 6 in.10 to .50	37 LION CONE, CONUS LEONINUS, Gmel., Florida, 1 to $3\frac{1}{2}$ in.10 to .50
19 FULGUR CARICA Gmel., Atlantic, 3 to 6 in.10 to .40	38 CAPTAIN'S CONE, CONUS CAPITANEUS, Linn., Ceylon, $1\frac{1}{2}$ to 3 in.05 to 30
	39 DOTTED CONE, $1\frac{1}{2}$ to 2 in.05 to .15

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40 MILES SOLDIER, <i>CONUS MILES</i> , Linn., Ceylon, 2 to 3 in.10 to .35	76 CASK SHELL, <i>DOLIUM PERDIX</i> , Linn., Bahamas and China, 2 to 4 in.10 to .50
41 WAVEY CONE, 1½ to 1¾ in. ....	.05 to .15	77 MALEA RINGENS, Swains, Pacific. ....	.50 to 1.00
42 CONCH or FOUNTAIN SHELL, <i>STROMBUS GIGAS</i> , Linn., Bahamas, 6 to 12 in. ....	.15 to .50	78 NATICA CANCRENA, Linn., West Indies, ½ to 1 in. ....	.05 to .10
43 POINTS or CONES cut from No. 42 for ornament, painting or decorating. ....	.25 to .75	79 STAIR-CASE SHELL, <i>SOLARIUM PERSPECTIVUM</i> , Linn., Zanzibar, 1½ in. ....	.50
44 <i>STROMBUS ALATUS</i> , Gmel., Gulf of Mexico, 2 to 3½ in. ....	.10 to .30	80 TECTARIUS MURICATUS, Linn., Bahamas, .02 to .05	
45 <i>STROMBUS GRACILOR</i> Wood, Panama, 2 to 3 in. ....	.15 to .30	81 WORM SHELL, <i>VERMETUS (vermiculus)</i> , LUMBRICALIS, Linn., 2 to 3 in. ....	.03 to .10
45 <i>STROMBUS TUBERCULATUS</i> , Lam., Bahamas, 3 in. ....	.10 to .25	VERMETUS CLUMPS. ....	.05 to 5.00
47 SILVER-LIP, <i>STROMBUS LENTIGINOSUS</i> , Zanzibar, 2½ to 3 in. ....	.05 to .15	82 SCREW SHELL, <i>TURITTELLA</i> , 1½ to 5 in. .02 to .35	
48 SPIDER SHELL, <i>PTEROCERA LAMBS</i> , Lam., China or Zanzibar, 4 to 12 in. ....	.15 to 1.00	83 BLEEDING TOOTH, <i>NERITA PELEONTA</i> , Linn., W. I., ½ to 1½ in. ....	.02 to .10
49 HOOKED SCORPION, <i>PTEROCERA (Harpago) RUGOSA</i> , Sowb., Mauritius, 4 to 6 in. ....	.15 to .40	84 <i>NERITA TESSELLATA</i> , Gmel., W. I., ¾ in. ....	.02 to .05
50 SCORPION, <i>PTEROCERA (Harpago) CHIRAGRA</i> , Lam., East Indies, 6 to 10 in. ....	.20 to .75	85 <i>NERITA ZIGZAG</i> , Bahamas, ¾ in. ....	.03
51 ORANGE SCORPION, <i>PTEROCERA AURANTIA</i> , Lam., China, 3½ to 5 in. ....	.20 to .35	86 TOP SHELL, <i>TURBO MARMORATUS</i> , Linn., China, 3½ to 7 in. ....	.25 to .75
52 PELICAN'S FOOT, <i>APORRHAIIS PSEPELLICANI</i> , Lam., Mediterranean, 1½ in. ....	.05 to .10	87 GREEN SNAIL, 3 to 4 in. ....	.25 to .50
53 ARABIAN COWRY, <i>CYPRÆA ARABICA</i> , Linn., 1 to 2 in. ....	.10 to .25	88 SPOTTED SNAIL, 3 to 4 in. ....	.25 to .50
53a GNAWED COWRY, <i>CYPRÆA EROSA</i> , Linn., Polynesia, ½ to 1½ in. ....	.05 to .15	89 BANDED SNAIL, 3 to 4 in. ....	.25 to .50
54 <i>CYPRÆA ISABELLA</i> , Linn., Mauritius, ¾ to 1½ in. ....	.05 to .15	90 PEARL SHELL, 3 to 9 in. ....	.25 to 2.00
55 ZEBRA COWRY, <i>CYPRÆA ASELIUS</i> , Linn., East Indies, ½ in. ....	.05 to .10	91 TURK'S CAP, <i>TURBO SAROMATICUS</i> , Linn., East Indies, 2 to 4 in. ....	.15 to .75
56 SNAKE-HEAD COWRY, <i>CYPRÆA CAPUTSERPENTIS</i> , Linn., Ceylon, 1 in. ....	.05 to .10	92 GOLD MOUTH, <i>TURBO (Senectus) CHRYSOTOMA</i> , Lind, Philippines, 2 to 2½ in. ....	.15 to .50
57 CAURI COWRY, <i>CYPRÆA CAURICA</i> , Lam., Ceylon, ½ to 1½ in. ....	.05 to .10	93 <i>TROCHUS MAXIMUS</i> , China, 3 to 5 in. ....	.25 to .50
58 <i>CYPRÆA HELIOLA</i> , Lind, Amboina, ¾ to 1 in. ....	.03 to .10	94 <i>TROCHUS NILIOTICUS</i> , Linn., China, 2½ to 4 in. ....	.15 to .50
59 LYNX COWRY, <i>CYPRÆA LYNX</i> , Linn., Singapore, 1 to 2 in. ....	.03 to .15	95 PEARL TROCHIUS, 2 to 5 in. ....	.15 to .75
60 MOURNING COWRY, <i>CYPRÆA MAURITIANA</i> , Linn., Mauritius, 2 to 4 in. ....	.10 to .50	96 <i>TROCHUS (Livona) PICA</i> , Linn., Bahamas, 1 to 3 in. ....	.10 to .50
61 MONEY COWRY, <i>CYPRÆA MONETA</i> , Linn., Ceylon, ½ to 1 in. ....	.02 to .10	97 MAGPIE TROCHIUS, 2 to 3 in. ....	.20 to .50
62 MOLE COWRY, <i>CYPRÆA TALPA</i> , Lind, Zanzibar, 2 to 3 in. ....	.15 to .50	HALIOTIS or EAR SHELLS, Nos. 95 to 104.	
63 TIGER COWRY, <i>CYPRÆA TIGRIS</i> , Linn., Australia, 2½ to 4 in. ....	.05 to .25	95 HALIOTIS CRACHERODI, Linn., Cala., 3 to 8 in. ....	.15 to .50
64 TIGER COWRY with Lord's Prayer engraved on. ....	.25 to .50	99 GREEN EAR, HALIOTIS IRIS, Gmel., Japan 3 to 6 in. ....	.25 to 1.50
65 PANTHER COWRY, <i>CYPRÆA PANTHERINA</i> , Sol., Indian Ocean, 2 to 3 in. ....	.15 to .35	100 HALIOTIS RUFESCENS, Swains., Cala., 2 to 7 in. ....	.25 to .75
66 CALF COWRY, <i>CYPRÆA VITELLUS</i> , Linn., Ceylon, 1 to 2 in. ....	.03 to .15	101 HALIOTIS SPLENDENS, Reeve, Cala., 6 to 9 in. ....	.25 to .75
67 SPOTTED COWRY, <i>CYPRÆA EXANTHEMA</i> , 2 to 4 in. ....	.15 to .35	102 BLACK EAR, Japan, 3½ to 7 in. ....	.25 to 1.00
68 EGG SHELL, <i>OVOLUM OVUM</i> , Linn., Singapore, 2 to 3 in. ....	.15 to .50	103 WHITE EAR, HALIOTIS TUBERCULATA, New Zealand, 4 to 8 in. ....	.25 to 1.50
69 TRIVIAS, ¼ to ¾ in. ....	.02 to .10	Unpolished Shells. ....	.15 to .50
70 HELMET SHELL, <i>CASSIS MADAGASCARENENSIS</i> , Lam., Bahamas, 5 to 10 in. ....	.35 to 1.00	104 RED EAR, Cala., 5 to 8 in. ....	.50 to 2.00
71 YELLOW HELMET, <i>CASSIS CORNUTA</i> , Brug., Ind. Ocean, 5 to 10 in. ....	.50 to 1.00	105 KEY-HOLE LIMPET, <i>FISSURELLA BARBADENSIS</i> , Lam., Bahamas, 1 to 1½ in. .03 to .10	
72 BLACK HELMET, <i>CASSIS TUBEROSA</i> , Lam., Bahamas, 5 to 8 in. ....	.35 to 1.00	105 OWL SHELL, <i>LOTTIA GIGANTIA</i> , Sowb., Cal., 1½ to 3 in. ....	.05 to .15
73 CAMEO SHELL, <i>BULLMOUTH</i> , <i>CASSIS RIFA</i> , Linn., Zanzibar, 2½ to 6 in. ....	.10 to .50	107 SCALEY-RIBBED CHITON, <i>CHITON SQUAMOSUS</i> , Linn., Bahamas, 1½ to 2 in. ....	.05 to .10
74 CAMEO SHELLS with a cameo head cut on for only.	2.00	108 COIL SHELL <i>HELIX (Acavus) HEANASTOMA</i> Lind., Ceylon, 2 in. ....	.05 to .15
75 <i>CASSIS FLAMMEA</i> , Lind, West Indies. .35 to .75		109 BLACK-MOUTH SNAIL, <i>HELIX (Acavus) MELANORAGUS</i> , Borb, Ceylon, 2¼ to 2¾ in. ....	.10 to .25
		110 AGATE SHELL, <i>ACHATINA VARIEGATA</i> , West Africa, 2½ to 4½ in. ....	.35 to .50
		111 PEANUT-SHELL, <i>STROPHIA GLANS</i> , Kuch, Bahamas, ½ to 1 in. ....	.03 to .10
		112 TUSK SHELL, <i>DENTALIUM ENTALIS</i> , 1½ in. ....	.02 to .05
		113 WATERING-POT SHELL, <i>ASPERGILLUM VAGINIFERUM</i> , Lam., Red Sea, 7 in. 1.50 to 2.00	
		114 ANGEL WING, <i>PHOLAS COSTAS</i> , Linn., Florida, 5 to 6 in., single valve.15 to .50
		115 RAZOR SHELL, <i>SOLENS ENNIS</i> , Linn., N. J., 3 to 6 in.03 to .30

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- 116 CALLISTA GIGANTEA, Chemm, Florida, 3 to 5 in..... .10 to .30
- 117 CLAM, VENUS MERCENARIA, Linn, Atlantic, 2 to 4 in..... .05
- 118 ASAPHIS COCCINEA, Mart., Bahamas, 1½ to 2½ in..... .05 to .20
- 119 VENUS LAITERI, Bahamas, 2 to 3 in..... .10 to .25
- 120 SUN SHELL, TELLINA RADIATA, Linn., Bahamas, pink, 1½ to 3 in..... .03 to .25
Yellow variety of same..... .03 to .25
- 121 QUOIT-SHELL, DOCINA DISCUS, Reeve, Florida, 2 to 3 in..... .05 to .25
- 122 COCKLE SHELL, CARDIUM PSEUDOLIMA, Lam., E. I., 3 to 5 in..... .35 to 1.00
- 123 HEART SHELL, CARDIUM MAGNUM, BORN., Florida, 3½ to 4 in..... .15 to .35
- 124 CHAMA ARCINELLA, Linn., W. I., 1 in. .05 to .15
- 125 FURBLO CLAM, TRIDACNA SQUAMOSA, Lam, East Indies, 5 to 12 in..... .2 to 2.00
- 126 GIANT CLAM, TRIDACNA GIGAS, Lam., East Indies, 2 to 3 feet..... 10.00 to 25.00
- 127 EAST INDIA CLAM; HORSE-FOOT or SPOTTED CLAM, TRIDACNA (*Hippopus*) MACULATA, Lam., E. I., 3 to 11 in. .15 to 2.00
- 128 LUCINA PENNSYLVANICA, Bahamas, 1½ to 2 in..... .10 to .15
- 129 SCALLOP, PECTEN IRRADIANS, L. I., 1 to 3 in..... .05 to .25
- 130 ENGLISH SCALLOP, 4 to 5 in..... .10 to .25
- 131 SUN AND MOON SHELL, PLEURONECTIA JAPONICA, Gmel., Japan, 4 to 5 in..... .15 to .50
- 132 HAM SHELL, PERNA EPHIPIUM, Linn., Bahamas, 1½ to 3 in..... .15 to .35
- 133 FAN SHELL, PINNA MURICATA, Linn., W. I., 7 to 10 in..... .20 to .50
- 134 THORNY OYSTER, SPONDYLUS PICTURUM, CHEMM, L. Cal., 4 to 6 in..... 3.00 to 5.00
- 135 OYSTER, OSTREA VIRGINICA, Gmel., Chesapeake Bay, 3 to 6 in..... .05 to .10

Shells for Painting.

- 136 Mother of Pearl, yellow or light backs, polished, \$3.00 per lb or 35c to \$3.00 each.
- 137 Same as No. 136, unpolished, \$1.25 per lb or 35c to \$2.00 each.
- 138 Mother of Pearl, known as "Black Scotch" dark, iridescent backs, polished, \$3.00 per lb or 25c to \$3.00 each.
- 139 Same as No. 138, unpolished, \$1.00 per lb or 25c to \$5.00 each.
- 140 Sun and Moon Shell or Japanese Pecten, Same as No. 131, one valve highly colored other white. Valves have smooth, white inner surface and are from 4 to 6 in. in diameter. Have sold hundreds to artists. Price per valve, 10c to 25c; per doz., \$1.00 to \$2.00, prepaid. Can quote special rates by the hundred.
- 141 Silver Shell, a thin, translucent shell for painting, of a silvery color, about 3 in. in diameter. 10c each, \$1.00 per doz.

Small Shells, etc.

For Jewelry, Fancy Work, Aquariums and for Taxidermists in Case Work.

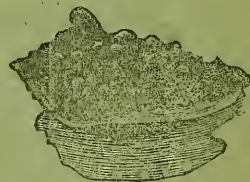
- 142 Cowries, 40c per pint, 75c per quart, by mail prepaid, or \$1.50 per gallon by express.
- 143 Olive Shells. Same price as No. 142.
- 144 Little Conchs, *Columbellas*, No 31. Same price as No. 142.
- 145 Valves of *Asaphis*, No. 118. One-half the price of No. 142.

- 146 Sun Shells, *Tellina radiata*, No. 120. Same price as No. 142.
- 147 *Nerita* or Bleeding Teeth, No. 83. Same price as No. 142.
- 148 Claw Shells, No. 52. Same price as No. 142.
- 149 Screw Shells, No. 82. Same price as No. 142.
- 150 W. I. Mixed Shells, all small and choice, but run largely to No. 144. Same price as No. 142.
- 151 Gray Sea Beans. Same price as No. 142.
- 152 Red Sea Beans. Same price as No. 142.
- 153 Guinea Peas, Black-eyed Susans. Same price as No. 142.
- 154 Tips and Fragments of W. I. Branch Coral, *Madrepora cervicornis*. Same price as No. 142.
- 155 Contains a good mixture of Nos. 142 to 154 inclusive. Price same as No. 142.
- 156 Rice Shells, postpaid, 20c per gill, 60c per pint, \$1.00 per quart; \$2.50 per gal. by express.
- 157 Tips of E. I. Branch Coral, *Pocillipora*. 25c per gill, 75c per pint, \$1.25 per quart.
- 158 Fragments of Organpipe Coral. Price same as No. 157.
- 159 Little Zigzag or Zebra *Neritas*, No. 87, very choice. 80c per ½ gill, 60c per gill, \$1.75 per pint, \$3.00 per quart.
- 160 Gem Shells, *Marginellas*, No. 25. Price same as No. 159. This and the last No. are very "toney" little shells and are quite valuable for jewelry purposes as well as fancy work.
- 161 Miamosa Seeds from Bahamas. Price one-half that of No. 159.
- 162 Small Fragments of Pink Coral from Sandwich or Caroline Isles. 50c per oz., \$8.00 per lb.
- 163 Small Fragments Red, same locality as No. 162. 30c per oz., \$4.00 per lb.

SPECIAL NOTICE.—We will furnish samples of any No. from 142 to 163 inclusive at 5c each. We will also furnish any No. in 10c, 15c, 20c, 25c, etc. lots as purchaser may desire. We can furnish Nos. 142 to 156 inclusive, in bushel, barrel or 100 weight lots as purchaser may desire, at very low rates.



No. 32, Marlinspike.



No. 47, Silver-lip.

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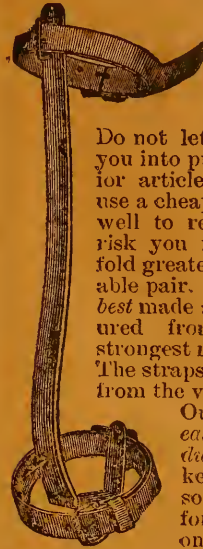
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BIRDS SKINS.

While we do not carry a full stock of Bird Skins, we have made arrangements whereby we can furnish our patrons anything obtainable at prices quoted in Feb. OOLOGIST. Orders under \$1.00 not wanted.

Faithfully Frank H. Lattin.

Climbing Irons.



There is scarcely a month in the year but what a pair of good Climbing Irons comes handy

Do not let a low price lure you into purchasing an inferior article. Every time you use a cheap pair of irons, it is well to remember, that the risk you run is a hundred-fold greater than with a reliable pair. Our irons are the best made and are manufactured from the best and strongest material obtainable. The straps are wide and made from the very best of leather.

Our climbers are the easiest, safest and most durable on the market and cannot be sold at a living profit for less money by anyone.

During the past five years we have sold hundreds of pairs of climbers, have sent them to nearly every state and territory in the Union and have yet to hear of the first dissatisfied purchaser.

From many testimonials, we select the following:

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"Received my climbers all right on the 21st of last month. I have deferred writing to you till I had used them. They are as good a spurs I ever tried and I think I am safe in saying that if you buy your spurs of Lattin, you get good ones."

J. P. J., Kelton, Pa.

"All the supplies ordered came duly to hand, all O. K. Am more than pleased with them all. The climbing irons are just what I wanted; the book of data is immense and the Naturalist's Guide is well worth the price. I wish to compliment you on your method of packing. The goods that I received could hardly have been better fixed for transportation. Am more impressed with your promptness every time I order; and in future, let me say, if there is anything in your line that I need, you may be sure that I shall give you the preference."

H. C. O., Shelburne Falls, Mass.

Our prices are as follows: Strapped, ready for use, by express, at purchaser's expense, \$2.50, or prepaid to any part of the United States, \$3.25. Climbers without straps by express, \$1.50, prepaid, \$2.00.

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HUMPHREYS'

DR. HUMPHREYS' SPECIFICS are scientifically and carefully prepared prescriptions; used for many years in private practice with success, and for over thirty years used by the people. Every single Specific is a special cure for the disease named.

These specifics cure without drugging, purging or reducing the system, and are in fact and deed the sovereign remedies of the World.

LIST OF PRINCIPAL NOS.	CURES.	PRICES.
1	Fever, Congestion, Inflammation.	.25
2	Worms, Worm Fever, Worm Colic.	.25
3	Crying Colic, or Teething of Infants.	.25
4	Diarrhea, of Children or Adults.	.25
5	Dysentery, Griping, Billous Colic.	.25
6	Cholera Morbus, Vomiting.	.25
7	Coughs, Cold, Bronchitis.	.25
8	Neuralgia, Toothache, Faciache.	.25
9	Headaches, Sickheadache, Vertigo.	.25
10	Dyspepsia, Billous Stomach.	.25
11	Suppressed or Painful Periods.	.25
12	Whites, too Profuse Periods.	.25
13	Croup, Cough, Difficult Breathing.	.25
14	Salt Rheum, Erysipelas, Eruptions.	.25
15	Rheumatism, Rheumatic Pains.	.25
16	Fever and Ague, Chills, Malaria.	.50
17	Piles, Blind or bleeding.	.50
18	Catarrah, Influenza, Cold in the Head.	.50
19	Whooping Cough, Violent Coughs.	.50
24	General Debility, Physical Weakness.	.50
27	Kidney Disease.	.50
28	Nervous Debility.	1.00
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THE

O O L O G I S T

Monthly.

50c. per Year.

Vol. VII,

ALBION, N. Y., APRIL, 1890.

No. 4

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

FROM MY Exchange notice in the Nov. OOLOGIST I received about 100 letters: although I had a large number of Eggs to exchange. I could have exchanged more than double the number. W. B. DALEY, Chatham, N. Y.

20 OUTINGS 87 and 88, Evening Grosbeak and other Northern skins for good Southern skins. STEWART E. WHITE, Grand Rapids, Mich.

AUTOGRAPH Papers or Magazines wanted. GEO. E. TRIPP, Box 1405, Woburn, Mass.

MOUNTED Photographs of birds, mammals, etc., for the same or for fine crystals, polished agate and fossils. Send a 20 cent specimen for sample photo. E. S. CHENEY, Pitrodie, South Dak.

WANTED.—Live Quail and Ruffed Grouse. Will pay cash or give any of the following first-class sets in exchange: Nos. 56½, 1 a½, 15½, 182-1-5, 257 1-7, 464½, 477 1-7 572 1-9, 574 1-0, 601 1-7, 691½. FRED JONES, P. O. Box 54, Martins Ferry, O.

TO EXCHANGE.—Maynard revolving seven shot collecting pistol, 22 cal., 23 inch barrel, val. \$10.00. First class skins wanted in exchange. All answered that enclose stamp. JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

ALASKAN and North-western Curiosities to Exchange for side blown, first-class Eggs, or fine shells. Write and send lists first. URIAH L. HERTZ, Kent, Wash.

TO EXCHANGE.—Double-barrel, breech-loading, shot-gun with shells, etc., also Fine Smith & Wesson 22 cal. revolver. For rifle, typewriter or other offers. GEORGE A. WILLIS, Colton, Cal.

A GOOD Baltimore No. 1 printing press with two fonts of type, self-inker. To exchange for first-class bird eggs in sets or singles. R. H. THOMPSON, 1109 St. Paul St., Baltimore, Md.

WANTED.—To Exchange a fine set of two eggs of the Golden Eagle first-class with data, for a good typewriter or a good double-barrel, breech-loading shotgun; or will exchange other western eggs for same. Correspondence solicited. A. Y. WILLIAMS, Box 99, Gonzales, Monterey Co., Cal.

WANTED.—TO PURCHASE COLLECTIONS OF INDIAN RELICS AND OTHER CURIOSITIES FOR WHICH CASH WILL BE PAID. PARTIES HAVING SUCH FOR SALE WILL PLEASE CORRESPOND WITH W. H. H. KING, JACKSONVILLE, ILLS. ayr

American, European and Exotic Butterflies and Moths for cash and in exchange for Birds' Eggs. Birds' Skins. All mounted and perfect. Very rare and beautiful specimens from India, Africa and South America; also live cocoons from India and Europe to exchange for others of this country. Send for catalogue. PROF. CARL BRAUN, Naturalist, Bangor, Me.

WANTED.—Collectors having well prepared and carefully identified eggs, specimens or curiosities for sale or exchange at low rates, in large or small quantities, will please send their lists and prices. All eggs must be blown through one hole smoothly drilled in the side, and without stains for ink-marks. FRANK H. LATTIN, Albion, N. Y. [6]

TO EXCHANGE.—42½ Postage Stamps, all different, for best offer of Birds' Eggs. Address, G. B. HATCH, 20 1/2 St. Roman St., New Haven, Conn.

TO EXCHANGE.—10 fonts of type and a Baltimore No. 1 printing press as good as new, rollers never been used. For birds' eggs in sets or single, and a few birds' skins. W. C. ROBI SON, 1001 St. Paul St., Baltimore, Md.

FOR EXCHANGE.—Skins of Western Birds for skins or desirable Eggs in sets. send lists and receive mine. Only first-class specimens wanted. L. ZELLNER, 839 west 18th St. (near Oak), Los Angeles, Cal.

TAXIDERMISTS' Instruments and supplies wanted. Complete set of tools especially desired. Will give first-class sets and singles; also curiosities. CHAS. TURTON, 1350 Flower St., Los Angeles, Cal.

BIRDS' Eggs to exchange for best offer of type-cuts, logotypes and border. Address with impression of type, LYON CHILDRESS, 620 Woodland Ave. Nashville, Tennessee.

WANTED.—To exchange Birds' eggs in sets, with data, and Birds' skins for the same. L. W. NICHOLS, JR., Richmond, Ill.

WANTED.—Good Detective Camera and outfit, 4x5 preferred. Have choice Bhd skins, 200 varieties to select from. Also mounted Golden Eagle. Address, THEO. D. HURD, Riverside, Cal.

TO EXCHANGE.—The following first-class Skins, A. O. U. Nos.: 622b, 413, 375a, 365, 581c, 519, 530, 458, 556, 552a and 447. Write soon. A. W. NOLTE, W. 16th St., Los Angeles, Cal.

THE OOLOGIST.

EXCHANGES.—Continued.

TO EXCHANGE.—Rare and Handsome Illinois Birds' Skins and Eggs to exchange for eggs in sets. F. M. WOODRUFF, Curator, Nat. Hist. Normal School, Englewood, Ills.

I Want, *at once*, a good set of eggs of the Saw-whet or Acadian Owl. Must be first-class and positively identified. Write, stating cash or exchange price. FRANK H. LATTIN, Albion, N. Y.

TO EXCHANGE.—Indian Arrowheads 40 foreign postage stamps, books and magic lantern with polyopticon attachment. For Ornithological or Oological publications or birds' eggs in original sets with full data. address GEORGE H. ROGERS, JR., P. O. Box 77, Wauwatosa, Wis.

TO EXCHANGE.—A good 33 set-cocking Revolver, worth \$4.00, for set of drills, blowpipe, &c. THOS. E. STUART, Corning, Adams Co., Iowa.

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EXCHANGE.—Mazon Creek Fossils in Iron stone, Nodules Ferns and Plants for Marine Shells, Star-fish and curios. Wishes fine Indian Relics, Minerals and Fossils in quantity. Wishes to correspond with parties who have large collections for sale or exchange. I wish large, showy specimens for my exhibit at the coming World's Fair at Chicago. H. D. HILL, Morris, Ill. a3

WANTED.—Collectors who are interested in stamps, to send for my approval sheets at 25 per cent. commission. Twenty-five varieties for 2c. stamp; 100 varieties for 10 cents; 1000 nicely mixed for 25 cents. 10 extra fine from Egypt, Bavaria, Russia, etc., 25 cents. 100 from Argentine Republic, Mexico, Ecuador, etc., 30 cents. Address, MIDDLESEX STAMP CO., box 1267, Natick, Mass.

WILD POTATOES.—See descriptions on another page. If planted they will grow. If kept in a dry place they will keep for years as a curiosity. I will give a good specimen for every 5 cts. worth of good, first-class Birds' eggs, or every perfect arrowhead, or for every foreign or U. S. stamp catalogued by Scott at 5c. or over, that is sent me before May 1st. No exchange will be accepted for less than five specimens or for over 50. Address, FRANK H. LATTIN, Albion, N. Y.

For \$1.00 worth of first-class Eggs or specimens we will give the OOLOGIST for 1890. For 50 cents worth, a card good for one exchange notice in the OOLOGIST; for 25 cents, a card good for inserting name one time in Directory, or for \$2.00 worth of very desirable ones, we will give a copy of Maynard's Birds of Eastern North America (publisher's price for this work is \$18.00) cash. Send in your lists of duplicates should you desire to exchange for any of the above. THE OOLOGIST, Albion, N. Y.

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Live collectors will not be long in observing the importance of keeping their names standing in this Directory. Collectors desiring to make sales, purchases or exchanges will not only write to the parties whose names appear in this directory for their wants, but will also keep them posted on "bargains" that they may have for sale cheap; publishers having papers, etc., that would be of interest to the persons whose names appear in this Directory, will recognize the importance of placing samples etc. in the hands of Live Collectors and will act accordingly.

Collectors receive as high as Fifty Letters, Labels, Circulars, Samples etc. from having their names inserted one time at a cost of only 10 CENTS in this Directory. Address, THE OOLOGIST, Albion, N. Y.

Roy Dosh, of Stuart, Ia., says "The Directory is working wonders for me."

Burlington, Iowa, March 18, 1890.

EDITOR OOLOGIST:

Owing to a recent change in my address, I sent it for publication in your Naturalists' Directory column and since then I have been overburdened with applications for my catalogue and price list of eggs, while I am not a dealer, but a collector.

Dealers are probably bothered in the same way for lists of exchange, eggs, etc. I understood this column was for collectors. The directory is a good thing, but I would suggest that some distinction be made between dealers and collectors.

Yours respectfully,

C. E. CRAM.

[The Naturalists' Directory is not a dealers' Directory, but a collectors' and we trust the readers of the OOLOGIST will in the future bear this in mind.—Ed.]

BIRDS' EGGS.

C. N. Pickering, 3114 Bell Ave., St. Louis, Mo.

D. T. May, Box 156, Poland, O.

Chas. E. Cram, No. 410 Jefferson St., Burlington, Iowa. [J3]

H. W. Davis, North Granville, N. Y. [Y]

Roy H. Dosh, Stuart, Guthrie Co., Iowa

Frank L. Farley, St. Thomas, Ont., Can

O. E. Crooker, 515 Lake St., Madison, Wis. a3

D. S. Musser, Aberdeen, South Dakota.

BIRD SKINS.

Frank L. Farley, St. Thomas, Ont., Can

STAMPS.

D. T. May, Box 156, Poland, O.

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to Nature. The First Set Cost

HUNDREDS OF DOLLARS TO PRODUCE.

Had we had these same cards made expressly for our patrons, we could not have furnished them for less than \$2.00 for the set, but a great manufacturing firm published them and packed one card with each package of their goods in order to increase its sale. It was in one of these packages that we first found one of the cards and learned that there were *Sixty, all different*, each representing a different species. We obtained a complete set at once and were so highly pleased with them that we immediately made arrangements whereby each of our patrons can obtain a complete set of sixty cards either free or for a mere song.

Each card is beautifully lithographed in many colors—in most cases—as true to nature as small lithographs can be made of the species represented. The size of each card is $1\frac{1}{2} \times 2\frac{1}{4}$ inches. On the back of each is the manufacturing firm's advertisement and on the bottom of the face—but entirely distinct from the lithograph, so that it can be trimmed, if desired, without injuring the beauty of the card in the least—is their trade mark.

The following is a complete list of the species represented. One species, usually both male and female on each card:

Purple Finch
Black-throated Blue Warbler
Bluebird
Redstart
Black-throated Bunting
Catbird
Hermit Thrush
Tree Sparrow
Ruby-crowned Kinglet
Savannah Sparrow
Red-bellied Woodpecker
Curlew Sandpiper
Purple Grackle
Piping Plover
Killdeer
Chestnut-backed Titmouse
Turtle Dove
Hudsonian Chickadee
Chestnut-crowned Titmouse
Song Finch

Mango Hummingbird
Western Bluebird
Barn Swallow
Black-cap Titmouse
Belted Kingfisher
American Crow
Crested Titmouse
Black-headed Goldfinch
Carolina Wren
Mealy Redpoll
Cala. Partridge
Am. Flamingo
Meadow Lark
Bobolink
Blue Jay
Painted Bunting
Pine Finch
Red-winged Blackbird
Oregon Snowbird
Am. Widgeon

Baltimore Oriole
Great Blue Heron
Louisiana Tanager
Lesser Redpoll
Canada Goose
American Swan
Red-headed Duck
Red-breasted Rail
American Coot
Ruby-throated Hummingbird
Bob-white
Downy Woodpecker
Robin
Black-crowned Night Heron
Wood Duck
Goosander
American Egret
Cormorant
Hooded Merganser
Mallard

During 1890 we will present a complete set of these beautiful cards to each of our patrons accepting any one of the following offers:

1st. A complete set will be given without any additional expense whatever, to every purchaser of \$1.00 worth of Birds' Eggs at prices quoted in this OOLOGIST.

2d. A complete set will be given for each new subscriber you may obtain for the OOLOGIST.

3d. For *only sixty cents (60cts.)* we will send you the OOLOGIST for 1890, a copy of the Oologists' Handbook and a complete set of the cards. If you obtain any of your friends to accept this offer it will entitle you to a set of the cards according to offer No. 2.

In case you do not care to accept either offers, No. 1, 2 or 3, but desire a set of the cards, we will furnish them to you as follows: Any one card, your selection, 2cts.; two cards, 3cts.; 12 for 6cts.; 20, our selection, 6cts., or for 12cts. we will send the complete set of sixty cards. Address plainly,

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

WILD POTATOES.

GROW YOUR CURIOSITIES.

We have just obtained a limited supply of Wild Mexican Potatoes. When mature they are about the size of a Catbird's egg, or in other words average about three-fourths of an inch in diameter.

A collector in Vermont, who has raised them, writes as follows:

"Doubtless you have received the Wild Potatoes before this date I have never seen anything in print describing them in any way. About three years ago my uncle obtained five or six of these wild potatoes from some source, I do not know where. They were taken from the mountains in Mexico. We planted them and they grew well. The vines look a little like common potato vines, but more like watermelon vines. The blossoms resemble closely the common potato. The little tubers do not grow in hills, but more like sweet potatoes or peanuts, on the rootlets which form a network under ground. They yield quite well. I should think they would yield at the rate of nearly 90 bushels per acre. They are quite a curiosity to me and I should think every collector would be interested in them."

S. C. WHEELER.

The samples were very satisfactory and we immediately purchased all we could obtain of them. We desire to introduce them this season and in order to do this, we have made the price very low, viz: We will send by return mail prepaid, two Samples for 5c, five for 10c, 15 for 25c, 50 for 75c, 100 for \$1.25.

We have only a few hundred to spare and we predict that a few wide-awake collectors will make a big thing out of them in making exchanges next winter. Remember they are very prolific, easily grown, and that too in any portion of U. S. Order at once or you may be too late. Address,

FRANK H. LATTIN - ALBION, N. Y.

RUBBER STAMPS

FOR

BIRDS' EGGS.

Collectors, now is your chance to get a supply of Rubber Stamps. I will take in exchange Eggs in sets as one-half payment for Rubber Stamps of all kinds. A Self-Inker, Best made, from 1 to 4 lines, for Envelope Corners, etc., Only 85 cts. Formerly \$1.50.

Self-Inker, Large Size, for Letter Heads, Data Blanks, etc., Only \$1.90. Others ask from \$2.00 to \$3.50 for same stamp.

Self-Inking Dating Stamp, complete, Only \$1.50. Others ask \$3.00 for this same stamp.

Send List of Eggs with description of stamp wanted. All kinds and makes for sale or exchange. Always inclose stamp for reply.

Satisfaction Guaranteed.

Don't Let this Chance Go By, it may not appear again.

Address all Orders to

H. E. BERRY & CO.,
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THE MARCH 1889 OOLOGIST contains full and instructions for making a Bird or Mammal Skins. A copy will be mailed you for 5 cts., or 6 c o p l e s for 25 cts.

21f

Improved Pocket Gun or Snip Snap.



The new improved Pocket Gun requires no powder, no caps, is neatly finished, durable and can be carried in the pocket, as it weighs only three ounces. Will shoot shot or bullets with accuracy and force and with a little practice will kill birds on the wing or bring them down from the highest tree.

It is just the thing for taxidermists, as it will kill without spilling the game and makes no report.

Sample prepaid 15 cts., 4 for 50 cts. Iron frame, leather loop, straps of best kind of rubber. Send for sample at once and practice on the Sparrows. Address,

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

THE OOLOGIST

VOL. VII.

ALBION, N. Y., APRIL, 1890.

NO. 4

Caged Eagles.

While on a deer hunt at a lumber camp in the northern peninsula (Iron Co.) I collected a few birds of which I had need, thus calling the attention of Mr. Bethel Bristol, scaler of the camp, to my ornithological tastes. He very kindly took considerable interest in me, promised to try to secure one or more of the Ravens that are found there and proposed that we set a trap for owls. Of course I assented and we immediately set about it. Cutting several stout poles about eight feet high and driving them into the soft mud of the river, we adorned the tops with steel traps suitably baited with the remains of an unfortunate Canada Jay.

Luck was against us during my stay, but some time after I had returned home, Mr. Bristol wrote that he had caught a fine Bald Eagle, asking if I knew of anybody who would like a pet of that description. You may be sure I lost no time in announcing my entire willingness to become its owner.

On New Year's morning the box arrived and I was, to say the least, somewhat surprised to find, not one, but two fine Eagles. One was a typical "Baldy" and was immediately dubbed Bethel, in honor of his captor. The other was very large and at first we took him to be a young White Head, but after sufficient examination of both him and other specimens and after several local ornithologists had passed their opinions, we concluded he was a Golden Eagle. His tarsi are feathered, his bill is different in shape and the build of his claws and body is heavier than that of the Bald Eagle and his tail has a very perceptible ring.

But to resume—the first care was to find a suitable place to keep them. At

first we chained them to perches in the barn, but after witnessing several escapes by breaking the chains, we came to the conclusion that it was "no go." After a few days we finished a cage, completely encircling a tree, in which, after severe struggle, we safely ensconced the birds.

Poor Bethel; from the first he drooped and after a week of miserable existence, he was found one morning, dead. Upon skinning, we found that he had burst a vein under his wing. He is now mounted and stands guard over a case of smaller birds. The Golden Eagle progressed finely and, before many days were past, we were very glad we had one, not two, live eagles. For the amount of meat the one devoured, was sufficient to engender serious alarm in our minds. This was without foundation however, as after a week or so he seemed to become "filled up" and declined to eat oftener than once in three or four days.

As the nights were naturally somewhat cold, we provided him with an old dog kennel well filled with straw. Into this he retired as evening fell. When approached, he stretches out his neck and utters a loud, cackling cry. When a rat or other small animal is introduced into his cage, he pounces upon it and, taking one end in each of his powerful claws, he tears it apart apparently without effort. The pieces are then swallowed whole.

On warm days he delights in a bath, scattering the water in all directions, ever and anon clucking in a satisfied manner.

The love of liberty is still strong within him. One day a Bald Eagle appeared sailing through the sky. At once, and without hesitation, Jumbo, as

our colored man calls him, dashed against the wire screening with which the cage is covered.

STEWART E. WHITE,
Kent Co., Mich.

The Evening Grosbeak.

With an ornithological experience in the vicinity of Detroit covering the last five years, I have met with this species only in the months of March and April, 1889. My first flock was seen on March third. I was in the woods looking up old Hawks' nests, when my attention was directed to a small grove of beech and live oak by having what I at first took to be a number of Bluebirds assembled together and warbling as House Sparrows sometimes do towards evening, but upon a nearer approach, the sounds made resembled the cries of wood frogs and it is doubtless from this close resemblance the birds derived their name. This flock contained at least 200 individuals. They were about evenly distributed in the trees and on the ground, consorting in little assemblies and, while hopping about in search of beech nuts on which the extensively fed, they reminded me of very large, handsomely colored House Sparrows. I penetrated into the middle of the flock, but they continued feeding without displaying the least alarm, in fact appeared almost indifferent to my presence. At times, without any cause for alarm, one would give a sharp chirp and the little party would rise with a loud buzz of wings to the branches overhead where a general wiping of bills and pluming of feathers took place and the spot just left was immediately taken up by another detachment from the trees.

One of the most characteristic features of this species is the large, thick, greenish-yellow bill.

About three-fourths of their entire number were females. The female

differs greatly from the male in color and were it not for the distinguishing beak, might be mistaken for a different species. A male and female before me, taken on above date, measure 8 and 7 $\frac{3}{4}$ inches respectively. The head of the male is blackish-brown, bounded by a broad band of bright yellow across the forehead and a streak of the same color passes over the eye. The nape of the neck and throat are dark yellowish olive, gradually brightening until on the rump, abdomen and lower tail coverts it becomes bright yellow. The female differs by lacking the yellow band on the forehead and streak over the eye, also the large patch of white on the wings. The head is dark brownish and the nape of the neck and back, brownish, shading into greyish yellow on the rump. Throat greyish-brown bordered on either side by a band of black. Breast, yellowish-grey, brown and abdomen and lower tail coverts, white.

This flock was visited every Sunday by several boys with shotguns and rifles and the report of fire-arms could be heard throughout the day. As may be supposed, this weekly persecution thinned their numbers greatly and those that were left, by the middle of April, were exceedingly wild and wary and could be approached within gunshot range only with the greatest caution.

I saw my last specimen April 25th, but in the following month, three adult males were brought me by a friend who claimed to have secured them May 12th.

The last bird of this species, to my knowledge, observed in this locality, was an adult male seen by B. Swales on November 16th, inside the city limits.

Let us hear from others on the habits of this bird.

J. CLAIRE WOOD,
Detroit, Mich.

The Solitary Sandpiper.

This bird is very abundant here during the migrations; in fact they are so plentiful that for several years I have known them under the name of "spotted sandpiper." Where the spots came in had always been a mystery to me.

I have had the good fortune to collect three sets of their eggs. As I take skins as well as eggs, there is no mistake in the identification. I had disposed of the eggs under the above erroneous name, when, by an accident, I discovered that my skins, which were labeled Spotted Sandpiper, were those of the Solitary (*Rhyacophilus solitarius*.) After discovering my error, I endeavored to get my eggs back, but only succeeded in recovering one, which now rests safely in my cabinet.

The first set discovered was in Scott Co., Minn. I am unable to recall the exact date, but it was about the third week in June, 1887. It was on the shore of a lake whose edges were overhung with willows. The nest was placed on the ground in a small opening surrounded by willows. It was merely a depression in the ground lined with grass. It contained three eggs. They were a grayish color and spotted all over with dark brown. They were quite pointed and averaged 1.35x.92.

The second set was found July 4, 1888 in Sherburne Co., Minn., it was placed about forty feet from the edge of a lake end was concealed in a clump of scattered willow bushes. It was a depression in the ground but contained no lining. There were four eggs in the set. They resembled somewhat the preceding set, but had a more yellowish ground color. They were slightly incubated. The parent fluttered around trying to attract my attention from her treasures. Her anxious manner was what caused me to look for them.

The third and last set was on a small island in the river. One side of this

island is a long, low sandbar covered with willows, bushes and some small, scrubby trees.

On the 26th of June, 1889, I suddenly came upon one of these birds in the above spot. After a short search I found the nest. It contained three eggs which I left. I returned in about a week, but they had hatched and I was unable to find any trace of them.

There is no mistake in my birds now, as they have been fully identified by two prominent ornithologists of this city.

WILL DE LA BARRE,
Minneapolis, Minn.

The Summer Redbird.

As the Robin is universally acknowledged the forerunner of spring, so should the Summer Redbird be acknowledged as the bird who heralds approaching summer, as it makes its first appearance here from the middle till the last of May.

The Summer Redbird nests twice a year, first in May, second in July. The male is only equalled in brilliancy of plumage by the Cardinal Grosbeak and the Orioles in this vicinity. He is certainly a beautiful bird, his feathers, as the name implies, being of a bright, solid red, unrelieved by any other color.

The plumage of the female is yellowish, dim in color, verging into a darker color on the wings and tail.

The birds may construct their nest either in a tree or in a bush. I have seen them in both places. When placed in a tree, the nest is usually built at the extremity of a long horizontal limb and is, therefore, very difficult to reach, especially if the limb is of a considerable distance from the ground. Climbing irons are of no avail here, for though they might aid you in climbing the tree, they cannot assist you in reaching a nest which is often many feet from the body of the tree.

The nest of the Summer Redbird is composed entirely of dry, yellowish grasses, its lining and outside being of the same material. The nest is a very frail structure, the bottom being so thin that, when the female is off the nest, one can easily see whether it contains eggs or not. I have seen nests so thin that I could count the number of eggs they held by standing beneath and looking up.

The eggs are usually four in number, the ground color being of a greenish-blue, thickly spotted by dark brown spots which sometimes coalesce around the larger end, forming a dark ring. I once found a nest which contained five eggs of uniform size making a very pretty set.

While collecting in a small town about seventeen miles from Lebanon, last June, I found at least twenty old nests of the Summer Redbird which had lain and hatched in May. This bird, though comparatively rare here, was the most plentiful bird in the vicinity of that town. I procured a good many eggs of this bird while staying there.

One curious fact I have noticed concerning the Summer Redbird, they frequently build their nests in the same tree, on the same branch as the preceding year, even though they may have been robbed the previous year. This some may doubt, but probably persons besides myself have noticed it.

E. CARL LITSEY,
Marion Co., Ky.

The Audubon Ornithological Club.

On Dec. 6, 1889, Mr. Frank Woodruff, of Chicago, reported seeing a Pine Siskin mingling with a flock of Redpolls in the school yard at Normal, Ill.

Mr. C. A. Jones noted two flocks of Bluebirds at Grand Crossing, Feb. 16, 1890.

The Ridgway Ornithological Club, of Chicago, which has been asleep for

about two years, has been reorganized through the efforts of Mr. H. K. Coale, the secretary, and intends to go into active operations once more. The Secretary would like to hear from all old members.

At the last meeting of the Audubon Ornithological Club, Feb. 14, 1890, the following corresponding members were admitted: Dr. S. A. Forbes, Champaign, Ills., and Mr. E. B. Peck, Clifton Springs, N. Y. Several interesting papers were read, among which was one on the *Sayornis sayii* by Mr. A. M. Cox, one on the American Herring Gull by Mr. O. B. Zimmerman and one by Mr. A. R. Hager on the Yellow-headed Blackbird.

Early Arrivals.

NOTES BY WILFRED A. BROTHERTON,
OBSERVER FOR STATION, ROCHESTER,
MICH., BUREAU OF ORNITHOLOGY
AND MAMMALOGY, U. S. DEPARTMENT
OF AGRICULTURE.

The following birds have appeared in this region remarkably early this year:

Ceryle alcyon (Linn.), Belted Kingfisher. Was first observed here March 1st. Saw two or three flying over a mill pond, my attention being first attracted to them by their peculiar cry. There was then more ice on the pond than ordinarily for this winter, yet there was some clear water and Paint creek and Clinton river were not frozen except where dammed up.

Merula migratoria (Linn.), American Robin. Was first reported to me as having been seen by some neighbors, Feb. 12th and 13th. Feb. 16th, I saw two. Heard their notes a few times since, during warmer days, we having had our coldest weather since March 1st. Only two weeks of snow here this winter and farmers plowing nearly every month. Ground not frozen until lately.

Sialia sialis (Linn.), Bluebird. Heard their gentle warbling as I woke up the morning of March 9th, they having evidently arrived in the night.

CHANGES IN THE HABITS OF BIRDS.

Habia ludoviciana (Linn.), Rose-breasted Grosbeak. Once this bird preferred the most secluded retreats in this locality. Now it prefers to come near human habitations. In the summer of 1888 I was called to identify a strange bird that had built its nest in a shaded nook of a vine covered doorway and found it to be a pair of Rose-breasted Grosbeaks that made their home there. They had many a hard battle with numerous European Sparrows, but always came out victorious and succeeded in rearing their young.

A large portion of the ground in the rear of the house was occupied by potatoes. While watching these Grosbeaks the first day I visited the place, I was much interested to see the male Grosbeak pass down one side of a row of potatoes, stripping them of the Colorado potato beetle (*Doryphora 10-lineata*.) Since then, I have often witnessed this habit of these birds.

The nest I referred to was in the heart of this village, one block from Main St. Have often observed them about my own home since then.

The Scarlet Tanager (*Piranga ludoviciana*) vieill was more numerous here last year than formerly and ventured to breed just outside of corporation limits and seemed to have lost much of their usual shyness. Their usual cry is very peculiar and rather harsh, yet they sing quite melodiously. It is a bird of wonderful beauty. This bird was the first bird noticed to eat the Colorado potato beetle. It seems strange that our two handsomest birds should delight in such horrid morsels as the larvæ of these beetles, yet I have seen the Rose-breasted Grosbeak devour

them with as much relish as a Robin does a cherry.

That brilliant Gem, the Indigo Bird (*Passerina cyanea*, Linn.), which usually frequents the densest thickets and, like the Scarlet Tanager, has hitherto been exceedingly shy, has been seen several times about my village home.

Family Rallidae in Minnesota.

Four varieties of this interesting family have fallen under my notice during the breeding season. Namely: Virginia, Rail, Sora, Florida Gallinule and American Coot. These I believe are all of this family which breed here regularly.

The Virginia Rail frequents about the same places as the Sora. Most of the nests which I have taken were placed in a meadow bordering a lake.

The nests are composed of last year's rushes lined with finer grasses etc. They are quite solid structures, but are generally soggy from absorbing the water.

The Rails bend the surrounding grasses over the nest, forming a dome. This is often the means of their exposure. The eggs range from ten to eighteen in number and are a rich buff color spotted with reddish brown. The birds begin to incubate from the first egg.

The Sora prefers to build in more wet places than the Virginia. The nesting habits otherwise are similar.

They utter a peculiar harsh cry during the breeding season. I often wondered what made it until I found out from a more experienced comrade.

The eggs are difficult to describe. They are a grayish-brown spotted with dark reddish-brown. They are from eight to sixteen in number.

I have only found one nest of the Florida Gallinule. I was collecting Yellow-headed Blackbirds' eggs in a

swamp, when I saw the nest. It was fastened to the surrounding rushes and contained seven eggs. I flushed and shot the female close to it. The eggs were creamy brown thickly spotted with brown.

The American Coot breeds here quite extensively. I have often found their nests when looking for those of the Pied-billed Grebe.

The eggs ranging from six to fourteen in number, are laid in a shallow nest of rushes, which are laid lengthwise and across. The eggs are clay color, finely dotted with black.

In spite of what Mr. Davie says in regard to their flesh and about young sportsmen shooting them as game birds, but not hankering after their flesh in riper years etc., I maintain that they are good. I have occasionally run across one while after ducks and when they are cooked I was never able to tell the difference. Perhaps my palate has not been so highly educated as Mr. Davie's, at any rate I never yet have found a person who sports at the Mud Hen who, if questioned, can own up to having tasted of them. They are like a great many other things made to appear worse than they really are.

W. D. L. BARRE,
Minneapolis, Minn

A Half Day's Egging in Los Angeles Co.

About eight o'clock one morning last season ('89) my cousin and I started on a small collecting hunt to stay half the day. As we were passing by some eucalyptus trees, our attention was attracted to a young Mockingbird not able to fly. We soon captured him and put him inside of a handkerchief. As we were crossing a small stream, we came to a sycamore tree in which my cousin had seen a nest, but it had been torn down since he was there, but by the alarmed movements of the female which was a Black-chinned Humming-

bird (*Trochilus Alexandri*) we knew that there must be a nest in the tree and ^{as} so there *was*, which contained two fresh eggs. After packing them up we tied the horses and investigated a hole in the dead limb of a sycamore tree out of which small straws were protruding. It proved to be a nest of Parkman's Wren. My cousin was knocking against the end to enlarge the hole, when all of it came off and it was well that he had his hand under it or the six fresh eggs it contained would have been broken.

We had the good luck to find another set of two eggs of the Black-chinned Hummingbird. As our time had about expired, we started home well pleased with our success.

M. L. WICKS, JR.,
Los Angeles, Cal.

A Bird Funeral.

Having heard the question a number of times, as to what becomes of the bodies of birds which die a natural death, and never having heard anyone say they had found one, and as I never had in my 6 or 8 years of bird hunting, I thought I would write the OOLOGIST concerning an incident which came under my notice about a year ago.

I was sitting in a swing in an orchard when I noticed a number of Bluebirds which seemed greatly excited about something. On going closer, I found they were burying a Bluebird in a hole, perhaps 4 x 2½ inches and had it nearly covered. When it was taken out, I found it to be full grown and could see no signs of its having been shot.

I do not pretend to say this is what becomes of all birds which die. It is the only time I have ever seen such a funeral.

W. W. MOSHEB,
Scott Co., Ills.

THE OOLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

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

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Sample Copies, - - - - - 5c each.

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ALBION, Orleans Co., N. Y.

* * * Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

Jottings.

The Query Column promises to be largely patronized, judging from the number of queries already received. Send them along.

We do not desire to publish articles that have already appeared in some other paper. The OOLOGIST wishes to furnish its readers purely first-hand matter.

Pine Siskins have been abundant throughout the western part of the county, during the entire winter just past.

Look out for nests of the Prairie Horned Lark! It is already getting late for them in New York State.

Editorial.

From ye associate editor.

There was something said in the last OOLOGIST about a "surprise" that would await its readers in the April number.

Well, here it is. The associate editor has no apology to offer for his appearance and nothing to say, except that he has appeared.

He feels at once the importance of his undertaking and realizes the honor he has conferred upon him by being offered the associate editorship of a journal so well-known and widely-circulated as the OOLOGIST.

He only wishes to state that it shall be his highest endeavor to assist in making the little journal more and more interesting each month, and that not only the *April* number, but that *every* number shall prove a genuine "surprise" to all its friends and readers.

Queries Answered.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

H. G. H., Beloit, Col.—Your "White-winged Blackbird," having white spots on the shoulders, and nesting on the ground, laying five blue eggs, and whose song is similar to the Bobolink's; is doubtless the Lark Bunting.

J. P., Kansas City, Mo.—Would like to know if parent birds carry water to their young, or if the young birds do without water. Here is a nut for the readers of the OOLOGIST to help us crack.

W. C. M., Albany, N. Y.—The time of breeding of the Screech Owl in New York is about the same as that of the Crow, that is to say, eggs may be found from about the 15th or 20th of April along into the fore part of May.

B. H. B., Cedar Rapids, Ia. and others.—It is almost impossible, except in some striking instances, to identify nest and eggs without some description of the bird.

G. H. G., Baltimore, Md.—The nest and eggs you describe are those of the Indigo Bunting. The female Indigo Bird is of a general brownish color throughout.

F. C. S., Baltimore, Md.—Your nest found in a cavity of an oak containing five eggs spotted with pinkish is undoubtedly that of the White-breasted Nuthatch.

F. H. D., Fayville, Mass.—Can hardly identify your nests from descriptions. Think No. 1, is English Sparrow. Would not be surprised to hear of this bird nesting anywhere.

A. W. H., San Jose, Cal.—The bird called "Linnet" in your locality, and described by you is probably the House Finch (Ridgw. No. 170.)

F. C. H., Whitby, Ont.—The "*Auk*" is published quarterly in New York City and is the organ of the A. O. U. The subscription price is \$3 per annum, sample copies 75 cents.

The "*Ornithologist and Oologist*" is published monthly at Boston at \$1 per year.

We will take subscriptions for either.

H. G. P., Cazenovia, N. Y.—The Woodpeckers frequently excavate in trees in winter for the purpose of providing places of shelter for themselves.

Stray Feathers.

Mr. Geo. H. Gray, of Baltimore, gives an account of several queer nesting occurrences, the most interesting of which is in regard to a Chipping Sparrow which built its nest in a pear tree when the fruit was young. As the fruit grew, one of the pears protruded itself into the nest and broke the eggs into bits. He also writes of a House Wren which built its nest in the nest of a Barn Swallow.

Mr. V. N. Marsh, of Mt. Union, O., relates a novel incident in connection with a Woodcock. He writes:—"About seven o'clock the other evening, a Woodcock flew into town and flew straight against the electric light in the square, and was instantly killed. I never before knew of a Woodcock coming into a town."

We feel a smile coming unconsciously over our features as we read the inquiry of one of our correspondents, wishing information concerning the "habits and plumage of the 'Gopher'." For his enlightenment we would say that the "Gopher" (whose eggs are listed in our catalogues) is a turtle of the Southern States.

Another simple contrivance for securing eggs from excavations in trees without tearing away the nest is brought out by J. W. Mykrantz of Paola, Kansas, who writes:—"A friend of mine obtained a fine set of eggs of the Screech Owl from a difficult nest without destroying the hole by taking a small hickory stick and bending it to fit the hole. Around one end of the stick he tied a ball of cloth, over which was a thick coating of liquid glue; and he drew the eggs out safely."

A. B. Grindell, of Plattsville, Wisconsin, writes that there have been a great many Snowy Owls shipped into that place this season for sale.

J. H. Fisher, Jr., of Baltimore, Md., reports having taken last season a nest of the Rough-winged Swallow containing four eggs, from a ledge underneath an iron railroad bridge almost over the middle of the stream and a few feet from the water, a rather unusual place for the nest.

Under date of February 27th, Mr. F. Jones, of Martin's Ferry, O., writes us that Robins and Bluebirds are building.

and that he saw a young English Sparrow just out of the nest. An early season is apparent.

Merritt Holmes, of New York City, writes us that he took, last season, in Kansas a set of two eggs of the Poor Will or Nuttall's Whip-poor-will.

There are worse finds than a set of Mallard Eggs. William Turner reports a set of four taken near St. Paul, Minn., last season.

James A. Wood, of Rouse's Point, N. Y., would like to have someone inform him as to how to make a cabinet for eggs and curios.

A. L., of Manitowoc Co., Wis., writes:—"In the latter part of June, 1889, I found a set of three eggs which are, as far as I have been enabled to identify them, those of the Nighthawk. They were deposited on the bare ground in the midst of a large tract of sandy soil lying close to the lake shore. They so closely resembled the surrounding stones and rubbish, that it was through mere chance that I discovered them. No attempt at a nest had been made and the parent birds were nowhere to be seen. I carried them home and placed them in my cabinet, hoping to identify them at some future time. But all sets of eggs of the Nighthawk which I have seen, differ in two respects, that of consisting of only two eggs to a set, and of being more glossy and smooth than mine. Will some reader of the OOLOGIST please inform me what species this is, or whether it is only an exceptional set of the Nighthawk?"

Ernest E. Lee, Covington, Ga., reports an early nest of the Cooper's Hawk. He found a nest containing young birds on March 8th.

Allison Merritt, Washington, D. C.,

reports an exceptional set of Flicker's Eggs. The set, which was of nine eggs, contained two small eggs which measured only about $\frac{7}{8}$ by $\frac{5}{8}$ in. One of the small eggs was found on the ground at the foot of the tree.

Frank Harris, of La Crescent, Minn., reports the following large and early sets:—

Feb. 17. Great Horned Owl. Set of four incubated eggs.

March 13. Great Horned Owl. Set of three incubated eggs.

March 13. Barred Owl. Set of four eggs. Incubation advanced.

First Bluebird of the season was seen March 12th.

Winter Notes from St. Thomas.

On the 10th of March, Mr. O. Foster of this city, shot two White-winged Crossbills on our grounds, both males. These are the first that have been recorded in our county.

Bird life has been quite abundant in and around St. Thomas, the past winter. Juncos, Redpolls, Tree Sparrows, Snow Flakes, Woodpeckers of several species and Crows were the most common birds noticed.

On the 13th of December, 1887, I shot a male Hermit Thrush. I consider it quite uncommon to find a bird like this one so late in the fall.

Early in January, Mr. B. P. Wintemute of this city, shot several Snow Flakes and one was only injured on the wing, which soon healed up and now it appears to be contented with its new home. It eats any kind of seed given it and its owner has good faith that it will remain in good health and spend its summer here when he might gain some knowledge of it, in the breeding season.

F. H. FARLEY,
St. Thomas. Ont.

Solomon says Evening Grosbeaks fly Eastward—And They Fly.

The past winter will be remembered for some time by ornithologists of the Eastern States as one in which the Evening Grosbeak flew well beyond its bounds and made itself known in the East.

This bird is a bird of Western North America, being most common between the Rocky Mountains and the Pacific Coast: It moves irregularly eastward in winter to Michigan, Wisconsin and Illinois, but this past winter reports of its being taken in many parts of New England and the East are common.

Following are a few instances sent us:—

The Evening Grosbeak has been common about here this winter. They seem to have been driven east by the strong gales we have had lately.

In the early part of the winter I came across a flock of about 30, picking the seeds out of decayed apples still on the trees. Would like to know whether any Evening Grosbeaks have been observed in unusual parts in the East.

G. LESLIE,
Hamilton, Ont., Can.

On the 22nd of January my brother shot two Evening Grosbeaks on our grounds, a male and a female both in very fine plumage, and on the 28th of February I shot another, a female within a few feet of where the others were shot. Their stomachs all contained the kernel of the seed of the wild cherry. Four others were taken and several more seen in February in the city

F. H. FARLEY,
St. Thomas, Ont.

"I have received a fine pair of Evening Grosbeaks—the first I have ever seen in Vermont.

S. O. BRUSH,
Chittenden Co., Vt.

On Feb. 11, 1890, while in Jordan, N. Y., a bird lighted in a tree nearly over my head, which on second glance proved to be a female Evening Grosbeak (*Coccothanus vespertina*). Luck was against me though, for before I could get a shotgun the bus with bells on the horses went lumbering along and my bird (so the boy said that was watching her) flew toward the "Other Side of Jordan" and in a three-hour's search, I failed to find her; but as there are lots of large Spruce trees in the village she might easily have escaped my observation. I have skins in my cabinet of (male and female) of this species and am positive as to the identity.

E. G. TABOR,
Cayuga Co., N. Y.

Cowbird Sitting on Eggs.

In reply to R. C. Alexander's query in March OOLOGIST, I will relate an incident in the life of a "Parasite," as the Cowbird is often called.

One bright, warm and summer day of 1889, I had taken my collecting box and gun (for it was unsafe to go into the thicket to which I was bound, without a gun on account of the large population of that dread to every body—*Mephitis mephitis*) and had proceeded about half way through this dense 20-acre thicket, when my attention was attracted by the cries of some small bird. I proceeded very slowly and carefully, determined to find out the cause of this uproar. I had not proceeded very far, when, as I approached a clump of blackberry vines, I saw some small bird dart away in the woods.

Searching through this clump of vines I saw a Cowbird sitting upon on a nest in a small bush. Here, then was the solution as to what undoubtedly caused the uproar, for it was probably the nest of this small bird upon which the Cowbird was sitting. The Cowbird flew off as soon as I approached the nest. It

contained four eggs of some species of Warbler, but I can not say what kind, as the bird disappeared before I had a chance to shoot it.

During all my years of collecting I have seen but this one Cowbird upon a nest. I am *positive* that it was a Cowbird.

If anyone else has had similar experiences, I join with Mr. Alexander and would be pleased to have them related in the columns of the OOLOGIST.

W. E. SNYDER,
Dodge Co., Wis.

Seeing Mr. R. C. Alexander's query in respect to the Cowbird, I thought I would relate a little experience with it which may be of interest to him.

On May 20, 1889, I found a nest of the Chipping Sparrow, completed but containing no eggs, as yet. On the 23rd, I had occasion to pass that way and was attracted by the bird which seemed to be in distress. Remembering the nest previously found, I thought I would take a look into it; so stepping up, I parted the bush in which it was situated and saw a Cowbird sitting upon it. She eyed me an instant and then was off.

The nest and its two eggs was afterwards deserted by the parent birds although no Cowbirds' eggs were laid therein.

W. CONGER MORGAN,
Allany, N. Y.

The Downy Woodpecker.

Although this bird is rather common in my locality, I have only had the opportunity of collecting one set of eggs. A *Dryobates pubescens* commenced, last season (1889), the excavation of its nesting hole in a dead limb of a cherry tree, near the house in

which I was staying. During the excavation of the future receptacle of eggs, I had ample opportunity of studying the habits of this progeny of the red-headed family.

It would drum, drum, drum for hours at a time, with unceasing energy, and continue with its work without a moment's intermission. It would sometimes be so occupied with the work in hand that I could approach clear under the hole, and then I have had to jar the tree before it would become alarmed. In all my observations of this bird I have found it to be very companionable and social in its character; enjoying the society of other birds and not fearing the presence of man. Out of nesting time it can be found continually clinging to the trunk or branches of trees searching for larvae. It also destroys a large number of insects.

The bird in question would, again, absent himself for a considerable period, until sometimes I would grow alarmed, unless my somewhat frequent interruptions of the good work going on, had frightened it away from the nest. But it would return after its holiday with renewed energy and go to work with more vim and vigor than before.

After work of excavation had ceased I waited the required time and on May 23d I concluded it time for the set to be completed and to take the eggs. I cut away the bark from around the hole and found it to contain five glossy, white eggs, laid on the bare bottom of the hole. When I blew them I found the incubation to be from fresh to advanced.

Let us hear from other collectors, on the habits of the Downy Woodpecker.

A. C. LILLARD,
Marion Co., Ky.

Hardly Ornithological.**A FOSSIL SNAKE AND A ROCK-ENCLOSED TOAD.**

In 1876, some of our workmen while digging limestone in our quarry, brought to light a large petrified snake, about four feet in length, all coiled up, which had the appearance of being spotted like a rattler; it came loose from the upper stone all except the head which adhered so firmly to the stone that it broke all to pieces when father tried to chisel it out. We afterward found another more imperfect snake and several petrified fresh water clams only one of which is perfectly shaped. The snakes were given away before I knew the value of such specimens. In vain have I searched for a petrified bird's nest.

But the queerest of all is this. About 12 years ago father and one of his men were quarrying stone in the same quarry when they removed a large stone from off another and discovered an extra large toad lying in a slight hollow in the lower stone. They laid it in the sun a short time when, to their astonishment, it hopped off quite lively. They examined the stones to see how it had come there but could find no visible crack or opening by which it had entered—nothing but the two hollows where it lay between two layers of solid limestone each a foot thick by ten square, which lay closely adhering to each other. The question is how did he come there, had he lain for perhaps Centuries in a torpor between two layers of solid rock? This is a true statement although it may seem impossible. I will close by asking pardon for writing about snakes, clams and toads, instead of birds.

GEO. W. VOSBURG,
Columbia Co., Wis.

More "White Blackbirds."

From W. E. Snyder, Beaver Dam, Wis.—In reply to Mr. A. Drouet's

query in last OOLOGIST, I will say that an Albino Blackbird stayed with a large flock for an entire summer, in the neighborhood of my former home in Southern Illinois. This flock was of about 300 birds. I would say that Albinos of the Blackbirds are very rare, here at least.

From George Vosburg, Columbus, Wis.—I noticed Mr. Drouet's query in the March OOLOGIST "Are White Blackbirds Common"? They are not that I know of, but I have heard of one other than the one he spoke of. It was captured, or rather taken from the nest, by one of my cousins, in Minnesota (Olmstead Co.) over 12 years ago. I don't remember the species, but I think it was the same kind he speaks of.

Queer Nidification.

Thinking perhaps it might be of interest to some of the readers of the OOLOGIST, I will give a note which I made on May 17, 1889. While in company with my father on a trip through the woods in South Duxburg, Mass., we flushed two crows from a pine tree. On ascending I found a nest of the common size and structure, containing four young birds just hatched and four eggs. In blowing the eggs, I found one about to hatch, one dead and two poor ones. I also took two sets of robin's eggs which I think may also be of note. The first set contained two eggs. She left them and built a second nest in which was laid four eggs. She then built a third nest in which was laid and raised three young. The nests were place in the orchard where I had good opportunities to watch their progress.

I would like to ask if it is a very common occurrence with the crow; also if the third party to the nest is a female. Hoping to receive an answer through the columns of the OOLOGIST.

E. S. GLOVER,
Plymouth Co., Mass.

IMPORTANT.

Collectors having eggs of Bridled Tern that they obtained direct from me, will please keep the same in their possession until a question which has recently arisen, can be settled.

My collector on the Bahamas was a man of experience, an old army captain, and who, for the past dozen years, has spent from six to nine months annually in active field work. In '88 and '89 he brought home from the Bahamas several skins of the Bridled Tern and a few eggs which he *positively identified* as coming from the same species. That my collector is honest in his belief in the identity of the eggs, is unquestionable, but one of the best. If not the very best Oologists in the United States—or the world for that matter—writes me that they *are not* the eggs of the Bridled Tern.

My collector is now in Central America somewhere and this matter cannot be straightened until his return which is not expected until July.

While I shall refuse to fill orders for eggs of this species until his return, I shall also refuse to redeem any of the eggs that I have sold for that species during the past eighteen months until the matter can be straightened. Should it be decided that the eggs are genuine, or should it be decided otherwise, notice will be given in the Oologist and I shall straighten the matter to my patrons' entire satisfaction.

In conclusion, I would state that in which ever way it may be decided, that the true eggs of the Bridled Tern are like, that the description of them as given in Davie's "Key to the Nests and Eggs of North-American Birds," is wrong.

Faithfully,
FRANK H. LATTIN.

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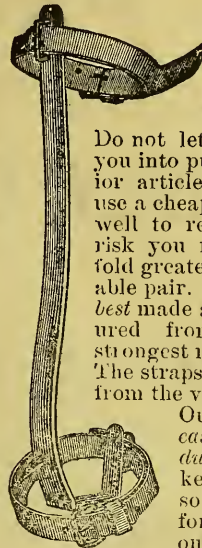
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Vol. VII,

ALBION, N. Y., MAY, 1890.

No. 5

Exchanges and Wants.

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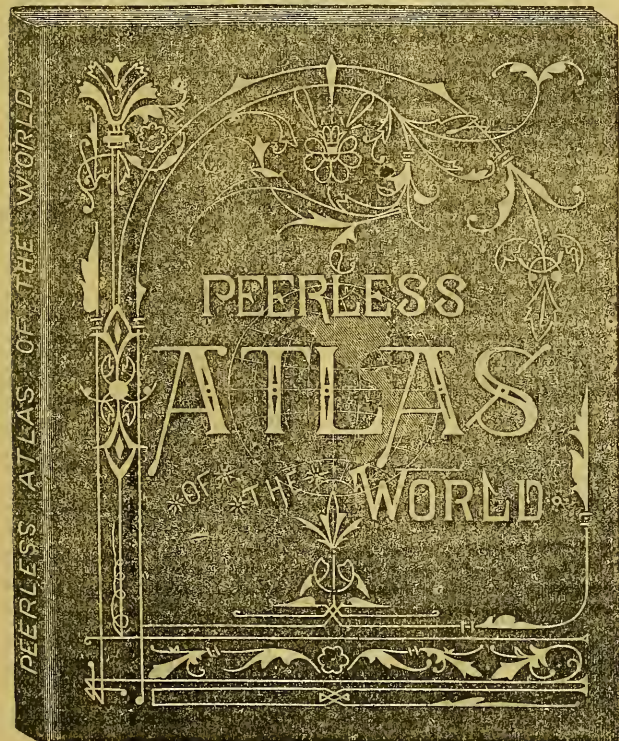
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THE OOLOGIST.

VOL. VII.

ALBION N. Y., MAY, 1890.

No. 5

Do Birds Mate more than Once?

Mr. George L. Stevens, in the January OOLOGIST, in closing his interesting article on the "Capture of a Trumpeter Swan," brings up an important question, and one which I think all ornithologists may profitably consider, namely—the mating of birds.

He states, in concluding his article, that he has read that the Trumpeter Swan never mates but once.

Now I would like to hear the opinions of our more advanced ornithologists on this subject of mating.

For some time I have been a devout believer in the theory of permanent mating, and I think that there is much and weighty evidence going to show that nearly all birds choose their mates but once, and then for life.

It shall be the purpose of this article to set forth some of this evidence and then to invite the attention of all interested, to this interesting subject as they find it in their own fields and woods, and I believe that close observation cannot do otherwise than prove the truth of the theory of permanent mating.

In the first place, I believe we are laboring under a misconception and are too willing to take for granted things that have not been proven; and so let me ask what is it that has led us to think that birds mate anew each year?

If we will candidly ask ourselves what it is that has convinced us and what evidence we have as proof of yearly mating, I trust that we will find that we have come to believe it without any particular proof or evidence. More than this, proof and evidence support just the opposite idea.

Some may say that the many mating antics which we notice every spring between male and female birds are

good proofs of annual mating. But let us look into the matter. Did we ever actually see old birds up to these mating tricks?

I venture to say that these mating frolics are carried on almost entirely by the young "unmarried" birds of the previous year, and that the old birds return to their old nesting sites without any such manoeuvres.

C. C. Abbott says in his excellent work "Waste-Land Wanderings," a worthy consideration is the remarkably prompt appearance of migratory birds at their former nesting sites. Not merely in the same neighborhood, but near the same tree, bush, or hollow in the ground; and a marked disposition to remain there, and particularly to roost there until nesting begins.

"This is especially true of the Baltimore Oriole, which I have often found at dawn on the day of his arrival, examining the remains of last year's nest, and have seen him commence repairs that same day when the structure permitted it. His mate is usually but a few hours later, contrary statements notwithstanding; and the arrival of Madam Oriole was not celebrated by any 'biling and cooing.' They were plainly 'old married folks' before they came." "Of course, in the lives of young birds, there comes a time when the mingled joys and sorrows of courtship must be undergone, and curious scenes are yearly to be witnessed. These frantic efforts to secure the smiles of some fair one have been elaborately detailed by many ornithologists, and it has been inferred that the same ordeal must yearly be repeated; but in very many more instances than has been supposed, I believe the very opposite of this to be true."

With the birds with which we are most familiar, we become acquainted individually. We come to know not only robins as robins, and wrens as wrens, but we recognize individuals among them—those that have characteristics peculiar to themselves.

For four successive years a pair of robins nested in the lattice work of my

porch, each spring coming back to the same place and adding to, and building upon their former nest. I became intimately acquainted with these two birds and know they were the same ones each year. Now, if these robins remained continually mated for four years, why not for life; and if robins, then why not other birds?

Again, it is a highly significant fact that our winter visitants from the North (those that are non-gregarious) almost always appear in pairs. As examples of this, we have the Northern Shrike and Snowy Owl, which, in this locality at least, almost always appear in pairs; and when we remember this fact, as well as the fact that a pair of Flickers have not infrequently been known to jointly excavate, in midwinter, cavities for roosting places, the question at least asserts itself—if mated only for a season, then why these mutual interests in midwinter?

Finally, let us have a few observations from Abbott, which can be explained only on grounds of permanent mating. He says:

"A pair of Cardinal Grosbeaks were found nesting, June, 1883, and the female was readily distinguished by a peculiarity in the coloring of her wings. The pair remained in the locality during the succeeding winter, nested in the old site in 1884, and in 1885 chose a new position in a thicket of smilax a few yards distant. This pair of redbirds were always associated during the two winters that I had them under observation."

"Meadow-larks, if not in loose flocks, as though two or three broods were united, are always in pairs, and there is every appearance of their close companionship during the winter. I have hundreds of references, in my note-books, to single pairs frequenting certain fields the year through."

"The familiar little Sparrow-hawk finally offers a striking instance of permanent bird marriage. A pair of these pretty falcons have for five years nested near the residence of my neighbor, and when the labor of rearing their young was ended, they retired to the shelter afforded by the projecting eaves of my

neighbor's house and there remained until the following spring. These birds were quite as affectionate and mutually considerate in winter, as when they had the common interest of offspring to keep them together."

Now one objection may arise. If birds are permanently mated, why do they not migrate together and why do not males and females arrive simultaneously in the spring?

This is perhaps the most serious objection, but we have only to watch carefully these self-same migrants to become more and more convinced of their life-partnership. It is, indeed, hard to realize that many of these birds should remain together for so long a time, when but a small part of each year is spent in the rearing of the brood. It is quite possible that they do not retire to other portions of our country in company; but it does appear that they part with a mutual understanding to meet again when separations do take place. It is not simply the same male bird or the same female that reappears spring after spring, but the same pair of birds.

Of course, every good rule has its exceptions; and I would make the exceptions to the rule of permanent mating, certain polygamous and polyandrious birds as the English Sparrow and some others; and certain game birds which are subject to great persecution, and where the chances are against both parents surviving until the following breeding season.

And now in conclusion let me ask the question which I hinted at the beginning. What proofs have we for believing, or what reasons for thinking that birds mate yearly or more than once?

NEIL F. POSSON,

A Cunning Blue Jay.

Not many years ago, while I was stopping in a small Kansas town, I had occasion to witness a very laughable

duel between a cat and a Blue Jay. The Blue Jay was sitting on a fence, and to all appearances, having a most enjoyable time, when the cat appeared on the scene. It evidently was hungry, for it began to make preparations to capture the bird.

First it began by crouching down for an instant, then it would spring forward a foot or so, in a most noiseless manner. It kept this up until it was within a few feet of the fence, when it crouched low, then sprang for the bird; but Mr. Blue Jay did not intend to be caught that way. He saw the cat just as she sprang and quickly took himself away to a barn near by, and before the cat could jump from the fence, he pounced down upon it with great swiftness and gave the cat a stunning blow upon its head with his bill. The Blue Jay then flew away in triumph. I never will forget the look on that face.

JOHN PERRY,
Kansas City, Mo.

Habits of the Evening Grosbeak.

This strange bird was very aptly named. Its many shades of yellow varying from the brightest to the dull-est, the flashes of white on his wings, and the sombre hue of his head and wings all serve to suggest the gorgeous sunset and the following twilight.

In a recent number of the OOLOGIST, I gave a short account of a flock I discovered. In this flock, it will be remembered, the males and females fed in separate bands. Although I have taken observations on many other flocks since that time, I have failed to find, except in a single instance, this sharp division of the sexes.

The Evening Grosbeak may be found in "openings" of deciduous woods, maple preferred on account of the mast it produces. The chances are that their sharp senses would make them

aware of your presence long before you had a suspicion that the birds were about were it not for the loud metallic call of the males; this is rarely uttered while feeding, but by standing still a little while it may be heard. When the flock discovers you they will fly into the trees directly above their feeding place uttering a *cheeping* note and, after settling on the branches the males give a perfect chorus of alarm whistles so loud and frequent that you think the flock numbers three times as many as it actually does. Before long, if you have restrained your desire of collecting, an old male flies towards you and, alighting near by, looks inquisitively into your face and, as if dissatisfied with the result of his observations, he utters a loud whistle, upon which, the whole flock joins him. While assuring themselves as to your identity, they utter a faint soliloquizing note like the distant chirping of a flock of English Sparrows. If, during this you remain perfectly still, moving not in the least, they become reassured and again address themselves to their food. One by one they sail to the ground on outspread wings, little by little the alarm notes of the males become fainter and fainter, and at last cease altogether; and before long quiet again reigns in the Grosbeak family. Their carriage and the wise manner with which they scan the ground reminds you of a flock of Robins, and, half closing your eyes, you amuse yourself by imagining that spring is already here, when your thoughts are suddenly recalled by the hasty alarm note of that inquisitive old female whose bright eyes have detected some slight movement on your part and who thus communicates her discovery to the flock. Instantly, with a rush of wings, they rise to the trees turning their heads curiously from side to side to find the cause of alarm. While the wise heads are thus engaged, the younger members improve their time

by nipping the young buds and branches, assuming, while occupied in this precarious business, a variety of posture that astonishes and delights you. By this time your patience is exhausted and, selecting the old patriarch of the flock, that one in the middle with the jet-black wings and tail, you discharge both barrels of your gun into the band. With a startled cry they dash from the tree, steering in and out among the trunks with a dexterity and swiftness that a Ruffed Grouse might envy; rising high in the air in a compact flock, circling around a few times, as if loth to leave a place so replete with good things, then darting away to less attractive, but safer woods.

Turning your attention to the fallen you first set about catching yonder wing-tipped female and, attempting to grasp her under the wings, get so well bitten for your pains that you are glad to let go if she will. Presenting a stick you find that she can be easily transported from place to place by the grasp of her powerful bill alone.

Besides the maple mast and buds the Grosbeaks are very fond of cedar berries and the red haws that grow in the woods.

As spring advances the males may be heard uttering their quaint song at all hours of the day. I am inclined to think that instead of vying with the Barred Owl in vesper song, the Grosbeaks, like other sensible birds, retire to their evergreen roosting place as evening approaches.

This Grosbeak comes ever year but is so irregular in his comings and goings that it is very difficult to decide whether it is a winter resident, visitant, or only a migrant. My opinion is that although they undoubtedly remain in small bands during the winter, yet the bulk passes north in the months of March and April. In those months a flock can nearly always be found by search in suitable localities.

STEWART E. WHITE,
Kent county, Mich.

Evening Grosbeaks Again.

In addition to the instances cited last month of the Evening Grosbeak occurring in the Eastern States, we also have the following:

A few days ago a party of hunters shot two fine specimens of the Evening Grosbeak, in this vicinity. This is quite unusual as the bird is not often seen so far east. The birds were identified by the State Ornithologist,
M. L. F.,
Williamsport, Pa.

On the morning of March 18, 1890, while waiting for one of my friends with whom I was going gunning, I heard a slight noise in a maple tree standing near and, on looking up, saw two birds which I did not recognize. I fired once and missed, upon which they flew to the top of a large elm tree in one of the neighbor's yards. After waiting a few minutes they flew down into a group of spruce and cedar trees. Here I crept up and secured one which proved to be a female. The other flew off so that I could not obtain it. Sex of the bird that escaped not known. Contents of stomach, parts of cedar buds. The bird has been identified by Professor Carl Braun.

GEORGE P. SHEPHERD,
Bangor, Me.

The Pileated Woodpecker in Florida.

This handsome Woodpecker can hardly be classed among the rare birds, but is becoming rarer as civilization advances. Years ago it was said to have been common, but as the hummocks and swamps have been cleared up, he has retreated farther and farther, until now he is found only in the more secluded hummocks. In these places he may be found at all seasons, busily engaged in pecking out grubs from the many rotten logs and stumps to be

found in these resorts. Like the Flicker, he will alight on the ground, if by so doing, he can more easily peck out his grub.

The breeding season commences in the latter part of March or first of April and only one brood is raised.

The nest is placed in some high dead snag or tree.

I have taken but one set of eggs of this bird and these I found by accident more than anything else. While hunting bird skins, I noticed a large hole way up in the top of a dead pine snag, but paid but little attention to it, as it seemed to be an old hole. When, in looking for a small warbler, I passed near the root of the snag, and noticed that the ground was fairly covered with bits of rotten wood and bark. Looking up, I found the hole to be a new one, a fact I had failed to detect before. At this, I found a club and began to pound on the tree. For a while nothing appeared, but presently out came the head and neck of a female Pileated, as if to inquire what all the disturbance was about. My delight at this was without bounds, but was somewhat checked by the thought that I had no climbing irons with me, they being in my room at the college, which was good two miles distant. A walk of four miles was not very pleasant to think of, but I could not think of leaving the nest without investigating it, so I put off for the college.

For brevity, I will say that after a lapse of two hours, I was again back to the nest. After a short rest, I strapped on my climbers and securing my hatchet, as I fully expected to have to cut some, as I thought these birds made their nests very deep. Imagine my surprise then, when, after climbing up to the hole, I thrust in my hand and found the hole to be only seven or eight inches deep and in the centre I felt three fine large eggs snugly cushioned on a soft bed of chips. These I immediately put

in a loose pocket, a safe receptacle for them during my descent.

On examining the hole, I found the entrance to be nearly five inches in diameter and to extend in about as far before turning down. The excavation was very shallow, only seven or eight inches, but very large and roomy. The bottom was covered with soft bits of rotten wood, making a soft bed for the eggs.

I was getting rather tired of hanging on by this time, so made my descent without mishap. I next set about to get the birds, which, by a small degree of caution, I accomplished; rather cruel, to be sure, but I wanted them for the college museum.

After carefully packing up my birds and eggs, I started for the college, as it was about time for dinner and I was certainly hungry enough to eat with a relish.

Dissection showed the female's stomach to be empty, while the male was fairly gorged. I suppose he had been to breakfast and would have soon relieved his better half while she filled up.

On blowing the eggs, I found the embryo to have just begun to form. They were pearly white, very slick and glossy and were, to my notion, the finest eggs I have ever taken.

A. L. QUAINANCE,
Lake City, Fla.

Bird Protection.

I have come to the conclusion and I am sure many others also have, that there are too many egg and bird collectors in the field.

I do not mean this to refer to anyone who really takes an interest in birds and desires to study them and their habits, but the class of "collectors" who go about pilfering nests and killing birds indiscriminately. Their manner of collecting is precisely like

that of an old woman gathering up her hens' eggs or killing a few chickens for market. She is just as much of an ornithologist or oologist as they are. In fact their object in view is clearly mercenary.

This manner of collecting should be stopped; and anyone who will stand by and see our native birds being rapidly exterminated should be ashamed of himself.

Two other things to be done away with are "pot-hunters" and "plume hunters." Take for instance the Wild Turkey, it is surely following the fate of the Great Auk. As to the doings of the "plume hunters" I can not do better than to refer you to Dr. F. W. Langton's "Destruction of our Native Birds," in OOLOGIST, vol. 5, No. 4.

There is a fourth enemy to our poor birds; this last is the English Sparrow (*Pugnacius trampus*) and the destruction caused by these pests everyone knows.

I think the way these evils could be remedied would be this: In the first place laws should be made forbidding the collecting of eggs except for strictly scientific purposes. These laws should be very stringent. The next two evils could be gotten over by strengthening the game laws.

The last is only to be put down by uniting and striving "with tooth and nail" to drive out that little pest, the English Sparrow.

Now we should not let these matters stand, they have already stood far too long and I make an appeal to every true ornithologist and oologist to help remedy these great evils.

Could a society not be formed to more quickly obtain these objects?

I would like to see an article in the OOLOGIST written by a more experienced hand than mine. I hope that the ornithologists and oologists of America will remember that collecting is but a

secondary consideration and that study is the first.

G. M. LESLIE,
Hamilton, Ont.

The Chinese or Mongolian Pheasant in Idaho.

A few years ago several pairs of this gay-plumaged bird were imported from their native home in China, and turned loose in Oregon, the State Legislature giving them the protection of the game laws of that State. Since that time these birds have increased rapidly. A pair of old birds will in one season hatch and bring up sometimes as many as three broods of young, each brood ranging from 12 to 25 young birds.

During the spring and summer months their shrill cry, very much resembling their domestic cousin's voice, may be heard in the meadows and wheat fields. In the winter they betake themselves to the low ground around small lakes and along grassy river bottoms. I have often while hunting ducks, scared them up among bands of snipe and wild ducks.

The male of these birds is beautiful. The breast is a brilliant red-brown. The back and wings are of a bright straw color mingled with green and bronze. The neck is bright green with a bronze tinge and a ring of pure white feathers encircles the neck. The head is surmounted with two tufts of feathers, resembling horns, and the tail which is composed of several long feathers, is of dark olive color. The female is of a duller color, being dark olive-purple striped with lighter gray bands. The meat of these birds is very white and delicious; fully equalling that of the Sabine Grouse (*Bonasa sabinii*), or the Dusky Grouse (*Tetrao obscurus*).

CLAY MCNAMEE,
Moscow, Idaho.

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

TERMS OF SUBSCRIPTION.

Single Subscription, - - - - 50c per annum.
Sample Copies, - - - - 5c each.

The above rates include payment of postage by us.

Send stamp for Premium List.

All subscriptions must begin with either January or July issues.

Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped, and all arrearages must be paid.

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

. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

Jottings.

"I hear from many a little throat

A warble, interrupted long;

I hear the Robin's flute-like note,

The Bluebird's slenderer song."

"Brown meadows and the russet hill,

Not yet the haunt of grazing herds,

And thickets by the glimmering rill,

Are all alive with birds."

We are in receipt of a fine portrait drawing in natural colors of the Cooper's Hawk from the hand of Robinson Watters, Baltimore, Md. The drawing speaks well for Mr. Watters as well as for *Accipiter cooperi* himself.

We learn from Prof. B. W. Everman, Terre Haute, Ind., that the ornithologists of the Mississippi Valley are arranging to have a meeting of American Ornithologists at the meeting of the American Association for the Advancement of Science at Indianapolis next August. He assures us that enough replies have already been received to insure a profitable meeting. Surely the advantage of such a meeting where ornithologists can get together and become acquainted, is great, aside from the profit and benefit that will be derived from the papers and discussions given. All, who possibly can, should embrace this opportunity.

Our contributors should not become discouraged if their articles do not appear at once and sometimes not at all. If they could see the piles of manuscript that comes before us monthly, from which we are to select a few of the most interesting articles and such as are of the most value to the greatest number, they would think it nothing strange that their articles are sometimes overlooked. Remember we want articles on the rarer birds and on novel and unusual occurrences, and then—"If at first you don't succeed, try, try again." We mean to treat all fairly.

We have on hand several county lists of birds which have been sent us, and we only regret that want of space prevents us from publishing. Such lists, while they are of great local value, are not of general interest to readers all over the country, and so we are obliged to omit them.

Our Question Box.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

H. A. H., Edinburg, Ind.—It is a common occurrence for the Crow to assail Hawks and Owls. It seems to be the Crow's delight to torment these larger birds.

J. P., Kansas City, Mo.—In reply to your query in last number we have received light from some of our readers. J. H. Fisher, Jr., Baltimore, Md., writes that he thinks birds give their young, water in some way. He says he has tried to raise some young crows without water and they all died and again he raised some by giving them water. Charles L. Weeks, New York City, thinks that the birds moisten the food given to their young and thus supply their thirst. Claude Bell, of York, Neb., is of the opinion that the parent birds carry water in their bills and with this idea agrees the testimony of E. K. C., who writes: "I have seen Canary Birds water their young. They would go to the water and fill their bills, and give it to their young the same way they feed them. I think other birds do the same."

H. H. R., Middle Granville, N. Y.—The name "Hen Hawk" is applied to nearly all the larger Hawks. The "Hen Hawk" of your locality is probably either the Red-tailed or Red-shouldered. The "Shitepoke" is doubtless the American Bittern.

B. S. B., Rochester, N. Y.—There is a stringent State Law restricting the taking of birds and eggs, but as it is rarely enforced we hardly think it will interfere with anyone who is collecting from a purely scientific standpoint.

J. H. H., Hammondsport, N. Y.—Persecution has made the Passenger Pigeon and Raven rare in almost all parts. As to the other birds you mention, think a careful search will reveal them.

R. S., Kansas City, Mo.—Your yellowish eggs spotted with chocolate markings and pencilings and found in a hole in an apple tree, are doubtless the eggs of the Crested Flycatcher.

C. T. D., Raciney, Wis. and many others.—It is impossible many times to identify with certainty, either birds or eggs without having the specimen before us.

P. E. R., Sewickley, Pa.—As to how to make bird lime, we would refer you to an article in the *Young Oologist* of

August, 1884—page 59. Or you can obtain bird lime already prepared, from almost any natural history dealer.

J. V. C., Marathon, Ia.—In reply to your query concerning the general colors of the Solitary Sandpiper, we quote from Maynard's Birds of Eastern N. A.: "Adult. Above, dark-brown, streaked on head and neck, spotted on back, and widely banded on tail, with white. Beneath, white, streaked on neck and breast, and banded on sides, under wing coverts, abdomen, and under tail coverts, with dark-brown."

W. I. C., Norwalk, Conn.—The nests and eggs of the larger hawks are so similar in description, that it is impossible to identify yours from description given. Isn't it the Red-tailed or Red-Shouldered?

J. P. J., Kelton, Pa.—The bird, nest and eggs described by you are referable to the Hairy Woodpecker.

S. E. D.,—The eggs of the Downy Woodpecker are deposited during the second or third week in May, in New York and New England, but much earlier as we proceed southward.

P. C. S., Simcoe, Ont.—Your large hawk of an ash-blue color, barred with darker on the back, well feathered down the leg, and having red iris, accords more nearly with the American Goshawk than any other.

P. H. H., Wenham, Mass.—1. Would like to know if Woodpeckers, Chickadees and others birds nesting in cavities in trees, use their excavations more than one season. Who will tell us? 2. The Cooper's Hawk nests in your vicinity about the middle of May.

Name mislaid.—"If we collected a set of eggs and did not kill the bird, how would we write the 'identity' in the data, if we were positive what kind of eggs they were?" Well, I think we would be tempted to write, as we have often seen it, "s-h-u-r-e."

W. H. P., Ashtabula, O.—Have used cotton batting in egg cabinets for

several years and was never troubled as you state. Do not know where you can get the material you mention. Eggs in collections should not be exposed to the light then, too, pink cotton would not fade.

Scraps from Many Note-Books.

Herbert W. McBride, Waterloo, Ind., writes of a set of two eggs of the Red-tailed Hawk taken by him March 29, which were unusually large. They measured respectively 2.50 x 1.98 and 2.49 x 1.99 in. The nest was in a black-ash tree, 65 feet from the ground.

F. C. Browne, of Framingham, Mass., writes us that a correspondent of his in Western Michigan informs him of having taken on March 6th, a set of three eggs of the Great Horned Owl, the thermometer being 30° below zero that morning and had been below nearly every morning for two weeks.

H. A. Hess, of Edinburg, Ind., relates the taking of a Trumpeter Swan by Mr. George Dudley on the Clifty Creek, being the third bird of that species taken in that vicinity in a period of five years. Although a not uncommon migrant there, he says it rarely stops on their waters.

Under date of April 12, A. E. Kibbe, of Mayville, N. Y., writes: "I have just mounted two nice Trumpeter Swans sent from Indiana. One measured 7 feet 2 inches from tip to tip, 4 feet 7½ inches in length and weighed 16½ pounds."

M. & C. Quechee, Vt., sends us an interesting account of a trip after eggs. Among other things, they mention taking 8 eggs of the Ruffed Grouse which were as dark as Prairie Hen's and spotted.

Through a letter from Mr. N. R.

Christie, of Rye Patch, Nev., we learn something of what collectors in that "far west" country have to contend with.

Mr. Christie inserted an advertisement in the county paper—soliciting bird's eggs of certain species and stating that he would pay cash for the same. In the most prominent column of the next issue appeared an article entitled "Bird's Eggs—A Penalty for Taking them From their Nest," which article, after calling attention to Mr. Christie's advertisement, quoted the law on the subject and stated the penalty for taking the eggs of birds, and then closed with a warning injunction that trouble and "jails" awaited those who disturbed such nests. Surely the collectors of the Silver State are not to be envied. It seems at least, that the State Legislature ought to make some distinction between scientific collecting and "robbing bird's nests."

An exceedingly early nest of the Cardinal is reported by Harold S. Stabler, of Sandy Spring, Md. He reports a nest begun on February 4th.

Among the many records of early arrivals which have been sent us, are Robins the last week in January, Bluebirds, February 23rd, and Red-winged Blackbirds March 2nd, by W. E. Aiken, Rutland Co., Vt. Also by F. Leon Englebert, Des Moines, Ia., Chipping Sparrows and Phœbes, February 18th; and Bluebirds, February 21.

L. E., Fairview, Mo., asks a rather hectic (?) question. He says: "Do Birds die with consumption? Last year one of my pet birds, a parrot, died very suddenly and, not knowing the cause, I took him to one of my friends to be examined and preserved. He examined him and when he told me the bird died of consumption, I laughed

at him. Then we went to a doctor who is quite a bird crank himself. He told me the same and not until then did I believe it. Some of my friends (collectors) do not agree with me and I would, therefore, like to have the opinion of the majority."

Under date of April 7th, Clarence A. Smith, of Gainesville, Fla., writes: "Nesting is just begun here. Loggerhead Shrikes have finished building and Mockingbirds have just begun. I took a set of three Red-bellied Woodpeckers to-day, also observed a pair of Red-headed Woodpeckers making a cavity in a dead pine."

On the 19th ult., ye Associate Editor and E. J. Botsford, while enjoying a ramble near Medina, found, in a dense thicket of underbrush in a marsh, and impaled on a sharpened twig of one of the bushes, a Robin's head entire. Only a few rods away was an orchard, in which a completed nest of the White-rumped Shrike had just been found with the birds near by, and to them was probably traceable the Robin's tragedy.

W. A. Merritt, Washington, D. C., reports some early sets of Crow's eggs, as follows:

March 29, 1890. A set of four eggs of *Corvus frugivorus*.

April 5th. A set of five eggs of *Corvus frugivorus* and one of five eggs of *Corvus ossifragus*.

Percy Smith, Simcoe, Ont., writes: "A few days ago we noticed that the vegetables in our cellar were being gnawed, presumably by rats. I set a trap, but caught a beautiful Flying Squirrel. Length, 10 inches; extent, 8 inches. I made a skin of him. As these little fellows have been in the cellar other winters, I think that they must hibernate in such places."

Prairie Warbler.
(*Dendroica discolor*.)

This bird rarely breeds here, but on the 21st of May, 1888, I had the good luck to find one of their nests.

While passing through an old field that had grown up to a thicket of sassafras and other bushes eight to ten feet high, I was attracted by the bird's peculiar chirp. On looking around, I espied the nest in a small hickory bush, about three feet from the ground.

The nest contained one egg then, but in four days, the set of five eggs was complete.

The nest was a model of neatness, very compact and deep, measuring on the inside $1\frac{3}{4}$ inches deep by $1\frac{1}{2}$ inches across. It is composed of grass, bark, lint and down, from the milk-weed; lined with horse hair, feathers and fine grass.

The eggs measured .63 x .46 and were slightly tinged with greenish, speckled with chestnut, with lighter shell markings in the form of a wreath, around the large end.

F. C. POINDEXTER,
Bartle, Indiana.

Rose-breasted Grosbeak.

I have not seen much in the OOLOGIST about the Rose-breasted Grosbeak (*Zamelodia ludoviciana*) and as it has been my luck to find several nests, I write this article hoping it will be of interest to the readers. This bird is noted for its voice and beauty. It is plump and round. The male's head and neck are black, bill whitish, wings and tail white and black, the breast and under wing coverts, rosy or carmine red. The female's wings and neck are blackish and olive brown; the under wing coverts are yellowish. The nest is of a shallow structure, made of twigs, etc., and is rather oval in shape; the eggs are three to five in number.

They are of a bluish green or greenish blue in color, spotted thickly of reddish brown. Sizes range from .95 to 1.08 in length by 70 to 76 in breadth.

GLOVER M. ALLEN,
Middlesex Co., Mass.

Winter Birds in Spring.

March 28. On looking out of the window I was very much surprised to see the ground covered with snow, in some places to the depth of two feet. Only the day before I had seen the early spring birds. The weather was very cold, but I could still hear the song of *Melospiza melodia*.

March 29. Snow again fell, and it brought numbers of Redpolls, Tree Sparrows, and; much to my surprise, a large flock of Snow Buntings and Crossbills, into the city. The Snow Buntings congregated in a vacant lot where I procured three of them, and the Crossbills stopped to feed on the cones of some hemlocks across the road. Of these I got five, all American Crossbills. Concluding that the main flock must be somewhere in the vicinity of the city, I took my gun and went in search of them. After considerable walking we found the flock which, on rising, seemed to fill the air like so many huge snowflakes. We procured as many of these as were wanted and among them a male, with clear white head and breast, and in place of the greyish-black and chestnut markings on the back, it was jet black; and we also secured two females of the usual color, alive, they being slightly "wing-tipped." We saw several more of these White Buntings, which I believe is their summer plumage.

On our way home we saw a large flock of Robins, Meadow Larks, Juncos, Song and Tree Sparrows; also some Blackbirds and Redpolls, near a hemlock wood, where they could fly for shelter from the storm. It was proba-

bly the recent snow storms which drove these northern birds back, but notwithstanding this, was it not very late for them to be loitering here?

CHAS. C. TREMBLY,
Oneida Co., N. Y.

Some "Pun"-gent Sentences.

A "tough" bird—the jay.
A cheating bird—the gull.
A boasting bird—the crow.
A dishonest bird—the robin.
A rude bird—the mocking bird.
An untruthful bird—the lyre bird.
A low spirited bird—the blue bird.
A "cabinet" bird—the secretary bird.
E. J. BOTSFORD,
Medina, N. Y.

Great Gray Owls.

On^r January last there was shot in Franklin Co. a Great Gray or Cinereous Owl; also one was taken in Chittenden Co. the same week and the two specimens are now in my collection.

This owl is a very rare visitor in Vermont.

There were several Snowy Owls captured here this winter.

S. O. BRUSH,
Chittenden Co., Vt.

A Valuable Work.

We have received from Messrs. W. W. Crooks & Co., of Gilman, Ill., a copy of Jordan's "Manual of the Vertebrates" of the Northern United States, including the district north and east of the Ozark Mountains, south of the Laurentian Hills, north of the southern boundary of Virginia, and east of the Missouri River—inclusive of marine species. Fifth Edition.

The design of the work is to give to students and collectors a ready means of identifying the Vertebrate fauna of the region which it covers, and of recognizing the characters on which the families, genera, and species of these animals are founded.

The work is greatly condensed, giving the reader "much in little." All descriptions are very concise with as few repetitions as possible.

The order of arrangement, is that

now generally favored, namely of putting the lowest forms first. The arrangement of the fishes is essentially that of Jordan and Gilbert's "Synopsis of the Fishes of North America;" the arrangement of the Batrachians and Reptiles is essentially that set forth in the various papers of Prof. Edward D. Cope; while in the nomenclature and classification of the Birds, the author adopts the "Check List of North American Birds," published by the American Ornithologists' Union.

The work covering 375 pages with index, enumerates 487 species of fishes, 43 species of batrachians, 95 of reptiles, 403 of birds and 117 of mammals.

A fair idea of the plan of the work can best be given by quotations from it. The following will give some idea:

"Class E. *Pisces*. Subclass *Selachii*. Order *Raiæ* (The Rays.) Family *Pristididae* (The Saw-fishes.) Genus *Pristis* (Latham) 24 *P. pectinatus* Latham. Saw-Fish.

Saw with 25 to 28 pairs of spines. Length 10 feet. West Indies; occasional N. (Lat., comb-toothed.)"

"Class H. *Aves*. Order *Pici*. (The Woodpeckers and Wrynecks.) Family *Picidae* (The Woodpeckers.) Genus *Colaptes* (Swainson.) 852. *C. auratus* (L.) Yellow-Hammer. Flicker. Golden-winged Woodpecker. High-Holder. Head ashy, with red nuchal crescent; back drab-color, barred with black; rump white; below pinkish brown shading into yellowish; a black crescent on breast; belly with numerous round black spots; shafts and under surfaces of quills golden yellow; male with a black maxillary patch. Length 12½. Wing 6. Tail 4½. Eastern North America, abundant."

The student will at once see the value of such a work. Speaking only of the treatment given the class *Aves*, it is too valuable a work for any ornithologist, (experienced or amateur) to be without. One thing with which many bird students all over the country are unfamiliar, is the classification of our birds. Oftentimes, those who have an excellent knowledge of ornithology (specifically speaking) are lost when they come to tell to what family or order a given species belongs.

The work under consideration is just what every bird student needs to overcome these difficulties as well as to readily identify any specimen of doubtful identity.

One thing that strikes us as almost

marvelous, is the amount of knowledge that is crowded into a small space. 1145 species are treated of thoroughly and minutely, enabling anyone to identify specimens readily therefrom, and all inside of 375 pages.

Everything is concise, sufficient, to the point, and just what every student of any of the forms of the *Vertebrata* should have by him for ready reference.

Methods in the Art of Taxidermy.

We desire to call the special attention of the readers of THE OOLOGIST to Mr. Oliver Davie's new work "Methods in the Art of Taxidermy".

Mr. Davie is well and favorably known to American Ornithologists and Oologists as a publisher that always gives his patrons *two hundred cents on a dollar*.

The original plates for his new work have cost him \$1,000 in cash. We have had the privilege of examining 40 of them and must say that they alone without text make the Art so plain that if you could see them we are certain you would quickly give \$5.00 for duplicates. Mr. Davie has already devoted six years of time and labor on this work, and now to publish 500 copies as he proposes will cost him \$2,500 IN CASH. Already he has received subscriptions for 100 copies but before he can publish the work he needs 400 more. We trust that he will find a goodly portion of this number among the readers of THE OOLOGIST. He asks no money until the work is published. Write him at once for subscription blank properly fill the same and return it to him by next mail. To any of our readers who will write Mr. Davie for a blank and properly fill the same, stating to him that they subscribe for his work, through the recommendation of the publisher of THE OOLOGIST, we will, if you are not more than pleased with the work when published, give you \$5.00 in cash for your copy and present you with a year's subscription to THE OOLOGIST, for your trouble.

We do not receive *one cent* from Mr. D. for making this offer; for writing this article; or for the two page adv. in this OOLOGIST, but make and publish the same for the benefit of our patrons that they too can aid Mr. D. in completing this valuable work, from which he anticipates no financial reward.

A New Work on Taxidermy.

Important to Taxidermists, Naturalists and All Persons Desiring to Learn
the Art of Taxidermy.

In reply to the many inquires regarding the progress of my large work on Taxidermy, which has been mentioned at various times by the press, I desire to make the following announcement. Before giving the plan and style of publication a description of the work is necessary. This, however, must be very brief.

The text is written by Oliver Davie and the illustrations have been made by Dr. Theodore Jasper. The drawings, which are at present in the original India ink, were begun over six years ago and were made only at times when inspiration prompted. The number FIFTY FULL PAGE PLATES with several hundred figures representing every stage in the skinning and mounting of Birds, Mammals, Reptiles and Fishes, together with characteristic attitudes of various groups of the animal kingdom.

Some idea of the minuteness of the illustrations may be obtained by examining the plate illustrating the skinning of a bird. The common Robin is taken as an example. The plate contains ten figures, illustrating every stage of skinning the bird; figure 1 showing where to make the first cut and every procedure is illustrated until the bird is completely skinned in figure 10. The companion plate, on the mounting, contains fourteen figures showing every procedure in making the artificial body, adjusting the wings, filling the neck skin, wiring the legs, inserting the artificial body, sewing up the specimen and mounting it on a temporary stand. This is followed by another plate showing the Robin bound in threads and complete. Here on the same plate are figures showing how to obtain accurate running and stepping attitudes of birds, based upon simple anatomical principles.

Plates with figures illustrating all the variations in the skinning of birds are given and a new method of skinning and mounting birds called the "breast cut" method, is illustrated in two plates of ten figures. Probably the most interesting plate to the taxidermist, as well as to the beginner, will be the one containing four figures, illustrating a new, simple and accurate method of mounting long-necked birds. To those following taxidermy for profit or pleasure, the information imparted in this plate alone will be worth more than the entire cost of the work. There are three plates which thoroughly and beautifully illustrate the best methods of making good bird-skins. Twelve plates figure in the finest style the forms and attitudes of Grebes, Loons, Cormorants, Gulls, Terns, Ducks, Geese, Swans, Herons, Hawks, Owls, Grouse, and the smaller perching birds. Four figures in one plate illustrate explicitly the muscular anatomy of Hawks and Owls with an imaginary outline of feathers and the exact position of legs with the artificial muscles in the mounted specimens.

The same detailed correctness is followed in the skinning and mouting of Mammals, the Fox squirrel being taken as the example in the smaller quadrupeds, is represented by six figures on one plate, delineating the procedures of skinning the animal and modeling the head; the companion plate illustrating every stage in the process of mounting. In the larger and short-haired Mammals the methods of building the frame-work and modeling in clay are illustrated. For this purpose the Greyhound, Horse and Elephant have been selected, the drawings being made from the actual specimens in the course of preparation. These occupy several plates beginning from the skeleton frame-work to the completed animal. A plate clearly outlining the method of taking the measurements of large animals and other details are given, while two plates figure minutely the methods of mounting Fish, Bird and Animal heads, and two others furnish ideal mounted Dog, Deer, Fox and Antelope heads. One entire plate is devoted to a group of mounted Dog heads of seven different species. Two others consist of mounted Setter and Pointer Dogs, taken from the actual mounted specimens. The illustrations showing the methods of mounting and skinning Snakes, Reptiles, Turtles and Fishes are faithfully executed. One entire plate is devoted to the skinning and mounting of Frogs. Others represent figures showing how to fill with clay the tails of Beavers, Muskrats, flippers of Seals, Sea Lions, etc., etc.

Ten plates contain accurate attitudes of Elk, Deer, Bear, Lion, Wild Cat, Muskrat, Beaver, Fox, Weasel, Ferret, Moles, Shrews, etc., etc. The entire muscular system of quadrupeds is illustrated in two figures, together with three others showing the proper formation and modeling of the head, nostrils and lips of animals with clay. All the instruments used in Taxidermy are illustrated.

The text for this work is simple, clear and concise, conforming and referring to the plates throughout. It consists of the skinning and mounting of birds, variations in the skinning and mounting of birds, making scientific skins, the best method of softening or relaxing skins and the time required in each case; mounting birds with the wings spread; new method of mounting long-necked birds; the manipulation of the dry skins of Mammals and all pertaining to the mounting of their skins fresh or dry; modeling in clay, etc., etc. No theoretical methods or illustrations are offered in the work—simply those that have been obtained by actual experience. Besides the regular text a concise description will face each plate which will enable immediate reference when all the details are not desired. It has already been said by those who have examined the illustrations that they are so complete in their exposition of the art of Taxidermy that there is really little need of text matter. Our design from the beginning has been to make this a grand work, superior to anything that has yet appeared in the literature of Taxidermy. Nothing like it has appeared in any language or in any country, the quality of the illustrations being of the highest order, delineating as they do, everything that has long been desired in the Art.

PLAN OF PUBLICATION.

Knowing that there is a great demand for a thorough work on Taxidermy at a lower price than was our first intention to publish, I have decided to reduce the size of the illustrations from that in the originals, printing them on plate paper 7 x 10 inches, thus making a work of royal octavo size. The engravings will be executed in the finest style and the work will be printed for me by one of the best publishing houses in New York City, and I am assured that as an example of book making it will be one of the best, and will be known as *Edition de luxe*. It will be tastefully bound in cloth, gilt uncut edges and gilt top.

Provided I can secure 500 *bona fide* subscribers at \$5.00 per copy, the work will appear complete in one royal octavo volume in September, 1890.

Considering the expense already incurred in securing the illustrations and the immediate outlay in producing the book I feel confident that no publisher would undertake the work without yielding him at least double the amount per copy of the price asked.

As the work has been purely a labor of love with me I feel sure that it will agreeably surprise my subscribers, but under no consideration will the book be published in the form herein stated unless the 500 subscribers can be assured.

I will not, however have it understood that the information contained in this work is all my own. My eighteen years experience as a Taxidermist is backed by that of Dr. Jasper who has practiced the art of Taxidermy in France, Germany and in this country for more than fifty years. He is thoroughly conversant with the best methods employed in the modeling and building up of the structures of Mammals and in every detail in the entire art, possessing at the same time an extraordinary ability for depicting these subjects with pen and brush, while his mounted specimens fairly rival some of the examples in the higher plastic arts.

I have selected for the title of the work, "Methods in the Art of Taxidermy."

Within thirty days from the delivery of the complete volume, subscribers will receive at least two proof illustrations and a printed "Contents" of the work. I trust that you will send *at once* for a subscription blank, which I hope you will, after due consideration, sign and return to me so that I may know as *soon as possible* the results of this proposition. A prompt reply will also cause no delay in the mechanical execution of the work.

Very truly,

OLIVER DAVIE,

COLUMBUS, OHIO.

214 North High Street,

BIG DISCOUNTS

For 30 DAYS Only.

In order to enliven trade and reduce stock we make the following Discounts: No discount will be allowed on orders of \$1.00 or under.

BIRDS' EGGS.—For \$1.00 you can select eggs to the amount of \$1.25. For \$2.00 you can select eggs to the amount of \$3.00. For \$3.00 you can select eggs to the amount of \$5.00. For \$5.00 you can select eggs to the amount of \$10.00. *On orders of over \$5.00 you can select eggs at one-half catalogue rates.*

This is a remarkable offer and we will receive hundreds of orders, to make sure that you will receive just what you order, always name 50c. worth of substitutes on every \$1.00 sent. You can order sets or singles as you may prefer in ordering at this discount. Our stock is by far the largest in America.

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FISHING TACKLE, 10 per cent discount on orders of \$1.00; 25 per cent discount on orders of \$2.00 or over.

MAYNARD'S AMERICAN FLOBERT. To introduce we will send a sample Gun by Express for only \$1.75.

The Big Discounts and Offers made above will hold good until June 10, 1890.

PAGES FROM

THE NEW CATALOGUE

OF

SPECIMENS AND SUPPLIES

FOR SALE BY

FRANK H. LATTIN,

ALBION,

Orleans Co.,

N. Y.

In this issue of THE OOLOGIST we give our regular prices for

Birds' Eggs, Oologists' and Entomologists' Instruments and Supplies, Fishing Tackle, and Maynard's American Flobert.

FOR 1890.

If you are not already a subscriber of THE OOLOGIST it will be mailed you during 1890 as a premium with your first order of \$2.00 or over—this offer holds good until 1891. Send in your orders early and often. Make your remittances in most convenient manner. Remember we always

BIRDS' EGGS.

Eggs are numbered to correspond with Ridgeway's Nomenclature.

All eggs are carefully prepared, being blown from one smoothly drilled hole in the side and are warranted true to name.

All specimens will be carefully packed in strong tin or wooden boxes and sent at *purchasers'* risk by mail or at *our* risk by express.

Small orders under 50 cents must contain 5 cents for packing and return postage.

Eggs in original sets, with data, can be furnished when desired.

The following discounts will be allowed on orders for single eggs:—

Ten per cent. on orders amounting to two dollars.

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Twenty per cent. on orders amounting to five dollars.

Twenty-five per cent. on orders amounting to ten dollars or over.

SECOND-CLASS SPECIMENS can be furnished of most species at one-half the price of a first-class one. Parties ordering second-class eggs must name a list of extra eggs to be used as substitutes, in case we are out of those ordered.

Western Grebe.....	\$ 50	Gannet.....	35	Yellow-cro'ed Night Heron.....	25
Holbein's Grebe.....	50	Anhinga.....	25	Limpkin.....	1 25
Horned Grebe.....	35	Cormorant.....	50	King Rail.....	20
American Eared Grebe.....	25	Double-crested Cormorant.....	35	Clapper Rail.....	10
Pied-billed Grebe.....	10	Florida Cormorant.....	25	Virginia Rail.....	20
Loon.....	1 50	Brandt's Cormorant.....	50	Spotted Crane.....	30
Black-throated Loon.....	1 50	Baird's Cormorant.....	50	Sora.....	10
Red-throated Loon.....	75	American White Pelican.....	50	Corn Crane.....	20
Tufted Puffin.....	1 00	Brown Pelican.....	25	Purple Gallinule.....	30
Puffin.....	20	American Merganser.....	1 00	Florida Gallinule.....	12
Cassin's Auklet.....	3 00	Red-breasted Merganser.....	30	European Coot.....	15
Black Gull.....	20	Mallard.....	20	American Coot.....	10
Murre.....	20	Black Duck.....	40	Red Phalarope.....	1 00
California Murre.....	25	Florida Duck.....	2 00	Northern Phalarope.....	50
Brunnch's Murre.....	25	Gadwall.....	50	American Avocet.....	75
Great Auk (cast of egg).....	1 50	Widgeon.....	25	Black-necked Stilt.....	75
Razor-billed Auk.....	20	Baldpate.....	75	European Woodcock.....	1 75
Skua.....	75	European Teal.....	20	American Woodcock.....	1 25
Parasitic Jaeger.....	60	Blue-winged Teal.....	25	European Snipe.....	25
Long-tailed Jaeger.....	1 25	Shoveller.....	40	Dunlin.....	35
Kittiwake.....	40	Pintail.....	40	Black-tailed Godwit.....	50
Glaucous Gull.....	85	Wood Duck.....	75	Willet.....	40
Iceland Gull.....	1 50	Redhead.....	25	Ruff.....	20
Great Black-backed Gull.....	50	American Scaup Duck.....	60	Bartramian Sandpiper.....	40
Western Gull.....	25	American Golden-eye.....	75	Spotted Sandpiper.....	15
Herring Gull.....	20	Barrow's Golden-eye.....	1 00	Long-billed Curlew.....	75
American Herring Gull.....	20	Old-Squaw.....	40	Whimbrel.....	40
California Gull.....	30	Harlequin Duck.....	1 25	Lapwing.....	15
Ring-billed Gull.....	30	Greenland Eider.....	30	Golden Plover.....	40
Mew Gull.....	35	American Eider.....	20	Killdeer.....	20
Laughing Gull.....	20	American Scoter.....	2 00	Ring Plover.....	20
Franklin's Gull.....	75	Ruddy Duck.....	50	Little Ring Plover.....	25
Gull-billed Tern.....	15	White-fronted Goose.....	1 50	Wilson's Plover.....	25
Caspan Tern.....	50	Canada Goose.....	1 00	Oyster-catcher.....	25
Royal Tern.....	40	Whooping Swan.....	1 50	American Oyster-catcher.....	70
Cabot's Tern.....	40	Whistling Swan.....	2 50	Bob-white.....	10
Forster's Tern.....	15	American Flamingo.....	1 00	Florida Bob-white.....	15
Common Tern.....	08	Roseate Spoonbill.....	1 00	Texas Bob-white.....	10
Arctic Tern.....	15	White Ibis.....	35	Chestnut-bellied Scaled Partridge.....	50
Roseate Tern.....	15	American Bittern.....	1 25	California Partridge.....	10
Least Tern.....	08	Least Bittern.....	20	Valley Partridge.....	20
Sooty Tern.....	35	Great White Heron.....	1 25	Gambel's Partridge.....	25
Bridled Tern.....	2 00	Ward's Heron.....	40	Ruffed Grouse.....	15
Black Tern.....	12	Great Blue Heron.....	25	Willow Ptarmigan.....	75
White-winged Black Tern.....	40	European Blue Heron.....	20	Rock Ptarmigan.....	1 00
Noddy.....	75	American Egret.....	25	Snowy Heron.....	20
Black Skimmer.....	12	Snowy Heron.....	15	Sharp-tailed Grouse.....	75
Fulmar.....	75	Reddish Egret.....	40	Sage Grouse.....	50
Manx Shearwater.....	1 00	Louisiana Heron.....	10	Wild Turkey.....	75
Audubon's Shearwater.....	2 00	Little Blue Heron.....	10	Chachalaca.....	1 50
Stormy Petrel.....	50	Green Heron.....	10	Red-billed Pigeon.....	2 00
Leach's Petrel.....	15	Black crowned Night Heron.....	20		

FRANK H. LATTIN, ALBION, N. Y.

Mourning Dove.....	03	Prairie Horned Lark.....	20	Bank Swallow.....	04
White-winged Dove.....	30	Desert Horned Lark.....	20	Rough-winged Swallow....	90
Ground Dove.....	25	Ruddy Horned Lark.....	35	Cedar Waxwing.....	10
Inca Dove.....	75	American Magpie.....	25	Phainopepla.....	50
Turkey Vulture.....	75	Yellow-billed Magpie.....	75	Loggerhead Shrike.....	15
Black Vulture.....	75	Blue Jay.....	05	White-rumped Shrike.....	08
Mississippi Kite.....	10 00	Florida Blue Jay.....	50	California Shrike.....	08
Marsh Hawk.....	40	Florida Jay.....	1 50	Red-eyed Vireo.....	10
Sharp-shinned Hawk.....	1 00	California Jay.....	2 25	Warbling Vireo.....	20
Cooper's Hawk.....	30	Northern Raven.....	1 50	Yellow-throated Vireo.....	35
Harris' Hawk.....	75	American Crow.....	05	White-eyed Vireo.....	20
European Buzzard.....	35	Florida Crow.....	50	Bell's Vireo.....	15
Red tailed Hawk.....	60	Northwest Crow.....	50	Prothonotary Warbler....	30
Western Red-tail.....	75	Fish Crow.....	25	Golden-winged Warbler....	75
Red-shouldered Hawk.....	50	Starling.....	20	Nashville Warbler.....	75
Red-bellied Hawk.....	1 00	Bobolink.....	20	Parula Warbler.....	25
Swainson's Hawk.....	75	Cowbird.....	03	Yellow Warbler.....	05
Broad-winged Hawk.....	1 25	Dwarf Cowbird.....	20	Black-throated Blue Warbler.....	75
Rough-legged Hawk.....	50	Yellow-headed Blackbird..	05	Magnolia Warbler.....	50
Golden Eagle.....	8 00	Red-winged Blackbird.....	02	Chestnut-sided Warbler....	30
Gray Sea Eagle.....	2 00	Olecolored Blackbird.....	20	Black-poll Warbler.....	75
Bald Eagle.....	5 00	Tricolored Blackbird.....	20	Blk-throated Green Warbler.....	75
Duck Hawk.....	3 00	Meadowlark.....	12	Prairie Warbler.....	50
Merlin.....	50	Western Meadowlark.....	12	Oven-bird.....	15
Kestrel.....	25	Hooded Oriole.....	50	Louisiana Water-thrush....	50
American Sparrow Hawk..	25	Orchard Oriole.....	10	Maryland Yellow-throat..	15
Audubon's Caracara.....	1 25	Baltimore Oriole.....	10	Western Yellow-throat..	25
American Osprey.....	50	Bullock's Oriole.....	15	Yellow-breasted Chat.....	10
American Barn Owl.....	30	Brewer's Blackbird.....	05	Long-tailed Chat.....	15
American Long-eared Owl.	35	Purple Grackle.....	04	American Redstart.....	15
Short-eared Owl.....	1 25	Bronzed Grackle.....	04	White Wagtail.....	10
Barred Owl.....	1 00	Great-tailed Grackle.....	20	Meadow Pipit.....	10
Florida Barred Owl.....	1 00	Boat-tailed Grackle.....	10	American Dipper.....	1 00
Screech Owl.....	40	Purple Finch.....	15	Mockingbird.....	05
Florida Screech Owl.....	50	House Finch.....	06	Catbird.....	02
Texan Screech Owl.....	50	Redpoll.....	50	Brown Thrasher.....	30
California Screech Owl..	50	American Goldfinch.....	68	Texas Thrasher.....	03
Great Horned Owl.....	1 25	Arkansas Goldfinch.....	20	Curve-billed Thrasher....	25
Western Horned Owl.....	1 25	Lawrence's Goldfinch....	25	Californian Thrasher.....	25
Hawk Owl.....	1 00	Snowflake.....	50	Cactus Wren.....	12
Burrowing Owl.....	25	Lapland Longspur.....	75	Carolina Wren.....	15
Groove-billed Ani.....	1 00	Grass Finch.....	05	Bewick's Wren.....	50
Road-runner.....	25	Western Vesper Sparrow..	15	Vigor's Wren.....	25
Yellow-billed Cuckoo.....	10	Savanna Sparrow.....	12	Baird's Wren.....	25
California Cuckoo.....	25	Western Savanna Sparrow..	20	House Wren.....	08
Black-billed Cuckoo.....	12	Yellow-winged Sparrow....	20	Western House Wren.....	06
Belted Kingfisher.....	20	W. Yellow-winged Sparrow	20	Long-billed Marsh Wren..	06
Hairy Woodpecker.....	50	Sharp-tailed Sparrow.....	35	Tule Wren.....	15
Downy Woodpecker.....	20	Seaside Sparrow.....	25	White-breasted Nuthatch..	30
Red-cockaded Woodpecker.	1 25	Lark Sparrow.....	05	Brown-headed Nuthatch..	35
Pileated Woodpecker.....	1 00	W. Lark Sparrow.....	25	Tufted Titmouse.....	35
Red-headed Woodpecker....	08	Gambel's Sparrow.....	05	Plain Titmouse.....	60
Lewis's Woodpecker.....	40	White-throated Sparrow..	35	Chickadee.....	12
Red-bellied Woodpecker....	30	Chipping Sparrow.....	02	Carolina Chickadee.....	15
Golden-fronted Woodpecker	75	Western Chipping Sparrow	04	Californian Bush-Tit.....	15
Flicker.....	03	Field Sparrow.....	04	Verdin.....	50
Red-shafted Flicker.....	10	Slate-colored Junco.....	50	Blue-gray Gnatcatcher....	20
Chuck-will's-widow.....	1 50	Black-throated Sparrow....	50	Western Gnatcatcher.....	50
Whip-poor-will.....	1 50	Song Sparrow.....	02	Wood Thrush.....	06
Nighthawk.....	40	Desert Song Sparrow.....	50	Wilson's Thrush.....	15
Western Nighthawk.....	50	Heermann's Song Sparrow..	12	Russet-backed Thrush.....	15
Chimney Swift.....	15	Samuel's Song Sparrow....	08	Olive-backed Thrush.....	40
Ruby-throated Hummingbird	60	Swamp Sparrow.....	15	Hermit Thrush.....	40
Costa's Hummingbird.....	1 00	Towhee.....	25	American Robin.....	02
Anna's Hummingbird.....	50	Spurred Towhee.....	25	Western Robin.....	15
Scissor-tailed Flycatcher..	10	Oregon Towhee.....	40	Red-spotted Bluethroat..	60
Kingbird.....	03	Californian Towhee.....	08	Wheatear.....	10
Gray Kingbird.....	40	Cardinal.....	55	Bluebird.....	02
Arkansas Kingbird.....	08	Texan Cardinal.....	06	Western Bluebird.....	15
Cassin's Kingbird.....	25	Rose-breasted Grosbeak..	15	Mountain Bluebird.....	15
Ash-throated Flycatcher ..	25	Black-headed Grosbeak....	20	English Sparrow.....	01
Crested Flycatcher.....	12	Blue Grosbeak.....	25	European Tree Sparrow....	15
Phoebe.....	05	Indigo Bunting.....	03		
Say's Phoebe.....	20	Lazuli Bunting.....	20		
Black Phoebe.....	20	Painted Bunting.....	30		
Wood Pewee.....	15	Grassquit.....	75		
Western Wood Pewee.....	20	Black-throated Bunting....	05		
Western Flycatcher.....	25	Lark Bunting.....	50		
Acadian Flycatcher.....	20	Scarlet Tanager.....	25		
Little Flycatcher.....	40	Summer Tanager.....	20		
Traill's Flycatcher.....	20	Purple Martin.....	15		
Least Flycatcher.....	10	Chiff Swallow.....	04		
Skylark.....	12	Barn Swallow.....	05		
		Tree Swallow.....	15		

SUNDRIES.

African Ostrich, small.....	1 25
" " large.....	1 50
Emu.....	2 50
Rhea.....	3 00
Alligator.....	27
Turtle.....	10
snake.....	10
Gopher.....	25

Oologists' Instruments and Supplies.

Every Instrument I sell is thoroughly tested before leaving the office, and should an inferior instrument be sent my patrons, I will kindly thank them to return the same and their order will be cheerfully duplicated.

EGG DRILLS.—Our drills are equal to any in the market. Short-handled drills we make a specialty. Collectors will find them more convenient and less expensive than the long-handled ones. Our drills are made expressly for our trade from the best Stubbs steel. The lengths of handles are as follows: Short, 2 in.; Medium, 3 in.; Long, 6 in.

No.1. Sh't hand., 8-100, good for all fresh eggs.	\$.07
No.2. " " 12-100, " " " " "	.09
No.3. " " 15-100, " " " " "	.11
No.4. " " 18-100, " " " " "	.13
No.5. " " 21-100, " " " " "	.15
No.6. Medium handle, fine cut, burr 4-32 in.	.20

Our medium and long-handled egg drills are the finest in the world. They are made with a fine, clean cut burr, fine point, nickel plated and engraved handle. Best style, extra fine steel. We can furnish either long or medium handle of any the following sizes at prices quoted:

No. 1. 3.32 in. burr	\$.25
No. 2. 5.32 " "	.35
No. 3. 6.32 " "	.50
No. 4. 8.32 " "	.75
No. 5. 12.32 " "	1.00
No. 6. 16.32 " "	1.50

BLOWPIPES. —No. 1, Brass	\$.12
No. 2, White Metal	.20
No. 3, No. 2, nickeled	.25

(Nos. 2 and 3 are the white metal blowers sold by other dealers).

No. 4 is the best blower ever manufactured; best white metal with an extra nickel finish, actually worth double No. 2 or 3. .35

No. 5, Glass; by mail at pur chaser's risk. .25

EMBRYO HOOKS.—As the season advances collectors obtain many specimens of our rarer species that are nearly useless on account of the advanced stage of incubation. To overcome, in a measure, this difficulty, every collector should have a good embryo hook.

No. 1. Long handle, nickel and engraved or blued steel; three sizes, fine, medium and large, price each. .30

No. 2. This style hook is the best made and screws into a finely engraved, nickeled handle.
 Handles, each. .25
 Hooks (three sizes), each. .20
 Handle and Hook. .40
 Handle with three hooks (assorted sizes). 75

No. 3. The cheap wire hook in handle, sold by other dealers. .15
 Do., without handle. .10

EMBRYO SCISSORS.—Sometimes very useful in removing embryos.

No. 1. Fine scissors, cheap	\$.25
No. 2. Fine scissors, extra	.50
No. 3. Fine scissors, curved	.75
No. 4. Fine scissors, curved, extra	1.50
No. 5. Fine scissors, elbow, extra	1.50
No. 6. Fine scissors, straight, extra	1.50

FORCEPS.—Very useful when preparing specimens containing an embryo.

Cheap	.....\$ .15
Ordinary	......25
Best	......75

CLIMBING IRONS.—Strapped, ready for use; by express, at purchaser's expense, \$2.50; prepaid, \$3.25.

Unstrapped; by express, \$1.50; prepaid, \$2.10.

SYRINGES.—Hard rubber, for rinsing eggs...\$35

LEAD PENCILS.—Soft, extra quality for marking eggs. .10

COLORED PENCILS.—Red and blue. .10

OOLOGISTS' CEMENT.—For mending eggs and fragile specimens. .12

COURT PLASTER.—Per envelope of 3 pieces, assorted colors, 6c.

POCKET CASE.—Russia Leather for carrying instruments in field. Very desirable. Nickel clasp, \$1.25.

BOOK OF TISSUE PAPER.—For patching eggs or specimens. This book contains over 100 different shades and colors of 1x2½ inch pieces of tissue paper, tightly bound and so arranged that you can pick out at once the color you desire for the specimen you wish to mend. A price list is also attached, giving prices at which we can furnish any color in large or small quantities. As it only requires a very small piece to patch an ordinary egg this book will last the average oologist many years. Price, only 10c.

GUMMED PAPER.—For patching eggs, per sheet. .10

RUBBER TUBING.—For making water blowers, 7c per foot, 8 feet for 50c and for each extra foot, 6c.

WATER BLOWER.—Complete, including 8 ft. of tubing, blowpipe, rings, can and printed instructions, for only. .100
 Collectors who have used it say they will never again blow eggs in the old tiresome, laborious and wind-exhausting method.

DATA BLANKS.—Our data blanks are printed on good calendered paper that will not blot through and are put up in pads of 100, glued on top and sides.

Small, per 100	.....\$ .15
Medium " "	......20
Large " "	......25
Extra large, per 100	......35
Book of 100 datas, check book style, best	......35
" " " Manilla covers, unperforated	......30
Checking lists, 2 styles, per doz	......20
Samples of 20 styles data blanks, etc., and 2 checking lists	......05

PINK WOOL COTTON.—For lining trays, cabinets, etc. Comes in strips 12 in. wide. Extra quality, 12c per foot, 30c per yard or 90c per roll of 3½ yards.

We can also furnish Blue, Canary or White Cotton of same grade at same price.

Ordinary Grade, either pink or white, 8c per foot, 20c per yard, 60c per roll. This is the grade sold by other dealers at \$1.00 per lb. We can furnish at same price.

Samples of all colors, both grades, 3c. ▲

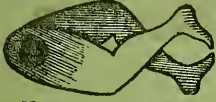
FRANK H. LATTIN, ALBION, N. Y.

Measures for Eggs and Specimens.

No. 1. Fine six inch, brass trimmed folding rule with a brass calliper attachment, registering 16ths. Should you desire the result in 100ths you can readily obtain it by multiplying by 6 $\frac{2}{3}$. Price 25cts.

No. 2. Same style as No. 1, except being of ivory, trimmed with German silver; very fine, \$3.50

No. 3. Plain 3 in. steel rule, marked in 100ths. Price postpaid, 60 cts



No. 4. A pair of callipers which are very convenient to use when measuring specimens with rule. Price, postpaid, 25 cts.

No. 5. Steel calliper rule registering 100ths.



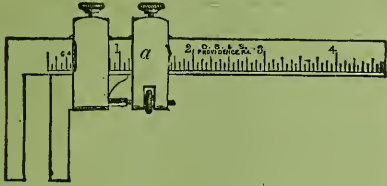
When closed this rule is 3 in. long. The caliper can be drawn out to measure 2 $\frac{1}{2}$ in. The thickness of the rule is $\frac{1}{8}$ in. Price, \$2.50.



No. 6. 1 in. steel rule with the following graduations, viz.: 16ths, 50ths, 64ths and 100ths.

They are furnished with split ring and make a first-class watch guard charm.

We can furnish them as follows:
 Plain steel each.....\$.30
 Nickel plated "..... .40
 Silver plated "..... .50
 Gold plated "..... .75



No. 7. Calliper square, steel, divided into 100ths. This is unquestionably the best article ever offered for measuring specimens. We can furnish these squares in two sizes.
 2 in. size, postpaid.....\$3.50
 4 in. size, postpaid..... 4.50

Outfits for Oologists.

OUTFIT No. 1, will be sent postpaid for only 40 cents.

Contents:

1 Handbook.....	\$.15
6 Checking Lists.....	.12
50 Datas.....	.10
1 12-100 Drill.....	.09
1 Brass Blowpipe.....	.12
1 Sample Sheet Datas.....	.02
1 Bottle Cement.....	.12
1 Best Soft Pencil.....	.05
1 Vest Pocket Note Book.....	.06

OUTFIT No. 2, postpaid for only \$1.00.

Contents:

1 Handbook.....	\$.15
6 Checking Lists.....	.12
100 Datas.....	.25
1 Vest Pocket Note Book.....	.06
1 Sample Sheet Datas.....	.02

1 Bottle Cement.....	.12
1 Soft Pencil.....	.10
1 White Metal Blowpipe.....	.25
1 12-100 Drill.....	.09
1 21-100 Drill.....	.15
1 Embryo Hook.....	.30
1 Instrument Case.....	.20

OUTFIT No. 3, postpaid for only \$3.75.

Contents:

1 Davie's Nests and Eggs of North American Birds (paper cover).....	\$1.25
1 Handbook.....	.15
1 Field Note Book.....	.35
1 Vest Pocket Note Book (flexible red leather cover).....	.12
12 Checking Lists.....	.20
1 Book of Datas.....	.35
100 Small Datas.....	.15
1 4-32 Drill No. 0.....	.20
1 6-32 Drill No. 3.....	.50
1 Pair Forceps.....	.25
1 Best White Metal Blowpipe.....	.35
1 Embryo Scissors.....	.50
1 Caliper Rule.....	.25
3 Embryo Hooks, with handle.....	.75
1 Bottle Oologists' Cement.....	.12
1 Sample sheet Datas.....	.02
1 Wood Case for Holding Instruments.....	.35

For 50c additional we will put in a cloth bound Davie's in place of the paper covered one. As this is a work of nearly 500 pages, it is always advisable to purchase the cloth bound edition.

For \$1.00 additional we will put in our Russia Leather Pocket Instrument Case.

Outfit No. 3 contains the best, and is just what is needed by every oologist, whether old or young, amateur or professional. If in the field one season, you will need every article in this outfit; every instrument and publication contained therein is the very best, and the Outfit, taken as a whole, is just what "Lattin" would use could he collect during the coming season. Should you already have one or more articles in this outfit, I will allow you $\frac{1}{2}$ the price at the left for such articles, this amount to be deducted from the \$3.75, my price for the outfit complete.

Outfits No. 1 and 2 are put up in large quantities and can not be changed.

Outfit No. 1 will prepare a set of fresh eggs just as well as No. 3.

OUTFIT No. 4, postpaid for only \$5.00,

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1 No. 1, 3-32 Drill.....	\$.25
1 No. 3, 6-32 Drill.....	.50
1 No. 5, 12-32 Drill.....	1.00
1 Best Blowpipe.....	.35
1 Best Scissors.....	1.50
1 Flue Forceps.....	.25
1 Embryo Hook.....	.30
1 Russia Leather Pocket Case for Instruments.....	1.25

Outfit No. 4 is the \$5.00 outfit of other dealers, except we put in a better embryo hook and blowpipe.

TRAYS! TRAYS!

No cabinet should be without them. Two of one size just equal one of the next. They are the best possible partitions easily changed about, easily cleaned.

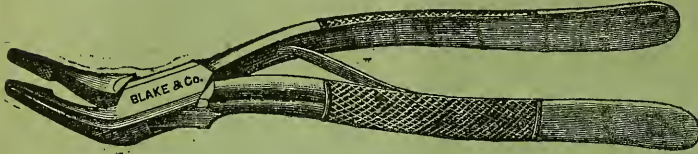
2x1 $\frac{1}{2}$ x $\frac{3}{4}$, per doz.....	\$.10	per 100.....	\$.65
3x2x $\frac{3}{4}$ ".....	.12	".....	.75
4x3x $\frac{3}{4}$ ".....	.13	".....	.85
6x4x $\frac{3}{4}$ ".....	.15	".....	1.00

Fifty or more of one size at one hundred rate. Trays covered with paper of any color in lots of 50 or more. We keep in stock trays covered with white, black, dark red and green colored paper.

For eggs, shells, minerals or specimens of any kind, nothing has yet been found to take the place of good trays. We have sold nearly 50,000 during the past two years.

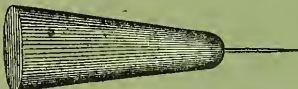
Sample set of Trays..... .05

Entomologists' Instruments and Supplies.



Blake's
Entomologists'
Forceps.

DREDGE.—6x9 inches, circular, perforated bottom, socket handle.....	\$1.00
Smaller size.....	.25
FORCEPS.—Common straight points, each, 15c to.....	.35
Fine or large straight points.....	.75
“ “ curved points.....	1.00
Best straight forceps, plated.....	1.00
“ curved plated, for pinning forceps.....	1.25
Blake's extra strong forceps, as per above illustration.....	2.50
MOUNTING BLOCKS.—Flat or bevel tops, each (5c extra by mail).....	.12
NETS. (Collecting).—Brass ring, turned handle, fine netting.....	1.00
BOXES.—Wood-stained, 3 x 4, cork-lined.....	.35
“ “ 3 1/2 x 7 “.....	.40
Collecting Box, 8 x 4 x 11, black walnut, cork-lined and strapped.....	1.75
“ “ 8 x 4 x 11, Covered with fine leather.....	5.00
CASES.—Hard wood, glass top, 10 x 14 x 3, cork-lined.....	1.25
Pine, 10 x 14 x 3, glass top, “ \$1.00. Smaller size.....	.50
“ 10 x 4 x 14, wood top.....	.50
We also make a large case, with best glass top, splendidly made and nicely finished inside and out, 12 x 18 x 2 1/2, lined and ready for filling at.....	1.50
COPS.—For winding insects on block, each.....	.10
CORK.—Size, 4 x 12 x 1/2 in., first quality, very fine, per dozen sheets.....	.90
Second, fine, per dozen.....	.60
Third, fair, “ “.....	.40
Size 4 x 12 x 1/2 in., first quality, very fine, per doz.....	2.00
Same size, second quality, fine, “ “.....	1.25
Samples of cork.....	.03
CYANIDE BOTTLES. (Poison).—For killing beetles, etc., large.....	.35
Small.....	.25
INSECT PINS.—Best makes. 00, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.....	100. 1000.
Best German stuck pin; bright; sizes 00 to 9.....	\$.15 \$1.25
“ “ “ Japanned (will not corrode) sizes 00 to 9.....	.17 1.60
We can also furnish the loose Klægar pins; bright; sizes 00 to 8.....	.15 1.25
Samples of pins, 3 cents.	
LABELS.—Printed for localities in sheets, several states on a sheet, as follows (2 cents per sheet, 500 sheets, \$2.50.):	
I. N. S., N. B., C. E., C. W., L. Sup., H. B. T., Br. C., R. A.	VII. La., Tex., Ark., I. T. N. M.
II. Me., N. H., Vt., Mass., R. I., Ct.	VIII. Colo., Wy., Mon., Dak., Neb., Ks.
III. N. Y., Penn., N. J., Md., Del., Va., W. Va., D. C.	IX. W. T., Or., Cal., Nev., Ut., Id., Ariz.
IV. N. C., S. C., Ga., Fla., Ala., Miss., Tenn.	X. Cuba, Tam., Chi., L. Cal., Son., Mex., C Rica, Gua.
V. Ohio, Ind., S. Ill., Ky., Mo.	XI. Months.
VI. Minn., Wis., Mich., Ia., N. Ill.	XII. Signs for male, female and neuter.
We can furnish Gummed Labels of any style. Send 3c for samples.	
CAMPHOR—Fluatuates. Will send any amount wanted from 10c to \$1.00.	
CHLOROFORM.—1 oz., 27c; 2 oz., 35c; 1 lb., \$1.50.	
CORROSIVE SUBLIMATE (Poison).—1 oz., 15c; 1/2 lb., 75c; 1 lb., \$1.25.	
CYANIDE OF POTASSIUM.—1 oz., 15c; 1/2 lb., 75c; 1 lb., \$1.25.	



Full Size.

DISINFECTING CONES.—For Entomological cabinets, etc., for keeping infection from cabinets. Is endorsed by leading Entomologists. They are ready for use, take up very little room and are effective. Equally good for Bird Skins, Woolens, etc.

Price per doz., 18c; per 100, \$1.25.

“INSECT COLLECTING.”—A manual for the beginner, with instructions, hints, etc., only 10 cts.

FISHING TACKLE.

From our store at Chautauqua we sell a large amount of fishing tackle annually.

As many of our patrons are, to a certain extent, disciples of Izaak Walton and are either obliged to pay exorbitant prices for their tackle or are unable to obtain exactly what they want at any price. We have concluded to offer the following leading articles.

At prices quoted everything is sent *prepaid*. Satisfaction Guaranteed.

We are so situated that we can furnish almost anything in the fishing line from a named trout fly to a 300-foot lake or river seine and would be pleased at all times to quote prices on anything our patrons may desire.

Lines.

N. B.—All our lines are so joined together that our patrons can obtain any desired length.

	EACH DOZ.	
No. 1. Drab line, size No. 1, 16 feet, for trout and small fish.....	\$.02	\$.15
No. 2. Drab line, size No. 3, 16 feet, for perch and medium fish.....	.02	.18
No. 3. Drab line, size No. 5, 16 feet, for black bass and other gamey fish..	.03	.30
No. 4. Drab line, size No. 7, 16 feet, for bass, pickerel and large fish.....	.04	.40
No. 5. White twisted line, No. 23, hard finish, 20 feet.....	.03	.25
No. 6. White twisted line, No. 30, 20 ft., for medium fish.....	.03	.30
No. 7. White twisted line, No. 38, 20 ft., for medium fish.....	.04	.40
No. 8. White twisted set line, 50 feet, a heavy line. No. 2.....	.10	1.00
No. 9. Block line wound on wood, 50 ft., on wood winder.....	.10	1.00
No. 10. Braided hard finish cotton line, a genuine braided line in assorted shades.....	.10	1.00
No. 11. All linen coil line 50 ft., <i>all linen</i> . The best line we offer. A splendid trolling line.....	.10	1.00
No. 12. Braided oil silk line, genuine silk braided, medium weight, in coils of 25 yards.....	.75	

Ringed Fish Hooks.

Best Imported Kirby and Limerick.

	DOZ.	100
No. 12. For <i>very</i> small fish.....	\$.03	\$.18
No. 10. " " " ".....	.03	.18
No. 8. " " " ".....	.03	.18
No. 6. For trout and small fish.....	.03	.18
No. 4. " " " ".....	.03	.18
No. 2. " " " ".....	.03	.20
No. 1-0. " perch, bullheads, etc.....	.03	.25
No. 3-0. " " " ".....	.04	.30
No. 5-0. " pickerel, catfish, etc.....	.05	.40
No. 7-0. " " " ".....	.10	.70
No. 12 to 7-0. Assorted.....	.04	.30
No. 6 to 5-0. ".....	.04	.25

EACH DOZ.

Snell Hook, Kirby No. 4, combining hook on gut, wound with silk, ready for line	\$.02	\$.20
Snell Hook, Kirby No. 2, as above, but larger.....	.03	.25
Double Snell Hook, No. 2, made with 2 strands of gut.....	.04	.35
Treble Snell Hook, No. 2-0, with three strands of extra fine imported gut.....	.06	.55
Single Gut Leaders, 3 feet, best selected stock.....	.03	.70
Double Gut Leaders, length and quality as above, with double strand.....	.10	1.00

Miscellaneous Tackle.

EACH DOZ.

Double Ringed Sinkers, popular size, made from lead and having brass ring at each end.....	\$.02	\$.15
Feathered Trolling Spoons, feathered, nickel plated spoon, with treble feathered hooks, brass swivel and brass wire leader, with glass ball wheel, 3 sizes.....	.18	1.50
Bass Flies, 1 doz. assorted natural flies with snelled hooks in envelope. A splendid fly for price.....	.08	.75
Trout Flies, put same as above.....	.08	.75
Sawed Shot, lead shot grooved so that a fish line can fit in and be fastened firmly by pressure. 15 shot in a box; Per box.....	.08	.85
Furnished Fish Line; 16-foot drab line, medium size hook, sinker, extra large float, and a coil spring fastener. Each on a wood winder.....	.03	.80
Furnished Fish Line with double snell hook, 16 feet of genuine linen line with a long fancy colored float, with fixtures heavier and larger than above.....	.18	1.75
Floats, either cork or excelsior, egg shape, 3 sizes, small, 5c, medium, 10c, large, 12c.		
Stringer, with line complete, each 10c.		
Stringer and Hook Extractor combined, nickel, steel each, 25c.		
Fish Spears—3 prong.....	\$.75	
" " 5 ".....	1.00	
" " 5 " socket.....	1.15	
" " hand made, all best steel, can change to either a 3 or 5 prong spear, width 4½ in.; length, 6½ in.; entire length, including shank and socket, 22 in. Each.....	2.50	
Gaff hooks.....	.35	

Rods—Each in Bag by Itself.

No. 1. Genuine ash, rosewood finish, full varnished, 3 joints, brass ferruled, with guides; 16 feet long. Each.....	\$.40
No. 2. 10½ feet long, artistically finished, hard wood, nicely varnished; double brass ferrules, 4 joints with guide rings, etc., complete.....	.75
No. 3. Genuine selected bamboo, 70 feet long, highly finished with double brass ferrules, guiding rings, adjustable brass ring for holding reel, etc.....	1.25
No. 4. Double finished and polished ash, with genuine lance wood tip; double brass ferrules, brass butt, brass guide rings and eyes; also adjustable brass ring to hold reel. It measures 8 feet when put together, but when apart, can be carried in the shortest of trunks.....	1.50
No. 5. 12 feet long, 6-joint, elegant shape, double finished, varnished and polished ash, with two lance wood tips; double brass extra long ferrules, brass butt, guide rings and eyes; also	

The Maynard American Flobert.



The Cheapest Cartridge Rifle in the Market.

DESCRIPTION OF GUN.

The MAYNARD AMERICAN FLOBERT is a light target or sporting gun, shooting a 22-100 cal. cartridge and weighs 34 ounces complete. The stock is oil-finished Black Walnut and all metal parts are heavily nickel plated. The sight is adjustable. The hammer is entirely eliminated, making it absolutely the safest gun made for young or inexperienced persons. The firing mechanism is the most durable and simplest used in any gun. Ladies will find in this none of the objections to heavier guns, and its adaptability to use from a carriage or boat are strong points of recommendation.

ABOUT THE BARREL.

The barrel used in the MAYNARD AMERICAN FLOBERT is made of a special composition metal, anti-friction, non-explosive and will not rust or corrode. It is made the exact length necessary to utilize all the explosive force of the cartridge, the ball leaving the muzzle the instant it attains the maximum speed, thus obviating all loss from friction within the barrel, giving the greatest range and penetration possible. Accuracy is secured by an exact rifling as is found in the most expensive rifle. We claim the MAYNARD AMERICAN FLOBERT is the best cheap rifle made and a trial of the gun will convince you of the fact.

All the parts in the MAYNARD are interchangeable, thus making it so that if any should happen to get broken, they can be duplicated at a slight expense.

On April 17th, '90 Frank H. Lattin personally visited the factory at which this wonderful little gun is made and found a large building in which over 30 hands were employed making this gun exclusively. Mr. L. carefully examined all the parts of the gun in various stages of manufacture, from the walnut lumber in the pile to the completed gun. He also saw one pile of boxes in which were packed 3,000 of these guns, an order of a single firm.

After careful examination and thoroughly testing the gun, Mr. L. concluded that it was the gun for collectors and that it could be furnished them at a price within the reach of all.

The editor of the Durand (Mich.) Express, says that he has used the gun in squirrel hunting with the best of success, and that he has been with parties using the high priced Winchester and other makes and that the MAYNARD AMERICAN never failed to bring down the game from the highest of trees, in cases where the guns costing from \$20 to \$25 failed. He also says that after a year's use of the gun he was fully convinced of its durability and effectiveness.

With a 22 cal. shot cartridge, loaded with No. 12 or dust shot, a better gun for the taxidermist or field collector to use on small birds was never invented. The gun is an entirely new invention, having been manufactured only a little over a year, and we are the first to introduce it among collectors, and have been appointed wholesale agent for that purpose.

We desire a good active agent in every locality in the U. S. and Canada and will pay them liberally for their work. To secure the agency, purchase a gun and state that you will do all you can to introduce the gun in your locality and we will send you our best wholesale rates and fifty circulars describing the gun, with your name printed on them as agent.

Price of Gun Complete Only \$2.00

We will send it *prepaid* to any part of the U. S. or Canada for 50 cts. additional.

To any person getting up a club or selling five guns and sending us \$10.00 for the same, we will send an additional gun free for their trouble.

Each gun is packed in a case and is accompanied by full directions and two or three targets.

Cartridges (ordinary 22 cal.) for the MAYNARD may be obtained of any dealer or we can furnish them at the following prices.

22 cal., BB Cartridges, per hundred.....	\$25
22 " short " " " .....	.30
22 " long " " " .....	.35
22 " shot " " " .....	.60
22 " " " " fifty .....	.35

Cartridges must go by express at purchaser's expense. A liberal discount will be allowed on orders of 1000 or over.

Everybody's Typewriter.



This is exact copy of the MERRITT'S work. It is equal to that of any High Priced Typewriter. Relieves fatigue from steady use of pen. Improves spelling and punctuation. Interests and instructs children. The entire correspondence of a business house can be done with it. Learned in a half hour from directions. Prints Capitals, small letters, figures and characters, 78 in all. Price \$15 complete.

Prints from Clear Metal Type.

No Ribbon to Wear Out, Smuts the Fingers or Paper.

Can both **DUPLICATE** and **MANIFOLD**. This no

other low-priced Typewriter on the market can do. **Excelsior!**

No Rubber Type Machines can compete with it. Its Work is Unexcelled.

Perfect Alignment, Greater Speed than any but a High-priced machine.

What YOU want is a MERRITT. No other machine can give you such results for the money.

Hundreds of Testimonials like the following are received.—“We like it very much and would not part with it for four times the amount we paid for it unless we could duplicate it.”

Write for Circulars, Voluntary Testimonials and sworn-to Speed Test of 60 words a minute.

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Large, well illustrated 48 page book, 5c.

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A work by which anyone can identify a specimen belonging to the Vertebrata. It is arranged on the same plan as Grey's Botany, i. e. an analytical key, and is indispensable to anyone studying zoology in any of its divisions. It is a 275 page, cloth bound book containing accurate descriptions of all North American Birds, by means of which one can determine a parent bird very easily.

"It is indispensable to the working zoologist." A. A. Handbook.

It is the cheapest work yet offered to the Ornithologist and Oologist, and is needed by all. Address, W. A. CROOKS & Co., Gilman, Ill.

IMPORTED JAPANESE

AND INDIAN SILK WORM EGGS FOR SEED,

In Silk culture. Different species, also the celebrated Madras Silk Cocoons warranted to be raised successfully in this country. Directions given how to raise them profitably. Prices low.

PROF. CARL BRAUN,
NATURALIST,

BANGOR, MAINE.

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YOUR NAME On a Nickel-plated Pocket Rubber Stamp for Printing Cards, Books, Paper, etc. with a Supply of Ink, only 15 cents.

Club of 10 for \$1.00. Address,

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BRISTOL, CONN.

TELEPHONES for private lines. Sold out-right. Circulars free. Address, HARBERT TELEPHONE CO., 132 W. Van Buren St., Chicago, Ill. Circulars free. Agents wanted.

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During the past few years we have cheerfully attempted to

IDENTIFY ALL SPECIMENS

our friends have sent us, and this without remuneration; but owing to the fact that we are now receiving packages by the dozen for this purpose, and that our time is more than occupied with our regular business, in the future we shall be obliged to CHARGE our friends in addition to return postage the following

RATES:

Single or first Specimen, - 10 cts.
Second to tenth Specimen, - 3 cts. each.
Eleventh Specimen and over, - 2 cts. "

The above rates for identifying we think very reasonable. We have spent several years in handling and studying specimens of various kinds, and have on hand a very large stock with which comparisons can be made. We also have the leading works to use as reference. The advantage of having specimens properly identified is invaluable to collectors.

Address,

FRANK H. LATTIN, Albion, N. Y.

WM. G. SMITH,

-COLLECTOR OF-

BIRDS, MAMMALS & EGGS,
LOVELAND, COLORADO.

I make a specialty of mailing birds same day as skinned, or sent in the flesh after subjecting them to a preservative preparation. Enclose stamp for Price List.

Exotic Butterflies and Moths

In brilliant colors and of rare beauty, from India, Australia, Africa and South America for cash or half cash and half in rare eggs or fine bird skins. Also fine cocoons from other countries. Send 5c for catalogue. State what you want distinctly. Absolutely no attention paid to postal cards. Collections made up in cabinets for museums and colleges, containing all the classes of insects from every clime. We have the largest stock of Lepidoptera in New England and charge the lowest prices in the United States.

PROF. CARL BRAUN,
NATURALIST,
BANGOR, MAINE.



O O L O G I S T



Monthly.

50c. per Year.

Vol. VII,

ALBION, N. Y., JUNE, 1890.

No. 6

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

TO EXCHANGE.—Vol. 4 and 5 and 70 other different papers of Golden Days, for best offer of Birds' Eggs or sets, first-class with data. SIG MUND HILL, Box 25, New Milford, Conn.

TO EXCHANGE.—430 rare Stamps, part unused in Imperial Album, for best offer of first-class single Eggs. OWARD W. BELL, Box 1262, San Jose, Calif.

TO EXCHANGE.—First-class Singles and Sets, with data, to exchange for other first-class Sets. Send list and receive mine. All letters and cards answered. RALPH ARNOLD, Pasadena, Cal.

I WILL EXCHANGE Taxidermist outfit No. 1, for a second-hand pair of Climbing Irons, or will sell it for \$1.50. Address, C. C. Renshaw, Boyce, Clark Co., Va.

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If you desire to obtain anything on the above list in exchange, send on your eggs at once. If you have no eggs, but have other desirable specimens in quantity, write what you have, with price; or will exchange for collections of fine Postage Stamps or second-hand Books on Natural History, or choice Indian Relics.

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THE OOLOGIST.

VOL. VII.

ALBION N. Y., JUNE, 1890.

No. 6

Notes on the Nesting Habits of the American Oystercatcher.

My opportunities for observing this bird have been somewhat limited, but so little seems to have been recorded concerning the nidification of this species that I write the following in the hope of inducing others having greater experience to supply more complete information.

In June, '88 my friend, E. B. Coues, and myself made a collecting trip of about two weeks to Cobb's Island, Va. and it was during this time that the following notes were taken.

From what we had heard and read before starting, we had hardly expected to find *Hematopus* breeding on the island, for, although once an abundant species, they have become comparatively rare and I do not think that over a dozen pairs can be counted in a season. This diminution has resulted from several causes, chief among which is the continued persecution to which the birds are subjected during the nesting season by the islanders, the eggs being taken on all occasions, as they are said to possess a more delicate flavor than those of any other species, but it is needless to say we did not attempt to confirm this statement by eating any. Besides this, many eggs must have been destroyed by the cattle which roam over the island, although the Willets and Clapper Rails are the greatest sufferers in this case, as they nest in the grass where the animals feed and we found many crushed and broken eggs.

Inquiries on the island merely confirmed what we had heard before, i. e.—that the Sea Crow (as the bird is called by the natives) was rapidly becoming a thing of the past and, up to the third day of our stay, we had not so much as seen a specimen, although we had col-

lected skins and eggs of nearly every other species breeding in the vicinity. That day (the 18th) however, as we were walking through the thick grass just above high-water mark, collecting eggs of the Willets and Rails, which are breeding abundantly, we suddenly caught sight of a large dark bird running out on the wet sand after each receding wave and the red bill and thick, plover-like form quickly dispel all doubt as to his identity; but now he sees us too and, with a few shrill pipes to his mate, who has been hidden from view by a clump of grass, the two make off with short, rapid strokes of their black and white wings. Marking the spot from which they rise, we hurry forward, but alas! an empty hollow scratched in the sand is all that rewards our patient search, while a man's footprints close to the nest tell the rest of the fatal story.

This is disappointing, but we determine to be revenged on the birds anyway. They have alighted on the beach near by and now stand watching us and bobbing their heads in a comical fashion, evidently not quite decided whether to fly on farther or not, but we quickly settle the matter by coming within range and knocking over the nearest one with a charge of fives.

A few hours later, however, we are more fortunate. While exploring a large colony of Black Skimmers, we are pleased to see some half dozen Oystercatchers in a sociable little clump and a few minutes later, accidentally discover a nest with two fresh eggs. They are dropped in a slight hollow in the dry white sand, no lining whatever being used, a hollow, in fact, similar in every respect to those made by the Skimmers which surround us on every side.

During the next few days we succeeded in taking three more sets of eggs, two of two eggs each and one of three. One of these sets comes from Hog Island, the other two from the Skimmer colony visited on the 18th, the set containing three eggs being found within a few yards of the first nest.

All the eggs were fresh in spite of the late date, the set-back being due to the depredations of the eggers, a party of whom had pitched a camp near the Skimmer colony and were robbing the nests daily, and a clean sweep they made too, for, although we went over the ground carefully, we could find no more than one or two eggs in a nest.

Although three was our largest set, we were informed by Capt. C. H. Crumb, of the Life Saving Station, and a thorough ornithologist, that he had collected a number of sets of four during the past few years and, in his opinion, full sets of the first laying usually consist of three or four eggs.

In hunting for the nest we at first tried following up the birds' tracks, but they crossed and recrossed each other in such confusion that we soon gave it up and trusted to luck. Watching the parents would seem equally futile, for, like most species laying on the open sand, these birds leave their nest uncovered during the greater part of the day, trusting to the sun's warmth to incubate the eggs, a duty for which the scorching rays are amply competent and, as we tramped over the burning sand, we only wondered that the eggs were not baked on the spot.

This spring we hope to pay a longer visit to the haunts of the Sea Crow, when, possibly, a more thorough search may add somewhat to our knowledge of the habits of this interesting, if somewhat eccentric, character.

THEODORE W. RICHARDS,
Washington, D. C.

The Prairie Horned Lark.

SETS OF FIVE EGGS.

Mr. Ernest Short, in the February number of the OOLOGIST, asks if any of its readers have ever found a nest of the Prairie Horned Lark containing five eggs.

I would like to state that I found a nest containing five eggs on May 28, 1889. From appearances I thought that she had been sitting some time. I didn't disturb the nest or eggs.

Close to the mother bird, who was sitting on the nest, were four young birds, which were, without a doubt, her first brood, for they flew away with her when I disturbed her.

Did any of the OOLOGIST's readers ever notice anything like that?

GEORGE L. WHITE,
Livingston Co., N. Y.

[A set of five eggs of the Prairie Horned Lark was taken in June, 1888, by Ezra J. Botsford, of Medina. Also see description of set No. 1 by E. G. Tabor, below.—ASSOC. ED.]

IN CAYUGA COUNTY.

In answer to an article on the above-named bird by Ernest Short, of Monroe county, N. Y., allow me to say I have found three nests of this bird as follows:

Nest No. 1, contained five fresh eggs. Nest on ground at the foot of a growing hill of corn; made of grass, roots and lined with dry grass blades. Found while cultivating corn. Had three eggs in at time of finding. Nest and eggs taken June 14, 1886.

Nest No. 2, contained three eggs. Incubation one-third advanced. Laid by same bird as No. 1, in neighbor's corn field across the road from ours, where No. 1 was found. Nest and situation the same as before. Date of collection July 3, 1886.

Nest No. 3, contained three young, nearly ready to leave the nest, which was placed in a meadow and was found

by watching the parent birds carry food to their young. Found in the same field as No. 2. Date, May 23, 1889.

ORLEANS COUNTY ALSO.

Several nests of this bird have been found in Orleans county and among others a set of two eggs taken by E. J. Botsford, of Medina, on March 19, last.

Aside from the earliness of the date, this set is peculiar in the markings of the eggs, and perhaps a description of them will be of interest.

The markings of this set appear more distinct than is usually the case and are of a darker shade. Egg No. 1 is evenly spotted over the entire surface, while egg No. 2 is a rarity. Nearly all of its spots are concentrated near the great end, forming a very dark wreath of greenish-brown thereabout. Aside from the wreath the markings are very sparse and each end of the egg displays the grayish-white background, free and unmarked. This egg also has the imperfect pencilings of black near the large end, common to the eggs of this species, while egg No. 1 has no such markings of black.

The eggs of this set measure respectively, .84 x .65 and .84 x .63.

N. F. P.

The Saw-whet or Acadian Screech Owl.

The Saw-whet Owl (*Nyctala acadica*) or Acadian Screech Owl, as it is commonly called, is the smallest member of the Owl family in Eastern North America, and is considered quite rare in the District of Columbia four only being taken by the following gentlemen, respectively: The first by Mr. Fredrick Webster, the well-known taxadermist, the second by the Smithsonian Institution, the third by Mr. A. E. Colburn, and the fourth by myself which I took a short time after the one taken by Mr. Colburn. I give the following measurements, etc., from my skin. (Date, Dec. 31, 1889. Locality,

Ivy City, D. C.; Sex., female; Length, 7½ in.; Wing, 16 ¼ in.; Tail, 8 in.) The following from Dr. Thomas M. Brewer's American Oology gives the Habitat, etc., as follows: "North to New Calendonia; Dr. Townsend observed it in Oregon; Dr. Cambell in California; Mr. Audubon in Kentucky and Louisiana; Wilson in New Jersey; McCuehuch in Nova Scotia and Dr. Hoy in Wisconsin." "Mr. Brewer further states that he has taken eggs in northern Ohio and observed the bird in various parts of New England." As to their nesting he says: "The Acadian Owls rear their young in the hollow of trees often only a few feet from the ground, in the deserted nests of other birds, in crevices of rocks and according to Wilson occasionally construct nests for themselves among thick pine trees. The eggs are of a bright clear white and more like a woodpecker's than an owl's in their crystalline clearness; a specimen from northern Ohio measures 1 2-16 x 14-16."

W. ALLISON MERRITT,

Washington, D. C.

[A set of five eggs of this species in our possession—taken at Elk River, Minn—does not show the polished or glossy surface—so characteristic in the Woodpeckers and some Owls. These specimens are, however, the purest of white with a surface rather inclined to be rough, but not polished or glossy, and except in size, resemble, exactly, clean specimens of the Elf Owl.—ED.]

Pine Warbler.

Three miles towards the south from this city, lies a large patch of woods rapidly disappearing before the yearly onslaughts of the woodsman's axe. Around it are the cultivated fields and the partly cleared wood-lots of the farmers; within its confines all is changed. Here one could easily imagine that the primeval forests had suddenly arisen on their old-time sites. The immense pines reach so far towards the

heavens that their melancholy roar is softened by distance into an enchanting murmur and the "caw" of the crow, balancing on the topmost spear, loses its harshness and blends well with the melody of the Winter Wren here below. Under foot, the soft needles give a springing elastic sensation to the footsteps, and their racy odor tempts one to breathe deep and long. Farther on, in the dry maple woods, an old sugar house long since deserted, has become the haunt of numerous noisy Chickadees, while the swamp beyond gives promise of Warblers by-and-by. On escaping thither from the busy country road outside, one is tempted to exclaim with Longfellow

"This is the forest primeval:
The murmuring pines and the hemlocks,
Bearded with moss and in garments green,
Stand like a ruins of Eld."

It is the middle of April and on first entering this sylvan retreat, I am saluted by the ever-pleasing song of the Ruby-crowned Kinglet; instantly I become absolved in a vain attempt to transcribe it to paper. Even while my interest is thus centered I am conscious of *ci-cada* like trill near by and after the Kinglet has discovered me and has changed his tune into angry chattering, I turn my attention to it. This trill I notice is of the same pitch throughout, but first increases then decreases in power.

By the aid of a powerful field glass, I can make out the form of a little bird up a monster pine and by his motions I recognize him as the Pine-creeping Warbler. Walking carefully along, watching the ground very intently, lest I should step on a stray twig, I at last reached the foot of the tree, and straightening up prepare to shoot, when I discover he is not there. At this moment the trill sounds again but this time farther along and on repeating the operation I am again fooled. This continues until the distant twelve o'clock whistle warns me and I am just

about to start for home when two birds flutter to the ground fighting savagely. So rapid are their motions that I cannot distinguish them, but ere long one gains the advantage and his defeated rival seeks safety in flight.

The victor, his breast swelling with pride, mounts a small bush and begins the well-known trill; it is never finished however, and his lifeless form soon reposes in my hand.

Next day, the April "cold snap" arrives and the sky is well overcast with clouds so I determine to see how my bird friends stand the weather. I again find the Pine Creepers, but how changed their habits; they have descended from their airy bowers and now inhabit the deciduous trees of the swamp. One can easily observe their habits now and see how appropriate the name of creeper is, for apparently their best hunting grounds are the trunks of the trees, although numbers may be seen hunting among the twigs with all the diligence, if not quite the speed and dexterity of other Warblers.

As the season advances the males develop a greater variety of notes; sometimes they end their trill with four clear whistles, sometimes they utter four pairs of notes, the first of each pair the low, followed by the four whistles.

They are now found everywhere; the pine woods are full of them as a matter of course, and they may often be found in small patches of oak a mile or so from the nearest pine. In the fall they change their plumage and have the habits of the Bush-warblers. Their appearance is so like that of the Black Poll and Bay-breasted Warblers (full plumage of course) that it is no wonder that they are not oftener observed in the fall.

STEWART E. WHITE,

Kent Co., Mich

The Bluebird.

The Bluebird is about the second bird to make its appearance here in the spring, out of the many which annually assemble here at that season, the Robin being its immediate predecessor. The Bluebirds generally make their first appearance about the middle of March. They quickly form into pairs and diligently go to work at their respective nests. The nest is usually placed in a hollow post or a hole in a tree, being a neat cup-like depression composed entirely of grass. The eggs are usually five in number of a light blue color and entirely devoid of spots.

The plumage of both male and female is alike and is very pretty. The back, wings, tail and head are of bright blue, the feathers covering the breast being of a reddish-brown. Albino eggs of this bird are very rare here; I have never heard of but one set being taken. The nest was placed in a hole in a tree and contained four milk-white eggs, no two of which were of the same size. One was nearly one inch long and in shape resembled a Chimney Swift's egg. The others were near the ordinary size of the common Bluebird's egg. If a Bluebird which lays albino eggs be compared with one which does not, it will be found that the plumage of the former is of a much brighter blue than that of the latter. I know of no reason for this but I have observed it to be a fact.

The Bluebirds frequently select a curious place in which to construct their nest. Though they use holes in wood in preference to other places, they often build their nest in a place where no one would ever think of looking. I will record an instance of this kind which came under my notice several years ago.

I was out collecting one day, and after considerable strolling about found myself in a marshy hollow. A creek

ran through the little valley, which abounded with tall grass and weeds. Numerous willows also grew along the margin of the stream. One of these willows forked at about two feet from the ground and in the crotch lay an old rusty tin can. How it came there I have not the least idea. I now observed two Bluebirds sitting on a fence about two rods from the willow. It immediately came to my mind that there should be a nest near. I don't know what possessed me to do it, but the first place I looked was in the old tin can, and there sure enough was the nest with four half-grown young ones in it. I was somewhat disappointed by not finding the eggs, but anyway I learned something about the nesting of Bluebirds.

E. CALL LITSEY,
Marion Co., Ky.

The Great Crested Flycatcher.

One of the strangest and most grotesque of our American birds is the Great Crested Flycatcher, (*Myriarchus crinitus* LINN. *Cab.*)

He is not only grotesque in his appearance but in all of his habits, and in everything connected with him.

They arrived in my vicinity this year May 2d, but as it is their custom to stay in a dense swamp for three or four weeks after their arrival, until the weather gets warm and settled, they have not yet, May 16 1890 begun to charm (?) us with their "music," soon however the woods will ring with their song, for they will soon leave the dense swamps for more open woods.

Mounting the topmost branch of a giant oak they pour forth their "song," and such a song! For loudness, harshness and wierd grotesqueness where can you find its equal? A stranger can well wonder how a bird can produce such a noise, and keep it up for hours at a time. In fact no one would think

a bird could make a noise like that, but rather some strange kind of tree frog. It was years before I could believe a bird could utter this strange cry, that I had been in the habit of hearing from four years of age. And its nest! Unlike most Flycatchers it nests in holes in trees, and stranger still often lines them with cast-off snake skins, and to keep up the harmony this strange bird places in this odd nest some very queerly marked eggs. Where can you find its equal for grotesqueness among our American birds?

WILFRED A. BROTHERTON.
Oakland Co., Mich.

More Albinos.

SONG SPARROW.

On the sixteenth of March my uncle told me of a white Song Sparrow that he had seen in his orchard. I became interested and went out immediately and vainly searched the orchard and truck-path for it. But on March 24th, as I was going by his place on my way to school, I saw it feeding, in company with Snowbirds, in front of his barn.

The next evening I found it in a little marsh on the place and was so successful as to kill it. I gave it to Professor Langille and he pronounced it a Song Sparrow.

Its head, breast and wings had the ordinary markings of a Song Sparrow, but its back was white. Its tail was very light, but some of the feathers were light brown.

HAROLD B. STABLER.
Montgomery Co., Md.

JUNCO; FIELD SPARROW.

The Junco is quite common in this locality and a short time ago I saw an albino.

A friend of mine and myself were hunting in the country a few miles from this place (Augusta, Ga.) and while walking across a grass field, flushed a

flock of Snowbirds, among which was this albino. My friend fired and brought him down and presented him to me.

It measured 6.13 x 9.45; wing, 3; tail, 2.75.

The bill and feet were pure white and the eyes red. It was pure white with the exception of a few of the secondary quills, three feathers of the tail and a few ashy blotches on the back and breast.

Mr. Geo. Butler, of this place, has a partial albino Field Sparrow.

E. E. N. MURPHEY.
Augusta, Ga.

BLACKBIRD.

I have an albino Blackbird in my collection which was shot in March last. It was rather badly torn by shot, being minus a few feathers on one side of the neck, and his tail, but what the shot spared is preserved.

EUGENE EVANS,
Larimer Co., Colo.

A Day after Hawk's Eggs.

We started April 22, 1889, well equipped with two breech-loading shot-guns and a pair of climbers.

When about two miles on our way we spied a nest; going up and striking the tree, we were surprised to see a female Broad-winged Hawk start off. We secured her and two eggs which were a dirty white, blotched and spotted with purplish brown.

We next took a set of five Crows. Then we found a nest of the Red-tailed Hawk with two eggs; next, in a large maple 40 feet high, eggs about 2.25 by 1.75 spotted fine with reddish brown and lilac.

We next took a set of four eggs of the Cooper's Hawk from a beech 80 feet high. The nest was composed of sticks being rather flat. We secured the female. The eggs were white, tinged

with blue and unspotted. Our last Hawk's nest was that of the Red-shouldered in an old hemlock about 60 feet high. It contained three eggs, two of which were dirty white, blotched with faint reddish brown chiefly at the larger end. The other was dirty white, very faintly marked with reddish-brown spots at the larger end; we shot the old bird. We also got two more Crow's nests, each containing five eggs.

M. AND C.,
Windsor Co., Vt.

The Pileated Woodpecker in Mahoning
Co., O.

On May 10th, while a companion and myself were passing through a large piece of timber about one mile from Poland, this county, my companion had occasion to discharge his gun.

Immediately after the discharge, I noticed a female Pileated Woodpecker fly from the opposite side of a dead hickory near by.

After further investigation, I saw a hole in the stub of a large limb about fifty feet up, and chips at foot of tree.

As I had no climbers, I concluded to attempt to climb the tree without, although there was not a single limb between the ground and the excavation.

I had reached a height of about thirty feet, when I concluded that I was unequal to the task and reluctantly descended to the ground.

After looking at the hole for some time, I noticed a small beech standing about ten feet from the hickory reaching to, and beyond the excavation.

I ascended this and after remaining perched for some time looking wistfully at the nest, which, although so near was yet so far, I cut a limb with a hook on the end and found that by hooking this around a limb on the hickory and pulling with both hands, I could bend the beech over until I could

nearly reach the nest, but this was of no avail as my hands were both in use.

I finally concluded to borrow a rope which I did, and after fastening one end to the hickory, I wrapped the other end around a limb on the beech, and after considerable difficulty, succeeded in pulling it over until it touched the hickory.

After working for some time with a knife, I succeeded in reaching the bottom of the excavation and to my great disgust withdrew an egg with the head and bill of a bird protruding. I returned this and found that the nest contained one bird just out and another egg which was bad—not rotten, but one of those instances in which the contents remain clear, and comparatively inoffensive to the smell.

It is a fairly good specimen, pure glossy white and measures about 1.30 x .95.

The excavation was 18 inches in depth and between 4 and 5 inches in diameter at the entrance.

The eggs were placed on chips at the bottom of the excavation.

This bird is very rare here, many persons never having seen one.

If any other person has taken eggs of this species in this county would like to hear from them.

W. H. OLNEY,
Mahoning Co., Ohio.

A Shower of Birds.

There was a great destruction of birds in Cedar Rapids Saturday night, May 17th, between 9 and 10 o'clock.

There was a severe rain-storm, during which the birds came down in hundreds. Most of them were birds that do not nest around here and are not at all common.

Several taxidermists who reside in the city succeeded in getting a fine lot of specimens.

Some of the birds were merely stunned and when caught and put in cages, soon revived—others were killed outright.

The names of the birds as far as known were Olive-backed, Russet-backed and Golden-crowned Thrushes, Cat-birds, Bobolinks; eight varieties of Warblers, Golden Plovers, Rose-breasted Grosbeaks, Scarlet Tanagers, Yellow-crowned Sparrows, Grinnell's Water Thrush, Yellow-headed and Red-winged Blackbirds, Hepatic Tanagers and American Redstarts.

The cause of this shower of birds was that they were probably migrating during the night, when the storm struck them and beat them to the earth. Those that died were killed by coming in contact with the electric light and telegraph wires.

There was a similar shower of birds about six years ago.

BERT H. BAILEY,
Cedar Rapids, Ia.

Belligerent Neighbors.

During the year of 1882, it was my good fortune to spend the summer in the country, with very little to do, but amuse myself. Consequently I saw a great deal of bird life, for I literally lived out of doors, making pets of all the feathered families on the farm.

Among my most intimate friends were a pair of Chipping Sparrows and a pair of House Wrens, who came as regularly as clock-work for their morning allowance of crumbs. The Wrens seemed to be in great distress. They could find no place that appeared to suit their fancy for a home. To relieve them, I took a gourd, and cutting a small hole in one side, emptied the seeds out and placed it in the fork of a large cedar tree that stood but a few feet from a veranda, where I spent a good part of my time. I thought I would thus have a good opportunity to watch them in their domestic cares.

They took immediate possession, but trouble was in store for all my pets. The Sparrows had evidently chosen a limb on which to place their nest, about two feet and a half from where I had put the gourd, and both pairs began building on the same day. They were no longer friends, but enemies of the bitterest kind. From that hour on there was a continual warfare—not a war of words by any means, but long and hard-fought battles; the feathers often flying in great numbers. After a battle the Wrens would perch defiantly on their domicile, and the Sparrows as resolutely on their chosen limb, neither pair willing to yield a single inch. Each pair finished their home and when the eggs were deposited the females began the work of incubation while their partners took the position of guards. Many and hard were the battles fought, but each little warrior stood resolutely at his post with a fidelity that is well worth copying.

When the young birds were hatched they kept up their war for a few days, and then something stranger still took place; they very suddenly became the best of friends. The Wrens would feed the Sparrows and the Sparrows would then return the favor. I never heard an angry word between them from that time on, each assisting in the task of gathering food until both families were ready to move out. The Sparrows left as soon as the young could fly, and that was the last I ever saw of them. The Wrens stayed, however, and were soon preparing to rear another brood, but trouble of a more serious nature was in store for them this time. I noticed some very suspicious looking scratches on the tree, as though some prowling old cat had been trying to get my little friends. Not knowing what to do, I consequently did nothing, but would go every morning as soon as I was up to see if my little pets were safe.

One morning when the young birds were only two or three days old, I came down to find my worst fears realized. One of the parent birds had been killed and the gourd turned over, but the little ones were uninjured. The remaining parent sat disconsolately on a limb near by for a while, but the pitiful cries in the nest soon aroused it to a sense of the responsibility that rested upon it. So it set heroically to work to care for the half famished nestlings within.

This was too much for me to endure (for I hate a cat at best) and I determined to have revenge. I waited patiently until after dark, and the family had gathered in the house so I would not be observed. I covered the gourd with mosquito bar, took it down carefully and hung it in an unoccupied room in the house. Then I placed a stout steel trap in the place where the nest had been and was rewarded next morning by finding a big cat in the trap. A member of the family that was always first up in the mornings agreed to dispose of the cats for me, so I set the trap each night and succeeded in catching three. I still took the nest in every night until the birds were old enough to fly. When I would put them out in the morning and take off the cover the old bird would hop out and, perching scarcely a foot from my hand, would warble out its morning song as though thanking me for my care.

I would like to hear from some of the readers of THE OOLOGIST if they have ever met with an incident like this of the Sparrows and the Wrens. Doubtless what I thought a very odd freak of nature, is something not so strange after all.

LILLIE I. CONLEY,
Wayne Co., Ind.

Our Question Box.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

T. M. B., Natchez, Miss.—The eggs of the Hermit Thrush are greenish-blue, unspotted and average about .86 x .65 and closely resemble those of the Wilson's Thrush.

M. S. H., Portland, Mich.—1. The American Peregrine Falcon or Duck Hawk is frequently called the "Bullet Hawk."

2. Will not the answer to "B. S. B's." query in the May OOLOGIST apply as well in Michigan as in New York State?

C. T., Los Angeles, Cal.—The original data should *always* accompany the set.

H. C. H., Cincinnati, N. Y.—The Prairie Horned Lark (*O. a. praticola*) is not an uncommon breeder in the lake counties of Western New York. The true *alpestris* (*Otocoris alpestris*,—Horned Lark) breeds in Labrador and those upper regions and may be a winter visitant to this section. It does not breed in New York.

G. B. E., Kansas City, Mo.—Your gregarious birds having a light-brown topknot, strip of black about the eye, yellowish-white breast, lavender rump, tips of secondaries, red and tail feathers tipped with yellow; are Cedar Waxwings.

W. M., Charlie Hope, Va.—Your "lead-colored bird, with a black throat and white breast," nesting in a hole in a dead stump, whose eggs are six in number, small and white with brown specks; is the White-breasted Nuthatch.

Name mislaid.—The Belted Kingfisher nests in this locality from the 20th of May into June. The Woodpeckers nest about the same time.

A. O., Brocton, N. Y.—Your sand is garnet sand. The shells which you call pennywinkles (periwinkles?) are doubtless *Littorinas*.

R. H. B., Claremont, N. H.—Is not the egg you describe, a runt egg of the Cliff Swallow? It resembles a Cliff

Swallow's in everything but size, (judging from your description.)

A. L. T., Newark, N. Y.—We know of no hawk that is nearly all white whose eggs are greenish-white unspotted.

G. E. B., Marion, Ala.—Your "Butcher-bird" is one of the Shrikes, probably the Loggerhead. Your "Swamp mockingbird" we think from your description must be the Towhee.

P. C., Wilmington, Del.—The following owls probably breed in your locality, viz.: The Barn, Saw-whet or Acadian, Screech, Great-Horned, Short-eared, Long-eared and Barred.

A. H., New Dorp, N. Y.—The answer to W. I. C. in the May "query column" applies *verbatim* to your case.

A. W. C., Tecumseh, Mich.—The Red-tailed Hawk begins to set about April 1st. Incubation lasts about three weeks. Your one egg constitutes a set if you are satisfied that the bird had finished laying. The eggs are laid at intervals of a few days. Cannot say as to the bird that migrates with the Oriole.

R. H. D., Stuart, Ia. asks the following question: "What bird is it that builds on the beams of bridges, lays a blue egg, and is about the size and color of a Robin? The nest is built of sticks and grass." We don't know if it isn't a Robin. Who does?

J. F. H., Mendota, Ills.—Cannot place your nest and eggs without a description of the bird.

L. S. M., Gregory.—1. Your bird called "Chippy" which lays blue eggs spotted with black is the Chipping Sparrow.

2. Your description is insufficient.

H. H. R., Middle Granville, N. Y.—Although we have always heard the name "Shitepoke" applied to the American Bittern, P. G. B. of Haverhill, Mass., informs us that in his locality, this name is applied to the Great Blue Heron. He says that there is an island near Haverhill where the Great Blue Heron breeds, which is called "Shitepoke Island."

A. T., Newark, N. Y.—Your egg is an egg of the Oven-bird or Golden-crowned Thrush.

C. H., Oregonia, Ohio.—The Vesper Sparrow or Grass Finch nests on the ground and has two white feathers in the tail, most noticeable when flying.

H. A. H., Edinburgh, Ind.—We have generally heard the name "Shitepoke" applied to the American Bittern and although a correspondent at Haverhill, Mass., informs us that in that locality, it is applied to the Great Blue Heron, yet the nest and eggs you describe as belonging to the "Shitepoke," are, by your description, very like those of the Green Heron.

J. H. L., Hamilton, Ont.—The number of eggs in a clutch of the Cowbird is not, definitely known, although observations in regard to this matter have been had, that approach accuracy. For instance, in one case a Cowbird kept in captivity, laid four eggs.

D. F. R., Himrods, N. Y.—1. The description of the nest and eggs belonging to the sparrow with a white tail, is like that of the Vesper Sparrow or Grass Finch.

2. Your description is hardly sufficient. The eggs of the Song Sparrow vary considerably in color and markings.

L. F. N.—Would like to know what bird it is about the size of a Crow or a little larger that frequents ponds, streams and other bodies of water, the general color of whose upper parts is greenish-brown and whose tail is tipped with bright scarlet. Who will relieve him?

H. J. C., Elba, N. Y.—1. Your bird about the size of a sparrow, of a slate color on the head, back, wings, tail and part way down the breast, the rest of the under parts being whitish, and having two white feathers in each side of the tail; is the Slate-colored Junco or Black Snowbird.

2. See another column of this issue.

3. Your small bird of a uniform yellow or yellowish-brown color, building a nest similar to that of the goldfinch in a bush near a house, the eggs being of a pearly white spotted with various

shades of reddish-brown and occasionally a spot of black, is probably the Yellow Warbler.

B. S. B., Phelps, N. Y.—1. The nesting of the Red and White-shouldered Blackbird or Tri-color Blackbird of the Pacific coast, is similar to that of the Red-Winged, the nest being placed in flags or alder-bushes near water.

2. Your sparrow of a general brownish color and patch of chestnut on the head, building a nest of hair in a bush, and laying blue eggs spotted lightly at the large end with brown is doubtless the Chipping Sparrow. Early nests of this species are often placed on or near the ground.

3. The nests and eggs of the different Plovers closely resemble each other as do the birds themselves. The Killdeer may be known from all other Plovers by the *two* black bands on throat and breast, and by its cinnamon-colored rump.

A. P. B., La Moille, Ia.—Your bird building its nest under a bridge or in an old barn, whose eggs are white spotted sparingly at the large end with brown, is the Phoebe.

NOTE.—Queries not noticed in this issue will be answered in the next number.

Our Monthly Mixture.

H. F. M., Quechee, Vt. reports having shot a Mockingbird at that place on April 30th, last.

Ernest H. Short, Chili, N. Y. relates the taking of an egg of the Prairie Horned Lark which measured 1.01 x .79, an unusually large egg for that species.

On May 6th, Allie Hutchinson, of Gaines, N. Y. found a nest of the Song Sparrow placed in a cavity of an apple tree, ten feet from the ground.

Letson Balliett, of Des Moines, Ia. reports a nest of the Great Horned Owl, the contents of which were wonderfully graded in size and incubation. First was a young Owl. Then five eggs, which, in incubation varied uniformly from highly incubated to perfectly fresh. Also there was a perfect

gradation in size, the most highly incubated egg being the largest, and the fresh one being the smallest, while the size of the others varied directly as the stage of incubation.

Charles C. Trembly, of Utica, N. Y., writes: "Have just received, from Mr. H. L. Callaway, of Orion, Ill., a set of nine (9) eggs of the American Crow, collected April 7th of this year. The eggs present no great variation in size, or color. Sets of six are not unusual, but I should call mine either a very large, or an "assisted" set; by which I mean that the nest was probably occupied by two pair of Crows."

We clip the following from a Mayville, N. Y. paper:

"Almon E. Kibbe, Taxidermist, of this village, has just completed the mounting of a Florida alligator, for Mr. Frank H. Lattin, of Albion, N. Y., which will be on exhibition at Chautauqua, during the coming summer. The reptile measures a trifle over eleven feet in length and must have been anything but a pleasant neighbor in its native slough in the land of flowers."

Frank Viele, of Ballston Springs, N. Y. relates an extraordinary occurrence in connection with a Robin. He writes:

"On May 2nd, while out collecting, I saw a curious sight. A Robin had built her nest in a tree near a Crow's nest, and the Crows bothered her so that she built a nest about twenty rods from the old one, and I saw her carry the four eggs in her claws to the other nest."

Homer J. Knickerbocker, of Elba, N. Y. writes:

"May 3rd, I shot a bird, whose back, head, wings and tail were olive color or yellowish green, with a small tuft of reddish yellow feathers on the back of its head. The throat was white, streaked with black not unlike a Meadowlark's. The breast and belly were white; the bill was about three-fourths of an inch long and closely resembled a Woodpecker's. Shot it in the act of singing. If this is an Olive-backed Thrush, please give me credit for finding two nests last year. The nests were in small saplings, about seven feet up, composed of small twigs, shreds of bark, etc. Length of nest,

about four and one-half inches; breadth, three and three-fourths inches; depth, two inches. Eggs, four in number, greenish-blue, specked with reddish-brown and lilac gray—size, about .90 x .65."

[Although the breeding of the Olive-backed Thrush is one of the rarest occurrences in this locality, who will say that the above accurate descriptions are not coincident with that Thrush?]-
ASSOC. ED.

F. W. Cook, of Minneapolis, Minn. reports the capture of a King Rail in Hennepin Co., on the 27th of April; a rather northern locality for that bird. It was a female in the best of plumage.

Victor Allee, Paola, Kansas writes us of a "red-bird" (cardinal) nesting in some vines in a porch. He secured a set of eggs from the nest and wishes to know if it is not uncommon for them to nest so near habitations.

Evening Grosbeaks were not uncommon in Western New York during the past winter. One or more specimens were taken by each of the following gentlemen: George Guelf, Brockport; R. Wilkins, Albion; John Rittenburg, Gaines.

L. A. Dockerey, Clinton, Miss., writes us that he has taken thirty-two eggs of the Broad-winged and Florida Red-shouldered Hawks this year between the dates of February 25th and March 10th. He also found two nests of the Carrion Crow, and a nest of the Meadowlark which contained two eggs of the Lark and one of the Bob-White. Two of the Meadowlark's eggs had been rolled out, and one broken by the Bob-White, as he inferred.

Glenn Levings, Potsdam, N. Y., found a nest of the Red-shouldered Hawk last spring containing six eggs, a very large set.

—o—
PROTECTION.

Having read Mr. Leslie's article on "Bird Protection" in the May OOLOGIST, I fully agree with him in the matter. I am but a boy collector, but I try to study birds, eggs and nests scientific-

ally. I think that if such a society as he mentions should be formed, our "native birds" would increase instead of diminish in numbers. I also think that a game law such as he mentions should be made and enforced, and that every officer to whom a certain district is given should know all the scientific collectors of that district. I think that if we, who are studying scientifically, could get up such a society as mentioned, it would in a great measure stop "nest robbing." Let us hear from more on this important subject.

HOWARD G. PHELPS,
Cazenovia, N. Y.

—
NESTING EXCAVATIONS USED MORE
THAN ONCE.

In reply to the query of P. H. H. in last OOLOGIST, I would say that I know of instances where the Flicker and Bluebird have had their nests in the same tree for three successive years, raising two broods each year.

H. F. M.,
Quechee, Vt.

No queries or articles reaching us later than the 20th of the month, can expect to receive attention in the following issue.

—
Another Handy Contrivance.

Seeing articles now and then on different methods of collecting eggs, I thought I might add something that would be new to some of the readers. viz.:

I have a light pole fifteen feet long, made of cedar, with an attachment on the extreme end for holding a small hand mirror and with this, one can look into the majority of nests without going to the trouble of climbing the tree to see if the set of eggs is complete or not.

I have used this very successfully during seasons '88 and '89 and intend to do so this coming season.

CLYDE L. KELLER,
Marion Co., Oregon.

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OÖLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

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.

. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

Editorial Notes.

We are in receipt of a leaflet explanatory of a proposed trip to Mount Whitney, the highest peak of the United States. It is proposed to organize a party to spend the summer vacation in visiting the mountain and making a scientific study of it and the adjacent country as regards Ornithology, Botany, Geology, Mineralogy, etc., and to make collections, which study will be under the guidance of competent instructors. Prof. Charles Hitchcock, of Dartmouth College, one of the most eminent geologists of the country, is expected to be with the party. The cost of the proposed trip is placed at \$100 per individual. Those desiring to join the class, should address Rev. F. H. Wales, Principal San Joaquin Valley Polytechnic Institute, Tulare City, California.

As enthusiastic a recommendation as the OÖLOGIST has received in some time comes to us from one of our correspondents. After vividly protracting, in a sad manner, the ignorance and rapacity of some "young collectors" in his locality, he exclaims with energy: "Young collectors, thrown down your pins, and shake five cents out of your bank and send it for a copy of the OöLOGIST which will tell you how to heartily enjoy and profit by egg collecting."

The number of queries received monthly are continually on the increase. It is true that the 19th century is an era of interrogation points. Send them along.

In the article on the Chinese or Mongolian Pheasant in the May number, by a mistake of the Editor, that bird was given as occurring in Idaho. The writer of that article, Mr. McNamee, resides in Idaho, but all of his observations on the Mongolian Pheasant were made in Oregon, and he informs us that that bird is not found in Idaho.

We make haste to amend the error, which was in confounding the place of observation with the place of residence of the observer.

Natural History Camp of the Worcester Natural History Society.

Unknown to many, although its fame is rapidly spreading in all directions, there exists, on the shores of Lake Quinsigamond, near Worcester, Mass., an institution, which, in originality, nature and scope of the work, and the object held in view, is one of the best and most worthy of imitation generally, that has been brought to our notice.

This is the Natural History Camp, established in 1885, by the Worcester Natural History Society.

It is a summer camp for boys, and a similar camp for girls has recently been instituted at Tower Hill, on the shores of the same lake and promises to be fully as successful as the Boy's Camp has been during the five years of its establishment.

The full plan and scope of the work may be obtained from the Prospectus, which we publish in this OÖLOGIST.

All who are at all interested in any of the branches of Natural History, will at

once see the true value and worth of such an institution, where one is able, at a very moderate price, to pursue his own loved study under the best of instructors, and in the fields and woods and by the waters of Lake Quinsigamond.

Natural History students, wherever they may be found, could very profitably spend their vacation; or, a part of it, at this delightful camp.

Or, if too far removed from this mother of Natural History Camps, why they not make an effort to establish similar institutions in their own respective localities, and by their own pretty lakes and streams? The project may seem large at the outset, but a scheme with such pleasure, education and profit behind it, cannot but meet with the greatest success.

We would like to see the plan of the Lake Quinsigamond Natural History Camp carried out in many places throughout the country. Is the result not worth the effort?

Recording the Number of Birds Observed.

[From *The Auk*, Vol. VII, No. 2, April, 1890.]

In an interesting article in *The Auk* a year ago Mr. Witmer Stone speaks of the difficulty of estimating the number of birds in a given locality, and declares it "well-nigh impossible." Although this difficulty is, perhaps, not so great as it seems, yet it has been so generally recognized that almost all field observers seem to have accepted the case as hopeless, and to have contented themselves with entering a bird in their note-books, as well as in published lists, as 'abundant,' 'rare,' or 'rather common,' words of such pleasing indefiniteness that they seldom mean the same thing to two different observers, or to the same person in regard to different species. The result is that we have but the vaguest idea of the relative abundance of different birds, or of the fluctuations of any one species in different years or from day to day through its period of migration.

To take a complete census—except perhaps during the breeding season—may be out of the question, but there is

no reason why an observer should not make his work exact as far as his opportunities and abilities permit,—*i. e.*; why he should not keep a record of the exact number of birds of each species met with each day. This of course would not represent the actual number present in any locality, for varying circumstances of length of time spent in the field, extent and nature of the country covered during the day, weather, etc., would considerably modify the results, but, by entering all these facts in the day's journal, and giving them due consideration in making subsequent comparisons of the figures obtained, results can be reached that if not exact, are at least an approach toward it, and of vastly more value than the record of a vague generalization based perhaps as much on some mere accident that has strongly impressed the imagination, as on any serious consideration of the facts observed.

This practice of keeping a careful count has been in use for the last few years among several ornithologists of my acquaintance, and it would seem worth while to urge its general adoption among field naturalists, if it were only to infuse a spirit of more scientific exactness into their field-work. Our way is to jot down in the field with pencil and paper—perhaps on the back of an old letter—every individual bird seen or heard. If birds are few, and one's memory good, it may be possible to do this all at the end of the day, but for most people, and in the height of the season, the best way is to stop every little while—in the inevitable pauses of waiting for some bird to show himself or to sing again—enter the species not already on the list, and mark against each name the number seen or heard since the last entry. Care must be taken to make due allowance for individuals already previously observed during the same day, in order

not to unduly swell the record by entering them over again. At the end of each day the results can be transferred to the permanent record. To some the work may seem an irksome slavery, hopelessly interfering with their enjoyment of the beauties of nature. But with a very little practice they will be surprised to see how easy it becomes, and how much more thoroughly they observe when they have an increased incentive to identify every bird and count the number in each flock.

To illustrate the system, I give a brief extract from the notes taken near Cambridge last season by Jonathan Dwight, Jr., and myself.

	May	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ampelis cedrorum										3	4				10	7		2	4
Vireo olivaceus										10	9				32	1		2	6
V. gilvus										2	12				8	10		1	4
V. flavifrons										1	2				1	1		2	4
V. noveboracensis										4	10				1	3		1	1
Mniotilta varia										6					1				
Helminth. chrysopyra.										1					1				1
H. ruficapilla										3	1				1				1
Composit. americana										12	15				23	28			5
Dendroica aestiva										4					1				26
D. cerulea										1	1				2				1
D. maculosa										8	9				2				1
D. pensylvanica										8	12				2				1
D. striata										4	1				2				1
D. vitrens										2	7				1				1
D. virens										1	1				1				1
D. virginii										1	1				1				1
D. discolor										1	8				10				5

ruled both horizontally and vertically, and the vertical columns headed with the days of the month, so that a space is given for the entry of each species under each day. This greatly facilitates the making of the original entry, and upon subsequent reference to it the history of the occurrence and abundance of any species during the period of observation may be read at a glance.

When it happens to be impossible to make an exact count—as is sometimes the case with a large flock of birds—the fact of the number recorded being only an estimate can be indicated by attaching to the figures any arbitrary sign to suit the fancy of the observer. Similarly, signs and abbreviations can be used to indicate that a species was in flocks, was apparently migrating, was singing, etc. As a rule, however, such facts can be more profitably treated at greater length in the note-book proper.

Hoping that others may be induced to follow this plan, and so, with but little trouble, greatly increase the scientific value of their field-work.

C. F. BATCHELDER,
Cambridge, Mass.

March 14, 1890.

BOOK REVIEW.

Any book reviewed in these columns can be obtained of the Publisher of the Oologist at prices quoted.

Birds through an Opera Glass. FLORENCE A. MERRIAM.

In Riverside Library for Young People. Illustrated. 16mo., 75 cents. Boston: Houghton, Mifflin & Co. 1890.

This work, written in a popular style, is one of the most entertaining and fascinating that has come to our notice.

The author assures her readers in the preface, that "the little book is no real lion" and that "they have nothing to fear." She says: "It is not an ornithological treatise. It has not even the lion's roar of technical terms and descriptions to warn them of raging dullness, but is 'a very gentle beast, and of a good conscience.'"

Preceding the work proper are a few

As a matter of convenience we use for a permanent record pages on which the species likely to be met with are printed in systematic order down the left hand margin. These pages are

brief but pointed "Hints to Observers," all of which are so valuable that we cannot pick out any particular one to mention here. She especially advises the observer, that, in order to make his study of birds through an opera glass most successful, that he strive to render himself, as much as possible, a part of the landscape, by avoiding bright-colored clothing, by walking slowly and quietly, and by using the trees and foliage as places of concealment.

The work itself is a marvel in the portrayal of bird character, and this vivid portrayal of character is one of the most pleasing and striking features of the work.

To give an example, what words could portray to us more clearly the character of the Blue Jay than the words the author uses? She says: "The Blue Jay comes with a dash and a flourish. Unlike the Chickadee, whose prevailing tints match the winter sky, and whose gentle *day-day-day* chimes with the softly falling snows, the Blue Jay would wake the world up." And again: "What a good business man the Blue Jay would make? All his notions are like the unique loading up performance—time saving, decided, direct."

Another excellent feature of the work is the description given the songs of the birds. Illustrated by notation in many instances, and represented by appropriate words in others, they are all most strikingly suggestive of the original songs.

In reaching the appendix, we find that we are only half done, for here we find the birds treated of in the work, classed into families forming a very handy table of reference. Following this, the general family characteristics of birds are treated. Then follows some arbitrary classifications: First, birds found in certain localities, as about the house, or in thickets, or in woods. Second, classification as to size as compared with the robin. Third, as to colors, whether striking and bright or dull and plain. Fourth, as to songs. Fifth, as to peculiarities of flight. Sixth, as to those birds that have the habit of song flight. Seventh, as to marked habits. Eighth, birds that walk instead of hopping. Ninth, shape of bill adapted to food. Tenth, classed as to place of nesting; and eleventh, birds that are seen in flocks when not nesting.

And so we reach the index of the work which tells us where to find anything we want and concludes this highly entertaining, instructive and valuable work.

Up and Down the Brooks. MARY E. BAMBORD.

In Riverside Library for Young People. Illustrated. 16mo., 75 cents. Boston: Houghton, Mifflin & Co. 1890.

This work, also written in a popular style, makes the study of water insects most interesting and pleasing. The author relates in an easy way her collecting experiences "up and down the brooks" and tells us in a way that we may all understand, about these lively little water-folk.

She depicts the invincible small boy, in all his many and variegated phases, to an extent of reality, that brings the "young America" right before our eyes. She devotes a closing chapter to "Frogs, Boys, and other small Deer."

Taken as a whole, the work is a valuable one and should find a place in the library, not only of all who are interested in entomology, but also of all who enjoy an interesting and readable book.

Modern Science and Modern Thought, by S. SAING.

In two parts, being Nos. 117 and 118 of The Humboldt Library of Popular Science. 45 cents. New York. December, 1889.

The object of the book is to "give a clear and concise view of the principal results of Modern Science, and of the revolution which they have effected in Modern Thought." The various chapters treat of Space, Time, Antiquity of Man, Miracles, Christianity without Miracles, Practical Life, etc., etc., etc.

Of course, a work of such depth of thought as this, is beyond our power to criticise. In all the subjects treated which refer to Christianity, the skeptical side is taken and the lines of reasoning are to that end. The articles which make no particular reference to Christianity, are well worthy the consideration of all.

That New Catalogue.

Owing to an extra amount of work, we have as yet been unable to complete our new 100-page Catalogue, but expect to have it out sometime during the current month. Our patrons can depend upon having a copy by first mail after we receive them from the binder's hands.

Faithfully, FRANK H. LATTIN.



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 Structure of Birds.....E. H. FORBUSH, President Wor. Natural History Society.
 Breeding Habits of Birds.....CHAS. E. HOYLE, Ideal Methods of Teaching Natural History.
 Histology.....HENRY A. KELLY.
 Photography.....DR. G. A. JORDAN.
 Astronomy.....DR. E. V. SCHIBNER, WILTON H. DESPER.

THE FOLLOWING GENTLEMEN ARE EXPECTED TO SPEAK AT SOME TIME DURING THE SEASON:

REV. EDWARD EVERETT HALE, D. D.....Curator Museum
 PROF. EDWARD S. MORSE.....at Salem.
 PROF. GEO. L. GOODALE.....Harvard College.
 PROF. CLEVELAND ABBE, U. S. Signal Office, Washington, D. C.
 PROF. J. W. P. JENCKS.....Brown University.

CAMP COMMITTEE.

DR. W. H. RAYMENTON. COL. E. B. STODDARD.
 DR. MERRICK BEMIS. A. P. MARBLE. PH. D.

PROSPECTUS.

The object of the Worcester Natural History Society in establishing this Summer Camp is to afford a pleasant and profitable place for boys to spend a part, or the whole, of their summer vacation. Here they can live in tents, fish, row, swim, and do all other reasonable things that to a boys' mind constitute "camping out;" in daily association with men of liberal education who lecture on scientific subjects, take boys out on collecting expeditions, take part in their amusements, are ready at all times to answer questions, and assist those who desire to carry on work in any department of Natural History, and do all in their power to make the season so enjoyable, that all will wish to spend every summer vacation at the Camp. During the past five seasons over 800 people have been cared for, and the Camp has become recognized as a permanent educational institution.

PAST RECORD.

The first camp was pitched in the summer of 1885. From a small beginning the Camp has grown in numbers, efficiency, and resources year by year. It has attracted the attention of many of the foremost educators, literary men, and scientists of the country. Its work has been heartily commended by Prof. Edward S. Morse, Rev. Edward Everett Hale, Col. T. W. Higginson and many others. A report on the Camp and its work by Prof. E. Harlow Russell, principal of the State Normal School at Worcester, was published in 1889, in the fifty-second annual report of the Massachusetts Board of Education. During the season of 1889 it acquired a national reputation, and was visited by many prominent people representing different departments of education.

LOCATION.

The Camp is beautifully situated on the west shore of Lake Quinsigamond, about one mile north of the causeway, on the old camping and fishing grounds of the Nipmuck Indians. It occupies the forty acre Park owned by the Worcester Natural History Society. This tract includes hills, forest and open land. The location is all that could be desired from a sanitary point of view. The Camp ground is well, but not densely shaded by large forest trees of various kinds; the tents are pitched on dry,

gravelly soil at the foot of Wigwam Hill. The wooded hillside shades the Camp from the afternoon sun. The whole region is a "haunt and nesting place for birds," a tract of wooded hills and upland pastures, clear streams and lakes, which offers every variety of occupation to boys who love out-door life.

CARE OF THE BOYS.

The system of registration used, together with the roll call, makes it possible to record at headquarters where each camper is, if out of camp, and when he should return. The camp physician goes the rounds every day. The accommodations, sanitary arrangements and food are subject to his approval. No serious illness has ever been contracted at the Camp. Boys are allowed to leave Camp and go to the City or elsewhere if it is the wish of their parents; otherwise not, unless accompanied by one of the officers, instructors or employees. Every care is used during the swimming lessons and excursions to avoid accidents; the boys are taught to use caution when in or upon water; and during the five years of the Camp no casualties have occurred. Fire-arms are not allowed in the Camp. Each boy is required to take a certain care of himself. He is expected to be cleanly and tidy in person and dress, and to keep his quarters neat and orderly. He must air his bed and bedding, make his bed, sweep his floor, hang up or fold his clothes, etc. He may do things after his own fashion, but he must do them effectively, regularly and punctually.

VISITORS.

Visitors are at all times welcome to the Camp, and arrangements may be made with the steward for meals. At Camp headquarters every possible courtesy will be shown to visitors.

DAILY ROUTINE.

The slight amount of drill and light military discipline serves admirably as a sort of camp tonic. It is in no way burdensome, and has proved very acceptable to the boys. Fifteen minutes per day are given to gymnastics, which are thoroughly enjoyed by all. These two systems of physical training do much in improving the figure, carriage, etc., without overtaxing the powers in any way.

- A. M.
 6:00. Reveille.
 6:15. Reveille roll-call.
 6:20. Fatigue call.
 6:45. Mess call.
 7:30. Inspection.
 7:50. Company drill.
 8:30. Gymnastics.
 8:45. Swimming, (voluntary).
 P. M.
 12:30. Mess call.
 4:15. Swimming, (voluntary).
 6:00. Mess call.
 Sunset. Dress Parade and Retreat.
 9:15. Tattoo.
 9:30. Taps.

Any boy may go to bed immediately after retreat.

This arrangement gives the boys thirteen and one-half hours per day free time, for lectures, games, excursions and other occupations. Sunday is a day of rest in camp, as elsewhere. Services are held in the Dodge Pavilion in the afternoon by Worcester pastors.

THE LECTURES.

Lectures given on scientific subjects by students and teachers, some of whom are eminent in their specialties, are made popular and easy of comprehension. Specimens, drawings, the microscope, telescope and stereopticon, are all used in demonstrating and illustrating. The boys are not compelled to attend, but it has been found by experience that many of them will voluntarily attend, and that nearly all of them become interested in one or more subjects.

THE WORKSHOP, LABORATORY AND STUDIO.

The society has a large, well lighted and well appointed workshop on the grounds. This is fitted up with benches, etc., and supplied with tools. It will be in charge of Mr. E. C. Ware, late superintendent of a large manufactory in Pennsylvania, who will teach the boys how to use and care for tools. Mr. A. A. Coburn will build boats or canoes in the workshop during the summer, and explain the manner of building as the work proceeds.

A new departure will be made this year in the upper rooms of the workshop. A room will be fitted up for photographic work by Mr. John M. Bemis, who has devoted much time to photographing microscopic objects. He will instruct the boys in practical photography, and will prepare photo-

graphs of microscopic objects, for use by other teachers. Rooms will be fitted up, one for biological work; one for a studio for drawing and modeling in clay; and another for preparing specimens. Two skilled taxidermists will give lessons in their art.

PRACTICAL OUT-DOOR LESSONS.

The hunter will teach the boys the haunts and habits of the game and fish, how to make a camp-fire, pitch a tent, handle an axe, cut wood, build log camps, etc. The lessons in rowing and swimming which have in past years proved of great value, will be continued under efficient instructors. An experienced bee-hunter has been engaged to take the boys on bee hunts several times during the season. The out-door sketching under the care of a New York artist will be made a special feature, and a systematic course given during the eight weeks of camp. Out-door evening lessons on astronomy, illustrated with the telescope, will be given during the season.

EXCURSIONS.

The experience of the past few years goes to prove that the best way to enlist the interest of boys in the study of Natural History, is to take them out into the woods and fields. Here the instructor comes nearer the learner than is usual in the class-room. He is, in fact, not so much of a teacher, as a student, whose studies the pupil is permitted to witness and share. In these excursions the teacher is simply a leader, whose methods of procedure are watched by the class, and whose suggestions or remarks are dropped incidentally, or called forth by questions from individual pupils. It is found that many of the boys catch the spirit of observation with surprising alacrity when it is thus diffused like an atmosphere round the path of an enthusiastic student of nature. While the natural activity of the boy is exercised by walking, climbing, rowing, etc., his perceptive faculties are developed by the continual out-look to discover new objects, and the observation of those pointed out to him by the teacher. Specimens taken are exhibited on the spot, or passed from hand to hand; comments are made on them by the teacher, and thus the boys learn without effort many things they will long remember, and are stimulated to further observation and reflection. No text books are used in any department.

CAMP FIRE STORIES.

Each week the Camp is in session there will be two evenings devoted to camp fire stories, when the boys gather round the central camp fire to listen to the personal experiences of hunter, soldier, ornithologist or woodman in the wilds. The subjects of these stories will be the Indians and adventures with wild animals, birds, reptiles and fishes. These camp fires will be a popular feature of entertainment and instruction for the season of 1890.

AMUSEMENT AND RECREATION.

All healthful games, such as base ball, tennis, foot ball and athletic contests, are encouraged. New base ball and tennis grounds will be ready for the coming season. A grand regatta will be held during the first week in August, in which the courses in the various events will be graduated to the strength of the contestants. Suitable prizes will be given to the winners. There are also evening gatherings around the camp fire when each one is invited to contribute his share to the general entertainment. Every week more elaborate evening entertainments are gotten up with music and literary exercises. Illuminations and fireworks are sometimes included in the programme. It is intended that the whole current of life here shall be free and buoyant, and every effort will be made to give every one a good time to which he will look back as long as he lives.

ACCOMMODATIONS.

The tents are of the army wall pattern, with substantial wood floors and waterproof fly. Each tent will accommodate four persons, and is provided with straw mattresses, wash basins, a tin dipper, pail and broom. Campers furnish their own blankets, pillows, towels, etc. Meals are provided in spacious dining tents, and there is also an enclosed pavilion and large workshop for the use of members. Other buildings will be built this season.

FOOD.

A variety of good wholesome food is prepared by excellent cooks. Plenty of fresh sweet milk is furnished direct from Shrewsbury farms. No pains will be spared to supply just what is most needed by growing boys.

□ CONDITIONS OF MEMBERSHIP.

Boys of good character, of the school age from ten to eighteen, can join the

Camp at any time during the season for one week or the eight weeks the Camp is in session, provided *Application is made in advance*. The Camp is as far removed as possible from being a Reformatory, and no boy will be received or retained who is vicious. While the management desires and intends to afford the boys all possible freedom during their stay at the Camp, some restraints are absolutely necessary in a camp of boys, and members are expected to submit to the mild form of camp discipline, which has proved so wholesome in the past.

WHAT TO TAKE TO CAMP.

Every boy should be provided with the following articles:

Note books, sketch book, two or three heavy double or four single blankets, a pillow, his customary summer underware, three flannel shirts, plenty of stockings, a suit of medium weight woolen clothes, two pairs of good weight shoes, an overcoat, a rubber coat, rubber boots, bathing trunks, a soft felt hat for bad weather, handkerchiefs, hair brush and comb, clothes brush, tooth brush, shoe brush and blacking, and a box containing pins, needles, thread, buttons, roll of white tape, indelible ink, thimble, scissors, a piece of beeswax, a ball of string and a package of court plaster. These articles are not required by the rules, but will be found useful.

APPLICATIONS.

Blank forms of application for membership are supplied, and will be mailed to any given address. Any one desiring to spend a few weeks at the Camp is requested to state the dates of his intended arrival and departure.

If the application is for the entire season, it should be so stated. All who intend to join the Camp of 1890 must send in their applications at once, so that the number of season members may be known at an early date, and a correct record made of those who desire accommodations for a short time only. It has been found that those who make application for a week's stay at Camp, usually desire to stay longer after a week's experience. This they can do by giving notice, *provided* a vacancy exists for which there are no previous applicants.

Applicants for the season will be given the preference. Transients will be registered in the order of application.

EXPENSES.

Members received at Seven Dollars per week, payable in advance. This covers the entire expense of living in Camp, board, lodging, swimming lessons, gymnastics, lectures, lessons, etc., etc. There are no "Incidentals."

A uniform cap, blouse and trousers, all of dark blue, is furnished by the Society at Seven Dollars per suit. To those bringing dark blue trousers, a cap and blouse will be furnished for Three and one-half Dollars.

A blouse and cap will be rented to those who wish them, at Fifty Cents per week.

HOW TO REACH CAMP.

The following railroads center in the Union Station, at Worcester:

Boston & Albany; Boston & Maine; Fitchburg; New York, Boston & Providence, and the Norwich & Worcester Branch of the New York & New England. The through express trains of the New York, New Haven & Hartford R. R. also stop here. Baggage can be checked from any point to Worcester. Here a change of cars and a transfer of baggage must be made to the Worcester & Shrewsbury R. R. The station is on the north side of the Union Station. Here a ticket to Camp will cost Twenty Cents. These trains run hourly, leaving Worcester on the half-hour and connecting with the steamer Apollo of the Lake Quinsigamond Steamboat Co. Those having baggage to be transferred here should notify the purser on the boat. The Apollo lands passengers and baggage on the wharf at the Camp.

The Summer Camp for Girls.

This is a camp for families, and is designed especially for Ladies and Girls. It was established by the Worcester Natural History Society during the season of 1889, at Tower Hill on the east shore of the Lake, and nearly opposite the Boys' Camp. Thomas H. Dodge, Esq., of Worcester, a liberal patron of the Boys' Camp, has offered the use of this land and a building that the girls may enjoy some of the advantages which their brothers have across the Lake. A very successful beginning was made last season. The prospectus of this Camp will be ready in May.

For further information in regards to either Camp address, PRESIDENT WORCESTER NATURAL HISTORY SOCIETY, Museum, No. 11 Foster Street, Worcester, Mass.

To Our Subscribers.

In this OOLOGIST we make two *extraordinary* offers in order to obtain hundreds of new subscribers. One offer is the \$1.00 offer which entitles the sender to a full year's subscription to THE OOLOGIST, and the other the 25c trial trip offer. We well know that with the co-operation of our friends and the liberal offers we make that we can easily obtain hundreds of subscriptions within the next 30 days. Our offers are so very liberal that we really cannot afford to give anything for obtaining subscriptions, but in order to induce our patrons to use their influence in our behalf and to call their friends' attention to our offers, we will send them a card good for anything we advertise, to the amount of 10 per cent. of the amount they have induced their friends to let them send us, in accordance to either or both our \$1.00 and our 25c offer. For example: If you should obtain three persons to accept our \$1.00 offer, and eight our 25c one, you would send us \$5.00, for which we would send you by return mail a card good for 50c worth of anything we advertise, or if you should induce only one to accept our \$1.00 and one our 25c offer, we would send you a card good for 12½c.

Many of your friends would be glad to have a chance to subscribe for THE OOLOGIST, and we think with a very little labor you could easily send us a goodly number of subscriptions during the next 60 days. Many of our patrons will send us more names and more money than others, and in order to show our appreciation for their extra work, we offer the following prizes in addition to our 10 per cent. offer, viz.:

To the person sending us the greatest amount of money in acceptance of our 25c and \$1.00 offers on or before August 1st, 1890, we will give a copy of Maynard's Birds of Eastern North America. Publishers price, \$18.00.

To the person sending the 2nd greatest amount, a copy of Ridgway's Manual of North American Birds. \$7.50.

To the next three persons, each a copy of Davie's Key, to N. A. Birds. Cloth, each \$1.75.

To the next five, each a copy of Davie's Key. Paper, each \$1.25.

To the next ten, each a set with data of the Noddy. Each \$.75.

To the next twenty, each a set with data of the Sooty Tern. Each \$.35.

All subscriptions must be sent us on or before August 1st, 1890.

The winner of 1st prize must send us not less than \$25.00 worth of subscriptions; of the 2nd prize not less than \$15.00 worth.

3rd to 5th not less than \$5.00 worth; 6th to 10th not less than \$3.00 worth; 11th to 20th not less than \$2.30 worth; 21st to 40th not less than \$1.30 worth.

The names of the lucky contestants will be published in September OOLOGIST.

Begin work at once. Address all orders plainly, Frank H. Lattin, Publisher of THE OOLOGIST, Albion, N. Y.

THE OOLOGIST

Is a 20-page (16 pages of inside matter with a colored cover) Monthly issued during the first week of each month. For this issue we had so much additional matter, that in order to get it all in, we omitted the cover, but to offset, give our patrons *twelve* extra pages, which we think will prove to their entire satisfaction. We make this explanation for the benefit of the hundreds of new subscribers which will be sent in during the next 30 days.

The publisher of the OOLOGIST is immodest enough to claim that *each* number is worth to the live collector or student of birds, their nests and eggs, the whole amount a trial trip or yearly subscription would cost them.

Any One Interested

In the sick-benefit, funeral-aid, and death-beneficiary associations of the United States can help make the statistics of their organizations for the forthcoming census more complete and disseminate the knowledge of the good work they are doing by sending the names of such societies as they may know of, and the addresses of their principal offices, to Mr. CHARLES A. JENNEY, Special Agent of the Eleventh Census, 58 William street, New York City.

GLASS EYES.

Please note our reduced price-list of Glass Eyes in this OOLOGIST. It is always well for our patrons to bear in mind that we can at all times furnish *anything offered by any American dealer* and that we will always meet their prices and usually do a little better.

Our patrons can order anything in our line whether advertised by us or not and can depend upon having their order filled, if articles ordered are obtainable in America.

FRANK H. LATTIN.

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We Will Send the OOLOGIST on Trial from Now until January 1st, 1891,

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19. Small King or Horse-foot Crab.
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25. 25 Assorted Fish Hooks.
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27. Egg of Great-tailed Grackle.
28. Egg of Sennett's Thrasher.
29. (For 10 cts. additional) Set, with data, of 1 egg of Sooty Tern.
30. Collection of 8 Common Eggs, worth, at list rates, 20 cts.
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IN ORDER TO REDUCE OUR Surplus Stock of Birds' Eggs

We quote the following Liberal Discounts for
The next 30 Days,

On eggs of the following species. Orders of 50 cents or over will be sent prepaid, under that amount 5 cents must be added for postage and packing.

For \$1.00 you can select eggs to the amount of \$1.50.
“ 2.00 “ “ “ “ “ 3.00.
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This offer will hold good until July 15th and for *single eggs only*.

Send 2 cents for complete price-list of eggs.

Eggs are numbered to correspond with Ridgeway's Nomenclature.

All eggs are carefully prepared, being blown from one smoothly drilled hole in the side, and are true to name.

All specimens will be carefully packed in strong tin or wooden boxes and sent at *purchaser's* risk by mail, or at *our* risk and *purchaser's* expense by express.

SECOND-CLASS SPECIMENS can be furnished of most species at one-half the price of a first-class one. Parties ordering second-class eggs must name a list of extra eggs to be used as substitutes in case we are out of those ordered.

Hobcøal's Grebe.....	\$ 50	Limpkin.....	1 25	Hawk Owl.....	1 00
Horned Grebe.....	35	Clapper Rail.....	10	Burrowing Owl.....	25
American Eared Grebe.....	25	Florida Gallinule.....	12	Groove-billed Ani.....	1 00
Pied-billed Grebe.....	10	American Coot.....	10	Road-runner.....	25
Tufted Puffin.....	1 00	Red Phalarope.....	1 00	Yellow-billed Cuckoo.....	10
Puffin.....	20	Northern Phalarope.....	50	California Cuckoo.....	25
Cassin's Auklet.....	3 00	Black-tailed Godwit.....	50	Belted Kingfisher.....	20
Black Guillemot.....	20	Willet.....	40	Hairy Woodpecker.....	50
Murre.....	20	Bartramian Sandpiper.....	40	Downy Woodpecker.....	20
California Murre.....	25	Spotted Sandpiper.....	15	Red-cockaded Woodpecker.....	1 25
Razor-billed Auk.....	20	Long-billed Curlew.....	75	Pileated Woodpecker.....	1 00
Skua.....	75	Wilmberl.....	40	Red-headed Woodpecker.....	08
Kittiwake.....	40	Killdeer.....	20	Lewis' Woodpecker.....	40
Glaucous Gull.....	85	Wilson's Plover.....	25	Red-bellied Woodpecker.....	50
Iceiland Gull.....	1 50	Bob-white.....	10	Golden-fronted Woodpecker.....	75
American Herring Gull.....	20	Florida Bob-white.....	15	Flicker.....	03
Ring-billed Gull.....	30	Texan Bob-white.....	10	Red-shafted Flicker.....	10
Laughing Gull.....	20	California Partridge.....	10	Chuck-wills-widow.....	1 50
Franklin's Gull.....	75	Valley Partridge.....	20	Nighthawk.....	40
Gull-billed Tern.....	15	Gamb 1s Partridge.....	25	Western Nighthawk.....	50
Caspian Tern.....	50	Ruffed Grouse.....	15	Chimney Swift.....	15
Cabot's Tern.....	40	Willow Ptarmigan.....	75	Scissor-tailed Flycatcher.....	10
Forster's Tern.....	15	Rock Ptarmigan.....	1 00	Kingbird.....	03
Common Tern.....	08	Prairie Hen.....	20	Gray Kingbird.....	40
Arctic Tern.....	15	Sage Grouse.....	50	Arkansas Kingbird.....	05
Least Tern.....	08	Wild Turkey.....	75	Cassin's Kingbird.....	25
Sooty Tern.....	35	Chachalaca.....	1 50	Ash-throated Flycatcher.....	25
Black Tern.....	12	Red-billed Pigeon.....	2 00	Crested Flycatcher.....	12
Noddy.....	75	Mourning Dove.....	03	Phoebe.....	05
Black Skimmer.....	12	White-winged Dove.....	30	Say's Phoebe.....	10
Fulmar.....	75	Ground Dove.....	25	Black Phoebe.....	20
Manx Shearwater.....	1 00	Inca Dove.....	75	Wood Pewee.....	15
Audubon's Shearwater.....	2 00	Turkey Vulture.....	75	Western Wood Pewee.....	20
Brown Pelican.....	25	Black Vulture.....	75	Western Flycatcher.....	25
Gauwall.....	50	Mississippi Kite.....	10 00	Acadian Flycatcher.....	20
Baldpate.....	75	Red-tailed Hawk.....	60	Little Flycatcher.....	40
European Teal.....	20	Western Red-tail.....	75	Traill's Flycatcher.....	20
Blue-winged Teal.....	25	Red-shouldered Hawk.....	50	Prairie Horned Lark.....	20
Shoveller.....	40	Fla. Red-shouldered Hawk.....	1 25	Desert Horned Lark.....	21
Plutail.....	40	Red-bellied Hawk.....	1 00	Ruddy Horned Lark.....	35
Wood Duck.....	75	Bald Eagle.....	5 00	American Magpie.....	25
American Scaup Duck.....	60	American Sparrow Hawk.....	25	Blue Jay.....	05
Barrow's Golden-Eye.....	1 00	Audubon's Caracara.....	1 25	Florida Blue Jay.....	50
Old-Squaw.....	40	American Osprey.....	50	California Jay.....	25
Harlequin Duck.....	1 25	Am. Long-eared Owl.....	35	American Crow.....	05
Greenland Eider.....	30	Short-eared Owl.....	1 25	Florida Crow.....	50
American Eider.....	20	Barred Owl.....	1 00	Northwest Crow.....	50
American Scoter.....	2 00	Florida Barred Owl.....	1 00	Fish Crow.....	25
American Flamingo.....	1 00	Florida Screech Owl.....	50	Bobolink.....	25
Great White Heron.....	1 25	Texan Screech Owl.....	50	Dwarf Cowbird.....	20
Ward's Heron.....	40	California Screech Owl.....	50	Yellow-headed Blackbird.....	05
Black-crowned Night Heron.....	10	Great Horned Owl.....	1 25	Red-winged Blackbird.....	02
Yellow-crowned Night Heron.....	25	Western Horned Owl.....	1 25	Bicolored Blackbird.....	10

Tricolored Blackbird.....	20	Californian Towhee.....	08	Curve-billed Thrasher.....	25
Meadowlark.....	12	Cardinal.....	05	Californian Thrasher.....	25
Western Meadowlark.....	12	Texan Cardinal.....	50	Cactus Wren.....	12
Hooded Oriole.....	50	Rose-breasted Grosbeak.....	15	Carolina Wren.....	15
Arizona Hooded Oriole.....	50	Black-headed Grosbeak.....	20	Bewick's Wren.....	50
Orchard Oriole.....	10	Blue Grosbeak.....	25	Baird's Wren.....	25
Bullocks Oriole.....	15	Indigo Bunting.....	08	House Wren.....	06
Brewer's Blackbird.....	05	Lazuli Bunting.....	20	Western House Wren.....	06
Purple Grackle.....	04	Painted Bunting.....	10	Long-billed Marsh Wren.....	06
Bronzed Grackle.....	04	Black-throated Bunting.....	05	Tule Wren.....	15
Great-tailed Grackle.....	20	Lark Bunting.....	50	White-breasted Nuthatch.....	30
Purple Finch.....	15	Scarlet Tanager.....	23	Brown-headed Nuthatch.....	35
House Finch.....	06	Summer Tanager.....	20	Tufted Titmouse.....	35
Arkansas Goldfinch.....	20	Purple Martin.....	15	Carolina Chickadee.....	15
Lawrence's Goldfinch.....	25	Cliff Swallow.....	04	Californian Bush-Tit.....	15
Snowflake.....	50	Barn Swallow.....	05	Verdin.....	50
Yellow-winged Sparrow.....	20	Bank Swallow.....	04	Blue-gray Gnatcatcher.....	20
Chestnut-collared Longspur.....	75	Cedar Waxwing.....	10	Western Gnatcatcher.....	50
Lark Sparrow.....	05	Loggerhead Shrike.....	15	Wood Thrush.....	06
W. Lark Sparrow.....	05	White-rumped Shrike.....	08	Wilson's Thrush.....	15
Gambel's Sparrow.....	25	California Shrike.....	18	Russet-backed Thrush.....	15
White-throated Sparrow.....	35	Red-eyed Vireo.....	10	Olive-backed Thrush.....	40
Chipping Sparrow.....	02	Warbling Vireo.....	20	Hermit Thrush.....	40
Western Chipping Sparrow.....	10	White-eyed Vireo.....	20	American Robin.....	02
Field Sparrow.....	04	Bell's Vireo.....	15	Western Robin.....	15
Slate-colored Junco.....	21	Prothonotary Warbler.....	31	Bluebird.....	02
Black-throated Sparrow.....	50	Parula Warbler.....	25	Western Bluebird.....	15
Song Sparrow.....	02	Maryland Yellow-throat.....	15	Mountain Bluebird.....	15
Desert Song Sparrow.....	50	Yellow-breasted Chat.....	10	English Sparrow.....	01
Heermann's Song Sparrow.....	12	Long-tailed Chat.....	15	European Tree Sparrow.....	15
Samuel's Song Sparrow.....	08	American Redstart.....	15	SUNDRIES.	
Swamp Sparrow.....	15	Mockingbird.....	05	Skate.....	65
Towhee.....	10	Catbird.....	02	Shark.....	15
Spurred Towhee.....	15	Wren Thrasher.....	03	Hammerhead or Leopard Shark.....	25
Oregon Towhee.....	40	Sennett's Thrasher.....	30		

WILD POTATOES. Very Desirable Eggs

GROW YOUR CURIOSITIES.

We have just obtained a limited supply of Wild Mexican Potatoes. When mature they are about the size of a Catbird's egg, or in other words average about three-fourths of an inch in diameter.

They were taken from the mountains in Mexico. The vines look a little like common potatoes vines, but more like water-melon vines. The blossoms resemble closely the common potato. The little tubers do not grow in hills, but more like sweet potatoes or peanuts, on the rootlets which form a network under ground. They yield well. They are quite a curiosity, every collector should be interested in them.

We desire to introduce them this season and in order to do this, we have made the price very low, viz: We will send by return mail, prepaid, three Samples for 5c, eight for 10c, twenty-five for 25c, one hundred for 75c, two hundred for \$1.25.

We have only a few hundred to spare and we predict that a few wide-awake collectors will make a big thing out of them in making exchange next winter. Remember they are very prolific, easy grown, and that too in any portion of U. S. Order at once or you may be too late. Address,

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Less Than Half Price!

—AT—

Sennett's Thrasher.....	\$.30
Brown-headed Nuthatch.....	.35
Texan Cardinal.....	.50
Great-tailed Grackle.....	.20
Dwarf Cowbird.....	.20
American Magpie.....	.25
White-winged Dove.....	.30
Sooty Tern.....	.35
Noddy Tern.....	.75

\$3.20

We will send any egg on the above list prepaid on receipt of price, \$2.00 worth or over, at one-half price, or will send

THE ENTIRE LOT FOR ONLY \$1.40!

This offer is good until July 1st. We have only 50 of the \$1.40 collections. If you desire one, order early. If all sold when your order is received, your money will be returned.

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NO. ON DIAGM	DIAM. IN INCHES.	1 PAIR.	1 PAIR.	1 PAIR.	1 PAIR.	1 PAIR.	10 PAIRS.	50 PAIRS.	
0	2-32	.02	.0301	.03	.10	0
1	3-32	.02	.03	....	....	.01	.03	.10	1
2	4-32	.02	.03	....	....	.01	.03	.10	2
3	5-32	.02	.03	....	....	.01	.04	.12	3
4	6-32	.03	.04	....	....	.01	.04	.14	4
5	7-32	.03	.04	....	....	.01	.05	.18	5
6	8-32	.03	.04	.08	.10	.01	.06	.20	6
7	9-32	.04	.05	.08	.10	.02	.07	.26	7
8	10-32	.04	.05	.10	.12	.02	.08	.30	8
9	11-32	.05	.06	.10	.12	.02	.09	.40	9
10	13-32	.05	.06	.12	.14	.02	.12	.50	10
11	14-32	.06	.07	.12	.14	.02	.14	.60	11
12	15-32	.07	.08	.13	.14	.02	.15	.80	12
13	16-32	.08	.10	.15	.16	.02	.18	.85	13
14	17-32	.09	.12	.16	.18	.03	.24	1.00	14
15	18-32	.10	.12	.18	.19	.04	.30	1.25	15
16	10-16	.12	.14	.18	.22	.04	.35	1.50	16
17	11-16	.14	.16	.20	.24	.05	.40	1.60	17
18	12-16	.16	.18	.24	.32	.06	.45	....	18
19	13-16	.18	.20	.30	.38	.06	.50	....	19
20	14-16	.24	.26	.35	.40	.08	.65	....	20
21	15-16	.24	.26	.40	.45	.10	.80	....	21
22	1	.32	.35	.45	.50	.14	1.10	....	22
23	1 2-16	.32	.35	.50	.55	.16	1.25	....	23
24	1 3-16	.38	.40	.55	.60	.20	1.50	....	24
25	1 4-16	.40	.45	.55	.65	.22	1.75	....	25
26	1 5-16	.45	.50	.60	.70	.25	2.25	....	26
27	1 7-16	.50	.60	.70	.80	.30	2.75	....	27

For Sizes, see preceding page. For full description of Styles, see next page.

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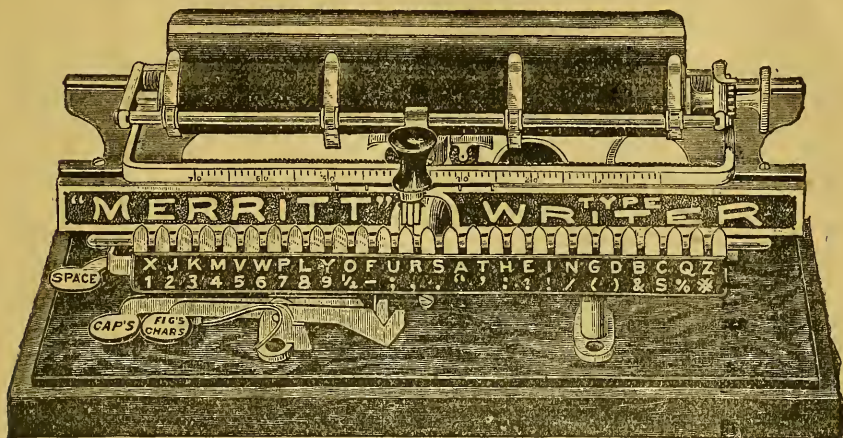
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All orders for less than ten pairs of one number will be figured at single pair rates. We *prepay* postage or express charges on all eye orders.]

When ordering, always give size, color, style (naming the extras) and name of animal, if possible, then we will be sure to send you exactly what you want.

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\$3.75 Worth of Rare Eggs to exchange for a Chicago Air Rifle in good condition, sent postpaid. Address Lock Box 36, Pitrodlie, Clark Co., S. Dak.

RARE.—18 Eggs of Golden Eagle, 9-2, all collected this season. All first-class, with full and authentic data. In series or otherwise, for good cash offer. W. C. and A. H. LAWRENCE, Los Gatos, Cal.

WANTED.—We want to buy Collections of Stamps. Collectors having such for sale, will please send us their stamps and state lowest cash price. Address, MIDDLESEX STAMP CO., Natick, Mass.

TO EXCHANGE. STUFFED BIRDS

For first-class Eggs, single or in sets, for which I will allow full list prices.

Below will be found a list of what I have to exchange, also prices asked, which is from regular price to about 1½. Postage must be added, which will be about 13c per bird, bal. will be returned. If you have any dup. eggs to exchange, please send list at once, stating what you desire.

A. O. U. Nos.—148, 126, 395 fem., \$1.50 each; 766, 735, 621, young male, 581, 567, 559, 540, 493, 456, \$2.00 each; 728, 557, 507, 493, \$2.50 each; 761, 704, 705, 674, 652, 624, 619, 501, 477, 444, \$3.00 each; 242, 412, \$3.50 each; one pair of 130, \$7.00, by express.

NOTE.—Those desiring to purchase for cash, will find a list in May No. of this paper. I still have a few of each except 394. Eggs are exhausted Stamp for reply.

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Monthly.

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Vol. VII,

ALBION, N. Y., JULY, 1890.

No. 7

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

"I received so many cards, letters and circulars daily that I could not answer them all." RALPH A. ALBION Pasadena, Cal.

CAUSE.—A single Exchange Notice in the O O L O G I S T.

TO EXCHANGE.—A pair of Climbers and a pair of Indian Clubs, for a Telescope or Maynard's Eggs of North American Birds. A. H. WAITE, West Newton, Mass.

FIRST and Second-class Birds' Eggs of this Section to exchange for Eggs of other sections. Want a good Taxidermist's Guide. Write with stamp. MERTON W. GRILLS, Lewisville, Ind.

WANTED.—Typical Sets marked with A. O. U. numbers, in exchange for Sets and Singles. J. R. CRAIGUE, Jackson, Minn.

WANTED.—First-class Eggs, single or in sets. Will give for same, Eggs or Nicely Stuffed Birds. Enclose Stamp. JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

TO EXCHANGE.—First-class Singles and Sets with data, to exchange for other first class Sets. Send list and receive mine. All letters and cards answered. RALPH A. ALBION, Pasadena, Cal. [63

I would like to exchange rare Cacti for Birds' Eggs in sets with data. Send list and receive mine. J. H. TALLICHET, 201 University Ave., Austin, Texas.

WANTED.—A 22 rifle for \$4.00 worth of first-class Sets and Singles. Send description of rifle and receive my list. W. BERMAN, 1050 Ingraham St., Los Angeles, Cal.

TO EXCHANGE.—Rare Western Eggs in first-class original sets with complete data. Lists wanted from reliable parties only. WALTER L. RICHARDSON, 435 So. Moline Ave., Pasadena, Cal.

WANTED.—Skins of (A. O. U.) 259a, to 296, 360 and any of the Owls. As I intend to stuff them, they must be full plumaged birds and with complete data. For the above, I will exchange Glass Eyes, Skins, Stuffed Birds and Eggs. Will allow good time. Enclose Stamp. JAS. P. BABBITT, 10 Hodges Ave., Taunton, Mass.

WANTED.—A good second-hand Single or Double barrel Breech-loading Shot-gun, 10 or 12 gauge. Will give first-class Birds' Eggs in exchange. OSWALD F. ZAHN, 317 S. Hope St., Los Angeles, Cal.

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TO EXCHANGE.—324, 315, 254, 258, 149a, 480, 351, 270, Prairie Horned Lark. Hawks particularly wanted, but others taken. All correspondence answered. JAMES HILL, Edinburg, Ills.

TO EXCHANGE.—A Colt's Rifle, 22 calibre, 16-shot, just bought, valued at \$15.00, for the best offer in Bird Skins. Wm. T. SMITH, Box 194, Wayne, Del. Co., Pa.

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WANTED.—A good Typewriter or any Birds Eggs in sets. Will give in exchange, Shells, Minerals and Curios. Large and rare lots especially desired. DICKINSON & DURKEE, Sharon, Wis.

TO EXCHANGE.—50 varieties of Foreign Stamps for every perfect arrowhead or for every 25c worth of Eggs, listed at 3c or over sent me. ALMANZOR R. HUTCHINSON, Box 133, Gaines, N. Y.

MY permanent address is Waynesburg, Penn., but for the summer and autumn, please address me as given below. Will be pleased to arrange exchanges with my old correspondents and new ones too. J. WARREN JACOBS, Glenwood (Pittsburg), Pa.

TO EXCHANGE.—Original Sets, Ridgeway's Nos., 4, 63a, 245, 182, 133, 170a, 838 and 460; also Singles for large or Water Birds' Eggs in original sets, or large Singles. Sets of Herons' and Pelicans' desired. FRED A. SCHNEIDER, College Park, Santa Clara Co., Cal.

EXCHANGES AND WANTS, Continued.

Have you read Lattin's "Exchange Extraordinary" in this Oologist?

EXCHANGE.—I have a long list of desirable Eggs, in full sets, with complete data, to exchange with reliable collectors for sets with accompanying data. Eggs of the Prothonotary Warbler in any quantity. Send lists and receive mine. D. B. BURROWS, Lacon, Marshall Co., Ills.

WANTED.—To exchange the following first-class Eggs, single or in sets, for others. Nos. 1, 111, 7, 122, 123, 135, 143, 157, 211, 214, 258, 270, 278, 282, 261, 263, 315, 320, 324, 354, 377, 382, 425, 451, 454, 480, 431, 525, 571, 670, 93.63.574. Data furnished if desired. All letters answered. M. C. WHITE, Mathews C. H., Va.

TO EXCHANGE.—I have 100 Stamping Outfits worth \$1.50 per set, 1 Accordeon, \$8.00; 1 Magnetic Belt, \$25.00; 1 Peerless Fountain Pen, \$3.50; lots of Books, Eggs, etc., for Eggs in sets, with data, or Indian Relics. Write what you have, if you mean business; "Silence is Golden," if you do not. Address, C. A. MORRIS, Paw Paw, Ill.

WANTED.—125 Fonts of Small Type like that used in printing the Oologist; also 50 Fonts Large and Fancy Type; also the Latest Edition of Ridgway's Key for which I will give \$15.00 in first-class Sets; also good Double-barrel, Breech-loading Shotgun (14 or 16 gauge); also Typewriter. Those having any of the above to exchange for first-class Skins or Sets out of a collection of 1000 Eggs, send particulars to H. W. NOLTE, W. 16th St., Los Angeles, Cal.

TO EXCHANGE.—A Rotary Plate, Self-inking Golding Printing Press, chase, 4 1/2 x 3, with outfit, and an Accordeon, for best offer of Curiosities, especially Coins, Stamps, Indian Relics and Bird Eggs with data, not necessarily in sets. For particulars, address EDW. B. JONAS, Box 221, Beaver Dam, Wis.

TO EXCHANGE.—Two Printing Presses, one 5 x 8, Self-inking; one 10 x 15 Foot Power, and several Fonts of Job Type and complete outfit for Safety Bicycle. A. M. EDDY, Albion, N. Y.

TO EXCHANGE.—First-class Eggs of Eastern Pennsylvania; Singles or sets, with full and original data. Send list. JOS. P. JACKSON, Kelton, Ches. Co., Pa.

EXCHANGE.—A Receipt telling how to mount birds in a life-like manner for every set of eggs sent, except 12 and 22, with data. J. W. P. SMITHWICK, Sans Souci, N. C.

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WANTED.—To exchange Sets of the following for others: 1, 7, 12, 13, 149, E. S., 254, 261, 270, 271, 278b, 2-9, 304, 387, 460, 494, 673, 763, 763a; also many Singles, including European varieties; also Foreign Postal Cards. Only sets with No 8 data blanks accepted. Lattin's 185 list as a basis of exchange. W. MORGAN MARTIN, 309 E. Ninth St., Wellington, Kansas.

IMPORTANT.—I care to make exchanges during the next 60 days as per offers in this Oologist only, and do not care to purchase specimens of any kind unless very desirable and at low rates. Owing to an enormous amount of work before us during the next two months, we are forced to make this announcement in order to save needless correspondence. FRANK H. LATTIN.

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FRANK H. LATTIN,
ALBION, N. Y.

THE OOLOGIST.

VOL. VII.

ALBION N. Y., JULY, 1890.

No. 7

The American Crossbill.

The American Crossbill, also commonly known by the name of Red Crossbill, is one of the great family of Finches (Fringillidae). It is a little larger than the common Linnet, and of a genus closely allied to the Grosbeak and Bull-finch. The genus is particularly characterized by the short, thick, round beak, of which the sides are inflated, bulging, and the tip of the upper mandible overhangs the lower one.

The Crossbills have long been celebrated on account of the peculiar form of their beak, from which they derived their name. The two mandibles are rather long, thick at the base, and much curved, so much so that they cross each other at the points, when the bill is closed.

In different individuals, even of the same species, the upper and lower mandibles are found variously directed to the right and left.

To examine the beak of one of these birds, one would say, it would prohibit its owner from picking up seeds or providing itself with food in any way, but, instead, it eats with all the ease and comfort of any of the straight-beaked birds, and enjoys itself like all its feathered fellows of the air. The food of the Crossbill consists of various seeds, such as the seed of the firs and pine, which it obtains by tearing apart the cones. They are also very fond of apple-pips. Setting on a tree where ripe apples are hanging, it attacks the fruit with its beak and in a few moments cuts a hole fairly into the core, from which it daintily picks out the seeds rejecting the ripe pulpy fruit in which they have been enveloped.

The male, as is the case with most birds, differs much from the female and

has the most beautiful plumage. The head and back are prettily colored with a variegated mixture of red, brown and green, all of which have a metallic lustre. The throat and breast are red, with here and there a few feathers of yellowish-green and drab, some of which are of a dim color, wings black, running to a brownish hue at the shoulders; tail, black; tail coverts, bright red; under tail coverts, drab and black; abdomen, drab; bill, black and half an inch long; legs and feet, black, short and strong.

Although nature has not provided the female with quite so beautiful a plumage, she is nevertheless, very pretty. The head, throat and breast are colored in a variety of green, red and yellow; back, red, green and black; tail, black; tail coverts, bright yellow; abdomen, drab; wings, black and white. The total length of this bird is not above six inches from tip of beak to extremity of tail. The tail has a very deep notch in the end, which is very conspicuous when flying.

The song of this bird is very simple and no particular quality to recommend it. The Crossbills generally build their nests in fir trees in a somewhat shaded retreat and lay from four to five delicate green eggs, spotted with varying shades of lavender brown, with here and there a heavy spot of dark purple-brown.

ROBERT R. SCORSO,
Afton, N. J.

The Crested Grebe.

The Crested Grebe (*Podiceps cristatus*) is one of the oddest looking birds I ever met with. It is very common along the shores of Lake Superior. I spent three months in the Lake Superior region in the summer and autumn o

1885, and I found the Crested Grebes numerous at Marquette, and often watched them as they swam about the harbor within the breakwater, and found them decidedly interesting in their habits.

They appear to have lost much of their usual timidity and gained in wariness and cunning by frequenting the waters of this busy harbor, and they pay little attention to the huge lake vessels that are continually going and coming, simply moving out of the way of passing vessels. Oftimes I have seen them turn and follow close in the wake of a huge steamer as it came to or went from the wharf, soon returning, however.

Like most of the divers, its eyes is exceedingly keen, and its movements exceedingly rapid when occasion demands it. When standing upon the wharf, I have frequently had them swim within ten or twelve rods of me, always closely watching me, and, if they thought I was paying too close attention to them, they would suddenly dive beneath the waters only to reappear in some unexpected quarter, a little later.

They are usually seen in pairs and are monogamous, and I believe, mate for life, possibly the survivor will remarry after the loss of its companion.

WILFRED A. BROTHERTON,
Oakland Co., Mich.

Ichthy-Ornithological.
Voracious Mountain Trout.

Two years ago while sojourning in the Willamette Valley in Oregon, another young companion and myself started one morning in the spring on a tramp with the intention of spending a day on Scoggin Creek, a tributary of the Tualatin River, in hopes of securing a fine lot of Mountain Trout

After plying the stream with our flies for a couple of miles with fair success,

we came finally to a large pool in which we could see several large trout swimming about in the clear mountain water, but with all our seductive art of fly-casting, we were unable to capture any of them, and finally sat down on a log in disgust to rest.

After sitting for some time we saw an old Wood Duck quietly swim out from under the shelving bank and start to lead her flock of young ones across the pool. We could see their little red feet splash in the water as they followed their wily parent. Just as they reached the middle of the stream, one large old trout made a charge right into the midst of the young ducks upsetting two or three in his mad career. The first fish was immediately followed by his comrades, each viciously attacking the young fowls in their turn. The young ducks evidently were very much surprised and terrified as they fled, diving in every direction, uttering their plaintive cry of fear. The fear of the young was apparently participated in by their mother as she moved around collecting her young, beating the water with her wings continuously.

Finally after some time, the trout seemed to desist in disgust as we had done in regard to their capture. The parent bird profiting by this respite gathered her flock before her and drove them down stream in great haste. The only solution my friend and I could offer for the novel action of these trout, was that the red feet of the young ducks bore a close resemblance to the Salmon eggs often used for fish bait by Oregon fishermen; or, that these old fellows had a relish for a practical joke, which indeed it resembled to an observer.

CLAY McNAMEE,
Moscow, Idaho.

The Yellow-billed Cuckoo.

The Yellow-billed Cuckoo or "Rain-crow," as it is more commonly called, breeds more extensively in this vicinity than its near relative, the Black-billed. The two birds resemble each other very much, their only difference being shown by their names. I think the Black-billed is also somewhat smaller than the Yellow-billed.

The Yellow-billed Cuckoo is a very modest bird and is seldom seen outside the thicket where it builds its nest, lays its eggs and hatches, and rears its young. It does not confine itself to the forest, however, for I have frequently observed it in trees surrounding a human habitation, and know of one instance where it built and laid in a tree about ten or twelve yards from a house.

The plumage of the head, back and upper part of the tail, is of a light brown color; the throat, breast and lower part of the tail being white.

A peculiar feature of this bird, possessed also by some of the hawks, is that a row of feathers extends along each leg to the foot.

The nest is rarely ever built very high from the ground, but is usually placed in a low tree or bush, a partially dead tree, or one whose limbs are covered with moss, being chosen in preference to others. The nest is a frail structure, being highly constructed of twigs, dead leaves and moss.

This bird is very careless in regard to the number of eggs it lays. I have found nests containing two eggs, which were incubated, a sign that no more would be laid; and I have found nests containing six eggs, none of the eggs being exactly the same size.

The eggs are sky-blue in color, being frequently defaced by whitish stains, very difficult to remove.

The Yellow-billed Cuckoo is a very fearless bird, allowing a person to ap-

proach quite near before it forsakes its nest. It never utters a sound when driven from its eggs or young, but glides quietly off into the forest. And here is where it differs from other birds. Comparatively speaking, but few birds will abandon their nest to the despoiler of its contents without a noisy resistance, which, however, is generally fruitless.

The Cuckoo nearly always sits on its nest till the last moment. I have known instances where it was necessary to shake the tree before she would leave it. She frequently hovers in the tree where her nest is situated for a while, but eventually makes off into the woods, where, at intervals, her deep, guttural notes, appearing to come from deep down in the throat, can be heard. The notes of the Cuckoo differ greatly from the shrill calls of its feathered kindred, and is considered by many to be a sure sign of rain. This bird consequently being generally called Rain Crow instead of Cuckoo.

E. CARL LITSEY,
Marion Co., Ky.

Nesting of the Green Heron.

The Green Heron (*ardea virescens*) which probably has as great a variety of names as any bird in the United States, (among which it will be recognized by such as Shite-poke, Indian Hen, Marsh Hen,) and, in fact, having a different name in every country village where there is a creek; is supposed by many persons to build its nest in dense swamps or over water; but from what experience I've had, I come to the conclusion that it prefers hilly land well away from the water.

It breeds quite sparingly in the District of Columbia, but I had the good luck to take three sets this season here. The first nest, taken on May 7th, was composed of coarse oak twigs, very frailly put together, placed in the inter-

lacing branches of two young oak trees fifteen feet from the ground, situated on a lonely hillside in the woods, at least a quarter of a mile from the water, or marshes; this set contained five fresh eggs.

On May 8th, "while among the pines," I took two more sets; the first one in a nest of more substantial build, placed in the fork of a small pine eighteen feet high, on a hill overlooking the river. It contained five eggs which were in the first stages of incubation. Then in a large pine nearly twenty-five feet up, in a nest placed on the end of a branch, I found a set of three, fresh.

The nest of the Green Heron, I find, is most always made of material from the tree in which the bird builds.

While collecting in May, I found a queer set which consisted of an egg each of the Cardinal Grosbeak, and Song Sparrow. They were in a Cardinal's nest, both fresh.

W. ALLISON MERRITT,
Washington, D. C.

Back in their Old Haunts.

It is with pleasure that I am able to report the unusual number of insectivorous birds breeding here this summer. On one hundred acres of land situated in two plots, one of 60 acres on the sound and another of 40, two miles inland, all in the city limits of New York City, I find the following birds:

Robins quite plentiful, Wood Thrush four pairs, Wilson's Thrush common, Catbird three pairs, Meadow Lark five pairs, Red-wing Blackbird about fifteen pairs, Purple Grackle seven pairs, Cowbirds three individuals, Song Sparrow plentiful, Chipping Sparrow a few, Baltimore Oriole one pair, Orchard Oriole one pair, King Bird three pairs, Red-eyed Vireo four pairs, Summer Red-bird one pair, Yellow-shafted Flicker six pairs, Yellow-billed cuckoo one

pair, Great Crested Flycatcher two pairs, Pewee two pairs, Crows common, Screech-owl one pair, House Wren two pairs, Spotted Sandpiper quite common, Green Heron two pairs, Night Heron one pair, Barn Swallow plentiful. I attribute the return of the birds to the scarcity of the English Sparrow; the blizzard of '88 killed a great many, but why they have decreased since last summer I do not know. Last fall I trapped about 400 and used them for trap shooting, but this year there are but five pairs breeding on my property, and there are very few in the neighborhood. I would like to see notes from other sections, saying whether the English Sparrow is on the increase or decrease, and I hope they will report the latter.

W. I. S.,
New York City.

Sialia-Mus.

I have to report the queer nesting of a pair of Bluebirds. On June 1st while collecting in a marsh, I saw a Bluebird go into a hole in the top of an old stump. When it came out I went and looked in but saw nothing but a little dry grass. On the 9th while again in the marsh, I again looked in the stump and saw a nest and two eggs.

I visited the stump for the third time on the 13th and found two more eggs had been laid, but the stump had meanwhile been inundated by heavy rains and the birds had deserted the nest. On pulling it out, I found under it a mouse nest with eight young mice, which had been drowned. The mice had access to their nest through a small hole in the bottom of the stump, and nothing separated them from the eggs, but the material of the two nests.

B. S. BOWDISH.
Ontario Co., N. Y.

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OÖLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

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

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Single Subscription, - - - 50c per annum.
Sample Copies, - - - - - 2c each.

The above rates include payment of postage by us
Send stamp for Premium List.

All subscriptions must begin with either January
or July issues.

Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped, and all arrangements must be paid.

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. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

Editorial Notes.

A large mistake was made in the printing of Mr. Merritt's article on the Saw-whet Owl in the June number.

By this error, the compositor put a tail eight inches in length on the Saw-whet Owl when it should have been but *three*. With an eight inch tail on an Owl only seven and one-half inches in length, the article appeared something like a rather "fishy" tale. We hasten to mention this error in detail as soon as we "saw it" before any of the more scientific ornithologists should begin to "howl" about some new variety of *Nyctale acadica*. (*Nyctale acadica longicauda*, perhaps.)

If those who send us queries could only use a little more pains, sometimes, in their descriptions, it would be much easier for us, and at the same time they would be more apt to receive satisfactory replies. For instance, we received one query which asked us to name a bird that had a red body and black wings and bill, and did not tell us a word as to size, whether it were as large as an Eagle or as small as a Hummer. Again, someone wanted to know what bird it was that laid an egg like a Field Sparrow's only larger, the nest being like a Grass Finch's.

A little pains would give us better descriptions and better results, and make the query column more of a success.

On the other hand, many of the queries received are marked by their conciseness of description, and it is pleasant to answer them.

"What They Say."

L. Eber, Fairview, Mo., writes of a "crippled" egg of the Kingbird in his possession.

The egg measures 1 5-16 x 6-16 in.

The shape is very peculiar, it having in the middle, a kind of groove all around it. One end is much larger than the other, forming a kind of "step-off" in the middle instead of gradually growing smaller at the end. The other eggs in the nest were shaped normally.

W. M. Berman, Los Angeles, Cal., says:

"During the later part of April and the first part of May, I found in the same hole in a sycamore tree, four sets and one single egg of the Western House Wren. All the eggs were spotted alike.

I had to take the nest out to get the eggs, so they had to build a new nest for each set."

W. I. C., Norwalk, Conn., writes: "May 9th, I found a Phoebe's nest, attached to the side of a ledge, containing five Cow Birds' eggs, but not one

Phœbe's. The Phœbe was setting, but I left them three days and then took them. Two were slightly and three quite badly incubated, and were all of the same size and color, evidently all being laid by the same bird."

June 12th, I found a Scarlet Tanager's nest containing three fresh eggs of that bird, and another which I am unable to name. It is immaculate white and the shell is very rough, and covered with bumps and ridges; and, altogether it is a very odd shaped egg, being very broad at the large end. It is about the size of the average Cowbird's. Is it a Cowbird's egg?

C. E. Pleas, Clinton, Ark., writes that the Chuck-Will's Widow is abundant in the valleys there, and that he is learning many interesting things concerning its habits. We expect to hear from him further concerning that bird.

J. C. Galloway, Montgomery, O., records a set of five eggs of the Sparrow Hawk, a nest of the Crested Flycatcher (rare there) and a nest with three eggs of the Green-crested Flycatcher as among his best finds for this season.

Among many sets of eggs taken by G. J. Kempen, Austin, Texas, are several sets of Bell's Vireo, comprising eggs of the Dwarf Cowbird. In this locality, the Red-eyed Vireo and the Cowbird form a never-failing combination, while there, the Bell's Vireo and Dwarf Cowbird seem to form a similar syndicate.

My first Nest of the Long Tailed Chickadee.

A friend and I went over into Fremont County, Iowa, on the 26th of April and a day or so afterward started up the river and pitched our tent (?) in a strip of timber. We stayed there one night and the next morning, after eating our breakfast we struck out. I had been walking about for nearly an hour, pounding on every stump and examining every bush and tree, when I saw a bird fly from a stump, and a charge of No. 12 shot stopped it. Looking around, I found the hole about ten inches from the ground. Opening it, I

found six beautiful pink eggs, laid upon a nest of hair moss and a few vegetable fibers. I took the eggs of course but they met with an untimely end, for upon reaching home I put them in some cotton, preparatory to blowing them, when my partner picked the cotton up and dropped all the eggs.

NORRIS H. REED,
Otoe Co., Neb.

Nesting of the Rough-winged Swallow (*Stelgidopteryx serripennis*) IN ELGIN COUNTY, ONTARIO.

Of the several species of Swallows peculiar to Ontario, the Rough-winged is probably the least known, not so much on account of its rarity, as its retiring habits, and association with its near relative the Bank Swallow (*Cotile riparia*), another bird of reserved habits, neither of them seeking the society of man to any extent.

As near as I can ascertain, they arrive here from the South about the 25th of April, being observed about the same time, and in the same localities as the Bank species. Operations in nest building are begun about the 20th of May, usually in sand banks along streams, one or two pairs mingling in with a flock of the others.

As their modes of nesting differ somewhat in many localities, my experience with them in that line might be of benefit and interest to some readers of THE OOLOGIST. The excavation is always larger, and extends inward a greater distance than those of the Bank Swallow. The nest situated at the end of the burrow is composed of coarse straw, and lined with fine grass, no feathers being used in its construction, which is such a common material in the nests of all the other members of this family.

The eggs, which are from five to seven in a set, are pure white, and considerably larger than those of the Bank Swallow.

F. L. FARLEY, Elgin Co., Ontario.

Our Question Box.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

J. A. L., Clarksville, Tenn.—The eggs of the Lark Bunting, as well as those of the Black-throated Bunting or Dickcissel very closely resemble the eggs of the Bluebird. What the eggs of any of these birds were doing in a Brown Thrasher's nest, we are at a loss to understand.

I. S. C., Paducah, Ky.—Think your nest and eggs are simply English Sparrows.

Does anyone, anywhere, know of a bird that is "black and red," which is called "Rink" from its note?

F. V. P., Las Vegas, Nev. 1—The bird about the size of a House Wren, with a light yellow head, building a globular nest of thorny sticks in the ends of the branches, the eggs being light blue with brown spots, is the Verdin or Yellow-headed Tit.

2. Do any of our readers know of a bird about the size of the Robin and much like it in appearance, only having a lighter breast and a small top-knot. It builds in holes and ledges along cliffs and lays four eggs (usually). Pinkish-white, about the size of a Bluebird?

W. E. G., Galveston, Tex.—Your ball-shaped nest suspended to the rank grass of a marsh, containing five white eggs speckled with red-brown, and belonging to a small bird with yellow-edged wings, doubtless is that of the Seaside Sparrow.

J. W. A., Allegan, Mich.—1. The "Yellowbird," with black crown, wings and tail, is the American Goldfinch. Its eggs are white with a bluish tinge, unspotted.

2. The "Yellowbird" of a uniform yellowish color throughout, is the Yellow Warbler. Its eggs are white or greenish-white, spotted, usually in a wreath around the larger end, with amber-brown, blackish and lilac-gray.

V. N. M., Mt. Union, O.—The young males of the genus *Agelaius* have the feathers of the back edged with bay.

A. O. G., Lawrence, Kans.—The only safe means of distinguishing between the nests of the Bank and Rough-winged Swallows, is by securing the parent bird.

J. V. C., Marathon, Ia.—The Wilson's Phalarope is about nine inches long, light-gray above, wings brown. A dark stripe through the eye, becoming purplish-chestnut on the sides of the neck. Upper tail-coverts and under parts, white.

C. M. G., Sacramento, Cal.—Your "Red-headed Linnet" is the House Finch—A. O. U., No. 519.

A. S., Linn Co., Ia.—The habitat of the Western Red-tail in the United States is from the Rocky Mts. to the Pacific Coast.

L. R. B., Cleburne, Tex.—Your "Mexican Canary" having a fiery-red breast, black head and greenish-blue wings, is doubtless the Painted Bunting or Nonpareil.

A. L. T., Newark, N. Y.—All of the descriptions you give are very incomplete. The set of nine eggs probably belong to one of the Rails, perhaps the Virginian. The Cherry-bird is without doubt, the Cedar Waxwing; while your "Guinea Woodpecker" may be the Downy, although we wouldn't say so definitely.

C. A. T., Petaluma, Cal.—Your bird with breast and head of red, laying from four to six light blue eggs spotted at the larger end with black, is doubtless the House Finch.

G. H. G., Baltimore.—The description of your bird is like that of the female Scarlet Tanager.

E. E. H., Cleveland, O.—The eggs of the English Sparrow vary greatly; and that bird quite frequently nests in holes in trees. Could your eggs not possibly be of this bird? As to your second nest, we can hardly judge from the description given. We know of no egg so small as to be only one-fourth of an inch in length.

Name mislaid.—Your description of bird is insufficient. It is probably either the Lark Bunting or the Black-throated Bunting.

J. H. S., Webster, Mass.—1. Your egg of light-blue spotted with brown and black, nest like a "Chippy's," composed of needles and placed in a pine tree, the bird being quite robust, is doubtless that of the Purple Finch.

2. See answer to first part of E. E. H.'s query in this column.

W. A. B., New Sharon, Ia.—Your bird with a blood-red body, black wings and tail, may be a Scarlet Tanager; although you told us nothing of its size.

L. S. D., Netherwood, N. J.—1. Your bird with greenish-brown back, yellowish-brown wings with white spots, bright yellow under the shoulders, white superciliary line, and short, thick and powerful bill, the eggs being blue spotted with yellowish-brown, is the female Rose-breasted Grosbeak.

2. Cannot judge without description of the bird.

G. A., Auburndale, Mass. and others.—Your descriptions are insufficient. A description of the bird is generally necessary in order to get any idea as to the identity of nests and eggs.

Great Horned Owl.
(*Bubo virginianus*.)

Feb. 17, '89, being a pleasant day, I started out to pay a visit to my Owls' nests.

My course, as planned in former years, lay through several large "strips" of heavy timber.

A tramp of two miles brought us to the first nest which seemed to be deserted. Another mile and we met with the same disappointment at the second nest. This was discouraging, but as there was another nest two miles farther on, I continued my tiresome tramp bringing up, finally, under the outspreading branches of the old hol-

low maple which was the home of my "hooter." All around were the freshly disgorged bits of fur and bones, but the cavity in the tree contained nothing.

Was I too early? This was the question which arose, but while I was eating a lunch, the mystery was explained. Three boys came along and informed me that a "Hoot Owl" had been killed in the woods a few weeks before.

After making my business known, I was informed by one of the party that he had often heard, during the winter, an Owl hooting in a thin strip of woods nearly opposite his house. I knew the very spot, and as it was only a few steps out of my route homeward, I started off for the place at once.

Arriving at the outskirts of the grove-like wood, I examined the first hollow oak, but found no Owl's nest. The second tree, however, showed signs of "life" as there was a feather adhering to a splinter near the cavity, which was about forty feet from the ground. After resting a few minutes, I began the ascent, climbing around on the opposite side of the tree as I went up.

When within three feet of the nest I looked up and could see the Owl's tail projecting through a large crevice. Not wishing to frighten her very much, I gave her tail a gentle jerk which caused her to slowly leave the nest and alight on a neighboring tree.

The nest contained only one egg, and fearing the nest was not complete, I did not remove it.

On the afternoon of the 20th, I returned to collect the set which I knew by this time would be complete. This was a cold cloudy day and as I neared the tree the old Owl left the nest.

Climbing up I was very much disappointed to find the number of eggs had not increased.

The nest was a new one, composed of a mass of leaves, twigs and bark nicely hollowed out and lined sparingly with feathers.

The diameter of the inside of the nest was about eight inches and the depth about one and a half inches.

J. WARREN JACOBS.
Pittsburgh, Pa.

Some Unusual Happenings.

On the last day of April, several years ago, as I was passing a small piece of white oak timber, I saw in a fork of one of the trees about thirty feet up, a Crow sitting on her nest. I concluded to see what the nest contained. On reaching it I found five eggs which proved to be fresh. After I had taken them out I noticed quite a bunch in the bottom of the nest. I removed the lining and there found another Crow's egg. The single egg was in a well lined nest, another lining was placed over it and the five eggs laid.

May 16, 1884, I found five eggs of the Bluebird in an old Golden-winged Woodpecker's nest in the trunk of an apple tree about two inches in diameter and only five feet from the ground. The nest was lined in the usual manner with soft grasses and some feathers and also contained one egg of the Golden-winged Woodpecker. I took the Bluebirds' eggs and left the Woodpecker's, but did not disturb the nest. On visiting the nest again, the 18th, the female flew from the nest. On looking into it I saw there were two eggs. On the 20th, I again went to the nest, but some boy had torn away one side of the tree and taken the eggs.

May 16, 1885, I shot a pair of Golden-winged Woodpeckers, for mounting, from a decayed maple in our grove, where a brood was raised the year before. Another pair were at work on an oak a few rods away. Evidently they had a hard task for they had been working a long time, but had not completed their nest.

On the 18th, I noticed this second pair on the tree on which the old birds were shot. While watching them one

of the pair went into the old bird's nest and soon came out with an egg on its bill and flew away.

May 28th, these birds had laid six eggs and on the 2nd of June there were eight eggs in the nest.

Last year I found some Hawks' nests with incomplete sets. I left them for a few days. On going to them with the expectation of finding full sets, I found they were empty.

This year I concluded to try an experiment if a chance offered.

April 14th, found a Red-shouldered Hawk's nest in the fork of a white maple about thirty feet from the ground, with two eggs in it. The next day went to it again and found there were three eggs.

I took two hens' eggs with me about the size of Hawks' eggs and spotted in a careless way, with reddish brown. There was not much resemblance to the original eggs. I put the two into the nest and took out the Hawks' eggs.

A week later visited the nest again and found the old bird on. On climbing to the nest found the two hens' eggs still there and that she had laid another.

April 17th, found a Broad-winged Hawk's nest with one egg. Swapped a hen's egg with her two days later, put in another hen's egg and took another Hawk's egg. A few days later went again to the nest, but someone had robbed it. However, by the exchange business I secured a nice set of two.

E. G. ELLIOT,
Bradford, Mass.

A Collecting Trip at Pewaukee, Wisconsin.

A few days since, I went over to Pewaukee in this county, and in company with a friend took an afternoon trip across the big marsh at that place.

While on the way to the marsh, we found a Flicker's nest containing a set of six fresh eggs. The nest was in a living oak tree and instead of having

been excavated by the bird was a natural cavity in a knot about twelve feet up. The bottom of the hole which was as big around as a peck measure was covered with leaves and three eggs were laid on the leaves

After packing the Flicker's eggs we didn't find any more nests till we reached the marsh, when we had not gone three rods when a bird flew up and then fluttered along the ground and we immediately saw that she was a Wilson's Phalarope, after a few minutes search we found the nest containing four fresh eggs. After packing the Phalarope's eggs we walked clear across the marsh and half way back again before we found a set worth taking. But when about half way home we had to go near a place where we, in company with Mr. B. F. Goss found a set of five Marsh Hawks, in 1886. I thought that maybe they had a nest there now, so I went over that day and sure enough up flew the Marsh Hawk. I went up to the spot she flew from, and there lay a set of five eggs. The nest was a little pile of grass about two feet in diameter and eight inches high with a small cavity in the top to hold the eggs. [The next and last set was another set of four Wilson's Phalarope.

The next day we went on the lake and obtained some fine sets the most curious of which was a set of five Albino Swamp Sparrows, perfectly identified.

DON CURRIE,
Waukeshaw Co., Wis.

—————
Pallas' Cormorant.
Phalacrocorax perspicillatus.
 —————

Newspaper clippings are sometimes valuable. The following clipping taken from some paper, we know not what and for which we are indebted to W. I. Comstock, Norwalk, Conn., is valuable in that it reminds us of an overlooked and forgotten species:

"Much attention has been drawn to

the Great Auk in recent years by the astonishing prices paid by collectors for its skins and eggs, while Pallas' Cormorant, the extinction of which in the North Pacific corresponds to that of the Great Auk in the North Atlantic, has been scarcely heard of at all. Yet Mr. Leonhard Stejneger, of the Smithsonian Institution, states that this bird was the largest and handsomest of its tribe. Only four specimens are known to exist in museums, no one possesses its eggs, and the first bones found and preserved were obtained by Mr. Stejneger in 1882 near the northwestern extremity of Behring Island."

Referring to Coues' Key, to learn more about this overlooked bird, we find the following:

"Deep lustrous green, above and below, with blue gloss on the neck, and rich purplish on the scapulars and wing-coverts, the dorsal feathers not sharp-edged nor bordered, as in all the foregoing 'species'.

Shafts of tail feathers (said to be) white; if this holds, it is a unique character among our species. Adult with coronal and occipital crests (not lateral paired crests); a white flank-patch in the breeding season; face and neck with long sparse straw-yellow plumes; sac orange, heart-shaped; bill blackish. Large: length 36.00; wing 13.00; tail 7.00? 9.00? tarsus 3.00; bill (along gape?) 4.00, very stout, two-thirds of an inch deep at base. North Pacific Coast. I have not seen this species, which seems to be well marked. There are no known specimens in this country, and none of the ornithologists who have lately visited Alaskan shores have found the bird."

—————
Interesting Extracts from an 1890 Note-Book.
 —————

May 18th. To-day I collected a fine set of three eggs of the Summer Red Bird, being my first set for this season.

June 13th. Collected a set of five

eggs of the Red Headed Woodpecker, nest in an old oak right in the heart of the city. This set deserves special mention as it is rather a peculiar one.

Eggs No. 1 and 2 are perfectly fresh and have that unmistakable pinkish tinge of newness.

No. 3 and 4 are dark and on blowing I find incubation advanced in one and in the other the young bird was almost ready to break its shell.

No. 5 however, is the queerest of the lot, inasmuch as it contains—nothing. An egg laid, containing nothing but air and about two grains (by weight) of yolk. My boy exclaimed on picking it up, "humph, here's an egg laid already blown."

No. 2 was unusually large, measuring $1.06\frac{1}{2} \times .76$. The shell was rough and had little bunches of shelly matter scattered over the surface and it was only about one-half filled. With all, it was the most remarkable set I have ever taken. (Note: In 1888, I collected a set of one egg out of another tree near this one. There was but the one egg which measured $.80 \times .62$.)

June 16th. To-day, I collected a fine set of five eggs of the Great Crested Flycatcher, nest in a round trough, through which wires used to run during shooting matches, composed of pine straw, leaves, seeds, bits of rope and fur; also a little cotton and hair and the inevitable snake skin, "Par. necessity."

S. A. TAFT,
Aiken, S. C.

A Flicker Moving its Household Effects.

On the morning of May 19, 1890, I started for what the boys, around where I live call the country, after reaching a clump of trees some two or three miles from the city, I sat down to rest, at the foot of a large yellow birch. I had not been sitting there very long before I was startled from my meditations by the cry of a Yellow Hammer

directly above me, and on looking up I saw the old fellow about to enter a hole in the decayed terminal branch of the birch.

Soon after he reappeared with what I at first supposed to be a chip, in his beak. This supposed chip I soon perceived to be an egg, which he held lengthwise. After looking around, he flew to a tree about a fourth of a mile distant. I being determined to rescue the remaining eggs, immediately climbed the tree, only to find that all the eggs had been removed. After descending I started for the other tree, upon whose top-most branches I could see the parent Flickers. On reaching it I perceived that the reward of possibly a half dozen of eggs would not warrant the task of climbing, as the tree was barren of limbs for the greater portion of its height.

C. RUPRECHT.
Cleveland, O.

Hairy Woodpecker and Potato Bugs.

Last summer, potato bugs covered every patch of potatoes in Marathon county, (being my home county,) Wis. One of my friends here, found his patch an exception, and therefore took pains to find the reason, and observed a Hairy Woodpecker, making frequent visits to the potato field and going from there to a large pine stub a little distance away.

After observing this for about six weeks, he made a visit to the pine stub and found, on inspection, a large hole in its side about fifteen feet up. He took his axe and cut down the stub, split it open, and found inside, over two bushels of bugs. All had their heads off and bodies intact. Now why did the Woodpecker carry the bugs whole to the tree and only bite off and eat the heads, which could have been done in the potato field?

V. A. ALDERSON,
Marathon Co., Wis.

An Unknown Nest.

On the 20th of May, I was looking for the nests of Wilson's Thrush in a piece of brush near here, when I saw a bird flit away from a bush just ahead, which, from its general resemblance, I called Wilson's Thrush, so did not watch it.

But, upon going to the nest, I wished I had, for it contained one egg measuring .56 x .43, spotted quite thickly with brown on a light blue ground.

The nest was placed about a foot from the ground between four upright twigs and resembled the usual nest of Wilson's Thrush, but was smaller. I left the nest and going back four days later, found another egg, colored like the first, but spotted, thicker, measuring .63 x .47. It had the appearance of having lain there several days, having settled into the bottom of the nest. No bird was seen this time.

Now, were they runt eggs of Wilson's or the Olive-backed Thrush, and, if Wilson's, is there any record of spotted eggs of Wilson's Thrush being taken; would be glad to hear, through the OOLOGIST, from anybody who can give information.

ERNEST H. SHORT,
Monroe Co., N. Y.

The Eggs of Audubon's Warbler.

Mr. Samuel B. Ladd, of West Chester, Pa., sends us the following description of the eggs of Audubon's Warbler from a series of sets in his extensive collection:

"The eggs of Audubon's Warbler are of a bluish-white background, with markings more like the Maryland Yellow-throated than the Yellow Warbler and some specimens would at first strike you as more like Orchard Orioles. Mine were all collected in Colorado and I have the nests, which is a great addition to their value."

A Cheap Collecting Box.

In reply to Mr. A. Drouet's query in the March OOLOGIST, I would say that I have collected eggs now for 5 years and the cheapest and best collecting box I have found is an old plaster box. Take and make two holes one each side of the seam and put a piece of wire through in the form of a ring, to which you can fasten a strap or string and put it over the shoulders in the same way as a fish basket. I have found them convenient in climbing for crows' nests and the like, and also they will hang neatly under the coat.

H. F. M.,
Quechee, Vt.

Book Review.

Key to North American Birds. ELLIOT COUES. Fourth edition. 1890.

In presenting the fourth edition of this standard work, the only change instituted by the author over the previous edition, is the addition of a Second Appendix.

It will be remembered that the "First Appendix," published with the previous edition, presented in double columns, the differences between the Key List of 1884, and the *Union List* of 1886, introducing such changes as the author saw fit to make in that edition of 1887.

The "Second Appendix" notes every further change reported by the Union's Committee from 1887 to January 1890 inclusive.

Upon most of these changes, the author expresses no individual opinion, presuming the judgment of the Committee to be final. But the names of species and subspecies which he is fully prepared to admit to the Key as additions or emendations are printed in thick type.

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THE



OOLOGIST.

Monthly.

50c. per Year.

Vol. VII,

ALBION, N. Y., AUG., 1890.

No. 8

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 25 words. Notices over 25 words charged at the rate of one-half cent per word. No notice inserted for less than 25 cents. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

"I received so many cards, letters and circulars daily that I could not answer them all." RALPH ARNOLD, Pasadena, Cal.

CAUSE.—A single Exchange Notice in the OOLOGIST.

WANTED.—To correspond with collectors of Minerals, etc., with a view of exchanging specimens.—Address, W. LINDENMEIR, JR., Fort Collins, Colorado.

TO EXCHANGE.—"Book of Birds" by T. Bilby, 200 pages, 38 full-page engravings, for \$1.50 of eggs, in sets with data, any species. N. BRADT, Eagle Harbor, N. Y.

WILL EXCHANGE.—Fossils for eggs in sets at the following rates: Ammonites, \$1.00 to \$1.50; Sea Cushions, 25c; Shells, 10c. Send list. ERNEST R. SCOUGHLE, R. 8, Powell Block, Ft. Worth, Texas.

TO EXCHANGE.—First-class eggs, in sets with data, for other first-class Eggs in sets. Send lists and receive mine. W. E. DRENNAN, New Sharon, Iowa.

WANTED.—The best offer of Eastern Bird Skins for \$10.00 worth of California Bird Eggs, in sets. W. BERMAN, 1050 Ingraham St., Los Angeles, Cal.

MOUNTED Quail, Flicker and other Birds, also Skins and Eggs, for a good Rifle, Gun or Revolver, Eggs, Cabinet or offers. W. INGRAM, Odin, Ills.

I have Bird Eggs which amount to \$13.50 at catalogue prices, four pairs of Rabbits and a Pet Coon, for exchange. What have you to offer? LOUIE MILLER, Frankfort, Ind.

I want the following Back Nos. of the OOLOGIST: 'Apr., '90; June, Oct., Nov., Dec., '89; June, '88. I have *Young Oologist* back Nos. to exchange. Write. T. E. STUART, Corning, Iowa.

EXCHANGE.—T. Bilby's "Book of Birds" and the "King's Men," cloth, unsoiled, for Davie's "Nests and Eggs of North American Birds" (cloth). W. E. AIKEN, Benson, Vt.

I have a good many Eggs of the Land Birds of Georgia. What have you to exchange? G. R. PALMER, Washington, Ga.

I want to exchange a Hunting Knife, 22 cal. Revolver, 2 pairs Climbing Irons, one case that will hold 40 sets, and OOLOGIST from Jan. 1st to May 1st, for First-class Eggs, in sets with data or for best offer. F. B. WELLS, Grinnell, Iowa.

EXCHANGE.—Sets, with data, for others in sets. 316, 406, 412, 444, 456, 474b, 488, 495, 498, 511b, 613, 622a, 704, 705, 731, 761, 766 and others. Send list, correspondence answered. WILLIE BRYAN, New Sharon, Iowa.

TO EXCHANGE.—First-class Birds' Eggs for a pair of Climbing Irons or a Set of Entomologists' Tools. Good offer. Address, WALTER W. GRANGER, 23 Prospect St., Rutland, Vt.

TO EXCHANGE.—Magic Lantern with polyopticon attachment and full outfit, cost \$2.50, for African Ostrich Egg or other Singles. Sea Birds preferred; also 2 Natural Histories and Eggs for Singles. What offers? J. MERTON SWAIN, East Wilton, Me.

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TO EXCHANGE.—For 20 cents worth of first-class Birds' Eggs, in sets or single with data, I will send, prepaid, a small nickel top bottle of Stones from the "Four Lake Country." Address, O. E. CROOKER, 621, Francis St., Madison, Wis.

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WANTED.—Davie's Latest Key, cloth. Will give the following first-class Single, Bird and Reptile Eggs, Ridgway's Nos.: 649, 402a, 357b, 11, 372, 149, Alligator, Gopher; Also Eggs to exchange. NICKOLAS V. LINDEN, Island Lake, Orange Co., Florida.

EXCHANGES AND WANTS, Continued.

Have you read Lattin's "Exchange Extraordinary" in this Oologist?

Collection of first-class Eggs, in sets, Singles and Pairs, mostly California Species, including Hawks, Owls, Flycatchers, Hummingbirds, etc., amounting to over \$25.00 by Lattin's 1890 price-list. Will exchange for good Breech-loading Shotgun, Typewriter, Rifle, Self-Inking Press, Type or other desirable offer. All letters answered. CHAS. TURTON, Box 956, Los Angeles, Calif.

WANTED.—Original Sets, with data, of the following A. O. U. Nos.: 206½, 362½, 184½, 428½ (with nest) and many others. Have for exchange desirable sets of California Eggs and first-class Bird Skins. Send lists of sets and first-class Skins. L. ZELLNER, 839 W. 18th St., Los Angeles, Cal.

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TO EXCHANGE.—First-class Singles and Sets, with data, to exchange for other first-class Sets. Send list and receive mine. All letters and cards answered. RALPH ARNOLD, Pasadena, Cal. [63

IMPORTANT.—I care to make exchanges during the next 30 days as per offers in this OOLOGIST, only, and do not care to purchase specimens of any kind unless very desirable and at low rates. FRANK H. LATTIN.

WANTED.—Offers for pair of Climbers, strapped ready for use. Water birds Eggs, sets or singles preferred. Address. R. B. Whitehead, Westfield, N. J.

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TO EXCHANGE. To every person who sends me 25c worth of Eggs, I will send a patent broom holder and directions for getting agency, send 4c for Postage. T. E. Stuart, Corning, Adams Co., Iowa.

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This Offer Expires on August 25, 1890.

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2, 26, 41, 42, 47, 51, 56, 93, 99, 115, 125, 168, 181, 193a, 197, 198, 198a, 201, 202, 217, 231, 238-c, 237, 243, 247, 248, 251, 247, 258, 260, 263, 264, 271, 272, 277, 278, 278b, 282, 293, 304, 306, 315, 339, 326, any of the running-4-7 birds, 351, 353, 354, 357, 361, 382, 385, 388, any of the Owls, Hawks, Eagles or Vultures, 465, 473, 482, 483, any of the Herons, 497, 498, 501, 516, 520, 525, 555, 569, 571, 572, 574, 578, 582, 583, 601, 613, 618, 640, any of the Cormorants, 649, 670, 664, 666a, 663, 673, 671, 725, 729, 733, 730, 761, 763a.

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Clay.....	03 " 25	" Pseudomorph.....	03 " 15	Staurolite.....	05 " 25
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Dolomite.....	03 " 25	Molybdenite.....	03 " 25	Wollastonite.....	05 " 25
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Dufrenite.....	03 " 25	Mica, Green.....	03 " 25	Wernerite.....	03 " 25
Elaeolite.....	03 " 25	" Curved.....	08 " 25	Zinc Blende.....	03 " 25
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THE OOLOGIST.

VOL. VII.

ALBION N. Y., AUG, 1890.

No. 8

The Caprimulgidae In Arkansas.

The Goatsuckers, like some of the Herons, are provided with a toothed comb on the middle toe, by which they are enabled to rid themselves of a certain portion of their parasitic adherents or obnoxious matter, and smooth the feathers.

There are three species known to occur in this locality, of which, perhaps, the Night Hawk is the most widely distributed and best known of any of the family. It is rare here, however, and does not breed that I can discover. It has only been seen during the migrations, and not known to alight. Its only note, known to me, (best produced by speaking the word "beard" in a whisper), is uttered as it wends its zigzag way through the air overhead.

The Whip-poor-will is next in order of wide distribution and general abundance. His clear, musical voice, (whence the name), may be heard on any still night from the early part of April till July. Then, like most other birds, his merry song ceases as he becomes settled in life, and the family cares appear. He is silent, except now and then a few occasional notes to cheer his mate. In the earlier part of the season they keep the forests ringing with the sweetest melody, throughout the night, and, as one after another joins in, at dusk, from different hill sides and ravines, it is truly a concert well worth hearing. Distance and location lend variation to the sound, and as the voices chime in, down some deep ravine, it reminds one of an orchestra in some great hall, and is particularly fascinating to him that hears it for the first time.

A dozen or more may be in hearing

at once, and as one quits off, another takes it up, and so the word is passed down the hollow till it dies away in the distance, to be repeated o'er and o'er. At other times it is a perfect medley of song; or, a single bird may be so near as to completely deaden the other sounds, and may keep it up for hours with scarcely an intermission. At such times, especially when one is taking his morning nap, it is quite unpleasant to be suddenly awakened by one of these planting itself near the house, or even in the door yard, to wind up its morning song. It is useless to try to sleep, and unless you frighten it away, you may wear your patience out waiting.

When rendered so near, its voice is loud and lacks that charming brilliancy so fascinating.

Often, when whistling, they seem to get excited, or in a hurry, and repeat the words very rapidly for a time. In singing, the head is thrown far back and the throat much dilated. They perch either on the ground, a rock, log or horizontal limb, and as a rule, sit lengthwise with the object on which they light. Their chief resort is the rocky ravines of the mountains. They are seldom seen in daylight and then only as they dart away in obscurity. The eggs are two in number, and too well described in Davie's work to justify an attempt here.

Occasionally, one can be called up by mimicry, and when heard so near there is a peculiar sound made before the first syllable, which resembles a noise made by the Ground Squirrel, as if it were a smack of the lips when the mouth is opened to utter the notes. This sound is synonymous to the first note, (chuck), of the Chuck-Wills-Widow, but is much weaker.

The Whip-poor-will arrived on the last day of March, and since that time I

have enjoyed many an evening stroll, out listening to his revelry.

The Chuck-Wills-Widow: This is not so well known as the former species, and is counted as rare everywhere, though I must say it is quite common in this locality. It is also named from the fanciful construction of its notes, and during the early evening keeps up an incessant flow of turbulent noise, which lacks the attractiveness found in the Whip-poor-will's song. It is sometimes called *Chip-buttee-white-oak*. The last syllable is emphasized, the first being more faint, and, at a distance, is sometimes not heard. Like the Whip-poor-will, it often gets in a hurry and repeats the words so fast as to make them indistinguishable.

I beg leave to differ with the notes given in Davie's description of this species, which read as follows, "deep ravines, shady swamps and extensive pine forests are the retreats during the day, when the birds roost in hollow trees." Their favorite retreat, here, is open, sterile rocky ground bordering the hillsides, where there are no hollow trees to roost in. He further says, "when in search of food, the same places are resorted to at night, and their singular notes are only uttered for a brief period in early evening, when on the wing." My experience is quite different. They resort to the same places at night, but in the mating season, they may be heard from dusk till bedtime, and I have yet to find the first one that performed such a part while on the wing. Of a hundred or more which I have traced up in the moonlight, every one was perched on the ground, a rock or log, or occasionally on a low limb or snag, while singing. They change their position frequently, however, while catching insects, and perhaps this gives rise to the idea that they are flying about. Yet, if disturbed, they do make a peculiar guttural sound like that of a bullfrog, or a rattling *ba-a-a-a*, when on

the wing. The female is generally along and utters the same noise but not nearly so course.

They are very hard to approach, owing to the fact that the female is close at hand, keeping guard while he sings, and at the least rustle in the leaves or brush, she takes flight, followed by her companion flapping his wings together occasionally, but irregularly and not twice together. Their flight is short; even if shot at they will only fly fifty yards or so and resume their music, if such it can be called, but I dare say that if a stranger should pass through these parts at night, and a bird would suddenly begin singing within a few rods of him, he would think of anything before "sweet music." It is absolutely the most lonely and bewildering sound I ever heard, and I shall not soon forget my first experience with them. It was in the spring of '88 that I had my first experience in a new unopened country, ravaged by forest fires and as I emagined, from numerous letters received, abounded in bears, panthers, wolves, wildcats, deer and other wild animals, liable to meet one in the road at all hours of the day. Guess at my feelings, as I started out alone and on foot, at nightfall, to travel three miles and a half over one of the roughest and wildest mountain trails in Arkansas for the first time. I was not much of a coward, and was determined to "surprise" the folks that night, if I didn't get lost, but I must say I quailed when one of these birds struck up a lively tune almost in front of me. I made the trip safely, though I carried my gun at full cock the rest of the way, and was ready to shoot every black stump or other unsightly object that came to view.

Twenty-five of these birds may be heard at one time, and a specimen shot measures fourteen inches, and twice as large in bulk as the Whip-poor-will.

They first arrived on April 29th.

"ARKANSAW HOOSIER,"

Clinton, Ark.

The White-bellied Nuthatch.

TAKEN FROM FLORENCE A. MERRIAM'S
"BIRDS THROUGH AN OPERA-GLASS."

Crossbills, Snow Buntings, Blue Jays, Pine Finches, Pine Grosbeaks, Goldfinches, and sometimes other birds visit us here at irregular intervals during the winter, but there are four little friends that never desert us, no matter how long the winter lasts. They form a novel quartette, for the Chickadee whistles the air, the Nuthatch sings his meagre alto through his nose, and the two Woodpeckers—the Hairy and Downy—beat their drums as if determined to drown the other parts. But they are a merry band, with all their oddities, and wander about giving concerts wherever they go, till the woods are alive again, and we forget that we have ever missed the summer birds.

When the drums get too much absorbed in their tree trunks, the alto and air go serenading by themselves, and who knows what gossip they indulge in about the grave magicians' day dreams, or how gayly they swear to stand by each other and never be put down by these drums!

They are old chums and work together as happily as Mr. and Mrs. Spratt, the Chickadee whistling his merry *chick-a-dee-dee, dee, dee*, as he clings to a twig in the tree *top*, and the Nuthatch answering back with a jolly little *yank, yank, yank*, as he hangs, head down, on the side of a tree *trunk*. What a comic figure he makes there!

Trying to get a view of you, he throws his head back and stretches himself away from the tree till you wonder he does not fall off. His black cap and slate-blue coat are almost hidden, he raises his white throat and breast up so high.

"Devil-down-head" he is called from this habit of walking down the trees, since instead of walking straight down backwards, as the Woodpeckers do,

he prefers to obey the old adage and "follow his nose." A lady forgetting his name once aptly described him to me as "that little upside-down bird," for he will run along the under side of a branch with as much coolness as a fly would cross the ceiling.

One of his popular names is "Sapsucker," for our Nuthatch has a sweet tooth, and when the farmers tap the trees in spring he "happens round" at the sugar bush to see what sort of maple syrup they are to have. He tests it well, taking a sip at "the calf" where it oozes out from the gashing of the axe, tasting it as it dries along the spile, and finally on the rim of the buckets.

But his most interesting name is—*Nuthatch!* How does he come by it? That seems a riddle. Some cold November day put on a pair of thick boots and go to visit the beeches. There in their tops are the Nuthatches, for they have deserted the tree trunks for a frolic. They are beech-nutting! And that with as much zest as a party of school children starting out with baskets and pails on a holiday. Watch them now! What clumsy work they make of it, trying to cling to the beech-nut burr, and get the nuts out at the same time. It's a pity the Chickadee can't give them a few lessons! They might better have kept to their tree trunks. But they persist, and after tumbling off from several burrs, finally snatch out a nut and fly off with it as calmly as if they had been dancing about among the twigs all their days. Away they go till they come to a maple or some other rough-barked tree, when they stick the nut in between the ridges of the bark, hammering it down, and then, when it is so tightly wedged that the slippery shell cannot get away from them, by a few sharp blows they *hatch* the *nut* from the tree!

Through my glass I watched a number of them this fall, and they all

worked in about the same way, though some of them wedged their nuts far into cracks or holes in the body of the tree, instead of in the bark. One of them pounded so hard he spread his tail and almost upset himself. The fun was so great a Downy Woodpecker tried it, and of all the big school boys! The excitement seemed to turn his head, and he attacked a beechnut burr as if he would close with it in mortal combat!

Though without any real song, the Nuthatch has a delightful variety of notes. In May his nasal *henk-a, henk-a, henk-a*, comes through the soft green woods as a peculiarly peaceful caressing note, and his soft *yang, yang, yang*, is full of woodsy suggestions. In the last of June I noted the sweet *yah-ha* of the Nuthatch, the same *yang, yang, yang*, and his nearest approach to a song, the rapid *yah-ha, ha-ha-ha-ha*. In August and September the nasal *yank* is sometimes run into an accelerated half song. Thoreau gives the ordinary winter note as *quah, quah*, and while that expresses the mellowness of the note on some days better than *yank*, they are both descriptive. But though certain notes may predominate in given months, on a cold January morning I have heard from a flock of Nuthatches every note that I had never heard before at any time of the year.

Like the other members of the quartette, the Nuthatch nests in holes in trees or stumps, while its lightly spotted eggs, six or eight in number, are laid on a soft, felty lining.

I am often surprised by discovering the Nuthatch at work in places where I despair of finding any birds. One day in December the snow-covered woods seemed to have fallen into the silent slumber of a child. Not a breath came to blow the white cap from the Vireo's nest, or scatter the heaped-up snow that rested like foam on the slender twigs. The snow that had drifted

against the side of the tree trunks clung as it had fallen. In silence the branches arched under their freight; the rich ochraceous beech leaves hung in masses under the snow—not a leaf rustled.

Overhead the twigs, snow-outlined, made exquisite filigree against the pale blue sky. But suddenly, as the woods seemed to be holding its breath, the *yank* of the Nuthatch came first from one tree and then another. A family of them were looking for their dinner in the white forest. If the snow covered the upper side of a branch, they ran along upside-down on the under side; if the south side of a tree trunk was white, they walked, head down, on the north side; and there, too, was the little drummer—a Downy Woodpecker, flickering from tree to tree—even here, the merry band was finding a place for itself in nature. As I passed on, fainter and fainter came the note of the Nuthatch. I looked back through the woods; the blue sky was veiled by snow clouds, but behind them shone the southern sun, pervading them with that wondrous radiance of white light that only a winter sky can show.

Two Instances of Strange Co-habitation— Wood Thrush and White-eyed Vireo.

While on a collecting trip a short time ago, a little incident came under my notice which I thought might possibly be of enough interest to the readers of THE OOLOGIST to publish.

On June 21st, I found a nest of the Wood Thrush, noticing, in the nest, a very large egg for this species. (Size 1.10 x .81.) I took it, leaving two in the nest. I thought no more about it until three days after when, as I was going by the place, happening to remember the nest, I went to look at it. What was my surprise on nearing the bush, to see a strange small head peep-

ing over the edge of the nest. I went up carefully, and was able to get within two feet of the nest before the bird flew off, lighting on a twig about a foot above it.

Taking a good look, I was able to identify the bird as a White-eyed Vireo. The two Thrush's eggs were in the nest and one egg of the Vireo.

Two days later when I went to the nest, the Thrush's had hatched (incubation was far advanced when I took my egg) and the Vireo's egg was gone. I sat down a little ways from the nest and in a few minutes saw the old Vireos feed the young Thrushes.

I would like to know if anyone else ever noted a like instance?

E. D. ROYCE,
Tolland Co., Conn.

DOWNY WOODPECKER AND PEWEE.

About the middle of May of the present year, I heard the cheery notes of a Downy Woodpecker for several successive days, in a small tract of timber near my home, and knowing these notes to be those of love, I concluded it had, or at least would have, a nest in the vicinity.

So I kept a vigilant watch, and on the 27th of the month, as I rapped upon a dead wild plum tree stub, I was rewarded by seeing Mrs. Downy fly out, and, thinking it rather late in the season for eggs of this species, I immediately "made way" into its nest, by sawing off the stub just above the opening, when to my dismay the nest was found to be empty.

Sawing a thin piece from the stub just sawed off, I placed it over the hole, so that no person would notice it except by close examination, and to my joy, Mrs. Woodpecker did not either, or if she did it "cut no figure" with her, for on May 30th it had two eggs. The next day another one was added, but on June 3rd it was found to be empty,

robbed by some animal or boy, and my set of eggs was gone.

At this time a Pewee had built her nest under the projecting roots of an oak over a gravel bed, only about ten yards from the tree where the Woodpecker had built. On June 3rd, this Pewee's nest had no eggs in it, but on June 6th it had two eggs in it, which exactly resembled those three that were destroyed or taken from the Woodpecker's nest. Those two eggs resemble in every way, all the eggs of the Downy Woodpecker in my collection and all I have ever seen alike in size, shape and usual gloss of eggs of the family *Picidae*.

My opinion of them is: When robbed of her three eggs and her nest destroyed, she, having no receptacle for the other two eggs, deposited them in the nearest available place—that Pewee's nest.

The Pewee laid no eggs, but sat on those two for about a week and then deserted them. On June 25th I took them, and on blowing, the contents of each were "dried up," in fact there was scarcely anything in one of them.

Soon after being robbed the Woodpecker began the excavation of another hole in the same stub, about eight inches lower down than the other one, and on June 14th I took a fine set of four eggs from it. I have neither heard nor seen the Woodpecker since.

As I have before said, those two eggs exactly resembled this set of four eggs, OOLOGISTS, here is a nut for you to crack. I would be pleased to have opinions expressed as to whether those two were eggs of Downy Woodpecker or not.

"WISCONICUS,"
Dodge Co., Wis.

Variation in the Eggs of *Habia Ludoviciana*.

Although no material variation presents itself in the eggs of the Rose-

breasted Grosbeak in the same clutch, nor still any enormous variation anyway, yet, when a series of sets are brought together, there will be noticed different phases of markings which constitute quite a variation and this variation will be more conspicuous, I dare say, as the series grows larger.

I fail to find any variation whatever in the shade of the ground color, it being, in all specimens compared, the same greenish-blue tint. As to size there is an appreciable variation, but I will not stop to speak of this variation.

To suit my own fancy, I have divided the various markings of the eggs of *ludoviciana* into three classes or phases which I will name for convenience: the reddish, the dark brown and the greenish-drab.

I will now attempt to describe four sets of eggs from my collection, as representing these three phases, remarking first that under-markings, of lilac occur in all specimens which I have seen.

Sets 1 and 2, of the four above named, represent the reddish phase of markings, set 1 being very heavily marked, while set two is much more lightly and sparingly spotted. These reddish markings are almost precisely similar in color to the color found on eggs of the Field Sparrow, where the spots mingle thickly about the great end. In set 1 the markings are nearly all blotches or large spots, there being scarcely any minute markings. These blotches and large spots cover nearly the entire surface of the egg and in egg No. 2, of this set, almost hides the ground color. Egg No. 1 is an exception to this statement, the markings being very well confined to the large end, the smaller end being almost wholly unmarked. The general cast of this set is a dull red.

The markings of set No. 2 are of the same color as those of the previous set, but are very different from them both in size and distribution. The spots and

blotches are both small and well confined to the great end of the egg, although, of course, as is always the case, there are scattering spots and markings throughout the entire surface of the egg. In this set, the first trace of a confluent ring of spots about the larger end is noticed, it being very distinct in egg No. 1 and quite indistinct, though plainly discernable in the other three eggs of the set (all of the sets here figured comprise four eggs each). Although the tint of the ground color and of all the markings are precisely the same in both the sets 1 and 2, yet their general appearance is very different, occasioned by the heavy and numerous markings of set No. 1.

The dark brown phase of markings is represented by set No. 3. The markings of this set, as concerns size and distribution, are similar to those of set No. 2, differing from them only in color. The color of the markings is a dark brown, almost reaching black in one or two spots and approaching greenish-brown in others. In this set, the confluent ring is plainly discernable in three of the eggs and wholly indiscernable in the fourth.

Egg No. 2 is very light, in that the markings are few and sparse and nearly all confined to the confluent ring, which, consequently, is very conspicuous. The smaller end of the egg is comparatively free from spots.

Set No. 4 represents the greenish-drab markings and is the most peculiar set of this species I have ever noticed, not, perhaps, because this phase of markings is more uncommon, but because the markings are so exceedingly light and faint. In color they are almost precisely similar to the markings of the eggs of the Prairie Horned Lark.

Eggs Nos. 1 and 2 of this set are the most thickly marked and even these present a lighter appearance than egg No. 2 of set 3, mentioned above. Eggs 3 and 4 of this set present markings

which are scarcely darker than the ground color of the egg. Especially is this so of egg No. 4, upon which, when held at a distance of four feet from the eye, no markings can at all be discerned, it appearing as a plain, unmarked green egg. On all the eggs of this set the spots are very minute, as much so as those of the eggs of the Brown Thrasher. The confluent ring is noticed in all the eggs of this set.

There also occurs in the eggs of *Habia ludoviciana* a slight variation in form, some being more pointed or more rounded at the small end than others.

The nests of the Rose-breast have always appeared to me to be very uniform both in location and construction. N. F. P.

The King Rail in Minnesota, and Other Notes.

Since writing my short article on the "Family Rallidae in Minnesota" in a former number of the OOLOGIST, I have added another species to the list.

On June 14th, of this year I got a day off and went out to see how the birds were getting along. Arriving at the meadow I started in and had scarcely taken ten steps when a Blue-winged Teal flushed from under my feet. The nest was nicely lined with down and contained nine eggs. I did not take these as the law is very strict prohibiting the taking of Duck eggs.

Further on I found several sets of Sora and Virginia Rails but left them as I had no use for any. Noticing a large bunch of swamp hay, and as it looked somewhat suspicious, I stooped down to separate it, just as a King Rail flew out. I recognized it immediately and was in such a hurry to get it that I shot before it was more than eight or ten yards off. When I picked it up it was so badly mangled, that I was unable to preserve more than the breast, head and neck. Going back to the nest, I found a fine set of ten.

They greatly resembled the eggs of the Virginia, but were about twice as large. The nest was composed of grasses and hay piled up to a height of ten inches. It was slightly hollowed, and as a whole, looked about like the nests of the Virginia. This nest and eggs are, I believe, the first recorded set taken in Minnesota. The birds are quite rare; but five being taken in the last twenty years.

Continuing on around the lake, we found two sets of Mallards' and one of Teal's, which we did not take. Every bit of floating weed contained a set of Black Tern; eggs were all around us but we were looking for a set of the Wilson's Phalarope, numbers of which were flying over our heads. I collected several males and females, the plumage of the males showing that they had begun to incubate. Suddenly, flushing one in the long grass, I ran up and found the nest. It was situated on a small hummock, about four inches above the level of the water. The top of this hummock had been slightly hollowed and lined with grasses. The eggs, four in number, were a great deal smaller than I had expected they would be. They somewhat resembled those of the Spotted Sand Piper, but were considerably smaller. Having had no time to measure them I am unable to give the exact size.

As it was getting time for me to return I looked around hurriedly and found another set of four. The location of these were the same as the first set. There were at least fifteen pairs of birds breeding here and I am confident that if I had had enough time I could have gotten a nice series.

On the way out we found a set of six Bobolink's, five Grass Finch's and five Chipping Sparrow's all within a space of six feet. Not taking any of them we wondered at the harmonious relations sustained by them, and providing that they all hatch out in due time; they will

have plenty of company besides their own brothers and sisters.

WILL DE LA BARRE.
Minneapolis, Minn.

Notes from the Audubon Ornithological Club.

A friend of mine in Caldwell, Wis., in a letter of June nineteenth tells me of an albino Robin that he has recently captured. It is pure white with no markings.

A few days ago I killed an English Sparrow in a manner that could not be called a violation of the city law, which protects these plagues. I was riding my bicycle down Jackson Boulevard, when an English Sparrow that tried to cross ahead of me was struck by a spoke and stunned. I took it home and put it in a cage. It was afterwards killed by a cat.

On the fourth of July I saw a female English Sparrow with several of the secondaries of the left wing pure white.

On examining an old note-book I find a nest of young Robins recorded on March 12, 1888. Is not that rather early for this locality. There was snow on the ground at the time. A pair of evening Grosbeaks were seen at Caldwell, Wis. as late as April 1st, this year.

When the members return from their vacations I think you can expect some good notes from the Club.

A. R. HAGER,
Pres. A. O. C.
Chicago, Ills.

An Imprisoned Wren.

On the 8th of May, last, a pair of House Wrens began to build a nest in a bird-box placed in some vines near my home.

After working at it for quite a while the nest was completed. After this, at different times, I investigated the nest by removing the back of the box, when

the old birds were away, but never found any eggs.

June 21st, I opened the box and found that the old bird was there—dead, with the appearance of having been so at least a week.

On examining the box I found that the entrance was filled full of twigs, packed so tight as to render it impossible for the bird to get out, (this being the only opening except two small air-holes.) It occurs to me that, as the nest had been so long without eggs, that the male bird had imprisoned its mate so as to compel her to lay, much after the manner of the Hornbill, a bird, native of Asia and Africa, which fastens the female in a hollow tree leaving only a small aperture through which to receive air and food, there to remain until incubation is complete.

The nest contained two eggs, one of which was of the average size, while the other was much shorter being almost globular.

M. L. FISHER,
Lycoming Co., Pa.

A Robin Caught by a Barbed-wire Fence.

While passing through a woods one day in the summer of 1888, I came across a robin, firmly fastened to the barbs of a wire fence.

A closer examination showed that one barb had passed through one wing, and another had entered the breast, holding the bird so firmly that it could not possibly have released itself.

As it had bled freely I do not think it could have lived very long after its impalement. It had evidently been dead several days when I found it, and had probably been flying rapidly when the barbs caught it; and there was also evidence that it had struggled violently to free itself, but in vain.

WILFRED A. BROTHERTON,
Oakland Co., Mich.

THE OOLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

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

Pencilings.

In the April OOLOGIST appeared an article on the "Family Rallidae in Minnesota" by Will de la Barre.

As an addition to that family, Mr. La Barre relates in this number, the occurrence of the King Rail near Minneapolis. The taking of a specimen of this bird in Minnesota was also recorded by Mr. Cook of Minneapolis in the June OOLOGIST. These are rare "takes."

We often come across amusing mistakes in a printer's proof.

When the proof of the July number came before us, we were somewhat amused to find the Red-winged Blackbird and Yellow-shafted Flicker posing in print respectively as the Red-mug Blackbird and Yellow-shafted Tickler.

Let all persons sending queries, write their name on each, separate slip containing a query. Failure to do this has been the cause of so many replies being addressed to "Name mislaid."

To our contributors: We are now receiving at your hands an excellent class of manuscript. We speak of this because it strikes us favorably and because we desire a continuance of the same.

It is the constant aim of the OOLOGIST to gradually improve its subject-matter and to raise it to a higher scientific standard. To this end, we urge our contributors (as indeed you have been doing in the past) to write about the rarer species and to take for subjects those things which are not generally known. Success to you, one and all.

We have just received a little book entitled "Recollections of General Grant" by George W. Childs. We haven't had time to look at it yet, but it looks as though there was "something in it." We will mention it next number.

Just as we are going to press, a "small boy" comes into the office of "Ye Associate Editor" and displays an egg which he found and gives a description of the bird and nest, and we are convinced that it is the Chewink.

This is valuable in that this is a rather northerly breeding-place for this bird and this is the first instance of its breeding here.

It is one of the rarest summer residents in this section.

The "small boys" of Medina seem to have better finds generally than their more experienced and scientific (?) predecessors.

We have received from E. S. Cheney, artist, Pitrodie, S. D., a number of photographs of different ornithological subjects, such as Short-eared Owl, nest and eggs of Marsh Hawk, etc., etc., which are wonderfully true to nature and speak highly for the artist. We haven't time to mention them further at present, but we promise our readers an interesting article in next number concerning this latest achievement in ornithology and some entertaining things concerning what the camera can

do for the ornithologist. Mr. Cheney will please accept our hearty thanks for his excellent productions.

Here and There.

James Hill, of Edinburgh, Ills., writes as follows concerning the nesting of the Prairie Horned Lark in his locality:

I have had considerable opportunity to study the nesting of this species by plowing in fields where they were abundant. I have noticed in all nineteen sets of this species during 1890, my first find was on April 8th in a pasture, the nest contained two young and one stale egg. The nest must have been made about March 20th. In early spring they breed here in the pastures. But in May and June, when the corn is from four inches to one foot in height, their nest may be found by the side of a growing hill of corn. I found a set of five eggs on June 19th of uniform size and very dark markings.

I think sets of this number are very rare. I found a set on June 15th containing two eggs. One was "white" except on the great end it had a few very dim blotches scarcely discernable. The other egg has the spots concentrated around the large end. My last nest consisted of three eggs found on June 21, 1890.

Fred A. Schneider, College Park, Cal. reports a nest of the Western Red-tailed Hawk taken by him April 26th, containing four eggs, two of which were nearly white. Is not this a rather large set?

On June 23rd, G. H. Bockoven, of Palmyra, N. Y. relates the taking of an egg of the Chipping Sparrow, which was distinctly spotted on the smaller end instead of the large end; a rather peculiar egg.

In regard to the question of birds watering their young, which was discussed somewhat in the May OOLOGIST, Kit Atkinson of Dime Box, Texas, gives us the benefit of a little observation. He writes:

"In 1888, I took a set of young Orchard Orioles and put them in a cage so the old birds could feed them. I brought them near the house and put

a water-glass in the cage so they could have water. The old bird would come and put her bill in the glass of water and then put it in the mouths of the young birds. I think she was watering the young; if not, she must have been playing that she was."

W. E. Snyder, Beaver Dam, Wis. writes:

"On the 11th of July, I took a set of four fresh Robin eggs of usual size from a burr oak. The eggs are the same in color as those of a Catbird, and but for size, shape and seeing the Robin on the nest, I would have pronounced them eggs of that bird. Is not that an uncommon color for Robin eggs?"

John W. Arnold, Allegan, Mich. reports a Chimney Swift which has built its nest among the Barn Swallow's nests in his barn for three successive years.

W. E. Drennan, New Sharon, Ia. relates the following:

"On June 25th, while on my way to a neighbor's house, I saw an old stump over in an orchard. Seeing a Bluebird around, I thought probably there might be a nest in it. On going over I saw a Bluebird fly out of a hole in the stump, and, looking in, I beheld three Pewee eggs almost ready to hatch. The Bluebirds had occupied the nest for some time, for they were seen there some time before. The Pewees were flying around close to the nest, but seemed afraid to battle with the Bluebirds for possession.

This is the first time anything like that ever came under my notice; and also the first time I ever knew of a Pewee nesting in a stump."

F. C. Hare, Whitby, Ont., Can. writes:

"I think you have given to Mr. G. E. B., Marion, Ala., the wrong idea of a 'Butcher-bird.' In Canada, the name Butcher-bird is the common name for the Northern Shrike, A. O. U. No. 621."

[The name "Butcher-bird" is applied to all the Shrikes; to the Californian of California, to the Loggerhead of the Southern States, to the White-rumped of the Western and Northern States and to the Northern of the high North.]

—Eds.

Our Question Box.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

C. E. G., Pasadena, Cal.—Your description is not sufficient, but think your bird is doubtless Gairdner's Woodpecker.

L. A. S., Elgin, Ills.—White eggs of the Bluebird are not uncommon. Reports are current of their being taken in almost all parts.

P. S., Simcoe, Ont.—1. The best method of killing insects is by means of a cyanide bottle.

2. The "Auk" is published by L. S. Foster, 35 Pine St., New York City.

3. A turtle can be removed from its shell by placing it in boiling water for a few moments, when the softer parts can be easily removed.

H. M., Garden City, Kans.—As to the value of eggs of the Black Rail, we would say that no definite value can be placed upon them; but they are rare and desirable and would doubtless bring anywhere from twenty-five cents to five dollars per egg. As a list-price, we might suggest \$2.00.

W. B., Los Angeles, Cal. and A. W. M.—The eggs of the California Clapper Rail are worth, doubtless, somewhere from twenty-five to fifty cents each. Some California collector can undoubtedly give a better opinion.

A. V. T., Decorah, Ia.—Your little bird of a greenish-yellow color, which arrives in May and stays in bushes and low trees, is probably the Yellow Warbler.

W. M. F., Sedalia, Mo.—1. Your eggs of the Yellow-billed Cuckoo which measured respectively 1.40 x 1.09, 1.40 x 1.08, 1.38 x 1.11 and 1.44 x 1.11 are unusually large eggs for that species.

2. It is impossible to tell to which species of Cuckoo your second set belongs, from your description.

A. L. T., Newark, N. Y.—The American Coot is frequently called "Mud Hen." There are other water birds that are also called by this name.

W. W. G., Rutland, Vt.—Three-story nests of the Yellow Warbler are not uncommon.

R. M. B., Clyde, N. Y.—The Red-shouldered Hawk is known as the "Winter Falcon." The eggs of this bird do not measure as large as the measurements you give.

Name mislaid.—1 The eggs of the Chipping Sparrow are nearly always of a darker blue ground than those of the Bluebird.

2. The Ruffed Grouse not infrequently raises two broods in a season.

3. The Whistling Swan breeds only in the high North.

B. S. B., Phelps, N. Y.—1. Observations that approach accuracy seem to infer that Hummingbirds feed their young by regurgitation.

2. The nest of the Grasshopper Sparrow is placed on or sunken in the ground and concealed by a thick tussock of grass. The eggs have a clear white ground-color, with a moderate polish, spotted more or less thickly with pale reddish-brown, chiefly and sometimes wholly at the large end. They measure about .78 x .56 in.

3. The nest of the Savannah Sparrow is a slight arrangement of grasses in concentric rings, the rim being flush with the surface of the ground, in which the nest is sunken. It is generally well concealed among the weeds and tall grass. The eggs are four or five, greenish or grayish-white in ground-color, spotted, speckled, and blotched with light-brown and lilac. Markings often very numerous. Measurement, about .76 x .54.

W. T. B., Philadelphia, Pa.—Your Yellowbird with black head and wings laying a white egg, is probably the American Goldfinch.

I. C., Paducah, Ky.—Description insufficient.

Name mislaid.—Your description of nest and eggs of bird like Phoebe is somewhat unshapely. We cannot conceive of a bird only a little larger than a Wren laying an egg $1\frac{3}{4}$ by $1\frac{1}{4}$ inches in size. Your description is like the eggs of either the Kingbird or Wood Pewee only for size.

G. R. P., Washington, Ga.—Cannot your red, white and black bird called "Shirt-tail," be the Red-headed Woodpecker?

F. B., Chadron, Neb.—Your female bird with yellow under parts and brown back, hanging its nest from the small twigs of trees in groves, the eggs being faint bluish, dotted and lined with dark-brown or black is doubtless the Orchard Oriole.

E. L. Y., Thornton's Ferry, N. H.—The description of your bird, nests and eggs corresponds well, we think, with the Meadowlark, nest and eggs.

Y. K. K., Scottsburgh, Ind.—1. The egg of the Belted Kingfisher is pure white, nearly spherical, 1.36 x 1.05. The egg of the Cedar Waxwing is light slate-color, with blotches and spots of dark-brown and purple, almost black. Measurement .84 x .61. The egg of the Bobolink is dull or grayish-white, tinged with light drab, olive or reddish-brown, intermingled with lavender, .83 x .61.

2. Although there may be no real depreciation in value of an egg because it has unnatural stains, yet an egg free from stains always seems to be worth more, in that it is a better specimen.

F. C. H., Whitby, Ont.—The Brown Creeper, A. O. U. No. 726 is the *Certhia americana* you refer to.

B. R., Toulon, Ills.—1. Cannot tell from the description given.

2. We can furnish John Burroughs' works at \$1.50 per volume.

G. M. W., Gibbon, Neb.—The queries of "Our Question-Box" are answered by the Editors.

T. W. G., Whitman, Mass.—Sets of eggs of a given species should be numbered consecutively beginning the season with the number you left off the previous season. No two sets in any collection should bear the same number.

In regard to the "black and red" bird called "Rink," queried about in

the last OOLOGIST, G. M. W., Gibbon, Neb., thinks it is the Chewink or Towhee. We think this conjecture is correct. The "red" might be accounted for as *chestnut*, perhaps.

Book Review.

Bird Ways.—OLIVER THORNE MILLER.

In Riverside Library for Young People. 16mo. \$1.25. Boston: Houghton, Mifflin & Co., 1889.

This work, written in a popular style, is described by its title, for the many winning ways of the birds treated are depicted very pleasingly by the words of the author. He relates many interesting incidents and experiences with the birds and tells his readers many things which must be new to them. He tells so many little things, in regard to some of the birds, that the ordinary observer would never notice—so many of their cute and quaint doings.


The author makes the assurance, in the introduction, that the things recorded in his book are the results of his own personal observation.

Chapter I is entitled "The Bird of the Morning" and is a faithful portrayal of the goings and doings of our common American Robin. Speaking of a Robin's nest he preserved, the author says:

"This snug cottage of clay has been the scene of some of the sweetest experiences of all lives, great as well as small. For the happiness it has held, I will preserve it, and thus moralizing, I placed it on a bracket in memory of a delightful study of the Bird of the Morning."

Some of the other chapters are: "The Bird of Solitude" and "A Gentle Spirit," both referring to the Wood Thrush; "The Bird of Society," referring to the Redwing Blackbird; "Upon the Tree-Top," referring to the Baltimore Oriole, and "A Ruffian in Feathers," which, of course, means the House Sparrow. The five closing chapters are devoted to the various temperaments; impulses, ways and doings of the House Sparrow.

As a whole, there is much in this little work for the live ornithologist and worlds of entertainment for the popular mind.

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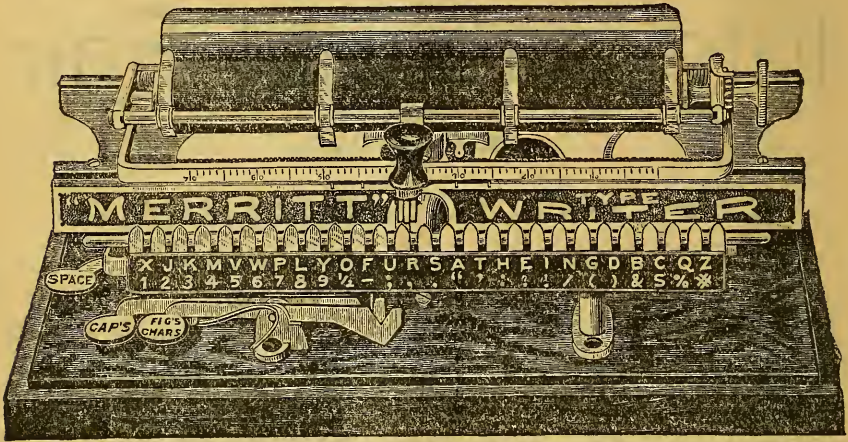
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Vol. VII,

ALBION, N. Y., SEP., 1890.

No. 9

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per word. No notice inserted for less than 25c. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms cash with order.

"You will oblige me greatly if you will insert in the OOLOGIST that I received so many letters and postal cards in answer to my exchange notice that I could not answer them all."

G. R. PALMER, Washington, Ga.

TO EXCHANGE.—Singles of 67, 152, 170a, 182, 264, 480, 482, P. N. Lark, 693, 572, 282 and 20 others. Send Lists. Box 105, Himrods, N. Y.

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WANTED.—2 sets of American Coots, 1 set of Sora and 1 set of Clapper Rails' eggs and data. Will give 9 numbers of the Golden Library for each set. ROY RUSSELL, Kokomo, Ind.

WANTED.—Good Irish Setter or pointer dog, well broken on Ruffed Grouse. Will give eggs in sets for one. Send full particulars. H. W. DAVIS, North Granville, N. Y.

TO EXCHANGE.—Books on Natural History, "Travel and Adventures, and Petrified Wood, for Air Rifle, Taxidermist Outfit or first-class birds' eggs, single or in sets, with data. A. WETZEL, Habbell, Thayer Co., Neb.

TO EXCHANGE.—A collection of 250 side blown Eggs, 45 kinds, mostly sets with data, valued at \$19, for best offer of Old Coins or Indian Relics before October 1st. FRED S. HAGGART, Chagrin Falls, Ohio.

TO EXCHANGE.—A collection of first-class birds' eggs; value \$25.00, for best offer in Bicycle or Rifle. Write for list. NATHAN L. DAVIS, Box 234, Brockport, N. Y.

I HAVE 400 square cut post-marks, all different, many foreign; also 70 Allen and Ginter's cigarette tickets, to sell or exchange for specimens. What offers? R. M. FLETCHER, 101 Third St., Sioux City, Iowa.

I HAVE some second-class eggs to exchange at one-third price of Check List, for first-class eggs or air gun. Make Offers? OTTO J. ZAHN, 317 S. Hope St., Los Angeles, Cal.

TO EXCHANGE.—The following first-class sets, Ridgw. Nos. 274, 154, 153, 170, 157. Also singles, 609, 460, 170a, 7, 12, 304, 258, 254, 1, 270, 230, E. S., 182, 425, 123a, 47, for singles. HOWARD W. BELL, Box 1262, San Jose, Calif.

TO EXCHANGE.—722 varieties Foreign and U. S. stamps, (loose) with a No. 2 Mekeel Blank Album, Stanley, Gibbon's and Scott's catalogues, for best offer Taxidermist's, Entomologist's, or Botanical supplies. ROBT. WYLLIE, Sylvan Lake, Fla.

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EXCHANGES AND WANTS, Continued.

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COLLECTORS, have you any Stuffed Birds in your collection? If not, you should have some. I have some very nicely stuffed Birds to offer in exchange for Eggs, sets or singles. Send list of what dups, you have and receive mine. JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

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TO EXCHANGE.—My entire stock of Stuffed Birds for eggs or Skins, such Birds as (A. O. U. W.) 373, 375a, 366, 367, 619, 514, 508, 524, 228, etc. Send complete list of what you have and I will send complete list of Birds. Address, with stamp, JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

FOR EXCHANGE.—Eggs in sets or single, Books, Climbers, Indian Clubs, a Watch, two Rifles and several Thread Cases and Sheif Cabinet. LETSON BALLIET, Des Moines, Ia.

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TO EXCHANGE.—First-class Singles and Sets, with complete data, to exchange for other first-class Singles and Sets, (Sets preferred). Send lists and receive mine. PERCY WIL- LIAMS, Box 212, Redlands, San Bernardino Co., Cala.

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THE OOLOGIST

VOL. VII.

ALBION N. Y., SEP, 1890.

No. 9

The Use of the Camera in the Field.

We shall suggest in this article some application of photography to the study of ornithology, alluding particularly to the use of the camera in studying nests and nesting sites of birds; and briefly to the climatic and botanical influences upon the bird at the time of nesting.

We hope that ornithological photography will claim some part of your attention. The beauties of nature which are so manifested in the feathered tribes and their modes of nesting will surely create a desire to photograph them, while as regards the latter it should not be forgotten that in bird architecture there lies hidden in a great measure, "a key to the minds and thoughts of the birds."

If we could steal quietly upon a nest every day during construction and from the same point each day take a photograph, carefully noting the changes which have occurred, which are not shown in the picture, would not our series when complete bring to our knowledge many interesting facts? (however not forgetting to note the condition of the weather.)

I venture an answer; It would prove far more instructive than a series of eggs; prove whether nesting was carried on steadily or was influenced by cloudy, rainy or windy days or violent storms; last but not least, the exact number of days occupied in the construction.

It would show where new material was daily woven in or added; the mason work as it progressed; the lichen overlaying or downy lining as the case might be, until the structure was complete.

Whether or not, it is possible to complete such a series without causing the

birds to forsake the nest remains to be found out.

To those who feel disposed to attempt another difficult subject, we will say that we have yet to see a series of photographs illustrative of the development of the chick in the egg. Another, but less difficult subject could be suggested: A series of photographs illustrating the growth of young birds.

During our spring-time rambles in wood, meadow and marsh is there not many a nest beautifully constructed upon which we look with admiration and delight; many a nest neatly woven showing the artistic taste of Warbler and Oriole in the choice of site and selection of material; nests judiciously concealed which baffle our wits to discover; scores of nests of all sizes, some plain, others beautiful; which are common sights to us and which we keep to ourselves or forget as years come and go?

Would not photographs of nests of birds which are not common in your locality be exceedingly interesting to your oological friends in remote districts where such birds never venture, if not interesting to yourselves?

Who can describe the magnificence of the architecture of some birds. We are too ignorant of the grandeur which lies hidden in remote localities and will be unless we see it with our own eyes. Is it not possible for us to have these sights brought to us by the valuable assistance of photography?

Oh, readers! if we would collect fewer sets and pay more attention to the nests and their composition; more attention to the birds and their habits; and have more pictures showing nesting sites, form, etc., we would learn much more, and find our collections more valuable and interesting. We are too anxious for large series and a great

variety of sets, to trifle with pictures. The botany so important, is neglected, and the datas are too brief in some cases to be interesting or of much value.

There are but few nests in reach of man, which are out of reach of photography. Time will prove this assertion. Years will work wonders with our combined efforts.

We can spare neither time nor space to mention the numerous modes of securing pictures of the great variety of nests in all sorts of places, for each nest needs a little different treatment.

As "a starter," will mention a few. Some nests of Woodpeckers will yield beautiful results by removing a portion of the wood on one side so as to show the eggs. For such purposes you need a sort of tripod platform for the camera which can be fastened by means of nails driven into the tree. A view of the tree from a near stand-point is good if the nest is not too high to show plainly. In this case the nest must not be tampered with, and if one bird could be also taken in, it would add greatly to the value of the picture. For very large nests out of reach of camera or any mount, a full view of the tree is extremely interesting. I have no trouble in getting views of the nests of Hawks at a distance of from ten to twenty-five feet, for most of our Hawks nest in the lower branches of small trees. Among my little collection of pictures I find a photo. of a large tree containing eleven nests of the Great Blue Heron taken while on a photographic tour last June, which is very interesting.

Nests placed on, or suspended from small branches out of reach of the camera or a ready mountant, will, if artistically arranged yield beautiful results. Proceed as follows: After having removed the eggs, if any, sever the branches holding the nest, at least twelve inches from it, tie them together

at the butts to prevent their catching and tearing the nest. If tightly woven it may be thrown down; otherwise it must be carried. Suspend the nest by string or rope before a suitable back-ground. Not the painted affair; but nature's back-ground, imitating as much as possible its former surroundings. If done skillfully, who will know whether it was photographed from a balloon or from the ground.

Nests placed on, or in the forks of, large limbs may sometimes be photographed from suitable limbs; but generally will have to be moved to a more convenient place. Photos. of nests which have been removed from their resting places, are of but little value in the study of nesting sites; but their beauty compares with, if not excells those taken under less favorable conditions.

Always allow the light to fall freely on the nest and use as small a stop as the lens will use without showing central spot; that your picture may be sharp and well defined. Some writers recommend large stops which I find very unsatisfactory at close range (one to four feet.) Others say "do not attempt pictures on a cloudy day." I agree with them in a few respects: Distant and instantaneous views. I never wait for a fair day, to take a picture of a nest at close range and can show some fine pictures taken on stormy days, with a little breeze thrown in.

On such days I use a little larger stop and vary the exposure to suit the subject; no rule can be given; you must use your own judgment to suit the situation of your subject and the rapidity of your lens.

As a final remark I wish to mention a queer nesting site, which can undoubtedly be attributed to botanical or climatic influences.

During a sketching ramble the latter part of June, 1886, I discovered a nest of the Orchard Oriole containing four

fresh eggs; in a tangle of bindweed (*convolvulus sepium*) and nettle (*stachys palustris*) two and one-half feet from the ground. It was well protected from "Dakota breezes" on all sides, there being a long strip of willows growing at the water's edge on one side and partly surrounding it, while it was well protected by the river bank on the other.

If the weather had been carefully noted some time previous to nesting; the nest photographed, and compared with a series of pictures illustrative of the nests and nesting sites of this species, with notes concerning the botany of each nest; the surrounding botany, which was supposed to offer some special attractions; and notes concerning the weather which was supposed to have had some influence; would it not have been possible to have assigned some cause for this odd nesting site.

Perhaps a strong wind previously destroyed a nest of this pair, (many nests being thus destroyed every year) thus causing them to seek a different nesting place; or, there might have been some attraction to the spot. Who can solve the mystery?

E. S. CHENEY,
Pitrodie, South Dakota.

To be continued.

Sawhet or Acadian Screech Owl.
(*Nyctala acadica*.)

I was much interested in the article which appeared in the June OOLOGIST written by Mr. Merritt. It caused me to feel it my duty to relate my experience.

On April 24, 1890, I was walking along a small wooded creek which flows through my father's farm. Seeing something fly into a last year's Flicker hole, I started to climb the tree to see what it was. To my surprise, two little Owls flew out which I saw at

a glance were not the common "Screech Owl." Presently one flew into a hollow tree near by. With all the caution I could avail I proceeded to ascend. I succeeded in getting my hand over the hole in which he had gone. The hollow was four feet deep and I saw I could not get him without the aid of an ax.

So plugging the hole with my hat, I started home. Getting an ax I returned to the scene of action. Chopping a hole was short work, but getting him out was still shorter.

As it was getting dark, I gave the other one no attention. The one I captured presented the following data: Sex, male; stretch of wings, 17 $\frac{3}{4}$ in.; tail, 3 $\frac{3}{4}$ in.; locality, New Sharon, Mahasha Co., Ia.; date, April 24, 1890.

On April 26th, I was again passing by the place where I captured the Owl. I began to wonder what became of the female. I started to climb the tree from which I had started them before and nearly reached the hole, when out she flew. I chased her around some time, trying to get her to go into a hole, but I could not persuade her to do so.

I saw this was hopeless and accordingly started to get a gun. But before I could get back my Owl had flown.

Climbing the old tree again to see if they had a nest, I found four white eggs which measure 1 7-16 x 1 3-10. The appearance of the shell much resembles that of the egg of the Mourning Dove.

On May 3rd, while I was out in a grove, about a quarter of a mile distant from where I collected the Owl eggs, I saw a hole some eight or ten feet up. On climbing up, I found another Owl identically the same as the one collected on April 24th. Her measurements, etc., are sex, female; length, 8 inches; stretch of wings, 16 $\frac{1}{4}$ inches; tail, 3 $\frac{1}{4}$ inches; locality, New Sharon Iowa; date, May 3rd, 1890.

I was anxious to know what kind of Owls they were. I laid the case before Mr. R. D. Goss of New Sharon, Iowa, and he kindly informed me that he pronounced them the Sawhet or Acadian Owl. I think probably the female captured in the grove as above stated was the mate of capture No. 1.

She likely thought it not safe to remain longer in the tree I so often frequented. This is the only capture of this kind I know of in this locality.

WILLIE A. BRYAN,
New Sharon, Iowa.

Nesting of the Black Snowbird.

On the 24th of July, I had the good fortune to find a nest of the Black Snowbird, containing three eggs, in a public park in the city of Binghamton. Although the bird was not secured, the identification is positive.

The nest was found along a much travelled road through an upland part of the park, and was placed in a hollow under an over-hanging bank. So effectually did the bank conceal the nest, that only the merest fraction of the edge was visible, and part of the bank had to be torn away to get it.

The nest is a thick, saucer-shaped structure of white horse-hair with a few fine grasses, rootlets and pine needles externally.

Where the edge is exposed the materials are coarser and more abundant, consisting of weed-stalks and grasses.

In color, the eggs are bluish-white, thinly speckled all over with dots and blotches of red-brown, which are thickest at the larger end where they run into a wreath somewhat after the manner of the House Wren's eggs. Measurements of the three eggs average .76 x .55 of an inch. Among common bird's eggs, they much resemble certain sets of the Song Sparrow.

From the lateness of the season this is probably a second brood. Although

incubation had begun, the female showed little anxiety for the safety of her eggs. She flew up into a small tree, near by, and remained entirely silent while I examined the nest.

This bird is generally regarded as breeding only in the North or in elevated mountainous regions; but in this case the bird has not even altitude in its favor, the highest point in the county being scarcely 1700 feet above tide, while the place where this nest was found is much lower. That the bird is a rare breeder in this locality, may be inferred from the fact that this is the first Snowbird I have seen in the summer months during a residence of five years in the county.

WILLARD N. CLUTE,
Broome Co., N. Y.

[This bird has also been found breeding in the vicinity of Lime Lake, N. Y., and in other places south of Buffalo.]—
ASSOC. ED.

Marsh Hawk. (*Circus hudsonius*.)

This beautiful, useful and well known bird inhabits the entire lands of North America, breeding as far north as Alaska and the fur countries and wintering from about 40° north, south to Cuba and Panama.

The Marsh Hawk arranges its nest in suitable localities everywhere, from the southern border of the United States to the northern limits of its range, though being most common through the prairie lands of the west.

They breed at different seasons in different localities. In Texas the eggs are to be found by the latter part of April, in the fur countries, not until the middle of June.

The nest is always placed on the ground, usually in a swamp or prairie well grown up with grass or bushes, with water at an easy distance. The nest is commonly placed at the base of

an overhanging bush, that making it very difficult to find. It is generally composed of dry grass, carelessly thrown together and kept in its place by the weight of a few dead sticks, and, to finish up the work of art, a scanty lining of feathers is added.

When the same site is used for several years in succession, the mass of material often forms a platform of considerable size.

They usually lay from four to six eggs, though as many as eight have been found. As is the case with most Hawks, the period of incubation is about four weeks, in no case does it vary more than a few days. The male assists the female in incubating the eggs and in feeding the young. During the time the young are being fed, the male often drops the food to the female from a considerable height as he passes near the nest, she darting upward and catching it before it reaches the ground.

The Marsh Hawk fights with great fury to protect its young from intruders and has been known to attack persons. After the young are reared and leave the nest, they remain together and, as fall advances, several families unite and fly southward. For this reason it is not unusual, during the fall, to see forty or fifty individuals at one time, scattered over some extensive marsh.

When the Hawk discovers prey, it poises for a moment and then drops quickly upon it. If unsuccessful, it is sure to beat over the same place again before leaving.

The food of the Marsh Hawk consists largely of field mice, ground squirrels, frogs, snakes, lizards and small birds. They also occasionally carry off poultry and game birds, though its economic value as a destroyer of pests is so great that its slight offense should be pardoned. Unfortunately, however, farmers and sportsmen slaughter it at sight, ignorant of the fact that it is a faithful slave that he is killing and that it pre-

serves an immense quantity of grain, thousands of fruit trees and a large number of game birds' nests by destroying the vermin which eat the grain, girdle the trees and devour the eggs and young of the birds; but it seems an impossibility to impress this fact upon the mind of any farmer or sportsman.

The Marsh Hawk is the most beneficial of all Hawks and should be protected by law.

ROBT. R. SCORSO,
Afton, N. J.

The Plain Titmouse.

On May 16, 1890, I thought I had found a Sparrow Hawk's nest in a large sycamore, so I started to climb to it.

At the base of the first limb was a hole, and upon putting my hand in it I heard a hissing noise similar to that which an Owl makes, and as I did not want the Owl, I poked a stick in the hole, and in a few moments a small bird flew out, which I supposed, in the twilight, was a Pygmy Owl, and, upon examination found four eggs in the nest, which proved, however, to be those of the Plain Titmouse. One egg is white; two are very slightly dotted over with light brown and the other one is very thickly spotted and slightly blotched with light brown.

They average in size .65 x .51.

The nest was composed of wool and feathers.

I afterwards visited the nest (on June 10th,) and hearing the hissing noise I this time caught the bird and after examining it, let it go.

As near as I can remember the color was gray throughout and very plain as the name indicates.

It had a crest on its head.

The nest contained two young and two fresh eggs.

FRED A. SCHNEIDER,
Santa Clara Co., Cal.

THE OOLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

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NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
Sample Copies, - - - - - 5c each.

The above rates include payment of postage by us.

Send stamp for Premium List.

All subscriptions must begin with either January or July issues.

Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped, and all arrearages must be paid.

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ALBION, Orleans Co., N. Y.

* Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

Findings.

"Recollections of General Grant" by George W. Childs, a small and interesting book contains many reminiscences of the life of that great General and many of his noteworthy sayings.

It also contains an account of the presentation of the portraits of Generals Grant, Sherman and Sheridan at the U. S. Military Academy, West Point. Its reading matter is highly instructive and entertaining.

"The Wisconsin Naturalist" published by Charles F. Carr, Madison, Wis., makes its debut into the world of literature with its Vol. I. No. 1 dated August, 1890.

It is devoted to Natural History in general and its initiatory number con-

tains many sound articles covering six-teen pages.

It evidently "means business" and we wish it the success which a journal carried out on the plan of Vol. I. No. 1 justly deserves. It is a monthly.

"The American Fish and Game Warden, and Sportsman's Journal" also takes its beginning with the August number, and hails (as a monthly) from Kalamazoo, Mich., under the management of E. E. Thresher. Its ten pages are devoted to the "protection and propagation of fish and game," and on this account, if for no other, it should meet with the hearty support of every true naturalist. It also seeks to interest the sportsman. Success to it.

In the *Detroit Free Press* of July 27th, under the title of "A Feathered Bandit" is an article on the Crow by J. Claire Wood which is of sufficient merit and originality to mention here. The Crow's intimate knowledge of the powers of a shot-gun at first sight, is brought out, and the article accurately gives many of this wise bird's characteristics.

"Mistakes will happen in the best regulated families." If the degree of regulation of families (so to speak) varies directly as the number of mistakes made, then we must be a pretty well regulated family, for we surely make mistakes enough. This time it was in the Book Review of the August number and all on account of that little letter *r*. That little letter which is so misused by being put in "dog" and left off of "car," made the most serious mistake of all this time. In reviewing "Bird Ways" by Olive Thorne Miller, in haste we looked at the name of the author and, behold we got it Olive-*r* Thorne Miller and then went on speaking of the author as *he*; and all on account of an *r*; nor did we discover our error until some of our readers called our attention to it. We heartily thank those readers and humbly ask the forgiveness of all interested. Yea, verily, we are a well-regulated family; (and regulated should be spelled with a capital R.)

"A new use for the phonograph has been hinted, the suggestion having been made that it might be possible to

record the songs of birds, and that one while sitting in one's own house might listen to the warbling of the least neighborly feathered prima donna. That would seem to put within the reach of sluggards the delights of the morning concerts that have been the peculiar perquisites of the naturalist, who gains his luxury at the cost of toil. But we fancy that a true lover of birds, like one of our contributors, would say that the phonograph could not reproduce the gorgeous morning sky, the sparkling dew, the freshness of the air, which give to the concert its setting, and that he would remind us that effort is always an essential ingredient in the full enjoyment of anything."—*The Golden Rule*.

We commend to the earnest attention of our readers, the article commenced on the first page of this issue, on "The Use of the Camera in the Field" by E. S. Cheney of Pitrodie, S. D. It is well worthy the careful perusal of all. The use of photography in the study of ornithology presents a new line of study which has only begun to be exercised, and one which promises much and has great possibilities before it. Mr. Cheney tells us in this number something of what may be accomplished. We hope to illustrate the October chapter of his article with several life-like engravings from the bird-world.

We are greatly indebted to Mr. Cheney for being able to present this interesting and important subject to our readers in so vivid a way.

Popular Pot-pourri.

N. L. Davis, Brockport, N. Y. writes: "It has been thought by several of our ornithologists that the Sharp-shinned Hawk did not breed in this locality, but on June 4th, while on a short collecting trip, I took a set of four fresh eggs of this bird. The nest was situated in a cedar tree about twenty feet from the ground.

[Mr. L. Reed, of Gaines, N. Y., brought us a beautiful set of four eggs of this bird collected within one mile of that village in '89. The first Hawk we ever shot was a Sharp-shinned and in the month of June. Ed.]

A. D. Pierce, Denmark, N. Y., relates the taking of a white swallow. It was

wounded but slightly and is in captivity.

The conjecture of G. M. W., Gibbon, Neb., in last issue that the bird called "Rink" was the Chewink, is doubtless correct as it has been confirmed by several others.

C. B. Vandycok, Odin, Ills., states that he has frequently heard the Chewink called by that name as well as by the name "Crank-Crank," which resembles the note of the male.

"At a recent meeting of the American Ornithological Union, Ernest E. Thompson, of Canada, said that some birds, especially sparrows, have ventriloquial powers. Birds, when surprised in the act of singing, will be silent for a moment, and then give forth a faint song that seems to come from a distance, though the singer be not further than ten feet away. Thrushes and robins, the lecturer said, also have this power."—*Clipping*.

William Brown, Hebron, Ill., reports the taking of an albino Meadowlark which was entirely white above and pale yellowish below, with pink eyes and very pale pink bill and feet.

Ed. Van Winkle, Caro, Mich., writes: "While out for a walk to-day, (Aug. 10th.) I found a nest of the American Goldfinch placed in a crotch of a small maple, consisting of three twigs in which was placed; first, an egg upon the bare twigs, and over this was built the nest which contained five eggs. The egg (out in the cold) being plainly visible and, upon my lifting the nest, it rolled out into my hand."

Sets of five eggs of the Prairie Horned Lark are apparently not so unusual after all, judging from the number that have been reported.

H. C. Mark, Davenport, Iowa, reports a set of five fresh eggs of this bird taken May 11, 1890, in Douglas County, Nebraska.

A. O. G., Lawrence, Kansas, writes: Several days ago, upon breaking open an egg of the humble and despised (in the OOLOGIST's opinion) *Gallus Domesticus*, I was somewhat sur-

prised to find an egg, perfectly formed, within the one I broke. The egg is almost round, about 1. x 1. in. This is the second case of the kind in my experience. I have one egg in my collection which I procured several years ago, from the inside of another egg, which is about the size of a buck shot, and as round. The two, which I now have in my collection, and one other, are the only instances of the kind of which I have ever heard. It eclipses, double yolk and runt eggs. I would like to hear from collectors and observers whether this peculiar formation has been noticed by others?

Our Question Box.

Queries to be answered in these columns should be written on a postal or slip of paper—never mix them in your letter when writing about other matters.

M. H., Warren Heights, O.—Your bird with black head, back, breast and beak; black wings with white on tertiary quills and primaries; having white in the outer webs of the outer tail feathers, reddish-brown or chestnut on the sides under the wings, and red iris; is the Chewink or Towhee.

C. H. M., Pittsfield, Me.—1: Your covered nest of grass and hair found on the ground, with white eggs spotted with red and lilac, the bird being olive-brown with white-streaked breast and golden crown, is doubtless the Golden-crowned Thrush or Oven-Bird.

2. The "books" say that the Hudsonian Chickadee breeds from Northern New England northward. Does anyone know of its breeding in Maine?

3. Davies' says the White-bellied Nuthatch not infrequently raises two broods in a season. He says the same thing in regard to some of the Chickadees and Titmice.

G. A., Intervale, N. H.—Your description of a bird six inches long, with black head and breast, slaty back and wings, and abdomen white; reminds us of the Slate-Colored Junco.

M. Van W., Gretna, N. Y.—1. Your bird seven inches long, light-brown above and white tinged with buff beneath, with brown-spotted breast, laying four blue eggs; nest in a berry

bush, three feet from the ground; is like the Wilson's Thrush.

2. The Ruby-throated Hummingbird is the only Hummingbird found in New York State.

3. Your nest similar to that of the American Goldfinch, the eggs being about .69 x .50, white tinged with blue, spotted and blotched with brown and lavender; may be that of the Yellow Warbler.

A. D., West Point, Miss.—A mere description of an egg, without any information concerning either the nest or bird, is never sufficient data to name the owner. Consequently we cannot answer your queries.

F. S. W., Taftsville, Vt.—Your small Woodpecker, spotted and striped with black and white, is the Downy Woodpecker. The one similar in plumage but larger in size is the Hairy Woodpecker.

L. B., Raleigh, N. C.—1. Cannot tell from your description.

2. Your nest may be of the Yellow Warbler. The Carolina Chickadee nests in holes in trees.

3. The nest of the Carolina Wren is a coarse structure made of strips of corn-stalks, grasses, hay and leaves, with an intermixture of the silk of corn; the lining is of chicken feathers, fine, dry grasses, and horse hair. It is placed in holes in trees, or in wood-piles, and in low bushes; sometimes in the nook or corner of a barn; occasionally in bird-boxes; often under an accumulation of brush-wood. Sometimes the nests are arched over or dome-shaped, the opening being only large enough to admit the bird.

W. E. A., Benson, Vt.—1. The description you give will apply very accurately to any number of different birds.

2. and 3. See answer to A. D's query in this column.

O. M. S., Whitewater, Wis. says:—"I should like to ask of those whose experience in taxidermy has been greater than mine, what they do to rid the skin of the vermin with which they abound? I dislike them much." Who will tell him?

H. M., Hamilton, Ont.—Cannot your egg of a light pea-green, speckled with black, cinnamon, and lavender shell-markings, measuring about .80 x .55, be an egg of the Cedar Waxwing? It is difficult to tell without any description of nest or bird.

[NOTE:—We are behind with our queries. The few queries remaining unanswered as we go to press will be answered by mail or else in October OOLOGIST.]

Lost Opportunities.

Of all the amateur sports and pastimes I have had the pleasure of participating in, I find photography one of the most interesting and instructive, and as an amateur naturalist, I have spent some of the most delightful hours of my life with a camera. When I go to the woods or visit the rivers and marshes, the camera is now my constant companion, for I find in it far more pleasure than the gun can afford.

Nearly every season when the rivers and lakes get their first glassy coat and the cold blasts of approaching winter sweep across our prairies, the Geese, apparently surprised at the sudden change, congregate in vast flocks and depart southward, and at such times I have seen nearly a thousand in a single flock. Such a sight would make a grand picture which sportsmen as well as naturalists could not help admiring. Ducks which have tarried too long often get caught by a cold wave and can be found trying to keep the ice from closing in on them by constant swimming about its edge, and at such times are less inclined to fly, allowing a person to get near enough to use a detective camera on them.

During a duck-hunt at one of the most pleasant lakes in this locality, in the fall of 1887, I had the pleasure of surprising a small flock of White Pelicans as they were feeding among the sedges which were growing in shallow

water and near a point of land running a short distance into the lake. I approached them, under shelter of the trees, to within ten rods and found them busily engaged, scooping up the minnows which were so plentiful. It was a grand sight and I could not help admiring it; but they soon discovered me and raised their wings to depart and it is scarcely necessary to state that I did what every naturalist would have done whose collection did not include one of these birds, I took the life from two of them. How much more pleasure a picture of them would have given me than the mounted bird ever can.

While visiting a colony of Western and American Eared Grebes, during the spring of '87, I saw some of the finest sights that ever came under my observation. There were not less than 50 pairs of the former and 150 of the latter breeding in separate colonies.

The Western Grebes were mostly confined to the furthestmost point of rushes extending into the lake. I paddled my little canoe through a neck of rushes connecting the breeding ground with those growing nearer shore. The little boat made very little noise which was drowned by the breeze rattling the rushes and many a Grebe was caught napping. One bird stood upright to get a good view of the intruder and then with a graceful dive she disappeared leaving scarcely a ripple. Others quietly slipped from their nests and soon their notes could be heard just outside of the rushes, where they were trying their best to charm me. Well I *was* charmed by the lovely sight. There were nests nearly touching each other and with a bird here and there, as seen when I first beheld the sight, It would have made a picture that was complete.

I then visited the other colony, but it covered such a large space that I saw but few of them before they left their

nests and as I passed among the nests, which was almost impossible to do without running over some of them, I found the eggs in many nests were covered and as I neared the other border they became more so. The Eared Grebes fairly swarmed in open places and in the lake beyond the rushes. Many fine views could have been taken with a detective camera which would not have been possible with the other styles.

I have said nothing about what has been accomplished, but merely mention a few opportunities which were lost by leaving the camera behind. I could mention hundreds of fine views of the birds in their retreats which were within reach of the camera and which have come under my observation during ten years residence in Dakota; but space and time will not permit.

"ALMON"

Do Birds die with Consumption?

In answer to the "hectic" question of L. E., Fairview, Mo., in the May OOLOGIST, I would unhesitatingly answer yes. I will look at this question not only from a scientific but from a medical standpoint.

What is consumption? It is a disease characterized by a general wasting away of the entire system, and especially by the formation of tubercles usually within the tissues of the lungs, but by no means confined to the lungs, the tissues thus affected breaking up more or less rapidly and sloughing off, leaving cavities.

The primary cause of the disease being one of the bacteriæ, the lowest forms of plant life, only seen by a powerful microscope and remarkable for their spontaneous motions which make some people think they are animals, the one causing consumption being *Bacillus tuberculosis*.

These minute plants are one-celled,

and multiply with most amazing rapidity, simply by budding or by each, soon dividing into two pieces.

Now consumption is by no means confined to man, among animals the monkey and cattle tribes being especially subject to its attacks, and any bird or mammal getting these bacteriæ within its system would be very apt to die with consumption. Possibly some of the cold-blooded animals might also suffer from consumption, but this I doubt as I believe these bacteriæ require too high temperature for their development in a cold-blooded animal. So L. E.'s parrot probably died with consumption.

WILFRED BROTHERTON,

Oakland Co., Mich.

[Mr. Brotherton has given us a very good explanation of the process of the disease of consumption. Were *Bacillus tuberculosis* to be found in any bird or animal, then of course the evidence would be conclusive that that bird or animal died of consumption. Has anyone found *B. tuberculosis* in any bird? Can L. E., of Fairview, Mo., tell us whether or no his parrot presented it on examination by the doctor?—Assoc. Ed.]

The Magnolia Warbler. (*Dendroica maculosa*.)

Of all birds my favorites are the warblers, and of all the warblers my favorite is the Magnolia. "But why", someone asks, "this preference? To be sure he is a handsome little fellow with his rich dress of black and yellow but then, he is so common that this soon loses its charm and his only vocal effort is a sharp chirp." Ah! in those last few words you named his chiefest charm, for it is not as people usually see him but in his summer home that all his good qualities appear. My truly intimate acquaintance with him commenced among the bushes and ever-

greens of the island of Mackinac where during the summer of 1890 he occurred in unusual abundance. I knew that the Magnolia Warbler should be found there but it was only after two days' search, when I was wandering along an old unused road, almost lost in the overhanging bushes, that I discovered the bird. From the top of a low evergreen a new note issued, *pura pura pura reoo*, a business-like song with a strong metallic accent rising and falling in the last two syllables. I had no difficulty in finding the owner as he frequently sallied forth, either to seize a passing fly or to drive away some audacious Redstart or other small bird, for our friend is very pugnacious and allows no intrusion on his chosen domain.

Having eaten his fill he flew to a small dead sapling and devoted himself exclusively to vocal effort. While in plain sight he repeated the song just mentioned two or three times in rapid succession, pausing a few moments, apparently to note the effect of his words. I turned to leave, thinking the performance over, when I heard a clear falsetto whistle, different in tone from any bird-note I ever heard. Having thus reclaimed my attention he gave the second part of his varied *repertoire*, a soft warble of the same falsetto tone of voice, *purra e hova*, and I have at last found a warbler that warbles. But this is not all, while his hand is in he intends to show off all his fine songs before the reporter of the same, much as the females of the human species show off all their fine dresses before the reporter of a newspaper. After a slight pause to enable me to jot it down he utters a sharp *prut-ut-ut-ut-ut* in the same falsetto tone.

He evidently likes the effect of this, for he repeats it several times in a low tone, commenting on it by a harsh *de kay kay kay*, like a miniature Blue Jay. What more developements there would

have been I am unable to say for at that moment my dog, which I had left carefully at home came bounding and crashing through the bushes, putting my pretty performer to flight. I have heard the same songs singly many times since, but never all from the same bird. When in the deep evergreens and out of sight this talented bird utters two quick, sharp notes followed by a warble of three notes, the middle the highest, *prut prut purreoo*. In closing the list I will mention the one least liable of all to be recognized; issuing from the evergreens by the side of the road, to careless ears it might sound like the summer song of the Redstart, *chewecch cheweech cheoo* but the difference is very appreciable on comparison, for does not the Redstart say *weechy weechy weecheeo*?

During migrations, as I have before intimated, the bird is nearly silent, being found among the low evergreens and tracts of scrub stuff. He seeks his food among the twigs, and even on the ground. Among other virtues he is very punctual, the seventh of May is the set time for his arrival in Kent County and he is always on hand on or near the appointed day.

"All this talk about a bird with never a word about its nest and eggs!" the same someone remarks in surprise. To be sure, many of our oologists think altogether too much of the eggs and never get beyond a bowing acquaintance, knowing the bird by sight perhaps, as is necessary for the identification of the eggs, but never taking the time or trouble to become really conversant with his ways and songs. It gives more pleasure to a true bird lover to discover a new song of one of his favorites than to find its nest and eggs.

Now do not gather from the preceding lines that I am not as enthusiastic a collector as the best, a new skin or set of eggs delights me as much as other people, but I think a collection is of

little value unless it represents a vast amount of knowledge of something besides book-lore.

STEWART E. WHITE.

Macinac Co., Mich.

[LATER.—Aug. 7, 1890. When I wrote the above article on the Magnolia Warbler, I supposed I had included all the songs and notes of this bird. At the present date, however, a new one is all the rage among the males; it is a harsh "k-e-e-e-dl," the last syllable higher by a shade, quick, and subordinated to the first part. It is the prevailing note now, only a few of the songs above described being heard.]

STEWART E. WHITE.]

Wilson's Plover at Home.

This interesting member of a large and populous family has been, I think, sadly neglected in the various publications devoted to the interests of his race. Certainly such treatment is undeserved, for unlike his more exclusive and aristocratic relations, he is a regular summer visitor along our hot and sandy shores, and as such, is entitled to respect and consideration from all true oologists.

In few localities, I imagine, can these birds be found and studied to better advantage than along the Virginia coast in the vicinity of Cape Charles.

The long string of flat, sandy islands stretching northward from this point are practically uninhabited and here the birds lay their eggs and rear their young unmolested.

Early in May, the eggs are laid and from then onward to the latter part of June they may be found, in cases where the first set has been destroyed. Three eggs usually constitute a set, although occasionally but two are laid and I have yet to see or hear of a nest containing four. They are laid directly on the bare sand, and will be in most cases, neatly encircled by a ring of

broken bits of shell, making altogether as pretty an oological sight as one could wish to see. Conspicuous enough it seems when once the eyes rests upon it, and yet the whole arrangement harmonizes so well with the broken sticks, shells and other debris along the beach, that the "nest" will be only found by accident or by long and patient search.

If the birds set at all during the day, which almost seems doubtful, they are careful enough to leave long before the collector draws near, and usually his first intimation of their presence is an anxious, plaintive note frequently uttered, and, looking carefully, the birds may be seen some distance away. They quickly spread the alarm and other pairs breeding in the vicinity join the first until a dozen or more may be seen at a time running on ahead and stopping every now and again to look back, all hands meanwhile keeping up a vigorous protest against the unwelcome intrusion.

In certain cases where the sand is bare and soft, an isolated pair can be tracked to the nest, but as the birds are apt to choose a place well strewn with shells, and as they are, moreover, of a neighborly disposition, tending to keep house in company, the whole place is generally a mass of indistinguishable footprints.

Of the eggs themselves little need be said except that they present remarkably little variation in color and marking, but differ considerably in shape, being in general less pyriform than most waders.

This species is one of the few in which there seems to have been diminution in number during the past three years.

Gulls, Terns and Skimmers are shot for their plumage and robbed of their eggs at a rate which threatens their extermination; Willets are shot while breeding and their nests depleted on all

occasions; but the dull-colored "Sand-bird" is too small for the gunner, while his little nest but seldom comes under the observation of the rapacious fisherman as he gathers his boatload of eggs.

THEODORE W. RICHARDS,
Washington, D. C.

Book Review.

North American Birds.—H. NEHRLING.

4-to. Milwaukee, Wis.. Published by George Brumder. Part III.

Nehrling's *North American Birds* is published in twelve parts of from forty to forty-eight pages each and is illustrated by thirty-six colored plates (three in each part.) This excellent work is so simply, beautifully and accurately written as to render it, at the same time, both highly scientific and generally popular.

What little of technical matter there is, is printed in smaller type at the end of the biographies. The author says what he has to say in a simple and very interesting manner, and relates his own field-experiences in a very entertaining style. But from the general to the specific; Part III. takes up the Gnatcatchers and Kinglets where Part II. left them and finishes the family. It opens with a life-like colored plate of the nest of the Blue-gray Gnatcatcher with the female on it (or in it) and the male on an adjacent twig.

The family *Sylviidae* is followed by the *Paridae* and *Certhiidae* and the *Troglodytidae*, which latter family is not finished in Part III. The second plate of this part represents a group of Thrushes, viz. the Robin, Hermit Thrush, the Varied, Wilson's, Wood and Olive-backed Thrushes; a very natural appearing and pretty group. Some might think the Robin's breast a trifle too bright of red, but if they do let them say so; we will not speak for them. The other plate presents a various group, comprising the Cedarbird, Tufted Titmouse, Phoebe, Brown Thrasher, Bluebird male, Bluebird female and Song Sparrow.

As to the biographies themselves, they are given in such a pleasing and poetical way as to make the work an exceedingly entertaining one to the general reader, while the care and accuracy with which they are written make it of great value to the advanced student of birds. The twelve parts,

when complete, will constitute a most valuable work on the Birds of North America.

[NOTE: Part II, although received by us many moons ago, has, through a negligent oversight, been allowed to pass unnoticed. It will be spoken of next number.]

Birds in the Bush.—BRADFORD TORREY.

In Riverside Library for Young People. 16mo. \$1.25. Boston: Houghton, Mifflin & Co., 1889.

This is also written to suit the popular mind, as might be judged from the title. The author's opening chapter is entitled "On Boston Common" and in this chapter he tells his readers of the many birds that may there be found, contrary to the statements of many, who assert that there are no longer any birds in our city grounds. Boston Common, judging from what the author finds there, is not a bad place for observation.

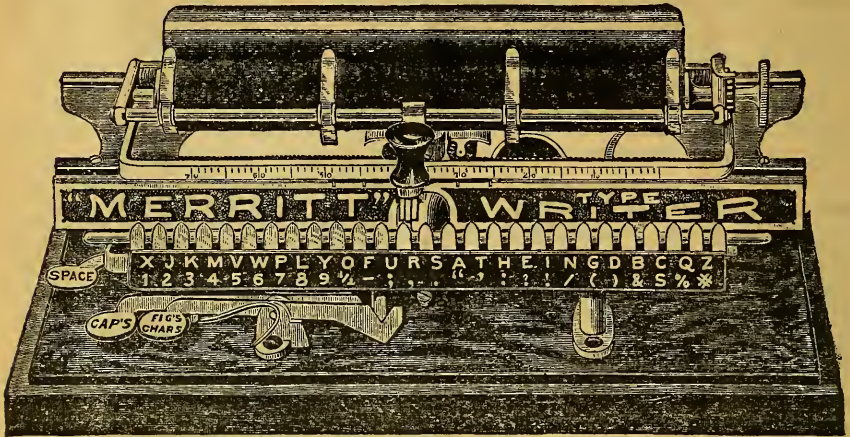
The chapter on "Character in Feathers" is a marvel in the way in which human temperaments and dispositions are shown us in the birds. A most pleasing feature of the chapter "In the White Mountains" is the mention made of the White-throated Sparrow and the remarks and descriptions made and given concerning its song.

The titles of some of the other chapters are: "Bird Songs," "A Month's Music," "Winter Birds about Boston" and "A Bird-Lover's April." the last mentioned beginning, as the author states, on the 29th of March. This last mentioned chapter is replete with the pleasures which an ornithologist experiences in waiting and looking for the spring-birds and in recording their arrivals.

"Birds in the Bush" is a most valuable addition to the book-shelf of any reader and to one who is at all interested in the feathered folk it is doubly so.

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Vol. VII,

ALBION, N. Y., OCT., 1890.

No. 10

Exchanges and Wants.

Brief special announcements, "Wants," "Exchanges" inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per word. No notice inserted for less than 25c. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

Please insert in OÖLOGIST that I received so many letters and postals in answer to my exchange notice, that I could not answer them all. JOS. P. JACKSON, Kelson, Ches. Co., Pa.

I have received 15 letters and cards in one day in answer to my notice in the OÖLOGIST. N. BRADT, Eagle Harbor, N. Y.

My exchange notice paid me big. Have exchanged about \$100.00 worth of specimens. W. E. SNYDER, Beaver Dam, Wis.

CAUSE.—A single notice or adv. in the OÖLOGIST costing from 25 to 50 cents.

WANTED.—To exchange first-class complete sets of this locality for those of others. All letters answered. L. L. KNOX, Giddings, Texas.

EXCHANGE.—Arabian Knights. People's Edition, New, Cloth, 450 pages, for second-hand copy of "Davie's Key," 4th edition, or "Maynard's Eggs of North American Birds." JESSE NICHOLLS, Tuscaloosa, Ala.

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WANTED.—Good minerals, fossils, curiosities, Indian relics, etc. Will exchange specimens and eggs; or, will pay cash for desirable specimens. ERNEST S. PARK, 829 18th St., Des Moines, Iowa.

WANTED.—Birds' eggs in numbers, Grackles, Blackbirds, Thrushes, Fly-catchers, Woodpeckers, Owls, etc. Will exchange Taxidermy outfit. (see ad. in Sept. OÖL.) birds' eggs, skins, or mounted birds. Address, E. W. MARTIN, Medina, Ohio.

WANTED.—A good shot gun, egg cabinet, book case, back Nos. of "Auk," and "Ornithologist and Oölogist." Will exchange eggs or will mount any bird to order for any of the above; also want first-class eggs in sets for Taxidermal work or first-class eggs. W. INGRAM, Odin, Ill.

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EXCHANGES AND WANTS, Continued.

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TO EXCHANGE.—For eggs in sets or Irish Setter, or pointer dog, well broken on Ruffed Grouse, a No. 3 Ballard 23-cal. rifle, pistol grip, nickel butt plate; also Columbia light roadstar Bicycle, ball bearings to both wheels and pedals, cow-horn handle bars, spade handles, black rubber tire, a first-class wheel in every respect, never had to pay out one cent for repair, run one season and is in as good shape as when sent from shop. Will sell either of above at a bargain. Eggs in sets for same. Sent list. H. W. DAVIS, North Granville, N. Y.

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PENNSYLVANIA Geological Reports (full sets or odd vol's.) shells, particularly those of New Jersey coast, and birds' eggs, for sale or to exchange for books, natural history specimens, optical instruments, or offers. CHAS. LER. WHEELER, Cape May, N. J.

YES.—YES.—In answer to the hundreds of letters I have received. I will exchange my taxidermy outfit for birds' eggs in quantity. Send your lists, Oologists, and learn taxidermy. Address, E. W. MARTIN, Medina, Ohio.

COPPER SPECIMENS.—Iron, Copper and "Spar" prepared in bottles, to exchange for stuffed birds, animals, chialstolite crystals. Indian relics, marine curiosities. What have you got? IRVING SHIELDS, Box 211, Hancock, Mich.

TO EXCHANGE.—\$4.00 worth first-class birds' eggs; Air Repeating Rifle, shoots 45 times without reloading, value \$9.00; two varieties Petrified Wood, to exchange for Taxidermist's Outfit, or first-class birds' eggs in sets with data. Will sell Rifle for \$4.00. A. WETZEL, Hubbell, Thayer Co., Neb.

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WANTED.—In large or small quantities any of following eggs, viz.: Any water birds, such as Gulls, Terns, Herons, Cormorants, Pelicans, Rails, etc. Also Hawks or Owls, in fact any good eggs. Especially need following numbers Ridgway's: 473, 477, 493a, 434, 442. Sets with data especially needed. Send full exchange list at once to H. E. PENDRY, Eustis, Fla.

I HAVE singles of the following to exchange for Books relating to Geology, Mineralogy, Conchology, Natural History and allied scientific works. A. O. U. Nos., 4, 6, 77, 201, 212, 214, 221, 289, 300, 305, 310, 316, 325, 333, 337, 360, 366, 378, 390, 394, 402, 406, 412, 413, 444, 447, 448, 456, 467, 474, 474b, 477, 483, 490, 495, 495a, 497, 498, 499, 500, 501, 501b, 506, 507, 510, 511, 519a, 552, 552a, 560, 560a, 563, 581, 587, 593, 595, 604, 610, 612, 616, 619, 622, 622a, 622b, 624, 633, 652, 681, 683, 703, 704, 705, 713, 721, 721a, 725, 735, 755, 761, 761a, 766, 767. All answered. Address, T. S. HILL, Knoxville, Ia.

WANTED.—“Gray’s and Coulter’s Western Botany,” in exchange for “Wood’s Class Book of Botany,” nearly new; or, Photographs of Mammals, Birds, Nests and Eggs, etc. Write for offer stating condition of book. E. S. CHENEY, Pitrodie, South Dakota.

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FOSSILS.

Will S. Graham, Creston, Ia. [S2

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R. W. Patterson, Box 247, Parkersburg, W. Va.

Clark Ijams, 210 E. 19th St., Cheyenne, Wyo.

BIRD SKINS.

Wm. T. Smith, Box 94, Wayne, Del. Co., Penn.

AGENTS.

Gus Deal, Blacksburg, S. Car.

A FINE BIRD-EGG COLLECTION for sale cheap. Write for particulars. Approval sheets of stamps on application. 33½ per cent com. JOHN HECK, Raleigh, N.C.

IMPORTANT!

Through an error the following offer appeared in Sept. OOLOGIST. It was intended to have withdrawn the offer on Oct. 1st, but owing to the error, we will extend the same until Oct. 25th, at which date it will be withdrawn, *never to be repeated.*

Faithfully yours,
FRANK H. LATTIN.

THE OFFER:

FOR ONLY \$1.00 CASH,

We will send

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A Card good for one Exchange Notice..... .25
A copy of the Oologist’s Hand-book (1885).... .15
A choice Resurrection Plant from Mexico.... .15
And \$1.00 worth of anything we advertise... 1.00

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We will allow our present subscribers to renew their subscriptions according to this offer—new subscriptions will commence with June issue—old ones one year will be added to the time their present subscription expires.

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On other pages we have offered many valuable eggs at greatly reduced prices, many species at prices below what we can purchase them at in hundred lots, but as we have them in stock in large quantities, we desire to close them out *at once*. Collectors will observe that larger the order greater the discount, and it is hardly necessary for us to give a “pointer” to our patrons as to the snug little profit they can make by combining their order with that of their friends, thereby, making a large order and giving them a better discount; for example: \$1.00 obtains \$1.50 worth of eggs. Ten \$1.00 orders would make a \$10.00 order which would entitle you to \$25.00 worth; or, a profit of \$10.00 worth of eggs for your trouble of obtaining the ten \$1.00 orders. Surely, a collector could not obtain a snug little collection any easier or at less expense. It would seem absurd for us to make an additional inducement to collectors to obtain their orders after giving a discount of *nearly fifty per cent.* less than usual *wholesale prices*, but in order to show our appreciation for *early orders*, we have concluded to make the first party from *each State, Territory or Country* that sends us an order for \$2.00 worth of eggs, on or before Nov. 15th, a present of a set of one egg, with data, of the Sooty Tern. For the first \$5.00 order, an egg, with data, of the Noddy, and for the first \$10.00 order, a *set of each species*. Remember these presents are given you without any additional expense and the earlier we receive your order the more liable you are to obtain one.

Faithfully,

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10 Turk Shell, W. I.
11 Oryzopsis Coral, Biogoroff
12 <i>Oryzopsis lynch</i>, Singapore
13 <i>Oryzopsis lynch</i>, Amboina
14 <i>Oryzopsis Arabica</i>, E. I.
15 Red Sea Bean, Bahamas
16 Gray Sea Bean, Nassau, Bahamas
17 Brown-headed Sea Bean, Bahamas
18 Screw Shell, China
19 Emerald Coral, Bahamas
20 Arrowhead, Orange Co., Indiana
21 Acorn Hornacle, Pacific
22 Rose Coral, Bahamas
23 Quartz Crystal, Hot Springs, Ark.
24 Sea Urchin, Atlantic
25 Slaving from a Mission, Conchita, N. M.
26 Money Cowry, Ceylon
27 Fish Bone, Caroline Isles
28 Indian Pottery, Orleans Co., N. Y.</p> | <p>29 Alligator Tooth, Indian River, Fla.
30 Emerald Salam, Cumberland River, Tenn.
31 Curio Sponge, Bahamas
32 Petrified Wood, Sonoma Co., Cal.
33 "Electric" Bones, Jeff. Co., N. Y.
34 Sand Shark Egg, Atlantic
35 Flexible Coral (<i>Melitta</i>), Tonga Isles
36 Limpet, Bahamas
37 Bloody-tooth Shell, Nassau
38 Fossil Shark Tooth, S. C.
39 Opencellum or Shell Bone, Bahamas
40 Native Lodestone, Magnet Cove, Ark.
41 Olive Shell, Zanzibar
42 6 Guinea Feas, Bahamas
43 Piece of Looftah, Japan
44 2 Egg Capsules of Penzance, Atlantic
45 Piece of Tapa Cloth, made by the Natives of Sonoma Isla.</p> |
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THE OOLOGIST.

VOL. VII.

ALBION N. Y., OCT, 1890.

No. 10

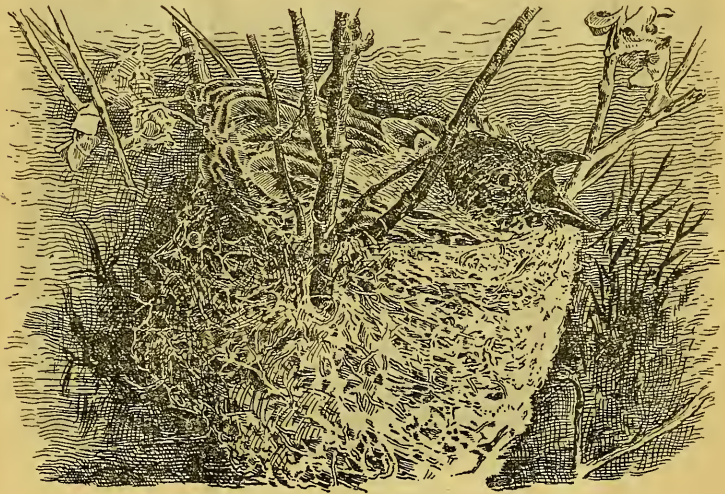
The Use of the Camera in the Field. *A Study of Nests.*

From year to year more and more interest is manifested in the importance of one of the most delightful and instructive of all studies—the study of nests; and we hope we may, at the present time, introduce into our midst the camera as an assistant in this grand and interesting study, which has undoubtedly been much neglected. It is perhaps a more extensive study than

oology, involving as it does the study of botany and requiring familiarity with all the characteristic plants and trees of our respective localities, but don't let these obstacles detain you, there is so much pleasure to be derived that you will be amply paid for all your trouble.

Here I wish to transcribe in part Mr. Ernest Ingersoll's plea for the study of nests, from his excellent "Bird's Nesting," knowing it will interest you.

"As a scientific study, there is far



NEST OF YELLOW WARBLER WITH YOUNG COWBIRD.

more advantage to be obtained from a series of nests than from a series of eggs. The nest is something with which the will and energies of the bird are concerned. It expresses the character of the workman, is to a certain extent, an index to its rank among birds, for in general those of the highest organization are the best architects, and give us a glimpse of the bird's mind and power to understand and adapt itself to changed conditions

of life. Over the shape and ornamentation of an egg the bird has no control, being no more able to govern the matter than it can the growth of its beak. There is as much difference to me, in the interest inspired, between the nest and egg of a bird, as between its brain and its skull, using the word *brain* to mean the seat of intellect. The nest is always more or less the result of conscious planning and intelligent work, even though it does follow

a hereditary habit in its style; while the egg is an automatic production, varying, if at all, only as the whole organization of the bird undergoes change. Don't neglect the nests then! In them more than anywhere else lies the key to the mind and thoughts of a bird, the spirit which inhabits that beautiful frame and bubbles out of that golden mouth. And is it not this inner life, this human significance in bird nature, this soul of ornithology, that we are aiming to discover."

After describing, in his charming way some of the beautiful masterpieces

of bird architecture, he concludes his plea with the following remarks:

"We want to know by what sort of skill the many nests are woven together that we find it so hard even to disentangle; we want to know how long they are in being built; whether there is any particular choice in respect to location, whether it be a rule, as is supposed, that the female bird is the architect, to the exclusion of her mate's efforts further than his supplying a part of the materials. Many such points remain to be cleaned up. Then there is the question of variation, and its extent in



NEST AND EGGS OF RED-HEAD DUCK.

the architect of the same species in different quarters of a ranging area. How far is this carried, and how many varieties can be recorded from a single district, where the same list of materials is open to all the birds equally?"

In the nests of birds there is evidently a great difference manifested in those placed in various situations and constructed under apparently diverse conditions, in fact a great variation in noticeable in a single district where the same materials and the same induc-

ments "are open to all the birds equally," but when you come to compare with those found in remote localities, (which is comparatively an easy matter with the aid of a series of pictures) you will find the difference so great in some cases that you would hardly recognize the nest as being of the same species.

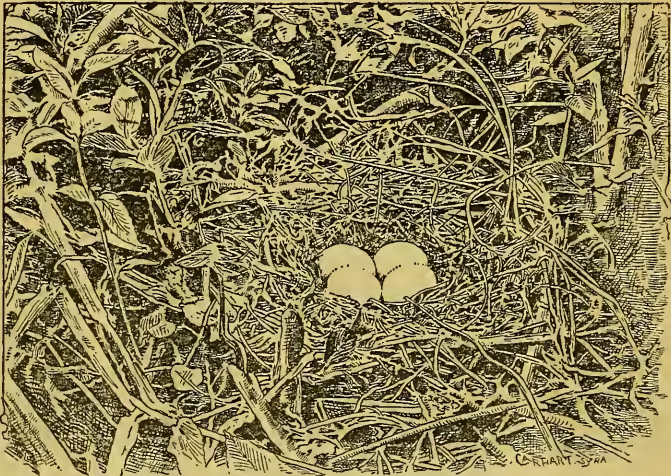
Undoubtedly young birds are less judicious than older ones which are better qualified, and more experienced, and enabled to foresee some of the per-

ils which some situations present; and I presume that as a rule their nests suffer more from strong wind and violent storms, from not being, I venture to say, as securely fastened. Allow me to illustrate this assertion by the nest of a young pair of Orchard Orioles. They were evidently young of the previous year, and this being their first experience in nesting, it presents many interesting points.

It was a beautifully woven basket, placed in the uppermost branches of a slender willow, apparently unexcelled in workmanship, but coarser in com-

position than any other nest of this species that I ever saw; and proportionally much shallower than nests of older birds placed in such slender trees prove to be. However, they neglected one thing of vital importance, they overlooked the fastenings and the day I first beheld it, (June 21, 1836) it was no longer a place of safety. Ere long their work would have been in vain for then the eggs found barely room in the partly overturned nest.

The nest, now before me, shows no trace of having been fastened in any way, although there was a few straws



NEST AND EGGS OF MARSH HAWK.

which held it in place until the weight of the bird, during a strong wind, had broken them asunder on one side. The material was so much coarser that anyone accustomed to seeing nests of the Orchard Oriole would have noticed it at once, in fact, more than half of it is composed of coarse grass while all other nests to which I have access are composed, almost exclusively, of fine sedges of the genus *Eleocharis* and fine grass blades. Furthermore it proves to be the only true basket-shaped nest

among them, and accurate measuring resulted as follows:

Diameter, outside, 3.25 x 4.25; inside, 2.75 x 1.76. Depth, outside, 3.00; inside, 2.50. The bottom is almost perfectly flat and measures 2.75 x 2.50 inches.

The nest mentioned in my article of September as being found in an odd place, was constructed by a pair in full dress, and is composed of a selection of very small sedge and grass blades varying from .02 to .07 of an inch in width

and a slight mixture of downy willow catkins with a lining of the same. It proves to be considerably smaller than that of the young pair and is deeper. Diameter, outside, 3.25 x 2.80. Depth, outside, 3.25; inside, 2.75 inches. One curious thing about this nest is the weaving, in fact, it is not woven at all on the longest sides, merely cross thatched most of the straws being fastened near the brim of the nest at its shortest sides.

Another nest of an old pair, and of which I have a photograph, is now before me and measures as follows:

Extreme diameter, outside, 4 inches; inside, 3.25. Diameter at brim, outside, 2.75; inside 1.50. Depth, outside, 4 inches; inside, 2.75. It was securely fastened to several branches of an ash tree within six feet of the ground, and July 4th contained four eggs.

The picture shows the form of the nest and its situation, and where a band of straws were woven around it after it was nearly finished, to make it more secure. It is globular in form and composed of the same material as the last, but a rather coarser selection.

Did it ever occur to you that it was possible to photograph a bird while it was constructing a nest or excavating a hole as Woodpeckers, Sapsuckers and some other birds do? Nevertheless it is much easier than you would suppose.

It is possible to catch the Oriole weaving in those tangled threads, shaping that beautiful specimen of bird art, that cradle for their young. It is possible to catch the Woodpecker chiseling away at that hole while clinging to the tree, or as it stops and listens. It is possible to picture the wren as it fills up the crevice of some decaying tree, bearing in those heavy twigs which seem so large for a little bird to carry, or peeping out to see that there is no intruder about. It is possible to hide a camera where man could not hide with-

out being discovered, and take a picture when you are rods away. It is possible to set the camera in the tree-top and take a picture with it while standing on the ground. All these and hundreds of other methods are possible if your lenses and camera are suited to the work.

For instantaneous pictures at close and medium ranges you need rapid rectilinear, or a portrait lens, but for time exposures at close range a single lens is undoubtedly the best.

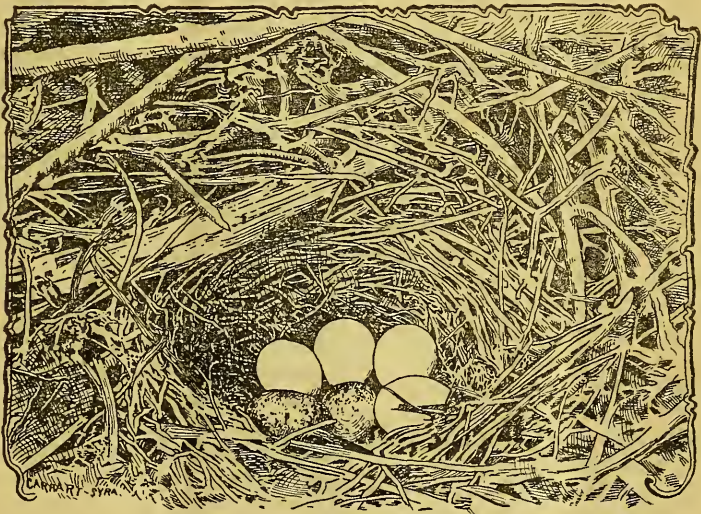
Trusting it will interest you, I will endeavor to describe a contrivance of my own construction, a tree tripod in fact, which will securely hold the camera to any tree of reasonable dimensions, or to any accessible limbs, enabling me to secure pictures, which could not otherwise be taken to show plainly, if at all. The top consists of three pieces of three-sevenths-inch black walnut, each measuring 6 x 7 inches; two cut lengthwise and one crosswise of the grain, the latter being placed in the center to prevent warping. In the center of these a hole was bored to admit the tripod screw for fastening the camera. The three legs; one measuring 52 and the other two 48 inches in length, were worked from an oak slab, and measure at the larger end $1\frac{1}{2} \times \frac{3}{4}$ inches, tapering to about $\frac{3}{4} \times \frac{3}{8}$ of an inch, except the longest which is large enough to admit a metal point. This leg is affixed to the top of the center of one of the long sides and near its edge, allowing it to swing back like the cover to a chest. The other legs are beveled off for about 4 inches at the larger end to bring them out of the lenses range, and are fastened at the center of the shortest sides about an inch from their edges, with very small bolts. These bolts being at least two inches from the ends of the legs to make them more rigid.

The legs are independent of each other and will make complete circles if

necessary. On the inner side sharp screws are protruding through; which I call "spurs." Two straps, one on either side, are all that is required to hold them in place, no matter how rough the bark may be. After setting it, the camera is drawn up and fastened in the same manner as it is on other styles of tripods and can be turned about in all directions with ease. With the aid of a screw-driver it can be easily affixed to the corner of any wood building for the purpose of obtaining pictures of nests under the eaves or elsewhere; or can be affixed to a win-

dow casing on the outside in the same manner.

For ground work and nests placed in bushes not over one foot from the ground it does very well, but for nests over one foot and not placed in trees it cannot be used, therefore I find it necessary to carry two tripods, and consider myself well off to get along with so little. A ladder or strong rope sometimes becomes a necessity, where there are no suitable limbs from which to get focus. Such feats as setting a camera and getting the focus while clinging to a rope would not be advis-



NEST AND EGGS OF LARK BUNTING WITH EGGS OF THE COWBIRD.

able unless it was to secure a picture of the nest of some rare species, in that case you would be amply rewarded, but in case of a common species it would be much better to seek a nest in a more accessible place.

Pictures will remind us of by-gone days when we rambled through the woods to study the great book of nature, amid dancing sunbeams flitting through leafy branches; amid beautiful flowers exhaling sweet fragrance filling the ambient air with perfume; amid

festoons of grape and woodbine hanging in wreaths and garlands; through fertile valleys with winding brooks and rivulets, some slow and deep, others rapid, murmuring a little trill as they ripple o'er obstructing pebbles or diverging from boulders, only to join again and ripple on toward the ocean. They will remind us of placid lakes, where the wild fowl love to dwell; of almost impenetrable swamps where man seldom intrudes, and of grassy lakes abounding in birds in almost endless variety.

In pictures we may admire at leisure sights which have long since passed away, never to appear again in the same form. Common birds of the present day may in a few years frequent remote districts, never to breed near us again, and should we neglect these, we might regret it in after years. Changes are taking place every year and some day you will be disappointed. You may visit former haunts and find the sights you seek are not to be found, and may appear no more where they were once so common.

Don't omit the pictures then,
Nor the common nests neglect;
For we cannot apprehend
Just what changes to expect.

When I beheld the picture of the nest of that beautiful duck *Aythya americana* it reminds me of a lovely morning, June the 21st, in fact following a dismal night with torrents of rain and almost continuous flashes of lightning and peals of thunder; of a pleasant walk through the woods to where the little canoe lay moored; the far distant drumming of the Woodpecker; the lively warble of the Wren and other woodland melodies; a pleasant ride o'er a rippling lake, bordered on either side with wide strips of rush and sedge, and the departure of a gay pair as I approached their nest, which was discovered the previous day.

I can imagine how contented they were with their lot (indeed they could be proud of such a situation.) How the female gathered the material from the surrounds and the down from her breast while her mate was alert to warn her of approaching danger. Bull-rushes (*Scirpus lacustris*) were growing around and their bowing heads sheltered it from the noon-day sun. Through them they could look far off to the eastward to watch the dawning of day and the rising sun. On either side, and not a rod away, was open water, where they could frolic or swim to

their heart's content. What a grand summer's home it must have been!

When I behold that little picture of the nest of *Circus hudsonius* the mind reflects to a glorious evening when the last diverging radiance of the sun was gleaming over the western hills and little birds were singing their evening songs in praise of a magnificent sunset.

At this time (June 18th) I was returning from a photographic tour in an adjacent county, pondering over the events of the day and the fine scenery which I had viewed, and admiring the sunset. While nearing a small marsh in and about which many species of sedge were growing, and those of the previous year still standing, (around which the road led.) My attention was drawn towards two female Marsh Hawks, which were slowly sweeping about it in search of food. Knowing I had barely time to reach my present destination before dark, and not caring to be caught out on a strange road which had so grown up to grass that it would have been almost impossible to have followed at night. I watched them closely while the horse plodded away. We had probably gone 80 rods when one of them rested her wings for an instant and like a shot vanished from view some 40 rods in the rear. I had no trouble in finding the spot for it was well marked by a patch of sedge, much taller than the rest and of the previous year's growth; but did not flush the bird until I was within ten feet of her. There was the nest in a wreath of mint with sedges to obstruct the view. Unexcelled in form, neatness and composition by any nest of this species that I ever saw, and the site was so well selected, so balmy and shady yet fanned by passing breezes on a sultry day.

The other reminds me of a cloudy day in June, 1889 and a long ride over the prairies dotted with beautiful flowers, spiderworts, tradescantia varying from white and rose color to pur-

ple and blue, lifting their gay heads above the grasses in damp places, displaying their beautifully colored petals. Virginian anemones were growing in the valleys in abundance, looking at a distance like snow banks; wood-sorrel and mallow, beard-tongue and rose, and scores of others too numerous to mention. Then to get some idea of the world in which I was, add to this the almost unceasing songs of birds reaching the ear from all directions and dying away in the distance, none of which excelled the ecstacy of the Lark Bunting (*Calamospiza melanocorys*); those full round mellow notes which fade into sweet cadences of indescribable melody.

While passing a pile of weed-stalks which had been raked from a patch of small trees or whips, a female Lark Bunting evidently having just left her nest, was noticed sitting on a sod a few feet away. Desiring to secure a picture of nest and eggs of this species, I lost no time in hunting up the nest, which, as I had supposed, was placed underneath the rakings, and being placed about 6 inches from the edge there was a nicely arched entrance, which led to its immediate discovery.

Although it was rather an unusual nesting site, the nest was apparently the same as other nests placed on the ground. In this instance a hollow measuring four inches in diameter and two in depth was excavated and lined with "spear grass." (*Stipa comata*), "gramma grass" (*Bouteloua oligostachyra*) and other grasses. The finished nest measuring $1\frac{1}{2}$ inches in depth and $3\frac{1}{2}$ in diameter on the inside.

The female was exceedingly tame and watched operations from her perch on a sod not two rods away, while the male was contented with a distant view, but I did not trouble them long and after removing the parasitic eggs, left them without further molestation.

E. S. CHENEY,
Pitrodie, S. D.

The Flathead Field.

It was my good fortune to become a member of the preliminary engineering party that was sent out by the Great Northern Railroad Company into these northern wilds in the early part of February last, and a sore and adventurous time we had of it until winter and snow left us in the latter part of April.

Being an enthusiast in the oological line, I could not but be on the watch for early bird-arrivals, and on the 13th of February, observed my first Robin near Ravallie. Ravallie is the R. R. station on the Northern Pacific road where passengers leave by stage over the Reservation, and *via* steamer on the lake, reach Demersville which is at the head of the valley and the only settlement of consequence in it.

Let me inform the collector that this is an entirely new field and, I believe, very rich in oological specimens. I was prevented from doing much collecting, as my work was of that kind which keeps one busily engaged from early until late; consequently my cabinet has not been enriched to the full extent that I would wish.

The most common birds that breed here, and from many of which I collected eggs, are as follows: Olive-backed Thrush, Catbird, Robin, Steller's Jay, Canada Jay, Hairy Woodpecker, Pileated Woodpecker, Red-shafted Flicker, Rufus Hummingbird, Vireos, Warblers, Flycatchers, Chickadees, Water Thrush, Snowbirds, Finches, Ruby-crowned Kinglet, Magpie, Canada, Ruffed, Sharp-tailed, Dusky and Pinnated Grouse, Red-head, Mallard, Blue-winged and Cinnamon Teal, Pintail, and many other varieties of Ducks. The Hooded Sheldrake is quite common, also Snipe, Plover, Curlew, Loons and Sand-hill Cranes, Owls, Buzzards, Hawks and Eagles.

Ravens and Clarke's Nutcracker are

very common. A nest of the former was discovered the latter part of March. It was on a high cliff and contained six eggs. These are all the most common residents that occur here.

The breeding places are as follows: Flathead Lake and vicinity, the main valley, Stillwater, Ashley, White-fish, Pleasant and Wolf Creeks, Flathead River and its feeders; also Big Fork and Swan Lakes. The latter, I have been told, is the breeding place of Swans, Loons, Sand-hill Cranes and thousands of ducks and water-fowl.

Island Lake, Loon Lake, Little Bitter Root Lake, McDonald's and White-fish Lakes and many marshes and swamps are famous nesting places. Thus the collector can see what a rich and wide field, that has not been troubled by the "egg-crank" as yet, can be worked over. True, it is a country that is very wild and inhabited by large game and the red man, but there is no fear from either of these, and the country is a beautiful and a healthful one and easily reached; though its trails are, as Horace Greeley expressed it, "only known to the trapper and the guide."

G. E. PRINGLE,

Missoula Co., Montana.

The Owls of the San Bernardino Valley.

What is the matter with the Owls lately that we don't hear anything of them? Is it because it is not their season? If it is, you will excuse me for these few random notes.

Well, to begin, there are six species of the "Owl Family" that nest in the San Bernardino Valley, to my knowledge. Of these the Western Horned and the Spotted are strangers to me. The other four are enumerated below.

American Barn Owl, (*S. pratincola*) tolerably common. This bird is not very particular about its nesting place, but usually selects some hollow tree or

snag; although I have known them to nest in burrows dug in a sand-bank, occupying the same nest year after year.

The eggs are between round and oval, plain white, usually covered with dirt and stains from the nest as the birds are, by no means, cleanly in their habits.

American Long Eared Owl, (*Asio wilsonianus*) common. Nests mostly in old crow or rat nests and sometimes in hollow trees.

This Owl has a rather weird appearance, especially so when one is passing through a dark patch of timber, and, on looking up, his eye falls on one of these fellows with long ears and large eyes, staring him full in the face.

The eggs of the Long Eared are from three to six in number, usually four. As a rule they approach more of an oval shape than those of the Barn Owl; they are also much smoother and cleaner.

California Screech Owl, (*Megascops asio bendirei*) rare. Nests in cavities of trees. All the eggs I have taken of this species were from nicely rounded cavities about two feet deep.

The eggs are white and nearly round. Average size, 1.16 x 1.40 inches,

Burrowing Owl, (*Speotylo cunicularia hypogaea*) abundant. This is a bird that loves the open prairie, I suppose on account of the "fresh air."

A curious habit of this bird is to sit by its hole and watch you as you pass, nearly twisting its head off, rather than to step around; and occasionally giving you a nod but receiving none in return.

There is one habit of this Owl that I have never seen, and never expect to, and that is their keeping company with rattlesnakes.

The eggs are nearly round and plain white. Size about 1. x 1.23 inches.

HARVEY M. HALL,

Riverside, Cal.

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

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.

. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

The Autumn time is with us! Its approach
Was heralded, not many days ago,
By hazy skies that veiled the brazen sun,
And sea-like murmurs from the rustling corn,
And low-voiced brooks that wandered drowsily
By purpling clusters of the juicy grape,
Swinging upon the vine. And now, 'tis here.
And what a change has passed upon the face
Of Nature, where thy waving forests spread,
Then robed in deepest green! All through
[the night
The subtle frost hath plied its mystic art,
And in the day the golden sun hath wrought
True wonders; and the wings of morn and even
Have touched with magic breath the chang-
[ing leaves."
—Gallagher.

A Collecting Adventure.

The pathway of the OOLOGIST is not always strewn with roses. Called crank by his friends, chased by dogs and angry farmers, tramping through rain and mud, his lot is not easy. During this last season, a friend of mine and I discovered a Blue-gray Gnat-catcher's nest, in an apple tree, near a farmer's house. We asked him if we could collect them, and he told us if he caught us on his place he would set the dogs on us.

A few days after that we saw his son in town and he had both of his father's dogs with him. Now was our chance, and we lost no time in getting out to that farm-house. There did not seem to be any one at home, but the old farmer was working out in a field in plain view of the tree in which the nest was. How to get the nest and eggs, without him seeing us was the question. The old fellow was a great politician and I thought if I could get him into a discussion he would not pay any attention to what was going on over in the orchard. I went up to him and wished him good-day, and we talked about the weather, crops, etc. At last I got to talking politics. Finally the old gentleman concluded it was too hot to work out in the sun and we sat down under a tree. As good luck would have it, he sat with his back to the orchard. I could see my friend sneaking from tree to tree, fast approaching the one in which the nest was. All the while we were busily discussing the merits of our favorite candidates for '92, Benjamin Butler would have turned green with envy, if he could have heard the ease with which I changed my views to suit those of the old farmer. Just as he was declaring he would bet seven bushels of potatoes that his candidate would get there, I heard the "shrill call of a Quail" far up the road, and I knew my friend had been successful. I bade

the farmer a hasty good-bye, hurried up the road and found my friend had one of the finest nest and set of four eggs of the Blue-gray Gnatcatcher I had ever seen.

We had a good laugh over the successful working of our scheme and started home.

The next day I saw the farmer in town, and asked him how the "Humming Birds," as he called them, were getting along. He said, "young man, while you was a talking politics to me the other day that infernal scoundrel who runs around with you, was a robbing that nest, and I jest tell you, if I ketch you fellers a traipseing around over my farm again I'll have you sent up for trespass." I tried to plead innocent, but all to no purpose. I have never yet felt sorry that we fooled the old fellow, and I have a good laugh every time I see those eggs.

F. J.,
Martin's Ferry, O.

The Ruby-throated Hummingbird.

The Ruby-throated Hummingbird, *Trochilus colubris*, is quite generally distributed through-out New England as a summer visitor. He arrives in Mass. about the middle of May. It is a very interesting sight to watch him darting around from plant to plant, sampling the nectar, which lays hidden in the bosom of the flowers, or hunting for the small insects which form the principal part of his food. There is music in the humming sound of his swiftly moving wings as he darts back and forth from flower to flower. How interesting he looks as he balances himself on a slender twig to rest and arrange his feathers! How his brilliant coat glistens in the bright sunlight! How eagerly we watch him as he gives a quick *chrrp*, his only note of song, and disappears around some corner, and we wish we could know more about the little stranger! How our

nerves tingle with pleasure, when in our walks, we suddenly discover his nest hidden on a horizontal limb of a tree almost covered with lichens, so nicely arranged that, at first sight you would call it a moss-covered knob! Our cup of joy is full to overflowing, when we find two little white eggs safely hidden in the soft downy nest. When we have safely transferred them to our cabinet, then, only then is our happiness complete. In Mass. this bird usually commences to build his nest the last of May on a horizontal limb of some maple, birch, or apple-tree. It is made of a soft, downy substance taken from some plant. It is then covered with lichens to make it look like a part of the limb, thus showing a wise instinct of self-preservation and of its nest and young also. Soon two very small, white, nearly elliptical eggs are laid and then the work of incubation commences. In about ten days the little brood appear, who receive the watchful care of the parent birds till they are able to care for themselves. We have a nest and two eggs in our collection which were found on a low limb of an apple-tree, over-hanging a large brook. We should judge that the nest had been covered with the same mosses and lichens that are found on apple-trees. Last spring, while at my old home in Buckland, Mass., my brother showed me a nest of this species, which he found, while at work in his wood-lot. The nest was half-a-mile from any house, in a timber-lot, near a cross road. It was on a small, slim yellow birch-tree, some twenty feet from the ground, and on a small, slender, horizontal limb about eight feet from the trunk of the tree. The bird was on her nest, and to all appearances incubation had commenced. My brother found the nest, which appeared to be completed the last week in May. I saw the nest and bird on it, June 2, 1890. As we could not get the nest and

eggs without considerable risk and trouble, we did not disturb the mother bird; but it was a pretty sight to see her sitting on her nest, rising and falling with the motion of the light breezes that were playing around her, and not at all disturbed by our presence below. Our earlier impressions were that these birds nested near our dwellings, because they seem to have a preference for cultivated flowers and the natural conclusion was that they would nest near their food supply, but this was an instance to the contrary. My observation goes to show that they prefer trumpet-shaped flowers like the honey-suckle to many of the more showey kinds. The more we study the habits of this bird the more interested we are. The same is true of all the interesting subjects found in Nature's book, which lies open for all to read who may.

ERWIN G. WARD,
Palmer, Mass.

Ornithologists at Indianapolis.

MR. EDITOR:

At this, the thirty ninth meeting of the American Association for the Advancement of Science held here, a subsection of Ornithology was formed by scientists of this and adjacent states. The ornithologists of the A. A. A. S. and many outsiders met in response to an invitation and many papers were read, among them articles by Widmann of Mo., Evermann and Butler of Ind., Professor Steere and Dr. Gibbs of Mich.

Mr. Amos W. Butler of Brookville, Ind., was elected president, and the other offices of a regular organization were filled. We will meet again at the next annual meeting and, with the A. A. A. S., when we hope to add many new members to our young society.

SCOLOPAX.

Indianapolis, Ind., Aug. 24, '90.

The Burrowing Owl.

One mile and one-half north of here is what is known as dog town. This is a section of virgin prairie where prairie dogs, rattle snakes, Burrowing Owls and numerous ground birds live. The Burrowing Owl will be our subject. On the fifth day of May we went out collecting. We were well supplied with tools for we thought we would have to dig deep after birds. It is said by many frontiersmen that the snake, owl and dog inhabit the same hole; but of all the owl holes we have explored we have found none.

On arrival at the dog town we were greeted with barks and amused at the frantic efforts of the little dogs to reach their holes. We went some way further in the town when we saw an owl fly out of a hole. On reaching the hole we found it to be a deserted dog hole (a new one having fresh dirt around the mouth of it, which is kept fresh by them scratching in it.) There was dry horse manure and feathers around the hole. We commenced digging and had not gone far before we found some dead mice and moles strewn all along the bottom of the passage. Finally we saw the female sitting in the passage which we thought was the nest. We were both afraid to reach in and get her, so we drew cuts to see which one should. It fell to me and I pulled her out. We could see one egg lying in the passage. Whether she does this to fool collectors we cannot say, possibly not, but think she does. Further in the hole was the nest about two feet in diameter and two or three inches deep, filled with dry horse manure, with ten pure white eggs in it. The passage never runs straight, but angles into the nest. Some may think it quite rare to get a set of these eggs, but we do not. In the pastures out here where you can find a deserted badger or some other burrowing

animal's hole you will find a burrowing owl's nest.

The cry of this bird is at night, and is sort of a mournful noise not unlike the second decadence of coyotte howl.

S. & G.,
Gibson, Neb.

After "Gator's" Eggs.

I have a little to say about my success in finding alligator eggs, which I trust will be of interest to the readers of the OOLOGIST.

Last year, with little trouble, I found several alligator's nests containing a great many eggs; but not so this year. early in August. I, in company with Mr. Herman Weislahn, of Apopka, started off with great expectations for eggs. We walked to the places where I found some last year, but nothing but old nests could we find. Now, I shall first give you an idea of an alligator's nest: The alligator tries to find the roughest and most unsurpassable places in a hammock; here she cleans a round place two to four feet in diameter for her nest. having done this, a layer of muck is brought, upon which she lays a layer of eggs, then comes muck and then eggs again, and so on until the eggs are all in the nest and well covered up. The pile is sometimes three feet high.

When going along the shore of a lake you can see whether there is a nest near or not, for the alligator has a very nice path from the water to the nest.

Now, again to the egg hunt. We walked a good many miles, waded through water, got stuck in the mud, scratched by blackberry vines, stung by wasps and came home with nothing but a cold. I shall not hunt for alligator eggs again this year, and hope that others have had better success.

NICHOLAS V. LINDEN,
Orange Co., Fla.

Notes from Northern Minnesota.

June 18, 1890. My cousin found a nest of the Virginia Rail in a small marsh while we were hunting for the nests of water birds.

The nest, a slight platform of dried reeds hid among the growing reeds, contained seven eggs in various stages of incubation.

June 20. Found a nest of the Bobolink in a dry slough. Nest on the ground, hidden from view by a willow bush about two feet high. Composed of dried grass.

We saw the male Bobolink before we found the nest and so we began to hunt for it. After going a short distance, we scared up the female. It flew close to the ground a short distance and then disappeared in the bushes. The place where it flew up was several feet from the nest. The nest contained four fresh eggs.

June 22. Took a set of four eggs of the Clay-colored Sparrow (*Spizella palida*.) Nest and eggs similar to those of (*Spizella socialis*).

July 5. A few days ago found two nests of the Black-throated Bunting. Nests composed of fine round grasses and fine dried weed stems, lined with very fine grasses and a few horse-hairs. One nest was on the ground in a clump of grass and the other in a small bush. The former contained young birds and the latter, four fresh, light-blue eggs. I took the eggs and to-day I found a cowbird's egg in the nest out of which I had taken the eggs.

June 22. Found a nest of the Prairie Horned Lark. It contained four of its own eggs and four Cowbird's eggs.

ROLLA P. CURRIE,
Polk Co., Minn.

A juvenile monthly presents the following sample of "good rhetoric" in its editorial column, viz.: "What ails the 'Tennessee Philatelist'? We haven't saw it since may."

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674.	Franklin's Gull.....	1- 3 2.25
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Above sent post-paid with full data for \$2.00. Safe delivery guaranteed. Send for list of other sets.

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To get the best TANNING PROCESS now in use. I have used this process for 20 years and know its merit. Have tanned from a rat skin to a sheep pelt. I will send the process in full for One Dollar in cash or \$1.50 in first-class sets of eggs not in my Collection, by F. H. Lattin's list. Sample of tanning for stamp. First-class sets of eggs to exchange for other sets.

A. E. KIBBE, Mayville, N. Y.

*The Publisher of the OOLOGIST has carefully examined skins prepared by my process and can attest to its value.

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It shows off best when one half is in water and the other dry. Splendid for cut flower backgrounds. To the person sending me the largest order, in stamps, in the next 30 days, I will mail free, a large roll of this curiosity. Post-paid at 15, 25, 50 and \$1.00.

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This is the most complete work of its kind ever yet published. It embraces all branches of Natural History and contains 1200 names.

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COLLECTORS.

Every one sending 25c (this month) to the "Natural History and Art Store," C. W. Hillman, proprietor, Canisteo, N. Y., will receive one year's subscription to "Maine O. & O.," Sea Moss on card size 4 x 6 and my catalogue. And in addition, first-class eggs. To 25th, Yellow-headed Blackbird; to 50th, Rose-breasted Grosbeak; to 100th, a Magpie; to 200th, Red-shouldered Hawk; to 500th, Wild Turkey. Send at once. A grand bargain.

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THE OOLOGIST.

Monthly. 50c. per Year.

Vol. VII,

ALBION, N. Y., NOV., 1890.

No. 11

Exchanges and Wants.

Brief special announcements, "Wants," "Exchanges" inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per word. No notice inserted for less than 25c. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

I received a large number of good offers from my X. in Sept. OOLOGIST. I think it was the best investment I ever made. ROBERT A. CAMPBELL, Hanover, N. H.

"I have received 15 letters and cards in one day in answer to my notice in the OOLOGIST." N. BRADT, Eagle Harbor, N. Y.

"My exchange notice paid me big. Have exchanged about \$100.00 worth of specimens." W. E. SNYDER, Beaver Dam, Wis.

CAUSE.—A single notice or adv. in the OOLOGIST costing from 25 to 50 cents.

TO EXCHANGE.—100 Eggs; over 50 varieties. Valued at \$15. For best offer of type, locks, lines, etc. GEO. L. THORTON, Box 148, Alma, Mich.

TWO PUEBLO Indian Spears, one Navajo Hand Spears, set of 3 Mountain Plover with data, rare, for best offer of books on Natural History. H. DE F. EARLE, Norwalk, Conn.

I HAVE a collection of Tobacco Tags, 226 different kinds, to exchange for the best collection of Bird Eggs amounting 35, with data, sent me. Address, FRED A. FORSBERG, No. 211 Fifth Ave., Lynchburg, Va.

84 ARROW HEADS, chipped or broken, over ¾ of Arrow remaining. Value \$1.25. Some are nice Pieces. What have you to offer? DARCY BIGGAR, Fulton, Wis.

TO EXCHANGE.—105 No. Youth's Companions, for anything desirable. What offers? Letters answered. WM. J. THOMPSON, 138 Gloucester St., Ottawa, Canada.

SEVERAL volumes Youth's Companion, in good condition, for books on Ornithology or Taxidermy, or Taxidermists' outfit. What offers? Address with stamp, CHESTER M. WHITNEY, Westminster, Mass.

OVER 1000 duplicate specimens coleoptera Would like to exchange the lot for Birds' Eggs Will send list. F. HODGE, Hudson, Ohio.

TO EXCHANGE.—A 44-inch. Rubber Tire, Steel Spoke Bicycle, in fair condition, for best offer in eggs, fossils, minerals or curiosities. ARTHUR C. VEATCH, Rockport, Ind.

FOSSILS, Birds' Eggs, Minerals, Curiosities, to exchange for good Books of all kinds. All answered. T. S. HILL, Knoxville, Iowa.

I DESIRE to exchange eggs of Ruddy Shel-drake, Gt. Crested Grebe, Med. Gull, Borbary Partridge, Kestrel Singles for Hawks, Owls or Warblers' eggs. Send lists and get mine. H. E. KAIGHN, 607 R. I. Ave., Wash., D. C.

EXCHANGE.—15 lbs. of type for best offer of first-class eggs in sets; also imperfect 4ct Playing-card stamps to exchange also. 2c certificate blue. ROGER WHINFIELD, 550 Public Ave., Beloit, Wis.

I HAVE a pair of every fine full blood game chickens either to exchange for best offer or for sale. Particulars on application. JOHN HECK, Raleigh, N. C.

TO EXCHANGE.—A \$5 Polyopticon, 200 pictures or three good tennis balls, for best egg offer. A chart of fifty tropical birds for January to May 1890 OOLOGISTS. DONALD CAMPBELL, Cold Spring, Putnam county, N. Y.

TO EXCHANGE.—A Juno Safty Bicycle, in good condition, for a well Bred Bird dog; must be Thoroughly Broken. A Pointer preferred. Write for Particulars. E. P. PECK.

WANTED.—A young Ferret not over twelve months old in exchange for bird skins or cash; also a few eggs in sets for exchange. Quick reply. JESSE Y. CRAVEN, Taxidermist, Box 71, Hulburton, N. Y.

WANTED.—Birds' Eggs, Indian Relics, Confederate Money and Minerals, for which I will give Minerals, Curiosities and Confederate Money. What am I offered for 25 Star Fish 3 inches in diameter. FRED H. BANKS, Stamford, Conn.

TO EXCHANGE.—A live Cooper's Hawk Stuffed Birds, Minerals, Fossils, Arrow Points and over 300 second-class eggs. Will allow two-thirds off regular prices. Will exchange for Minerals, Indian Relics, Stuffed Birds, Skins, first-class eggs in sets or singles, or curio. Make offers. L. V. CASE, Naples, N. Y.

WANTED.—Printing press, type, shot-gun, large cal. rifle, bicycle, show cases, camera or eggs, will give in exchange, Cash, Elgin watch, 22 Flobert rifle, 22 warrant, 22 pocket rifle, 22 revolver. Thread cases, compound microscope, eggs or stamps, Cabinets made to order. All letters answered. LETSON BALLIET, Des Moines, Iowa.

EXCHANGES AND WANTS, Continued.

WANTED.—Eggs in sets of eastern birds in large numbers. Can offer fine sets from the west or birds' skins. JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

COLLECTORS.—I have 1500 eggs in sets; also curiosities, to exchange for eggs, skins, insects, minerals, shells, or curiosities. GEO. A. MORRISON, Fox Lake, Wis.

FIRST-CLASS eggs in sets with data of A. O. U., Nos. 260, 429, 430, 431, 499, 505a, 519, 591b, 593, 622b, 703, 713, to exchange for other sets. Send your lists to WALTER L. RICHARDSON, 435 South Moline Ave., Pasadena, Cal.

TO EXCHANGE.—Weeden Upright Steam Engine, with Vilage Blacksmith, Base Ball Players, Vol. Youth's Companion, Eggs, Stamps, Coins, for Type and Printer's Material. FRED E. ATWOOD, Chelsea, Vermont.

WILL EXCHANGE a nicely mounted American Bittern for \$5.00 worth of 1st-class eggs in sets with data. Send list. H. C. HIGGINS, Cincinnati, N. Y.

WANTED.—Original sets from other localities, for original sets and singles of Cala. eggs. Please send lists and receive mine. Address, FRED A. SCHNEIDER, College Park, Santa Clara Co., Calif.

WANTED.—Collectors in the North, South and West to collect skins for me this winter. Can use anything for same. Can offer fine eggs in sets or birds' skins. Write for terms. JAMES P. BABBITT, 10 Hodges Ave., Taunton, Mass.

TO EXCHANGE.—1 Weeden Engine, nearly new, 2 Illinois Fossils, for the best offer Western birds' eggs. Address, ROY C. TAPLIN, 2 Spring St., St. Johnsbury, Vt.

LOOK!—Rare coins and fine minerals for first-class eggs of medium value in sets. Send list stating what you wish. Address, E. F., 466 Franklin St., Norwich, Ct.

EXCHANGE.—The following eggs in sets, A. O. U. Nos. 51a, 71, 106, 201, 333, 488, 511, 613, 721, and others, for sets from other localities. D. N. RAYMOND, Norwalk, Conn.

WANTED TO EXCHANGE.—A good Scovel camera, purchased from the Youth's Companion for the sum of \$9.00, for the best offer of Smith & Wesson revolver, 32 calibre, double action. Must be in good order. Address, H. B. HUSTON, Lakeland, Ky.

BEAUTIFUL Pampas Plumes and Chinese Curiosities to exchange for bird eggs in sets or ornithological works. H. C. LILLIE, 521 State St., Santa Barbara, Calif.

TO EXCHANGE.—Coins, books, shells, pottery, banjo. Youth's Companion since 1884, relic: great Chicago fire, all or any for Indian relics. Wanted good axes. Send offers and lists to O. B. MAYES, Lock Box 25, Centralia, Missouri.

TO EXCHANGE.—First-class Birds' Eggs in sets and singles, for other eggs. Send your lists and receive mine. ELMER J. GILLET, Barre Centre, N. Y.

TO EXCHANGE.—Fifty classified European beetles for as many classified American ones, or any other offer in Fossils or Eggs. C. L. HALL, Carpinteria, California.

CAUSTIC POTASH, stamps, banjo, bridges, shells, sheet mica, back numbers of OOLOGIST, printing material, cigarette pictures, tickets, charts, albums, to exchange for eggs. F. LEON ENGLEBERT, Des Moines, Iowa.

TO EXCHANGE.—16 Wild Mexican Pota toes, 5 Starfish. Size 3 in., Singles of (A. O. U.) 501, 495, 652, 540, 412, first-class, for minerals size 1 x 1½ and first-class Birds' Eggs. A. R. HUTCHINSON, Gaines, Orleans Co., N. Y.

WANTED.—Indian and Mound Builders' Relics, for which I will exchange, extra fine, large specimens of Horse Shoe Crab, Crab Shells, Sea-curiosities, Birds' eggs and Foreign Stamps. ROLLIN T. TOMS, Stamford, Conn.

FOR EVERY 10 cents' worth of stamps (none catalogued at less than 5 cents wanted, except with collections) I will give 15 cents' worth of fossils. 1st-class eggs (singles), or fine specimens of copper from the Lake Superior mines. ROBERT A. CAMPBELL, Hanover, N. H.

TO EXCHANGE.—A Quackenbush air rifle, cost \$8, for Coues' Key, Ridgeway's Manual, or best offer in books on ornithology, taxidermists' instruments and supplies, camera, guitar. Successful offer answered. G. B. FURNESS, 98 Caroline St., Ogdensburg, N. Y.

WILL EXCHANGE for such species as I need; fine sets of eggs of Limpkin, Chachalaca, Red-billed Pigeon, White-winged, White-fronted and Mexican Ground Doves, Caracara Eagle, Harris' Hawk, Texas Cardinal, Golden-fronted Woodpecker, Chestnut-bellied Scaled Partridge, etc., etc. THOMAS N. JACKSON, West Chester, Pa.

WANTED.—Coues' "Key" (4th.) Edition; also Ridgway's "Manual of North American Birds." Can offer Eggs of rare Arctic Birds, American White-fronted and Hutchins' Goose, Pacific Black-throated Diver, Rock Ptarmigan, Long-tailed Jaeger, King-Eider; also Skins of the rare Aleutian Song-Sparrow, not to be had in the market. Books must be in good condition. J. W. C. JOHNSON, Signal Corps, Duluth, Minnesota.

GOLDEN EAGLE, set of 2 very handsomely marked, first-class, large eggs, holes size of dime. Will exchange for best offer Job Type; also cuts, borders, etc. Must be in fine condition. Send proofs and make offers. All will be answered. CHAS. TURTON, 114 N. Spring St., Los Angeles, Cal.

WANTED TO EXCHANGE.—Skins and eggs of this locality for other skins. Western skins especially desired. E. E. N. MURPHEY, 444 Telfair St., Augusta, Ga.

TO EXCHANGE.—A fine press, five cases, \$20.00 worth of type and all the tools, for the best offer in eggs or anything. Address, J. W. GLOVER, Marietta, Ga.

TO EXCHANGE.—For best offer before Nov. 25th, 370 stamps, all different, valued at \$6.25 by Scott's catalogue. ERNEST BENNING, 16 Lee St., Cambridgeport, Mass.

TO EXCHANGE.—Eggs and tennis-racquet, for best offer of small steam engine or double-action revolver. Price-list free. Address, A. L. CHILDRESS, Box 59, Decherd, Tennessee.

GOLDEN EAGLE ½ and other desirable sets and singles to exchange, for Type, Self-inking Press, Guns, Revolvers, Type Writers, etc. CHAS. TURTON, 114 N. Spring St., Los Angeles, Calif.

EXCHANGES.—Continued.

TO EXCHANGE.—The following "Cigarette Picture Albums:" The Ruler Album, The Terrors of America Album, The Yacht Color Album, The Shadow Album, The Governor Album and The Album of the Indian Chiefs, for best offer in eggs in singles or in sets. Singles preferred. In making offers make an offer for each album separate. I will give \$100 in Confederate money for every 75 cents' worth of first-class eggs sent me. Lattin's Hand Book as a basis is both exchanges. ED. K. COLLETT, 1400 Colorado St., Austin, Texas.

IOWA BIRDS, mounted, to exchange for a Coues' Key, latest edition, 1st-class condition. Write for list. I will give \$10.00 worth of the following 1st-class eggs for a copy of above book: 147-6, 152-1, 201-1, 310a-2, 337-1 337b-1, 477-1, 506-1, 604-1, 622a-1, 633-2, nest-704-3, 761-3. Will trade \$2.00 worth of above for Davie's Key; \$6.00 worth for Sammel's Northern and Eastern Birds; \$8.00 worth for Ridgeway's Nomenclature; all of above eggs, and a pair of finely polished and mounted Buffalo Horns, for a double-barreled breech-loading shot gun, 10 Gauge. Write first. Above Nos. A. O. U. F. LEON ENGLEBERT, Des Moines, Iowa.

FOR SALE, cheap, a large collection of minerals, shells, bird eggs, curiosities and scientific literature. Will sell all together or separately. Particulars for 2c stamp.
GEO. B. BENNETT,
No. 1123 Main St., Terre Haute, Ind.

PHOTO of your future Husband or Wife **FREE!**
Send Stamp for Postage. **CLIMAX CO. CHICAGO, ILL.**

FOR SALE OR EXCHANGE.—"Birds of North America." (New) by Studer. One hundred and nineteen plates giving all the Birds of America. Over seven hundred species. All colored from nature by Theodore Jasper. Elegantly bound in embossed Morocco, with gold-leaf edges. Size 12 x 15. Will sell for \$50 or exchange for \$100 worth of first-class skins of Western Warblers, Thrushes, Vireos, Jays and Wrens, at Catalogue prices. Will exchange for skins, Eggs of Arctic Birds, Emperor Goose, American-White-Fronted and Hutchins. Pacific Diver, King-Eider, Harlequin, Rock Ptarmigan, Long-tailed Jaeger, for Swainson's Warbler, Bachman's Warbler, or Western Warblers. Will give satisfaction for first-class skins. Don't write except you have them. J. W. C. JOHNSON, Signal Corps, Duluth, Minnesota.

FOR SALE.—Collection of 77 rare kinds of eggs worth \$30.00, for best cash offer. **WILLIE R. CUMMINGS**, Pacific Grove, Monterey Co., Cal.

BIG BARGAINS.

This month at the Natural History and Art Store, C. W. HILLMAN, Proprietor, Canisteo, N. Y.

To introduce my Catalogue of Natural History and Art Specimens and Supplies, I make the following bargains until the 15th of December: For 30c I will send a copy of my Catalogue, and the following first-class small specimens: Starfish, Barnacle, Sea Urchin and an egg each, of the following: Bank Swallow, Housefinch and Lark Sparrow. For 75c I will send a copy of my Catalogue, and the following larger and rarer specimens: Sea Horse and egg of Mediterranean Gull. Send in your orders immediately.

AN X-MAS OFFER

We quote the following Liberal Discounts

UNTIL CHRISTMAS.

On eggs of the following species: Orders of 50c or over will be sent prepaid, under that amount 5c must be added for postage and packing.

For \$1.00 you can select eggs to the amount of \$1.50.	
" 2.00 " " " "	3.50.
" 3.00 " " " "	6.00.
" 5.00 " " " "	11.25.
" 10.00 " " " "	25.00.

This offer will hold good until Christmas and for *single eggs only*.

All specimens will be carefully packed in strong tin or wooden boxes and sent at purchaser's risk by mail, or at our risk and purchaser's expense by express.

SECOND-CLASS SPECIMENS can be furnished of most species at one-half the price of a first-class one. Parties ordering second-class eggs must name a list of extra eggs to be used as substitutes.

SETS. Many of our Patrons want us to include sets in this offer. This we have rarely been able to do, but *this once* will allow them to include sets of the following species, Ridg., Nos.:

673, 679, 686, 690, 693, 691, 695, 656, 705, 711, 712, 641, 585, 579, 580, 546, 553, 551, 480b, 471, 460, 464, 420, 408, 387, 378, 372, 373, 375, 337, 324, 325a, 289, 282, 261, 263, 270, 272, 181, 182, 170, 189, 204a, 207, 238a, 240b, 242, 243, 231b, 233, 244, 245, 161, 157, 11, 12, 13, 13a, 16, 67, 63, 1, 7, 23, 197, 214, 231, 315, 304.

Holboell's Grebe.....	\$ 50	Caspian Tern.....	50	Brandt's Cormorant.....	50
Horned Grebe.....	35	Cabot's Tern.....	40	Baird's Cormorant.....	50
American Eared Grebe.....	25	Forster's Tern.....	15	Brown Pelican.....	25
Pied-billed Grebe.....	10	Common Tern.....	10	Merganser.....	1 00
Puffin.....	25	Arctic Tern.....	15	Florida Duck.....	2 00
Murre.....	25	Least Tern.....	08	Blue-winged Teal.....	25
Razor-billed Auk.....	25	Sooty Tern.....	35	American Golden-eye.....	75
Glaucous Gull.....	85	Black Tern.....	12	Barrow's Golden-eye.....	1 00
Iceland Gull.....	1 50	Noddy.....	75	American Eider.....	25
Great Black-backed Gull.....	50	Black Skimmer.....	12	American Scoter.....	2 00
American Herring Gull.....	25	Fulmar.....	75	Ruddy Duck.....	50
Ring-billed Gull.....	30	Manx Shearwater.....	1 00	Scaup Duck.....	75
Mew Gull.....	35	Audubon's Shearwater.....	2 00	Velvet Scoter.....	1 00
Laughing Gull.....	20	Cormorant.....	50	American Flamingo.....	1 00
Franklin's Gull.....	75	Double-crested Cormorant.....	35	American Bittern.....	1 25
Gull-billed Tern.....	15	Florida Cormorant.....	25		

THE OOLOGIST.

VOL. VII.

ALBION N. Y., NOV, 1890.

No. 11

Faries in a Fary land.

THE RUBY-THROATED HUMMINGBIRD.

In the eastern U. S., there is, perhaps, no bird which is so generally admired by all and bears such an unmistakable identity as the Ruby-throated Hummingbird. Common throughout its range, it is always a welcome wonder of untiring beauty in the sight of man, visiting the gardens and even entering the houses to sip a tiny drop from the gayest flowers. And yet, its minute size and lightening-like flight render it difficult to get acquainted with.

Of a family of several hundred species, (all American) the Ruby-throat is the only one known to occur east of the Mississippi River. It is *our* smallest and fairy of birds, while in the Tropics there are even smaller Hummers, and others, whose spread of wing equals that of the Robin. Others still, have bills longer than their bodies, others with bills curved into a quarter circle, and many with puffs and frills, and long streaming tail feathers. All wear gorgeous colors, and while many are adorned in various shades of the most brilliant and iridescent hues, which dazzle the eye, ours is one of the plainest, but prettiest.

Though not tame, the Ruby-throat is little suspecting of danger, and will sometimes take honey from flowers held in the hand. Why should they be wild, when they have no enemies, except now and then a cruel cat (which has learned to hide 'mongst the flowers in the garden to catch them) and man?

This little creature is well deserving of attention, for no species of the feathered tribe furnishes a better or more interesting field for study and observation.

Watch it as it goes about, moving with jerks from flower to flower, always flying when it takes its food, and always humming too.

One would think so small and gay a bird knew no care but joy, but follow the collector into the woods and see how these tiny beings are left without houses, for the sake of knowledge.

A few years ago, the eggs of this, the commonest of the Hummingbirds, were known only to a favored few, but, through study and investigation, they are now in the reach of amateur. It was only in 1886 that I could not buy a nest (which was accidentally found) for five dollars. Now, I would be glad to realize the one-tenth that.

It was in this same year that I saved my \$5.00 by finding one myself. In passing along the road I had seen the female busily engaged among the bluegrass tops in a woods pasture. She would fly away and return, but any efforts to learn her mission or discover her nest were futile. Just one week later, I rambled through the woods, when lo, I heard her fly from overhead. I stood as still as a statue for some fifteen minutes. Presently she returned and after reconnoitering awhile, to my great delight, she went to her nest. I watched her till my neck was sore and then hurried home to tell the news. Next day, accompanied by my father, I returned with collecting can, a long ladder and ropes for guys. The ladder was up-ended under the nest. With one guy tied to a tree and the other held by my father, I ascended to "the prettiest of them all," and was overjoyed to find two fine eggs in it. I now understand her errand in the bluegrass. She was gathering spider webs which served as nails in her house to fasten it together.

The nest was not 100 yards from the bluegrass, and her line of flight pointed directly to it.

She placed the nest on a drooping limb of a small beech tree, I placed it in my collection, which was awarded the premiums at the County Fairs.

The next year I found three nests, all on beech trees not 50 yards apart, and in plain view of each other. Two were on the same tree and within ten feet of each other; one, an old one. The bird was carrying material from this old nest to the limb spoken of, (ten feet away) when I discovered her. The new nest was only begun and not visible. Eight days latter I took nests and eggs, though the old nest was half used up. Three weeks latter I found this third nest, which contained highly incubated eggs, and strange as it may seem, this tree also sported a nest of the Acadian Flycatcher, containing four eggs, one of the Cowbird.

In the spring of 1888 I came to Ark., and being little acquainted with the bird, I knew not where to seek for nests, there being no beech trees. All was hill and hollow, clothed in wild timber, the beech being replaced by black oak, post oak and sweet gum. The birds are much more numerous here, however, and I knew that by diligence I could solve the problem.

While making pine boards for shingles one day in July, I was awarded by seeing a bird fly into a small black oak. The nest was soon found with two newly hatched young. This was as great a find as my first, for, I thought I had not only learned where to find them here, but had discovered the kind of tree most preferred. During the balance of that summer and the next I searched in vain for more. I traced birds up hundreds of times, only to find them occupied in sucking a sweet succulent juice which oozes from knots or injured places in the bark of the black and red oaks. This, they are very fond

of, and I think, subsist largely on it during the dry hot months when there are fewest flowers. The cause of this instance I know not. Insects also visit these parts, and the wasps give the birds much trouble. Several birds visit the same trees, going constantly from one to another.

On June 16, 1890, while going up a steep hillside, my attention was attracted by a bird overhead. In less than five minutes, the female, which I had scared away, returned and alighted in her nest which was in the fork of a white oak limb, twenty feet above the road. This bird was particularly wild, for at every stir of the feet she flew away, and each time she returned, instead of lighting on the edge of the nest first, she would dab down into it, with as much ease as she could light on a limb. I secured the eggs a few days later by my ladder process.

On the 18th, while watering my horse in a little stream, I heard a bird behind me, and on looking around saw a bird dart away from her nest a few feet and return, as if either catching or driving away insects. These operations were repeated without the slightest notice of my presence. She even remained on her nest while I climbed the tree, (a small red oak four inches in diameter) took another short excursion, giving me an excellent opportunity to view the eggs, then returned and remained till I had cut the small limb nearly in two, and lowered it upon another branch, when she flew to an adjoining tree. The nest was twelve feet high.

The 19th, was another "lucky day" for me. While strolling on the river bank, I chanced to see a bird in a small sweet gum tree. She soon found her nest, which was on a drooping limb ten feet from the ground, and overhanging the water. Finding the complement to be complete, the limb was cut partly off near the body, and weighted down in reach from below.

On going down, I found the eggs

fresh, and the prettiest and most delicately colored nest it has ever been my lot to see. The architecture was particularly fine, and the body, instead of being made of the usual brown vegetable down, was almost of a lemon-yellow color, and perhaps collected from the under side of sycamore leaves. Then, to add to the beauty of the scene, the tree was one that was particularly corky. What a beautiful view this would have made for Mr. Cheney's camera! I suppose every naturalist dreams of finding. My turn came this night (the 19th); I dreamed of finding a nest back in Indiana. Next morning I was surprised that my dream was partly true. I found my fourth nest within a week. Such as this is almost enough to make an amateur dream. This nest was in a small white oak, 20 feet up, and contained two nearly hatched eggs. The female stayed in sight while collecting.

My next find was on the 27th. While out hunting, I found a deserted nest, high up in a large black oak, and without anything to assist me. I took a friend out to see if he could find it; showed him the tree, and finally the limb it was on before he could see it.

This, I concluded, was the last of the season, though, on the 23rd of July, I collected a set of two fresh eggs, half way down the Mt. (500 feet). While walking to town I saw this bird busily engaged about a small black hickory, my curiosity was aroused, to know what she could be doing there. She had some brown object in her bill, and I was determined to see what she did with it. Presently, she surprised me by alighting on her nest in that same tree, and not ten feet over my head. After remaining quiet a minute or so, moving her head from side to side as if watching me, she proceeded to place the brown object inside the nest, then "worked" it awhile and flew away. I climbed the tree first to see how large

the birds were, and was again surprised to see two white eggs. I gave her a day or two to finish her nest and then took the whole. The nest was placed on a little, crooked branch of a limb that hung vertical for several feet, and was in half an inch of main limb. This female also stayed close by to see her nest taken, and I once saw the male. She was the second Hummer I ever saw with anything in her bill. The other was carrying a long mass of spider webs, and how she flew so swiftly without becoming entangled, was a mystery.

I am told, on good authority, that a Hummer once built in a honeysuckle in a man's yard, but I think the nest was some other kind, and as the Hummers were seen there so often, they were mistaken for the owners. But few who have not seen these nests can have any idea of what a Hummingbird's nest is like. I used to hunt for them in honeysuckles.

It is probably true that the young are fed by regurgitation, and by careful study we may know in another year. No Hummingbird lays more than two eggs in one nest, and all are white. The eggs are the smallest of all, and yet one egg is one-sixth as large as the bird's body. The eggs, like those of a few other birds, that only lay in pairs, are "male and female," that is, each set contains an embryo male and female. (In the case of the Carrion Crow, the eggs are of different size, shape and markings.) Two sets of young are often reared.

In heading this article as I have, I do not mean to infer that Ark. is a fairy land, nor this mountain, but that a particular place on the mountain is just such a place as is often ascribed to those mythical beings, the fairies. On entering it, a strangeness takes possession of one, that makes him feel as if there is a little truth in fairy tales after all. It is the head of a Mt. stream, walled in by gray checked rocks,

clothed in mantles of moss and ferns, bedecked with blooming flowers and grasses in summer, o'erhung with gigantic crystals of ice in winter, and almost closed in by luxuriant vines and vegetation throughout the year. To add to this beautiful scene, the silence is broken by the fall of water, dripping here and pouring there, falling on the metallic fragments of rock like so many little "Brownies" ringing bells.

One only has to sit a few moments, or perchance he is taking a bathe, when he finds he has company in the form of little Ruby-throated fairies. Their mission also, is to bathe, and their manners are particularly interesting. The first you know of one's presence is the hum of wings, resounded by the semi-circular walls, intermingled with the sound of trickling water. In the obscure light, one is at a loss to know where it is, 'til he has scanned the whole scene over, and finds it perhaps, in a few feet of him, poised under a little stream of water, or, half flying and half sitting on a bunch of sprayed moss on the opposite side. This is a sounding bell, so to speak, for one can't tell where they are nor how near, unless he sees them. A bird will come in and view the whole structure before bathing, and then will try many sprays before finding one to suit. In taking this sprinkle, the body is poised upright, with the bill verticle, turning from side to side. One dip is never enough, but it repeatedly retires to a dead limb to ruffle and plume, and darts away as suddenly as it came; to return, perhaps, the next day. I have seen several here at a time, and all falls on the Mt. are more or less frequented, but this is the favorite place. Of course they do not get under the largest streams, but where it is actually streaming, and so hard, too, that I can hardly bear it, as it falls 35 feet or more. Where these falls cannot be had access to, they bathe in the tree

tops, in the morning dews and after showers.

"ARKANSAW HOOSIER,"
Clinton, Ark.

Notes from Travis Co., Texas.

The following taken from my notebook, are some of the birds found breeding here during the early months of the breeding season, of this year (1890).

The first nest found on March 4th, was that of the American Crow, containing five fresh eggs. It was situated in a cedar tree twenty feet up. Also found a nest of the Black Vulture, containing two fresh eggs. Eggs laid on the bare rock of a cliff ten feet up.

March 8th. Nest of Black Vulture containing one egg, incubation advanced. Nest in a small cave, four feet below entrance.

March 2nd. Nest of Great Horned Owl, containing three young about a week old. They were covered with white down all over, with large round eyes and a long hooked bill. All taken together, made them quite pretty.

March 20th. Found nest of Texan Screech Owl, three eggs slightly incubated, eggs laid on bits of rotten wood at bottom of a cavity in the decayed trunk of a tree.

March 23rd. American Barn Owl, two eggs incubation advanced; eggs laid at end of burrow in a bank, no attempt at a nest having been made.

March 29th. Two eggs of Black Vulture, incubation begun; eggs laid on bare rock in cavity of a cliff twenty feet up.

March 29th. Bluebird, five fresh eggs. Nest in the deserted nest of Woodpecker, in telephone pole fifteen feet up, composed of grass, etc.

April 3rd. Black-crested Titmouse, five fresh eggs; nest in natural cavity of China tree, not far from my window, composed of cotton, wool, paper, feathers and other soft materials.

April 3rd. Dotted Canon Wren, four fresh eggs. Nest in the roof of old stable, composed of straws, etc., lined with cotton and spider webs, making a very soft affair.

April 4th. Carolina Wren, four eggs incubation begun; nest placed between logs of an old house four feet from floor, composed of sticks, leaves, feathers, etc., lined with hair.

April 4th. Texas Screech Owl, two eggs incubation slight; nest in natural cavity of live oak tree twenty feet up.

Same date, five fresh eggs of Plumbeous' Chickadee; nest in telephone pole fifteen feet from the ground, composed of cotton, feathers.

April 6th. Baird's Wren, six fresh eggs; nest in that of Woodpecker in telephone pole six feet from the ground, composed of sticks, grass, etc., lined with hair.

April 11th. Dotted Canon Wren, four eggs slightly incubated; nest in crevice of rock, composed of sticks, grass, etc., woven together with spider webs, lined with cotten.

April 11th. Four fresh eggs of Phoebe; nest one side of cliff four feet up.

May 4th. Blue grey Gnatcatcher, four fresh eggs; nest placed in the forks of tree six feet up, composed of fine grass, spider web, covered with lichens.

May 18th. Blue Grosbeak, four fresh eggs; nest placed in low bush four feet up, composed of bark, paper, pepper-bush, etc., lined with fine roots.

Same date, Yellow-breasted Chat, three fresh eggs; nest placed in a clump of briars near the ground, composed of coarse straws, inner bark of trees, lined with fine roots. This is the first nest known by the writer from Travis county. The bird is more common this season than ever before. Two nests containing young have been found since.

May 30th. Baird's Wren, six eggs fresh; nest placed in a wall basket which hung near a window in one room of my house.

The bird must have been in a great hurry to lay, for they both worked all day carrying in straws, feathers, etc. Within four days the nest was completed, and on May 20th, one egg was laid and so on until six eggs were laid. The female resumed the task of incubation and I took the eggs.

E. K. GREEN,
Austin, Tex.

A Walk to Mt. Hamilton.

On May 15, 1890, my brother and I started to visit a friend, who lives on Mt. Day, a point about eight miles from Mt. Hamilton, where the famous Lick Observatory is situated. We walked almost 20 miles and had just gone round a sudden bend in the road when I spied a Yellow-billed Magpie's nest. It was about thirty feet from the ground in a large oak tree. I climbed up to it and found six badly incubated eggs. They looked like large Shrike eggs. When we started on again the hills seemed to be very steep, and we went up and up till at last we reached our friend's cabin. The owner of the cabin is an old bachelor, who is living on a quarter section of land which he has pre-empted. We spent the night with him and did not get up very early next morning and were still tired. I went outside as soon as I had eaten a little breakfast, and sat on a log and watched some blue birds which were making a lively racket in a tree near by. They seemed to be in a great deal of trouble about something, so I climbed up the tree and found they were fighting a Nuthatch.

There was a hole in the side of the tree, too small for my hand to get in, so I called to my brother to get a hatchet and come up. He cut into the hole till he could get his hand in. The nest was about eight or nine inches down and in it were eight Nuthatch eggs. In blowing them one disap-

peared, no one knows how. On our way home the next day I found another nest, but not having a hatchet we could not cut into the hole. But I hope to go that way again some day, as I find these eggs trade well. We had left our friend's house about 9 a. m. and walked about 35 miles and climbed about eight trees and reached home at 7 p. m.

GEORGE D. CHAMBERLIN,
College Park, Santa Clara Co., Cal.

Great Horned Owl.
(*Bubo virginianus*).

During my sojourn in Southern Missouri last winter and spring I gained some points in regard to the incubation of the Great Horned Owl (*Bubo virginianus*), which may prove interesting to the readers of the OOLOGIST.

On page 504 of "Coues' Key to N. A. Birds." may be found the following:

"Eggs said to be three to six, but not known to me to be more than two in number." Let me here quote from my note book. "March 12, 1890. Nest of Great Horned Owl (*B. virginianus*) in top of a large stump some eighteen or twenty feet from the ground. Nest composed of sticks, leaves, down, etc. Contents, four white spherical eggs, about 2.26 x 1.90 inches. Shot parent bird, length 23 inches extent 52 inches." Here is a case of four eggs.

I will again quote from my note book. "April 4, 1890. Nest of Great Horned Owl (*B. virginianus*) Contents, three young Owls, evidently two weeks old at least." One of these young Owls I kept in captivity for some time, it learned to fly in about two weeks. This case not only shows that there were more than two eggs, but also that the eggs were laid quite early, allowing the nestlings to be two weeks old and as the incubation occupies three weeks, it is clear that the eggs were laid about Feb. 27th.

One more quotation from the note, which I think records quite an early

incubation. "April 14, 1890, shot three of the young of the Great Horned Owl (*B. virginianus*) averaging about 22 inches in length and 45 in extent." All of these birds could fly, almost perfectly and were without doubt, six weeks old, and allowing the three weeks for incubation shows that the first eggs must have been laid about Feb. 10th. This is about the earliest case of which I have heard.

Now it is my opinion that it is more common to find more than two eggs than it is to find that number of less in the nest of the Owl in question. I also remember in the spring of 1889, I don't remember the exact date, the female Owl of the above species kept in captivity at Washington Park, Chicago, laid four eggs on the bottom of the cage. These eggs were given to me by keeper Dessette and are now in my possession.

J. M. DODSON.

Another Instance of Strange Co-habitation.

MOURNING DOVE AND FLYCATCHER.

While glancing over the columns of the August number of THE OOLOGIST, I noticed an article of peculiar interest under a similar heading, and, recalling an experience of like nature which came under my observation a few years ago, I have concluded to contribute it to the gleanings of nature for what it may be worth.

During the last of May, when out on business of another nature, I chanced to be driving along a road hemmed in on both sides by a hedge fence of Osage Orange, with here and there an occasional stalk of the same kind, which had not been pruned but had been allowed to outgrow the others in height, thus making a shade tree as is the custom of doing in this country. Suddenly I was impressed by the well-known cry of the Scissor-tailed Flycatcher and, upon looking in the direction of the sound, I

saw a pair of these *tyrannidæ* flying above and toward a point ahead of me. Finally the female alighted on top of one of the tall Osage Orange trees, on an overhanging³/₄ branch of which was placed the nest. The female, after flying to and fro near its mate uttering cries of alarm as if to secure her my protection, finally alighted on a more distant tree. After a hard climb of but a few minutes, I was²/₃ safely on the limb beside the nest; but what was my surprise to find, not a complete set of one species, but one egg of a Mourning Dove and two eggs of the Scissor-tailed Flycatcher. The latter I left, but the former I carried with me and placed in a nest of its³/₄ own species. In a few days (June 4, 1888) I made it a point to visit the Flycatcher's nest again. This time I found a fine set of five eggs of the Scissor-tailed Flycatcher with incubation just begun, and, as they lie before me, measure respectively .93 x .70, 1.00 x .68, .94 x .70, .95 x .71 and .93 x .68. The nest was composed of weeds and rootlets, and lined with hair, cloth and woody fibers, and measured as follows: Diameter, outside 4½ in., inside 3 in.; depth, outside 4½ in., inside 2½ in. The composition of nest plainly shows it to have been built by the Flycatcher, and I have come to the conclusion, that the Mourning Dove must have deposited its egg when the Flycatchers were out foraging, as it would have been a very impolite as well as a very unsafe thing to have done, had the Flycatchers been at home. I have never heard of such a daring deed being done by such a meek bird as a Dove, but the evidence certainly goes to prove such. The measurements of the Flycatcher's eggs are larger than the measurements given in the various works on oology, but, having a good view of the parent bird, I am sure that my identification is correct. Let us hear from others.

W. MORGAN MARTIN,
Wellington, Kansas.

[Friend M's. "Scissor-tail" would if captured have proven an Arkansas Kingbird.—ED.]

In the Maine Woods.

I passed the greater part of last May and June in Maine woods and made, to me, some very interesting discoveries. I found two sets of Magnolia Warbler's eggs, one of two eggs, the other of three, both much incubated. According to Davie's book these are very small sets.

In the bottom of the former nest was a Cowbird's fresh egg buried. There seemed to be only one nest, but the bottom was sufficiently thick to cover both sides of the egg, and I should not have found it had I not been in the habit of collecting the nests with the eggs. I have read of such cases, but this is the first one that ever came to my notice. Are such cases common? [Not uncommon.—ED.]

I have several specimens of the Shrike that nests in Maine, together with the eggs, but I am unable to tell which one of the Shrikes it is from Cones' descriptions. Will you please inform me? [White-rumped.—ED.]

I found that the Slate-colored Junco and the Winter Wren rear their young as far south as Orient, Me., and in a very level country.

A. B. CALL.

An Ornithological Leech.

A companion and myself while on a collecting trip during the past season, found a nest of the House Finch situated about five feet from the ground in the lower branch of a live oak. On approaching the nest we were surprised to find the bird sitting thereon, asleep, as we at first supposed, but further examination revealed life to be extinct. Removing her from the nest we made a *post mortem* examination and found

a large leech fastened tightly to the throat. The bird was still warm and as it was about 9 A. M. when we found it, my surmises are that the insect attached itself to the bird during the night when the latter was asleep. Death must have been instaneous, as there was no sign of a struggle. The nest contained three fresh eggs.

EUREKA,
Los Angeles, Cal.

Brewer's Blackbird.

This bird is one of the blackest I know, and when resting emits a harsh, shrill sound which is none too pleasant. The bird itself is a coal-black from bill to tail, and its egg is in strict keeping with it. The egg has a light background with lightning flashes and blotches of dark brown evenly distributed over its surface. The number in a set ranges from four to nine, while most of the sets contain five or six eggs. The nests are large and composed of different weeds, with a thick lining of black horse hair, and present a striking resemblance to each other. They are generally placed in either pine or cypress and are often found in the weeping willow. Very often two and three nests are found in the same tree and are always faithfully guarded over by their respective owners.

The bird is common in this locality, and a number of them are shot every year for mere sport.

Out of nine sets which I collected this year I found none incubated. They were all collected within a few days and showed very even markings.

The Blackbird makes a great noise when disturbed in her nest and I have known them to flap their wings in the intruder's face. They stay near their nest and utter sharp cries until the marauder is out of sight.

One day in the latter part of May I had climbed a tall pine and was just possessing myself of a nest containing

seven large eggs, when the owner came dashing by, emitting the Blackbird's peculiar cry. It was so sudden a surprise that I dropped the box containing the eggs to the ground. I descended hurriedly, my heart still beating loudly, and found the eggs spattered over the trunk of the tree and the ground below.

Although it is not a common thing, I have seen this saucy bird try more than one cherry on our place and they make an indignant protest against being stopped.

HOWARD W. BELL,
San Jose, Cal.

A Cowbird's Nest and Eggs (?)

Three years ago this summer while hunting for eggs, I had a singular experience.

While advancing into a thicket, I discovered a nest made of very coarse straws placed about four feet from the ground in a small maple bush. The bird on the nest was certainly a Cowbird, and the eggs were certainly the eggs of that species. There were five eggs in all.

I would like to know if any other collectors ever had any such experience.

A. L. THORNE,
Newark, N. Y.

[Mr. T.'s nest was doubtless that of some other species receiving a viits from a cowbird.—ED.]

Was it the First Set?

I notice that in W. De. La. Barre's article in August number, he speaks of a set of King Rail's eggs as the first recorded set in Minnesota.

This may be the first recorded set; but in 1886, eggs from two sets came to my notice collected in the vicinity of Minneapolis, Minn., a specimen of one of which is now in my possession.

I also have information of a speci-

men taken in this locality a year or two before this.

H. M. GUILFORD,
Minneapolis, Minn.

COLORADO SPRINGS, Colorado,
Aug. 10, 1890.

EDITOR OOLOGIST:

In looking over the August OOLOGIST, I noticed an article on the King Rail from Minnesota. Being a former resident of that state, I am naturally interested, but our friend De la Barre prizes his set of eggs of this species rather too highly.

Although rare, quite a number of sets have been taken in the vicinity of Minneapolis. I have found two nests of egg-broken shells myself, and shot half a dozen or more of the birds in the fall of the year. Yours,

GEO. G. CANTWELL.

An Egg Within Two Eggs.

About this time last year I found an egg of *Gallus domesticus* which was so very peculiarly shaped that I thought I would blow it and place it amongst my curiosities in eggs. It was about two inches long and the largest end an inch in diameter, the smallest end about $\frac{1}{4}$ of an inch curved like a gourd. Upon drilling through the shell the drill struck upon an inner shell which quite surprised me and upon removing the contents of egg No. 1, egg No. 2 would rattle within it. I wanted to see the inside egg so I cracked egg No. 1 around the middle and removed No. 2. It resembled No. 1 in shape, but was much smaller. I thought I would drill this egg to see if it contained anything, when lo! behold! this egg contained another shell about the size of a grape or large pea.

This made three eggs, one inside the other, each contained the albumen (the white) common in eggs, but no yolk. This I think outrivals A. O. G.'s egg, of Lawrence, Kas. Let us have the ex-

perience of other collectors in this line.

JOS. P. JACKSON,
Kelton, Pa.

Who Will Answer These Queries?

J. C. G., Montgomery, O., wants to know if a Crow can talk if its tongue is not split.

W. A. D., Scroggsfield, O.—“I saw a bird the other day which was the size and shape of a Blue Jay. It flew like a Jay and was of the same color, as near as I could judge, except its tail which was brown, precisely the color of a Brown Thrush. I had a good view of it. What was it?”

H. G., Montclair, N. J.—“What kind of a bird is it that lays an egg that is very light bluish-white, blotched with light brown all over? Nest like that of Grackle, in a large hemlock tree. Eggs, five and about the size of a Blue Jay.”
[Send us an egg and we'll tell you.—Ed.]

R. M. F., Sioux City, Ia., wants to know what small bird it is, which inhabits New England and, in seed-time, follows the sower, uttering notes which sound like: “Sow; sow your wheat, sibley, sibley, sibley.”

Nesting of *Contopus Borealis* at Westbrook, Me.

The Olive-sided Flycatcher is rare here and is generally considered a migrant only. On the 9th of June, 1890, as I walked through a pasture I was pleased to note one of these birds in a small clump of hemlocks. The next morning I was out by daylight and was agreeably surprised to note it in the same place. I quickly forded the small river and was about ready to shoot the bird when a second made her appearance, and from the proceedings I was quite sure that they were about to breed, and so left the place as quietly as possible.

The locality was a dry pasture through which ran a little river in an easterly course; on the north side a

bank of clay rose from a step of ground, abruptly to a height of 60 or 80 feet and then sloped away to the northward. About one hundred yards to the northwest was the remains of a once heavy pine growth. On the back grows a clump of hemlocks and several scattered hemlocks and spruces. These trees were low but quite dense.

On the evening of June 23 I thought it time to look for the nest. As I reached the scene of action, the solemn tri-syllabled note of *C. borealis* reached my ear, but the singer was not to be seen. I ascended several trees and had looked through the clump of hemlocks without success, and as a last resort, I gathered several clubs and dashed them noisily into the trees. At last a robin, which had gone to roost for the night, was frightened so badly by the clatter that she dashed across the river in full cry, and so started the female *borealis* from her nest and she quickly summoned her mate.

He looked on for a few minutes, and as all became quiet he retired to a dead limb of a large pine tree and as the female became quiet, disappeared into the woods. The female was routed from her nest again and the tree ascended.

The nest was on a horizontal limb of lone spruce about twenty feet from the ground and out about four feet from the trunk of the tree. The foliage was very dense, and the nest could not be seen from the ground. It was composed of spruce and hemlock twigs with much of the hanging moss which grows on these trees. This moss composed the lining together with a very little straw. It was a flat, shallow, and on the whole a rather frail structure, situated on a part of the limb where the foliage was densest. The diameter, outside, was 5 x 4.50 inches; inside, 2.75 x 2.50. Depth, outside, 2; inside 1 inch.

The eggs were three in number, of a light cream color, with spots and

blotches of rich reddish-brown and purplish-brown, inclined to a wreath at the large end. Two of them measured .79 x .61 and .79 x .59 inches respectively. They were quite round and blunt, with the greatest width at the middle.

While I was at the nest the birds eyed me curiously but showed no solicitude.

A. N.

A Letter from "Davie," Relating to his New
Work on Taxidermy.

Nov. 1, 1890.

DEAR MR. LATTIN:

You ask in your letter of October 28th concerning the progress of my work on taxidermy, particularly as to the number of subscribers obtained, etc.

I should state that since the five proof illustrations and the four-page circulars have been printed, the number of subscribers is exactly *two hundred and twelve*.

The proofs and circulars are being sent to all subscribers and to any person who may desire to examine into the style of the work before subscribing for it.

When the *five hundred* subscribers have been obtained at the present price, \$5.00, the price of the work will be advanced to \$7.50 per copy. With the proof illustrations for examination, I hope to be able to increase the list more rapidly than heretofore. No man I know cares to contract for something he has not seen or knows nothing of, except what printed circulars may say of it. Especially is this the case when the country is flooded with subscription books, the most part of which are nothing more or less than trash—gotten up for no other purpose than to make money. It is true, however, that in a business point of view a man is not a success who does not make money; yet there are often those who will ride their hobby-horse at an expense.

In 1883 I had the pleasure of skinning two African Elephants of small size. They had died in a menagerie which was wintering near Columbus. From these the first sketches and drawings were made for my work by Dr. Jasper, for the building of the frame-work for large quadrupeds. Drawings were shortly after made from actual specimens of horses and dogs in course of preparation. Dog heads, according to my note book, then received our attention until no less than nine completed jobs (among them common curs) were finished for our purpose. This was the case with the birds, and in every instance extensive notes were taken during the course of preparation.

The skinning and mounting of snakes and turtles is, I think, interesting, and as clearly laid off as in the case of birds and mammals.

On the mounting of long-necked birds an original method is given, and I feel sure the illustrations showing the method will be a revelation to many.

We think we have laid down the best plan or system which angles and lines can exhibit for obtaining accurate positions in the legs of birds in stepping and running attitudes, this being one of the common faults in mounted birds in active positions.

You will remember that our first circular stated that the work would contain fifty plates; we have added four more practical plates, and if we can think of other illustrations which will make the practical portion of the art more clear we shall certainly, even yet, increase the number of plates. You have observed that many of the original illustrations which you examined are not mentioned in the advertisement of the work; one especially which pleases me is the oological plate representing a handsome nest bound in threads for preservation, together with egg drill, blow-pipe, embryo hook, etc., etc. The chapter on this subject is, I think,

as extensive and minute as any person will desire.

You will distinctly remember the several plates on the mounting of the horse, containing all the minute details of the process, beginning with illustrations of the cutting out of the center board, then with the half-round side pieces, the sawing and bending of the neck-piece, and the whole lathing of the frame and the completed model in clay. The same is carried out in the illustrations of the Greyhound.

The text is full upon the skinning and dressing down of the skins, the management in each case and the best liquid solutions for baths is given for preservation of skins and relaxing before placing them on the clay model.

The work at this date is *ready for press* and when the prospects are good for obtaining the 500 subscribers, the book will surely appear within at least sixty days thereafter. The present indications are encouraging and all subscribers will receive due notice previous to the appearance of the work.

To be frank with you, I feel that I have already invested so much time and money in the project, that I really do not expect to be compensated by any remuneration from its publication. All I can hope for is to see the work completed in the manner which the circulars have explained. I must give due credit to THE OOLOGIST for its influence in securing a large portion of the subscribers already obtained, and I heartily thank you for your kind and liberal assistance.

Very truly,

OLIVER DAVIE.

[By permission, we print the above letter from Mr. Davie. Our readers will find therein, answers to the many queries they have deluged us with regarding Mr. D.'s great work on Taxidermy.—ED.]

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

TERMS OF SUBSCRIPTION.

Single Subscription, - - - 50c per annum.
Sample Copies, - - - - - 5c each.

The above rates include payment of postage by us.

Send stamp for Premium List.

All subscriptions must begin with either January or July issues.

Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped, and all arrearages must be paid.

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

* Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

"The Bittern" of Damariscotta, Me., speaks editorially of ye editor as "probably the best known dealer in curiosities and specimens of Natural History in America." Midst a daily mail, ranging from fifty to one hundred and fifty pieces, we are at a loss to know whether to ascribe the great diffusion of blushes that covers our lovely features to guilt, modesty or excessive bashfulness.

A. M. George, Gibbon, Neb., writes us an interesting account of unexpectedly finding set of Wood Duck of June 22, '89, while on a fishing excursion.

Our old friend, Mr. C. B. McPherson, of St. Petersburg, Fla., sends us a good article on the killing a "gator;" but as it is not egg-zaactly oological, we were obliged to return it with our regrets.

Mr. L. G. Beekwith, of Bay City, Mich., writes of finding a Phœbe's nest as follows: "Found it on the side of a boat house, on the shore of Timber Lake, near Pontiac, Mich. A spike had been driven through the walls, from the inside, and had projected two or three inches on the outside of the shed. On this, and the splinter which the nail had detached, the nest, which was exactly like a common Phœbe's, was placed. It contained three eggs, two of a light cream color, unspotted, and one of the same ground color as the other, but having reddish spots on the large end."

Subscriber, Ottawa. The eggs of the Bohemian Wax-wing are in color and markings almost exactly like those of its smaller relative, the Cedar Wax-wing; in size, however, they are much larger—averaging about 1.03 x .70 in.

H. C. L., Santa Barbara, Cala. The Shrike of your locality is the California Shrike; this species was formerly supposed to be the White-rumped.

B. C. R., Toulon, Ills. Your sparrow, nesting in a big thistle close to the ground, was doubtless the Song.

The Snowy Owl nests in the far north; we have not the space to give its plumage, etc., in detail, as the bird is too well known to most of the OOLOGIST'S readers.

Manton's "Taxidermy without a Teacher" is sold more extensively than any other 50c work on the subject.

Your long-legged Waterbird was undoubtedly a Heron of some species.

C. C. R., Boyce, Va. Your "Wood-hen" is doubtless the Pileated Woodpecker.

R. H. M., Memphis, Tenn. From your meagre description, should say your egg was that of the American Goldfinch.

H. E. H., Dryden, N. Y. Your "tip up" is the Spotted Sandpiper.

C. R. B., Little Rock, Ia. Descriptions of the Least Flycatcher and Dickcissel or Black-throated Buntings can be found in any reliable ornithology or in back numbers of THE OOLOGIST.

This answer will also apply to the many correspondents desiring descriptions of birds.

To those desiring descriptions of eggs we must refer as per the above answer and to Davie's "Key to the Nests and Eggs of North American Birds."

W. M. B., Los Angeles, Cal. Desires to know the difference between the Parkman's and Western House Wrens.

Mr. C. C. Purdum, of Wood's Holl, Mass., sends us his method of taking notes on migration, which, by the way is excellent, but as former OOLOGISTS have contained similar methods, we do not publish.

C. A. V., Lake City, Minn., writes. "During one of my collecting trips this season I found a Blue Jay's nest containing four eggs, together with which was an egg very similar to a Whip-poor-will, being about the same color, shape and size, though more glossy and smoother. Can you enlighten me as to what variety of a bird deposited that solitary egg?" We would suggest that the stray egg must either have been a Blue Jay "sport" or a large egg of the Cowbird.

Notes on *Ardea Herodias*.

The Great Blue Heron, familiarly known as the Blue Crane, is a common summer resident in Wisconsin. It frequents slow streams, muddy lakes and marshes and often flies twenty miles from its nesting place for feeding grounds.

They do not go in large numbers, generally in twos and threes. Often coming upon them in my rambles, when thus silently fishing, I was led to believe there must be a heronry near and the more so when I found that they generally came from and returned in a certain direction. By inquiry I located it as being some where in a tamarac swamp covering at least 250 acres and distance some 15 miles—as the crow flies—

In May, '87, with a friend, I visited

the swamp and after a good deal of climbing we found the heronry; but the nests all contained young. Although we only reached about a dozen nests, as we had no climbers along, we were satisfied that the above was the case, for at the foot of trees, containing nests, we could find pieces of shells, and where the young were large, could see their legs projecting over the edge of the nest.

An approaching storm drove us out long before we wished to go, and I then and there resolved to go earlier in '88. Being sick at the time set I put it off till '89. This was my lucky year; and so on the morning of the 20th of April, at 3:00 a. m., in company with a friend, I started out. The Horned Larks were abundant on the uplands and sang till dawn.

Song Sparrows, Juncos, Jays, Robins and Bluebirds were common along the roadside. We noticed two new arrivals for the season also; but, seeing a Heron fishing by a stream, we let our thoughts travel far ahead, and I wished, before we had got over the last five miles, that our feet might travel as fast.

We reached the swamp at 6:10 and waded in.

The water was three feet deep at the edge, but as we advanced towards the center it grew better. We reached the nests at 8 o'clock and the sight we then saw repaid us well for the wet clothes and bruised bodies. The day was a perfect one. The herons, some sitting on the nests and some flying about uttering at times their harsh *Konk!* *Konk!* made a picture I shall never forget.

The sun shone brightly and the air was shifting, but not stopping for a rest, we strapped on our climbers and made for the nearest trees containing eggs, and started on the ascent. We were, or rather I was, doomed to disappointment again this year, for we discovered much to our chagrin—a party

had visited the swamp two days ahead and taken all the available sets. It was with difficulty my friend secured a set of four.

The average size was 2.68 x 1.82. The texture of the shells was very rough and they were covered in places with a calcereous deposit.

The nests, some two hundred in all, were placed on an average of forty feet from the ground. They were composed of reeds, found at the edge of the swamp, and some, mostly of the year, were lined with straw. The older ones, besides being dirty and weather beaten, showed signs of extra material having been added on year by year. The swamp has evidently held this heronry for years as the ground is white in some places so great is the accumulation of manure. The old nests are strong enough to bear the weight of a man, but as most members of the genus *homo* do not have the happiest of sensations when fifty feet from terra firma and swinging out far enough to reach over and get into the nests, I would advise that persons tunnel through them to get the eggs. The view from these trees—the tallest ones—is excellent and it was with reluctance we would put our glasses away when ready for coming down.

After a good deal of tramping we found our way out of the swamp and ate our dinner at the edge. While in the swamp we noticed the following birds: Mourning Dove, Am. Crow and nest with eggs, Flickers, Red Headed Woodpeckers, B. C. Chickadee, W. B. Nuthatch and Red Shouldered Hawks; but they were all very quiet and eluded our gaze as much as they could.

About a week after visiting the swamp I found that I had been severely poisoned with poison sumac. Although a certain doctor does not allude to it in his article on the dark sides of a collector's life in the O. & O. I should call it one of them; but, he may be writing from a doctor's standpoint, and

so he is able to reply: "Sirs, ye know, that by this craft we have our wealth."

On Apr. 21, 1890, in company with a friend, I visited the swamp again, but the heronry looked as though it was not half of its original size and the only occupied nests were in the very tallest trees. On inquiry from a farmer I learned that a taxidermist from an adjoining town came down and carried away three or four bags of skins and this with the havocs made by the Crows in robbing the eggs and the fiendish collectors will in time break up what must once have been an immense colony. Perhaps no one feels more indignant at those who will help to bring this about than the farmers living in the immediate vicinity to the swamp who believe the Crone, as they call them, are a benefit to them. In the hereafter that man who is caught carrying away eggs or skins may expect rough treatment at the hands of these good men.

The Great Blue Heron arrives in this latitude about the middle of March, but its return is variable. Following is Ardea herodias's modest "bill-o-fare": "Crabs, eels, shell fish and various fishes," (De Kay.) "In a carp pond one has been known to eat one thousand stone carp in a year," (Wilson.) Prof. F. H. King found a bull head in the stomach of one which measured 8½ inches in length. "Snakes, frogs, mice, fishes and insects," (Samuels.) "Fish of all kinds, frogs, lizards, snakes, birds, shrews, meadow mice, young rats and dragon flies. It destroys great numbers of Marsh Hens, Rails and other birds," "Audubon."

EDWARD P. CARLTON,
Wauwatosa, Wis.

The Prothonotary Warbler.

This handsome little Warbler arrives here about the 10th of May. This year (1890) I have found only two pairs during the season, so they are not what we would call common.

It seems as though their only object in coming here, is to raise their little family and get away again as quickly as possible. For several years I have tried to take a set of their eggs,—this season I am rewarded for my efforts with a nice set of six.

On the 7th of May I noticed a male. He seemed to be in a great hurry to find a nesting site, and spent considerable time looking down a small stove pipe that was sticking through the top of a fish-house,—a very poor place for him to keep house. To help the little fellow along, I cut a hole in a cigar-box and nailed the box up near by. The next day I found him very busily engaged carrying moss into the box. The 12th, a female was there to assist in the work,—the most important part of the family of course, and the nest was completed in three days. Here came a stop to the proceedings by the disappearance of the female for about a week. Six days after her return, she completed the set of six.

The nest was made entirely of moss, lined with a few horse hairs. The eggs are white, with a slight pinkish tinge, spotted over the entire surface with reddish-brown. On one, the dots form a ring around the middle of the egg,—on another, the smallest in the set, the dots are quite fine. A few days after taking the eggs and nest, I commenced to look around for the next nesting-place. Passing a barn one morning, I was surprised to see the female come out of the barn through a broken window. In a short time, she was back again with a mouthful of leaves.

After waiting a few days, I returned to search for the nest. Standing on a shelf near the window, was a tin cup, and there in the cup was the nest with one egg. This time the complete set was four, which I let her hatch. The eggs were very similar to the first set.

The nest was made of dry leaves and fine dry grass, with a few horse hairs

for a lining.

WHIT HARRISON,
Houston Co., Minn.

Breeding of the Virginia Rail.

On the 15th of June, 1890, while investigating a swampy tract near here for eggs of the common Red-wing Black-bird, I discovered an egg lying on the ground, in a depression on a small hummock, caused by a fast disappearing stump. On first finding it I could think of nothing but the American Woodcock, though the egg seemed very small for that bird. But after reflecting I concluded that it must be some other bird as it was far too late for the Woodcock to be breeding, here at least. As I knew the set could not be complete, I concluded to leave it for positive identification and more eggs, when found the nest was 5 inches deep, with no lining whatever. On June 17th I visited the nest again and did not find any bird on the nest. It was raining hard and the water was high around it. The nest was well lined with dead flag, stalks and moss so as to nearly fill the cavity. It now measured 7 inches in diameter and was but slightly hollowed. There were 4 eggs, all alike.

I was now certain that it was no Woodcock's nest as the Woodcock sets very soon after she lays the 3d egg, so I left the nest for further watching, which as I afterward found was fortunate. On the 19th I visited it again and found the bird at home.

I had never seen anything like it before so I did not disturb the nest though I saw as she left the nest that there were 6 eggs. As the bird ran around in the flags I took a good picture of it in my mind and then went home and got out my Key and found that it was the Virginian Rail. As I had never found this bird here before, though the Carolina Rail is common, I naturally felt much elated.

On the 21st I made my last trip when I found eight eggs, not daring to wait for any more eggs as the swale was much frequented by other eggers. I shot the old bird and took the eggs. They were all alike, light cream in ground color, finely spotted with light brown, with lavender shell spots. They were very even in size, measuring about 1.19 x .94 with very light variations. I had both the eggs and bird's skin identified and am sure of the bird.

ERNEST H. SHORT.
Chili, N. Y.

The Turkey Vulture.

This large bird breeds throughout all our country, in all suitable places. This bird does considerable damage here at times. They kill a large number of young pigs here every year and when I used to herd my father's sheep they killed lots of young lambs. They all attack young calves.

I don't know that I have ever found a calf that was killed by the birds, but have them with their tails and ears bit off by the buzzards and they will sometimes pluck eyes from a cow or horse which is too poor or sick to get up when down and leave the poor animal to face death without an eye.

The bird does considerable good, but it is so well known there is so use to mention it. They will eat any kind of flesh but prefer it fresh. I have known them to eat each other and they also eat mud and I believe can live on it for a long time. I have taken several sets of these birds' eggs this year and I found two of the birds that were tame, I had to pull them off to get the eggs.

I could write a half a day on this bird but for fear of the waste basket I will close. Some one tell me if they had to lift them from the nest to get the eggs.

KIT ATKINSON.
Dime Box, Tex.

The Yellow Rail, *Porzana noveboracensis* (Gmel) in Michigan.

In a list and article "Family Rallidae in Michigan," in the OOLOGIST of June 1888, written by myself (*Scolopax*), only a very few lines were devoted to the Yellow Rail as it was unknown to me. Since then considerable time has been given to the various lists published on birds of this state, and also to writing to various collectors regarding its presence here.

I find in the notes of numerous observers in the state and of the many collectors since 1839 that the following have recorded the species: First Sager's list published in 1839, the first catalogue of birds in the state. Miles also embraces it 1869. "Summer sojourner," according to A. H. Boies in his list of Birds of Southern Michigan 1875. Covert in his list of '78 says,— "Rare, Nine taken."

These are the only published lists recording it worthy of consideration, excepting Steere's list—Migration of Michigan Birds, 1880, which says,— "breeds." This is unexpected, and as the species has never been found breeding by other collectors here, a few lines from Professor Steere would be most acceptable on this question. In my list published by the U. S. Geological and Geographical Survey 1879, the Yellow Rail was embraced on authority accepted, and never till now has my acceptance of the bird as a Michigan species been verified by myself. At dusk on October 19th, as two hunters of renown of this city, Messrs. O'Byrne and Françoise were returning from a snipe shoot, they flushed an immature specimen of this interesting little bird from thick grass on low land near water, noticing it flew peculiarly and was a bird new to them, they shot it and gave it to me. One mark they noticed in particular which may be a point of identification when the bird is

on the wing—the white spot on secondaries is plainly to be seen. They say that the bird sprung up with more vigor and flew swifter than the other rails.

This species lays six to nine eggs, which are of a rich buff-brown and are marked with reddish dots at the larger end. The eggs average about 1.09 x .83. The nest is rarely found and the eggs are very desirable; and remarks about the breeding habits will be thankfully received by oologists.

MORRIS GIBBS,
Kalamazoo, Mich.

Epitome of "The Young Oologist" and "Oologist" from Birth to Date.

In presenting this recapitulation of THE YOUNG OOLOGIST and OOLOGIST, it is our intention to review briefly the many good things which, in our self-consciousness, we claim to have given to our readers, since the little journal took its origin; to take, as it were, a sort of retrospective glance at our career; or in the words of the poet, "to cast one longiug, lingering look behind."

As we look back over the seven volumes which comprise THE YOUNG OOLOGIST and OOLOGIST, we become aware that we are entertaining an almost unconscious feeling of pride, for which there may perhaps be a reason. The saying: "If a man blow not his own horn, by whom will it be blown?" contains more of truth than of poetry. And so, rather than run the risk of having our horn bespoiled with the rust of dis-use, we proceed to blow it ourselves. As an initiatory blast, we desire, conceitedly, to say that we believe that the seven volumes now nearly completed, comprise the most popular magazine devoted to birds, their nests and eggs ever published.

However, it is not the purpose of this article to sing the praises of the little journal, or to exalt it in any way; but merely to criticise it in a fair and impartial manner as though it were the work of other hands; censuring where censure is needed and commending where commendation is just.

We proceed directly to speak of the different volumes in detail, listing the

articles which are of major importance.

THE YOUNG OOLOGIST.

Volume I and II—Monthly.

As we look at Vol. I, No. 1 (May, 1884) and remember the time when we made "our start," and sent out our first number, we kind of chuckle with the memory of the thing. But, desisting from chuckling and noticing the succeeding numbers, we observe a marked improvement in each one, reaching better paper and colored cover, and finally culminating in June, 1885, at the close of Volume II, in an A No. 1 32-page journal, full of excellent matter of great use and benefit to every live collector, and as good an ornithological journal as was published.

Each number of Volumes I and II had more or less space devoted to the answering of the queries of our correspondents.

In April, 1885, at the close of Volume I, a complete and exhaustive index of that volume, together with title page for binding, was published.

From out of the many things which Volumes I and II afforded, we take space to mention only the following:

1. "Instructions for Collecting Bird's Eggs." By J. Parker Norris. Vol. I, Nos. 1 and 2. May and June, 1884, (continued). Pages 3 and 19. A reprint from *The County Gentleman*.

2. "Great Horned Owl." Editorial. *Ibid.*, No. 1, p. 5.

3. "Ground Dove" (*Chamæpelia passerina*). By T. B. Perry. *Ibid.* p. 10.

4. "Eggs of the Virginia, Sora, and Clapper Rail." Editorial. *Ibid.*, p. 11. Notes wherein these eggs differ from each other.

5. "Painted Bunting or Nonpareil." (*Passerina ciris*). By Troup D. Perry. *Ibid.*, No. 2, June, 1884, p. 21.

6. "California Mottled Owl." By H. R. T. *Ibid.*, p. 23.

7. "Notes on the Nashville and Hooded Warblers, and Golden-winged Woodpecker from Dighton, Mass." By C. S. P. *Ibid.*, p. 26. Notes a set (?) of 71 eggs of the Golden-winged Woodpecker taken during 73 days.

8. "Ornithology of the Island of Montreal." By W. D. Shaw. *Ibid.*, p. 27. Enumerates a list of 168 species of birds frequenting the island of Montreal as observed by Mr. Ernest D. Winter and the writer.

9. "Oological Items from Waterville, Maine." By C. B. W. *Ibid.*, No. 3, July, 1884, p. 35.
10. "Yellow-shafted Flicker." By W. B. K. *Ibid.*, p. 35.
11. "Yellow-headed Blackbird." By J. W. Preston. *Ibid.*, p. 36
12. "Orchard Oriole" (*Icterus spurius*.) By T. D. Perry. *Ibid.*, p. 38.
13. "The Black Stilt." By A. M. Shields. *Ibid.*, p. 41.
14. "Cardinal Grosbeak" (*Cardinalis virginianus*.) By T. D. Perry. *Ibid.*, No. 4, Aug., 1884, p. 57.
15. "How to Make and Use Bird Lime." A reprint from *Pease's Feathered World*. *Ibid.*, p. 59.
16. "The Eagle's Nest." By E. H. F. *Ibid.*, p. 61. Notes a difficult climb for a Golden Eagle's nest.
17. "California Birds; Their Eggs, Nests and Habits." By A. R. H. *Ibid.*, No. 5, Sept., 1884, p. 75. Contains interesting notes on several Californian birds.
18. "Nest of the Black-throated Green Warbler" (*Dendroeca virens*.) By H. H. M. *Ibid.*, p. 77.
19. "Bachman's Finch." (*Peuceea aestivalis*.) By T. D. Perry. *Ibid.*, No. 6, Oct., 1884., p. 83.
20. "Dove vs. Robin." By H. E. Deats. *Ibid.*, p. 83. Relates the using of a deserted Robin's nest by a Mourning Dove.
21. "Wisconsin Birds" By C. McCollum. *Ibid.*, p. 92. Enumerates 270 species of birds observed by the compiler in the central and eastern parts of the state.
22. "A Singular Duel." By C. B. Wilson. *Ibid.*, No. 7., Nov., 1884, p. 98. Notes a contest between a Blue Jay and a Sharp-Shinned Hawk.
23. "Spurred Towhee; Least Tit." By H. R. Taylor. *Ibid.*, p. 100.
24. "Dove vs. Robin; White Robin Eggs." By J. L. Hollingshead. *Ibid.*, p. 103.
25. "A Four-Story Nest of the Summer Yellow-bird." By L. H. A. *Ibid.*, p. 107.
26. "Blue Grosbeak." (*Guiraca caerulea*.) By T. D. Perry. *Ibid.*, p. 107.
27. "Flickers in a Church Tower." By G. F. B. *Ibid.*, p. 108. Relates the nesting of six pairs of Flickers in that unusual place.
28. "The American Woodcock." (*Philohela minor*.) By Charles L. Phillips. *Ibid.*, No. 8, Dec., 1884, p. 112.
29. "Dove vs. Robin." By George P. Elliot. *Ibid.*, p. 113.
30. "The American Redstart." (*Setophaga rutocilla*.) By W. T. E. *Ibid.*, p. 119.
31. "A Five-Story Nest of the Summer Yellow Bird." By W. S. Scott. *Ibid.*, p. 120.
32. "Jottings from the Note-book of a Collector in Texas." By J. A. Singley. *Ibid.*, No. 9., Jan., 1885, p. 122. Contains many interesting notes, breeding, dates, etc.
33. "Trees Injured by Sap-suckers." *Ibid.*, p. 123. A clipping from an article of B. Horsford's in the Forest and Stream of March, 1883.
34. "The Barn Owl in Southern California." By Joseph L. Edmiston. *Ibid.*, p. 125.
35. "Nesting of the Winter Wren." By William L. Kells. *Ibid.*, No. 10, Feb., 1885, p. 133.
36. "Little Screech Owls in Pigeon and Poultry Houses." By E. C. W. *Ibid.*, p. 137.
37. "Prehensile Power of the Feet of the Crow." By Montague Chamberlain. *Ibid.*, p. 137.
38. "The Black Snowbird." By H. H. McAdam. *Ibid.*, p. 140.
39. "White-bellied Nuthatch." By E. T. Mack. *Ibid.*, p. 142.
40. "Correspondence." *Ibid.*, No. 11, March, 1885, pps. 146-150. Contains many interesting notes from many collectors, among which may be mentioned: "Ornithological Synonyms" by Dr. P.; "From California" by J. L.; "Nuttall's Poor-Will" by G. L. B.; "Meadow Larks in Winter" by T. M. D. P.; "From Wisconsin" by C. K.; "Collecting Among the Calaveras Group of Big Trees" by C. N. C.; etc., etc.
41. "Gambel's Quail." (*Soportyx gambelli*.) By Warren Carter. *Ibid.*, p. 154.
42. "The Maryland Yellow-throat" (*Geothlypis trichas*.) By Charles S. Phillips. *Ibid.*, p. 156.
43. "White-rumped Shrike." By Cyril Marr. *Ibid.*, p. 157.
44. "Land Birds of the Pacific Coast." By Edward H. Fiske. *Ibid.*, p. 158. Enumerates 297 species of land

birds occurring on the Pacific Coast between Alaska and Mexico.

45. "The Red-tailed Hawk." (*Buteo borealis*). By George H. Selover. *Ibid.*, p. 161.

46. "The Marsh Hawk." (*Circus hudsonius*). By Fred S. Odle. *Ibid.*, p. 161.

47. "Bartram's Gardens." By Harry G. Parker. Vol. II, No. 1, May, 1885, p. 1. Relates a visit to those celebrated gardens, giving much of general information concerning them.

48. "South Carolina Notes." By W. W. Northington. *Ibid.*, pps. 3-8. Gives extended notes on 103 species observed at St. Helena Island during March and April.

49. "Scientific Names." By Montague Chamberlain. *Ibid.*, p. 8.

50. "Nesting of the Great Horned Owl." By "Ortyx". *Ibid.*, p. 10.

51. "From Wisconsin." Correspondence from C. A. K. and B. W. *Ibid.*, pps. 17 and 18. Contains interesting notes on the White-bellied Nuthatch, Red-throated Diver, and Cedar Waxwing; also gives the dates of arrival, at Lake Koshkonong, of the different species of ducks.

52. "Interesting Happenings." By W. G. T. *Ibid.*, p. 22. Queer habits of the Crow and Spotted Sandpiper.

53. "A Newsy Letter from Texas." By J. A. Singley. *Ibid.*, p. 24.

54. "American or Red Crossbill." By E. T. Mack. *Ibid.*, No. 2, June, 1885, p. 25.

55. "Notes on the Cuckoos." By

H. K. Janison. *Ibid.*, p. 29. Notes an instance of the Yellow-billed Cuckoo depositing its eggs in the nest of a Black-billed; and of a Cuckoo's laying in an uncompleted nest.

56. "Notes from California." By E. H. Fiske. *Ibid.*, p. 29. Mostly concerning nesting habits.

57. "Nest of the Golden-winged Warbler." By William L. Kells. *Ibid.*, p. 31.

58. "The Fox Sparrow." (*Passerella iliaca*). By William L. Kells. *Ibid.*, p. 32.

59. "The Redhead." By A. M. Shields. *Ibid.*, p. 32. Among other things, relates the taking of fourteen Redhead's eggs, three eggs of the Ruddy Duck, and five of the Coot from one nest of the Redhead.

60. "The Horned Lark." By G. F. Breuninger. *Ibid.*, p. 41.

61. "Pygmy Nuthatch." By T. D. Perry. *Ibid.*, p. 44.

62. "Ferruginous Rough-Leg." By F. M. Dille. *Ibid.*, p. 44.

The foregoing enumerates only the articles upon the rare species and those concerning novel and unusual occurrences, and really mentions but a small proportion of the subject-matter of the *Young Oologist*.

The *Young Oologist* ceased publication with Vol. II, No. 2, and so Volume II, comprises but two numbers.

The following January, the *Oologist* made its appearance, posing as *Volume III*. The *Oologist* will be considered in succeeding numbers.

(To be continued.)

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CONTENTS.

The following table of contents enumerates some of the principal articles in each issue. The "short articles" mentioned are one column or less in length and are all of great value to the student.

Not mentioned in the list of contents, each issue contains one or two pages of "items" or "brief notes", one column to two pages of exchange notices, and from three to eight pages of advertisements, besides a "query column" which occurs in many, although not all issues.

THE YOUNG OOLOGIST.

VOLUME I. Nos. 1, 2, 3, 4, 5, and 12 each contain 16 pages. Nos. 6, 7, 8, 9, and 10 each contain 20 pages. No. 11 contains 36 pages.

No. 1.—Instructions for Collecting Birds' Eggs, (3 pages); Coues' Key; Twenty-four short articles. May, 1884.

No. 2.—Instructions for Collecting Birds' Eggs, concluded, (2 pages); Painted Buntings; Cala. Mottled Owl; List of Birds Found at Montreal; 21 short articles. June, '84.

No. 3.—Maine Items; Yellow-headed Blackbird; Orchard Oriole; The Slip System; Wilson's Thrush; Hand-book of Agassiz Association; 23 short articles. July, '84.

No. 4.—Screech Owl; Importance of Identification; A La. Herony; Cardinal Crossbeak; Eagle's Nest; How to Make and Use Bird Lime; 14 short articles. Aug., '84.

No. 5.—Bird-nesting.—To Collect Scientifically, (3 pages); Cala. Birds; From Wyoming; 22 short articles. Sept., '84.

No. 6.—Bobolink, (2½ pages); Sea Birds of Maine; Egging in Cala. Swamp; Old "Put" and the Bird's Nest; List of Wisconsin Birds; 12 short articles. Oct., '84.

No. 7.—Bronzed Grackle; Singular Duel; Fish Hawk; Spurred Towhee and Least Tit; Old "Put" and the Bird's Nest; Bird Island; 14 short articles. Nov., '84.

No. 8.—The Alligator; Collecting in Marshes; Woodcock; "Our Birds in Their Haunts;" Iowa Notes; Redstart; Summer Redbird; 18 short articles. Dec., '84.

No. 9.—Baltimore Oriole; Texas Jottings; Sapsuckers; Barn Owl; American Ornithologists' Union, (3 pages); How to Handle a Gun; Black-capped Titmouse; Egg of the Moa. Jan.

No. 10.—Winter Wren; Cala. Duck Hunting; Screech Owl; Davie's Egg Check List; Peacock with Queer Tastes; White-bellied Nuthatch; Blue Jays; Spotted Robin Eggs; 8 short articles. Feb., '85.

No. 11.—Bank Swallow; English Sparrows; Study of Birds; Gt. Horned Owl; Yellow-billed Cuckoo; Gambel's Quail; Conn. Notes; Intelligence of the Oriole; Yellow-breast Chat; Maryland Yellow-throat; White-rumped Shrike; List of Pacific Coast Birds; Knights of Audubon; Sample Data Blanks. (1 pages); 32 short articles. March, '85.

No. 12.—*Completes Vol. I.* Title pages for binding, with complete and exhaustive index. (8 pages.) April, '85.

VOLUME II. consists of but two numbers. Each contains 32 pages.

No. 13.—Bartram's Gardens; South Carolina Observations, (6 pages); Scientific Names; Gt. Horned Owl; Bank Swallows; Knights of Audubon; Hummingbird; R. I. Notes; Texas Jottings; 30 short articles. May, '85.

No. 14.—American Crossbill; Audubon's Birds of America; Illinois Notes; Destruction of Birds; Cuckoos; Cala. notes; Wrens on the Warpath; Golden-winged Warbler; Fox Sparrow; Our Winter Birds; Snipe Creek; Red-head; Wisconsin Jottings; Burrowing Owl, etc.; A Florida Trip; Horned Lark; Queer Homes and Nesting sites; Brave Bird; Ferruginous Rough Leg; Sparrows; Pigmy Nuthatch; 26 short articles. June, '85.

THE OOLOGIST.

Volumes III. and IV. are Bi-Monthly. The remaining volumes are Monthly.

VOLUME III. each issue averages 12 pages.

No. 15.—Full page Frontispiece.—*American Water Ouzels and Nest*; Chester Island and the Marsh Wrens; Birds of Cortland Co., N. Y., (4½ pages); A Cheap Cabinet; Nest of the Black-and-white Creeper; Summer Birds about Washington, D. C.; Davie's Nests and

Eggs of N. A. Birds; Water Blowpipe; 5 Short Articles. Jan. & Feb., '86.

No. 16.—Vagary of a Collector (Great Horned Owl Climbing Strap); A Hunt for Tern Eggs; Birds of Cortland Co., N. Y.; Notes from North Carolina; Whip-Poor-Will; Nest of the Brown Creeper; Black-billed Cuckoo Depositing Eggs in a Yellow-billed Cuckoo's Nest; Cannibalism of the Red-headed Woodpecker; 23 short articles. March & April, '86.

No. 17.—History of a Bird-Box; Tree Sparrow; Nests of the Green Heron; Bird Notes from Iowa; A Difficult Climb after a Red-tailed Hawk's Nest; Review of the Check-Lists of N. A. Birds, with special Reference to the new A. O. U. List (3 pages); The State of Maine as a Field for the Ornithologist; 16 short articles. May & June, '86.

No. 18.—My first White Crane's Nest; Spring Notes; Notes from Chester County, Pa.; Turkey Buzzards; How to Make a Cabinet; Chewink Nests in a Tree; A Cabinet for a large Collection; 13 short articles. Jy. & Aug., '86.

No. 19.—Collecting on Long Island; Chimney Swift; A Day with the Looms; Illinois Bird-Notes; Marsh Wrens; A Plucky Wood Pewee; Minnesota Notes; Yates County (N. Y.) Notes; 8 short articles. Sept. to Nov., '86.

No. 20.—*Completes Volume III.* Title pages for binding, with complete and exhaustive Index of Volumes II. and III. Dec., '86.

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No. 22.—Notes from Spoon River Region, Illinois; Peculiarities of the Ruby-throated Hummingbird; Purple Gallinule; How to Collect; Bird Surgery; Rufous-vented and Bendire's Thrashers and Canon Towhee; Newsy Items; Notes from College Hill, Ohio; Nesting of our Swallows; Notes from Sullivan Co., N. Y.; Blue-Gray Gnatcatcher; Notes from Connecticut; Fidelity of the Song Sparrow; 13 short articles. March to May, '87.

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- pages); Egg Collecting; Bird Voices; Road Runner; Notes on the Birds of Beaver, Pa.; 3 short articles. June, '88.
- No. 33.—Loon or Great Northern Diver (2 pages); Eggs of Mississippi Kite; Nesting of Brown Pelican; Breeding Habits of American Flamingo (3 pages); 3 short articles. July, '88.
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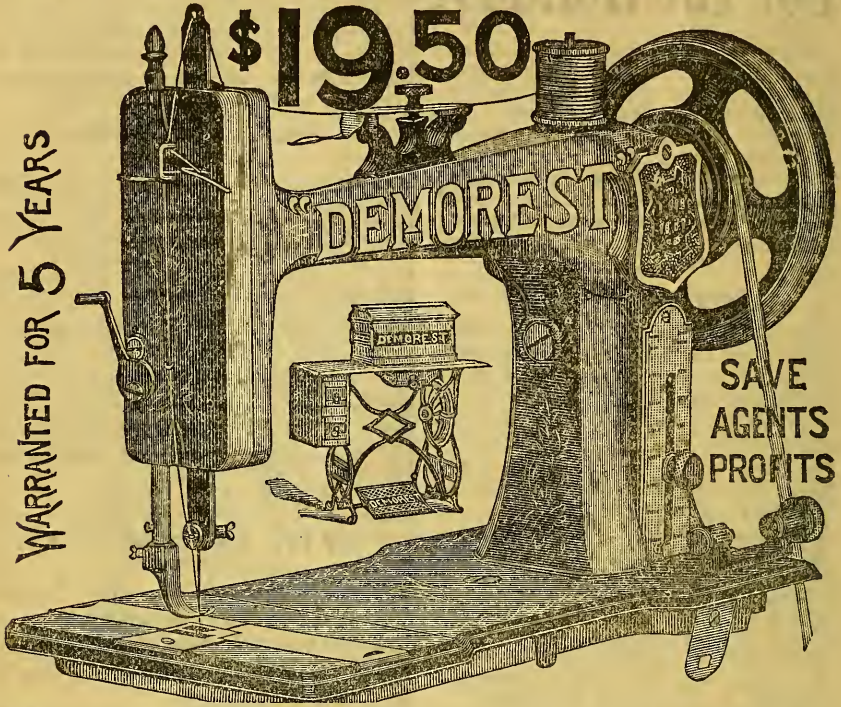
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The OOLOGIST is without a question the most popular and instructive magazine, devoted to Birds, their Nests and Eggs, ever published, and while of special value to the Oologist and Ornithologist, its publisher is not alone in his belief that Teachers, Scientists, Naturalists and curiosity collectors in all departments will find the OOLOGIST not only worthy of their attention, but of their *subscription*. On January 1, 1891, the OOLOGIST will enter its eighth volume, and it will be the aim of its publisher, with the aid of its subscribers, to make it of greater value than any preceding one. Each number for '91 will contain twenty pages (16 and a cover) and will be promptly and regularly issued the first week of each month. The OOLOGIST for 1891 will be sent post-paid to any part of the world

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THE OOLOGIST.

Monthly. 50c. per Year.

Vol. VII,

ALBION, N. Y., DEC., 1890.

No. 12

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per word. No notice inserted for less than 25c. Notices which are merely indirect methods of soliciting cash purchasers cannot be admitted to these columns under any circumstances. Terms, cash with order.

I received a large number of good offers from my X. in Sept. OOLOGIST. I think it was the best investment I ever made. ROBERT A. CAMPBELL, Hanover, N. H.

"I have received" 15 letters and cards in one day in answer to my notice in the OOLOGIST." N. BRADT, Eagle Harbor, N. Y.

"My exchange notice paid me big. Have exchanged about \$100.00 worth of specimens." W. E. SNYDER, Beaver Dam, Wis.

I received a good many answers from my last exchange notice in your paper and am going to try another. A. L. CHILDRESS, Decherd, Tennessee.



CAUSE.—A single notice or adv. in the OOLOGIST costing from 25 to 50 cents.

I HAVE sets with data only to exchange for same. FRANK CRAIG, No. 622 23rd street, San Francisco, Cal.

FOR EXCHANGE.—First-class eggs in sets with data of 666a, for other first-class eggs in sets with data. Send your list stating number of eggs in sets. WARD AMES, JR., 214 1st Ave., East.

I HAVE Wood's Nat. His., Cloth and gilt binding, 700 pages, well illustrated, for sets. Make offer. For every set with data, I will give 5 fine Spec. of mistletoe or sweet Gumballs. WALTER BRADFORD, Mayville, Ky.

TO EXCHANGE.—1 Dwarf Thrush (worth 2.00) 1 of 420, 2 of 431, 2 of 27, 6 of 41; also these foreign eggs: White-throat, Red-backed Shrike, Red-leg Partridge, Tern and Moor hen; all first-class; for best offer of fire-arms of any description; list price of eggs by 1890 catalogue \$4.50, I use Ridgway's nomenclature. Address J. A. STEWART, Covington, Ga.

DATA BOOK.—600 pages, bound in boards and leather. Will exchange for eggs or works on Ornithology and Oology. Write for particulars to B. H. HOAG, Stepentown, Rensselaer Co., New York.

A FERRET is wanted by JOHN A. LOSEE, Richfield Springs, N. Y.

TO EXCHANGE.—Skins, Supplies, Books (Novels), etc., for skins, eggs, etc. Letters answered. W. F. DEALING, 1403 21 Av. N., Minneapolis, Minn.

WANTED.—Any eggs numbered from 1 to 40 A. O. U. List except 4, 6, 13, 30. What have you to offer. W. B. PORTER, 224 So. Oakley Ave., Chicago, Ills.

TO EXCHANGE.—A Juno Safety Bicycle, in good condition, for a well Bred Bird dog; must be Thoroughly Broken. A Pointer preferred. Write for Particulars. E. P. PECK, Clifton Springs, N. Y.

FOR EXCHANGE.—Michigan birds eggs for Southern or Western eggs, also pair climbers and large engravings to exchange for eggs—one "The Russian Wedding Feast." MRS. A. SIMMONS, Richmond, Michigan.

TO EXCHANGE.—A fine set ½ Bald Eagle's eggs with data, for a breech loading shot-gun in good order. Will accept best offer. Give accurate description. M. C. WHITE, Mathews, C. H. Va.

WILL EXCHANGE.—Stuffed Eagles, Snowy Owls, Great Grey Owl, Peacocks, Deer Head, Grandfathers Clock, Flint Lock Pistols, and War relics.—Wanted, Cuckoo Clock, Wolf Robes, Quackenbush rifle. S. O. BRUSH, Milton, Vt.

BOUND VOLS. II. III. IV. V. of Harpers Young People, and Vol. XXI. Wide Awake for other books, ornithological books preferred, should like Coues' Key. F. A. GREGORY, 1214 N. Court St., Rockford, Ills.

TO EXCHANGE.—Coins, Books, Curios, and Indian relics, for other Indian relics and Curios, pipes preferred, fine horn rack for safety bicycle or gun. Address with stamps, I. J. HEAD, Lock Box 15, Centralia Mo.

WANTED.—A 48 in. wheel, Safety or Victor Jr. preferred, other make also accepted. Can offer finely prepared skins and eggs in sets. Write for list also stating condition of wheel, also skins to exchange for same of other localities. Write soon sending list. All letters answered. A. W. NOLTE, W, 16th st., Los Angeles, Cal.

WANTED.—To exchange a Compound Microscope, magnifies 2400 times, one prepared object and two glass slips, the whole packed in a polished mahogany case; also 100 side blown eggs, for first-class eggs with full data; singles preferred. DIAL SWEET, Box 118, Strong, Maine.

EXCHANGES AND WANTS, Continued.

TO EXCHANGE.—The following singles: 366, 375a, 385, 263, 713, 622b, 505a, 413, 595, 591b, 360, worth \$3.00, for climbing irons, eggs or other offers. **RAY L. WILBUR**, Riverside, California.

TO EXCHANGE.—A collection of 72 different first class eggs worth \$3. 10, also No's 497, 525, 516, 382 A, O. U. 2nd class, for sets. Send offer. **S. CIARCOSCHI**, 5423 Indiana Av., Chicago, Ills.

NOTICE!—Have 84 species, 125 eggs, sets and singles; climbers and Star bicycle to exchange for, camera, type-writer or guitar, or will sell. Make offers. **GREEN CLAY**, Richmond, Ky.

WANTED.—A hand printing press, can offer Birds Eggs, Shells, scientific papers for same. State size of chase and price in Exchange. All letters answered. **E. RAUBE**, Giddings, Texas.

I HAVE ONE Shadow Album, \$36, in Confederate Money and six numbers of Treasure Trove. Will exchange for birds eggs. **CLARENCE PARCHMAN**, Okolona, Miss.

FOSSILS TO EXCHANGE.—Spirifer Whitneyi, Strophodonta Reversa, Orthis Iowensis, and many others for minerals, fossil, and curios: 25 per cent. off for cash from exchange list. **HERBERT E. BROCK**, Box 86, Mason City, Iowa.

BIRDS' EGGS. Skins, Shells, Minerals, Indian Relics, Coins, Stamps, Confederate Money, Curiosities, etc., to exchange for same. Send lists and receive mine in return. **E. M. HAIGHT**, Box 24, Riverside, Calif.

TO EXCHANGE.—I have a pair of tree climbers and straps in good condition, have never been used, which I will exchange for the best offer of Water or Shore bird eggs in complete sets and datas. All letters answered. **ROY RUSSELL**, Kokomo, Ind.

WILL EXCHANGE.—OOLOGIST of 1889 bound, of 1890 unbound and a 22-cal. pearl handled, revolver, either together or separately, for the best offer in stamps. **WILLIAM S. HUBBELL, JR.**, 369 Pearl St., Buffalo, New York.

WANTED.—Fine Indian relics. Will exchange for same 1000 rare U. S. Stamps. 5000 Foreign, 1000 copies of "Golden Days," "Good News," Outing, Twenty-five dollars' worth of books, Confederate Money. For first trade I will give a rare present. **JAMES ATHERTON**, Mokenca, Ills.

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I HAVE some foreign coins of the following dates for offers in firearms or cash: 1865, 1855, 1867, 1838, 1754, 1858, 1877, 1865, 1855, two without dates, two in time of King George. **HARALD PACE**, Covington, Ga.

I HAVE a large number of first-class singles to exchange for sets. Also eggs of my locality for others. **W. B. PORTER**, 224 So. Oakley Ave., Chicago, Ill.

PEOPLE'S ENCYCLOPEDIA and Grant's Memiors. new, sheep binding, for best offer first-class eggs in sets. Five '83 V nickles without cents, for best set of eggs offered. Send lists and get mine. **W. L. MORSE**, 706 Montgomery St., Syracuse, N. Y.

I HAVE one pair climbing irons, new, Vol. 69 Youth's Companion, single eggs and eggs in sets to exchange for first-class eggs in sets with data. **JOHN OLDFIELD**, Norton, Mass.

WANTED.—A few sets of the common Southern and Western varieties of Birds' Eggs, in exchange or for cash. Also desire to correspond with earnest and enthusiastic collectors of all sections. Send for list of sets. Address. **WALTER F. WEBB**, 18 Strathallan Park, Rochester, N. Y.

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Faithfully yours, FRANK H. LATTIN.

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See description on pages 94, 95 and 96 May Oologist, also letter on pages 224 and 225 November issue.

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Great Black-backed Gull.....	50	Belted Kingfisher.....	20	Cliff Swallow.....	04
American Herring Gull.....	25	Downy Woodpecker.....	25	Barn Swallow.....	05
Ring-billed Gull.....	30	Red-headed Woodpecker.....	08	Bank Swallow.....	04
Mew Gull.....	35	Red-bellied Woodpecker.....	20	Loggerhead Shrike.....	15
Laughing Gull.....	20	Golden-fronted ".....	75	White-rumped Shrike.....	08
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Caspian Tern.....	50	Nighthawk.....	40	American Redstart.....	15
Cabot's Tern.....	40	Western Nighthawk.....	50	Mockingbird.....	05
Forster's Tern.....	15	Chimney Swift.....	15	Catbird.....	02
Common Tern.....	10	Scissor-tailed Flycatcher.....	10	Brown Thrasher.....	03
Arctic Tern.....	15	Kingbird.....	03	Texas Thrasher.....	30
Least Tern.....	08	Arkansas Kingbird.....	08	Californian Thrasher.....	25
Sooty Tern.....	35	Crested Flycatcher.....	12	Carolina Wren.....	15
Black Tern.....	12	Phoebe.....	05	Bewick's Wren.....	50
Noddy.....	75	Wood Pewee.....	15	Vigor's Wren.....	25
Black Skimmer.....	12	Acadian Flycatcher.....	20	Baird's Wren.....	25
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Velvet Scoter.....	1 00	Western Meadowlark.....	12	FOREIGN EGGS.	
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Texan Bob-white.....	10	W. Lark Sparrow.....	05	Turtle.....	10
Willow Ptarmigan.....	75	Gambel's Sparrow.....	25	Python.....	1 00
Prairie Hen.....	20	Chipping Sparrow.....	02	Shark.....	15
Wild Turkey.....	75	Field Sparrow.....	04	Hammerhead or Leopard	
Chachalaca.....	1 50	Song Sparrow.....	02	Shark.....	15
Sooty Grouse.....	1 75	Heermann's Song Sparrow.....	11	Egg of Skate.....	05
Mourning Dove.....	03	Swamp Sparrow.....	52	Devilfish.....	10
White-winged Dove.....	30	Towhee.....	01	Egg Case of Periwinkle.....	20
Ground Dove.....	25	Spurred Towhee.....	25	Egg Case of Pharaoh's Serpents' Eggs.....	10
Cooper's Hawk.....	30	Californian Towhee.....	08		
Harris' Hawk.....	75	Cardinal.....	05		

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

THE OOLOGIST.

VOL. VII.

ALBION N. Y., DEC, 1890.

No. 12

The Rusty Blackbird. (*Scolecophagus carolinus*.)

Silent and un-noticed, clad in sombre dress, the Rusty Blackbirds pass us twice a year; once, northward-bound, early in the train of numberless winged travellers which yearly wing their way to northward breeding grounds,—these, before the cold blasts of March are hardly done, and still straggling by through the days of April; and again, southward-bound, 'mid falling leaves and hoar-frosts, tinted forests and crisp October mornings.

I said silent and un-noticed,—unnoticed because silent and unobtrusive, it quietly passes by, creating no disturbance to attract our attention, nor emitting any notes to draw our ear in its direction; but, unostentatiously, in large flocks, small flocks, and singly, they move by us unawares, stopping only in low and swampy places, and even when they are noticed, are seldom hailed as anything more than merely a "flock of blackbirds."

But what about these blackbirds? What if some blackbirds did fly north or fly south once? Or what if they did it twice a year? What of it? Nothing, only I thought that these un-noticed birds so seldom see their "name in print," that out of justice to them, I would be their advertising agent for once.

Well, as I have said, the Rusty Blackbirds are with us twice a year as migrants. It is in the autumn that the rust-color markings, from which this species takes its name, are most conspicuous, and it is then that it presents the appearance, most nearly, of a *rusty blackbird*. At this time, all the feathers of its glossy-black plumage are edged with this ferruginous setting, making the bird at once conspicuous and

easily identifiable when at not too great a distance.

As to size, the Rusty Blackbird is just about equal to the Red-wing,—or just a little larger, being about $9\frac{1}{2}$ inches in length and about $14\frac{1}{2}$ inches in extent.

A conspicuous mark of this species, aside from the markings of the plumage, is the milk-white iris.

The female has a pale stripe above the eye. She is slaty-brown above, and rusty and grayish mixed below. In the spring, the male has some of the feathers edged with rusty-brown, but the predominating "glossy-back" of the plumage out-does it, and renders it inconspicuous.

For some reason, I do not notice these birds very often in the spring, but it is during the chilling days of October, when chestnut-burrs have just dropped their tempting morsels, and robins are dividing themselves into squadrons and battalions for their forced march southward, that the Rusty Blackbirds force themselves upon my notice.

Some way, I always associate Rusty Blackbirds with frosty autumn mornings, falling leaves and hazy skies; and, likewise, hazy skies, falling leaves, and frosty mornings with Rusty Blackbirds.

I know not why these are always associated in my mind together, unless, may be, it is because my first acquaintance with the Rusty Blackbird was made on just such a frosty morning, 'mid falling leaves and 'neath a hazy, October sky.

That morning I shall not soon forget. It was October 21st,—yes, I know it was October 21st (would that I could remember historical dates and those of my business transactions as well as those of my ornithological achievements.)

Langille most truly expressed my sentiments when he said, concerning himself, in "*Our Birds in their Haunts*"

that the making of the acquaintance of a bird for the first time gave him almost as much pleasure as though he had been the discoverer of that species.

Surely I find it so. The meeting, for the first time, of a looked-for species, is a red-letter day in my history,—a date to be remembered. Do I not remember distinctly the day I met my first Fox Sparrow? Was it not March 27th? And wasn't it April 7th when I found that Chewink, strayed into this northern district? And wasn't it just two days later, April 9th, when, in a lonely wooded wilderness, I came upon my first Hermit Thrush? Yes, I know the morning referred to was October 21st. No amount of forcible persuasiveness could make me believe it to be the 20th or the 22nd. *That* morning was October 21st.

But I am deviating. The morning in question found me mounted on my faithful, two-wheeled steed of steel and nickle,—my bicycle,—at 6 o'clock,—twenty-five miles from home, and facing a steady, although gentle breeze. Oh! what a morning that was. A stinging frost had forced its subtle influence into every nook and crevice of Mother Earth and sent the last painted leaf twirling to the ground. The roofs of farm-houses and their adjacent barns and sheds, were so many sheets of frosted writing-paper, on which I dare stay, the fairies were tempted to enroll their names. And then the sun,—not many minutes up,—shining over all from a clear sky, made every frosted object truly beautiful. Meadows and pastures were vast, unbounded carpets of glittering whiteness, woven, "hit-and-miss," of frostiness and sunbeams. The mullein,—that despised and overlooked weed of the pasture and roadside,—was for once queen of all, for, with head aloft, and her large velvety leaves, deeply frosted, outstretched to receive the morning sun, she indeed excelled all other objects in beauty, and stood motionless as if anxious to show

to all the world the beauties of a frosted mullein-leaf. What wonder, then, that a breakfast-seeking goldfinch, undulating over the fence with his merry *tsee-te-day*, should stop just long enough to leave the print of his tiny feet upon her glittering mantle? But I am soaring.

It was cold that morning at 6 o'clock,—yes it *was* cold. With chattering teeth and quaking limbs, I pushed my wheel out of the drive-way of the old-fashioned farm-house of my uncle into the highway and headed my steed for home. Increasing my speed to a racing pitch, after about a mile of hard riding, I succeeded in driving the "shivers" from my body, became thoroughly warmed through and in keeping with the surrounding atmosphere, and settled down to a slow-and-easy gait to enjoy the richness of my ride. Oh, it was grand! The exceeding crispness of the air made the very act of breathing a luxury in itself. One could not but breathe full and long. Even now, as I write, I can almost feel my nostrils distended with one more draught of that frosty, morning air.

But those blackbirds,—I almost forget them. All the morning they were flying southward in flocks of a half-dozen or greater,—sent with one accord by this,—the first truly stinging hoarfrost of the fall. One flock would scarcely have passed overhead, before another could be seen coming in the distance,—and so, detachment by detachment, hundreds of Rusty Blackbirds were hastening to their winter-quarters, fully aroused to their sense of duty by this piercing October frost.

One lone individual came flying by himself (thus proving the truth of the saying,—"birds of a feather, flock together") as though he cared not for friend or travelling-companion.

Approaching, he alighted on the topmost twig of a large maple which stood at the intersection of another road, as though he were appointed sentinel to

guard the cross-roads; and, as I wheeled quietly by, he gave utterance to a subdued croak, as if to demand of me, the countersign.

Tonawanda Swamp is a large and extensive tract of some fifteen or twenty thousand acres of low, wet, marshy, swampy, boggy, peat-bottomed, mucky, wooded land, extending in an easterly and westerly direction for about twenty miles, and lying along the boundary line between Orleans and Genesee counties.

Its width varies at different points from one to three miles. This immense wilderness is six miles from Medina, lying due south,—six miles as the crow flies, or eleven miles as the wild duck flies,—for the wild duck follows the creek, which flows in letter S fashion from the swamp to Medina.

The main road leading into Medina from the south runs through this swamp at a point where its width is nearly two miles, and this stretch of road, bordered on either side by vast, unbroken forests, furnishes not only a pleasant ride, but, to anyone at all interested in natural history, an overflowing store-house of wonders.

I don't remember the time when I have passed over this two miles of road and through these two miles of wilderness without seeing something new in the bird line.

But I was going to say that my path homeward on this afore-mentioned morning lay through this swamp and over this identical strip of road spoken of.

As I entered the confines of the swamp,—what was that?

I never had seen one before, but I knew the party at sight, and a great achievement it was to record a Blue Jay in these parts,—for, although abundant almost everywhere in the United States, in this particular section of Western New York the Blue Jay is a negative quantity.

The next thing noticed after the sensation caused by the appearance of the Blue Jay had passed by (as had the Jay himself) was a rustle in the bushes,—and lo,—*here* were Rusty Blackbirds.

If there were flocks flying overhead in the open country, here in the swamp were whole droves of them,—if hundreds of them had been flying southward high in air outside the woods, here were thousands lingering within its swampy recesses.

The underbrush was thronged with them, and the sombre hue of their rusty plumage harmonized well with the dying leaves and tinted foliage on every hand,—fit symbols of the dying year. How appropriate these rusty markings at this season of the year.

I had thought, when I saw the numberless flocks of blackbirds flying overhead that morning, that their number was beyond estimation; but when I encountered this vast host in the swamp, what numbers could approximate the blackbirds that were southward-bound that day?

Surely, of all that year, October 21st, was the day for Rusty Blackbirds.

But I will desist, and give my readers no further pain.

I have led them in a round about way over the country,—through swamps and elsewhere. I have told them about a morning ride, a heavy frost, a great big swamp, and a mullein-stalk, and all this under the title of "*Rusty Blackbirds*," while a small portion of my article only has been in relation to my subject.

What a wandering, soaring article, and what a wandering, soaring writer! I fancy I hear the reader saying. All very well, but if we call the writer foolish, what shall we say of him who has been so imposed upon as to waste his time in reading this?

That's all. Good-by.

Scotoleophagus carolinus is advertised.

NEIL FRANKLIN POSSON,
Medina, N. Y.

P. S. Having severed my editorial connection with the OOLOGIST, I feel perfectly free to impose upon its readers with the foregoing manuscript
N. F. P.

Noes from Ohio.

Our common winter residents, such as Slate-colored Juncos, Tree Sparrows, Fox Sparrows and Golden-crowned Kinglets, have been here in large numbers since the latter part of October.

At this date, Nov. 15th, Juncos and Tree Sparrows are unusually numerous.

While passing through the woods one can frequently hear the harsh notes of the Winter Wren, and the observer may now and then get a glimpse of his grotesque form as he passes some opening in brush pile or log-heap.

The casual observer would hardly believe such a large voice to come from such a small bird.

A Rough-legged Hawk is occasionally seen perched on the dead top of some tall tree, patiently awaiting an opportunity to pounce down upon some unsuspecting field-mouse.

The Rough-leg is one of the commonest of our large Hawks.

The migratory warblers that stop here during their fall migrations have nearly all departed for the sunny south.

A few stragglers of *Dendroica coronata* may yet be seen.

Every large flock of Chickadees or Golden-crowned Kinglets that I have seen this fall has been accompanied by one American Brown Creeper; and only one.

I have rarely observed a flock of Chickadees or Kinglets in the fall or winter not accompanied by a single Creeper.

I have never seen a Creeper unaccompanied by other birds.

The result of my investigations may be due to the fact that the Creeper is not very common here.

What have others to say on the Creeper subject.

The Bobwhite which was nearly exterminated a few years ago by severe

winters has become quite common again, but will not remain so long if they continue to be hunted as they have been since Nov. 10th.

Although not common, the Northern Shrike is sometimes seen here.

I have known one of these birds to remain in the vicinity of a corn field for an entire day for the purpose of catching the mice routed from the shocks by the huskers.

When captured the mice are impaled on some nearby thorn tree.

The American Crossbill and Snowflake, or White Snowbird as it is commonly called, are seen here during severe winters only.

The Prairie Horned Lark breeds here in considerable numbers, but the nests are rarely found.

While in a large woods, five miles west of this place, in the latter part of June, 1890, I saw several American Redstarts, and although I was not fortunate enough to find a nest, I am confident that they nest in that locality.

Five or six years ago the Rose-breasted Grosbeak was hardly known here.

It has been common for the last three summers—often nesting in shade and fruit trees in the vicinity of houses.

The Red-eyed Vireo nested here in increased numbers the past season.

I noted one pair of Yellow-breasted Chats in 1890.

Nov. 11th was remarkable for the large number of Wild Geese that passed over this section.

I observed over 400—more than I had seen for five years previous.

One flock contained about 250.

Of our common birds the Catbird has suffered more from the effect of the egg collecting fever that struck this locality about A. D. 1885 than any other.

As the Catbird was very common at that time, and the nests are rarely placed more than a few feet from the ground, the young collector could secure the eggs without much risk to

his neck, and consequently the cabinets of several collectors in this locality contained a well assorted collection of the eggs of this species—in some instances honored or dishonored by the names of certain birds that happened to be impressed on the collectors' vision as the rightful owner glided noisily from the opposite side of the nest ere her real identity could be established.

The Catbird, however, was not discouraged and is fast recovering from the blow.

Among my best finds for 1890 was a fine nest and set of eggs of the Ruby-throated Hummingbird.

The nest was built on the crotch of a drooping apple-tree branch in an orchard.

I also found a nest of the Cardinal Grosbeak containing two eggs.

Upon approaching the nest a short time after its discovery, I saw a snake about two feet long, coiled up therein.

I drove it out, but as was to be expected, the nest was abandoned by the birds.

The Cardinal has become rare here.

I can say and truthfully too, that a single copy of the OOLOGIST is worth double the yearly subscription price to the collector.

Every present subscriber should induce, at least, one friend to subscribe and thus double its present circulation.

When that has been done it would be a good plan for to increase the OOLOGIST in size by about one-half.

[If each of our present subscribers would send us a single new subscriber we would be able to double the present size of the OOLOGIST.—PUB.]

I think I had better quit writing before I depart any farther from the subject.

W. H. OLNEY,
Poland, Ohio.

The Evening Grosbeak in N H.

It was Thursday, May 1, 1890. My

school was to close the next day and I had nearly all my movables packed, preparatory to spending my vacation in Maine. My large gun was in the bottom of my trunk. My small gun was in an extension case, the pieces of the gun being carefully wrapped in paper. The shells were somewhere in the case, which was well filled and tightly strapped.

I arrived in front of the school building at just three minutes before one by the town clock. School was to begin at once. I heard a new and peculiar note. I soon discovered the author in a maple tree near by.

I hurriedly threw my armful of books to a scholar and asked him to watch the bird, while I ran to my room on the second floor of the hotel, about twenty rods distant. The contents of my extension case soon covered the floor. I seized a handful of shells and the three parts of my gun, which I put together while running back.

I had entirely forgotten my wanted dignity and was the object of several cutting remarks by the bystanders.

But what cared I? The bird was soon pointed out to me. He had flown to the other side of the road and was hopping from branch to branch in an old apple-tree. I made a lucky shot and the gasping, quivering form was soon in my hand. Too bad? Yes, but such work is necessary to an understanding of the science, and why should not the birds of the wood and air be subject to the wants of man as well as the barn yard fowl?

The bird proved to be an Evening Grosbeak. The first one I had ever seen alive. I was a few minutes late to school, but the scholars were interested in the specimen and I felt well repaid.

Is this the first instance of the occurrence of this bird in New Hampshire?

S. L. Crosby, a Bangor taxidermist, showed me last summer the skin of an Evening Grosbeak which he had taken

in the spring, the first one ever taken in Maine. Perhaps I have been equally successful in N. H.

A. B. CALL,
Henniker, N. H.

“The California Partridge or Valley Quail.”

This beautiful bird (*Callipepla californica*) is the principal game bird of the Pacific coast, although the Mourning Dove is “peppered” at considerably by the young hunter. The male’s beautiful head and topknot distinguishes him from the female. The topknot, as far as my observation goes, consists of five black feathers, although some say that there are six. The bird is a fast flyer and runner, and one needs a good dog and a true eye to obtain a mess. The bird will not lay to a dog like the Bob White, but will fly at his approach. The quail is rarely seen except on the wing, especially in localities where they have been hunted. The bird generally rise out of a bush and sometimes may be nearly stepped upon before they fly. A dog is generally necessary as the birds are liable to fall in thick brush and are hard to find.

They generally feed upon plains or hill-sides where the brush is thick, and the seed they feed upon plentiful. In some parts of the state they are considered a pest, as they feed upon the grapes and destroy large quantities of them.

As a rule they retire to the woods or some thicket to roost. In the morning and evening is the best time to shoot them as they feed then.

They congregate in flocks of from 10 to 150, and even more at some times. They pair about March and generally begin to lay in April.

I have never been able to obtain but one set of their eggs. In company with a friend I was going along the side of a canon, when we flushed an old bird. Running to look I found a nest containing 14 eggs hid under long

grasses so as to completely cover the nest. The nest was a shallow hole, lined with leaves, feathers and coarse grasses. The eggs were in different states of incubation and differed also largely in the style of marking. They were principally blotches and specks of old gold on a creamy-white surface. I would be glad to hear from anybody regarding the number of feathers in a quail’s topknot.

RAY L. WILBUR,
Riverside, Calif.

A Case for Instruments.

In the OOLOGIST for Aug. and Sept., 1888, J. H. F., Jr., gives a description for making a case for instruments which was very good. I have made a few changes in his plan and like the result better.

I happened to have a strip of black walnut $2\frac{1}{2}$ inches wide, $\frac{3}{4}$ in. thick, and several feet long (almost anyone will be able to procure a suitable piece.) From this I cut two piece 6 inches long. One of these I planed down to a thickness of about $\frac{1}{2}$ inch, slightly thicker in the center, having convex top, and rounded edges and corners. This for the cover.

Then cut places on the inside surfaces of these pieces as near the right shape of the instruments as possible, taking care to have them large enough. The pieces should now be sand-papered smooth all over.

Take two strips of velvet some what larger than the case and fasten them to the sides of the case in which the grooves are cut. For this I find strong flour-paste preferable to glue.

Now put the instrument in place and press the two pieces together, taking care to have the velvet smooth. Remove the instruments, place the two pieces together in their proper positions, weight them down and allow them to dry. *Never leave the instru-*

ments in the case while drying or they will rust very badly.

Now trim the velvet off close to the edges of the case, fasten the two pieces together with a pair of small hinges and a clasp or small hook.

The case may now be varnished or "oiled out." If "oiled out" the more it is rubbed with the hand when oiling the better it will appear, and it is usually necessary to give it a number of coats. For oiling I use boiled oil.

B. S. B.,
Phelps, N. Y.

NOTE: The case I have described will just about hold the instruments for preparing fresh eggs, and it is well to have a similar case for instruments for preparing incubated ones. I find it more convenient to have the instruments thus divided.

Notes from Island Lake, Fla.

March 6th. Found my first nest of Loggerhead Shrike, containing five eggs; was in an orange tree and composed of twigs, straw, feathers, etc.; lined with palmetto fibres

April 26th. Going through the woods and practicing with my climbing irons, I happened to find in a deserted flicker's nest containing two badly incubated Florida Screech Owl eggs.

April 29th. Took my first set of Flicker's. The nest was in a dead pine about fourteen feet from the ground, and contained four fresh eggs.

Continuing the hunt, I found in a dead pine about sixteen feet from the ground, my second set of Florida Screech Owl, containing two fresh eggs.

On the same day I found in an orange grove a Florida Grackle's nest, containing five fresh eggs.

May 1st. Found my first set of three of Anhinga eggs on an island in a pine tree fifty feet from the ground. Nest was composed of coarse twigs.

Then, walking along, I suddenly saw a Florida Towhee fly out of the bushes. Searching for the nest, I found it on the ground, composed of pine straw and dead palmetto leaves; lined with fine grass. It contained three badly incubated eggs.

May 6th. Took my third set of Florida Screech Owl. I also found a Florida Towhee's nest, containing two fresh eggs, in a small bush in a bay. Returning to the same place on the next day, I saw three eggs instead of two. Knowing the set to be incomplete, I left the eggs, and again returned on the 12th, but to my great disappointment the eggs had disappeared.

May 8th. Took my first set of Florida Night Hawk. These birds always lay two eggs on the bare ground.

May 9th. Found on an island my second and third nests of Anhinga. First contained one egg and one bird. Second contained four badly incubated eggs. Nests were composed of sticks; lined with green bay leaves.

May 24th. Found my first set of Chuck-Will's-Widow. The nest was on the ground; contained one rotten and one badly incubated egg.

NICKOLAS V. LINDEN,

A Bank Swallow Produces "An Egg Within An Egg."

On reading the article entitled "An Egg Within Two Eggs," it reminded me of an egg I found during the summer. It was a Bank Swallow's egg I was carrying in my hand, when accidentally I crushed it. On looking down I was surprised to find that I still had an egg. The shells were joined at the ends, but were separate everywhere else. My egg did not have any of the albumen between the shells, but was entirely dry.

GEO. P. SHEPHERD,
Bangor, Me.

THE OÖLOGIST

A MONTHLY MAGAZINE DEVOTED TO
ORNITHOLOGY AND OOLOGY.

FRANK H. LATTIN, ALBION, N. Y.

EDITOR AND PUBLISHER.

NEIL F. POSSON, MEDINA, N. Y.

ASSOCIATE EDITOR.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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Single Subscription, - - - - 50c per annum.
Sample Copies, - - - - 7c each.

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

Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible and can be mailed to either the Publisher or the Associate Editor, as you may prefer.

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

It is with much regret that we are obliged to inform the readers of THE OOLOGIST that the Associate Editor severed his connection with our little monthly last September—we have been very tardy in making this announcement as we thought it barely possible Mr. P. might be either coaxed or driven into reconsidering his withdrawal and continuing with us for at least another year as the marked improvement in the OOLOGIST during the past season has been largely due to Mr. Posson's efforts. During the summer months he was both Editor and Associate. In severing our connection with Mr. P. we lose a valuable co-helper and while it will be necessary for us with the co-operation of

THE OOLOGIST'S thousands of readers to place our "shoulders a little firmer to the wheel" in order to make the little monthly for '91 what it might have been with his assistance. While we are making this extra effort to make THE OOLOGIST for '91 better and more interesting than any previous volume, we can congratulate our Friend Posson upon acquiring and faithfully performing the duties of a Government official which from a pecuniary standpoint, must be fully as substantial as the honor and glory he obtained in his connection with us. Mr. Posson has agreed to keep "windward eye" on THE OOLOGIST and to occasionally "help us out" (?).

Nothing at All.

(A la "The Old Oaken Bucket.")

I

How fresh in my thoughts are those days of collecting,
Since in endless succession they return to my mind,—
How, through orchard and meadow, with shotgun and egg-box,
I searched every nook for the eggs I might find.
And when, in my rambles through forest and thicket,
I'd chance on a nest which my own I might call.
How I'd rush to the spot, and,—oh what disappointment.
To find that that nest contained nothing at all!
Contained simply nothing,
not a single thing in it, not even an egg-shell,—
no, nothing at all.

II

Then I'd gaze toward the tree-tops and murmur at fortune.
And replace the cover on my egg-box of tin;
And comfort my troubled and discouraged spirit
With the sad consolation that "It might have been."
Yes, I daily remember those deep disappointments;
And my hopes and ambitions almost instantly fall
To the soles of my gaiters with each recollection
Of the many nests found that contained nothing at all.

The Hawk's nests, the
Wren's nests, the nests of the Warblers, and
the many odd nests that contained nothing at all.

III

How fresh in my memory is that day in the summer,
When a nest of the Cerulean Warbler I found;
In the heart of a woodland, in a large, branching oak-tree,

Near the end of a limb, fifty feet from the ground.
The girth of the oak was something enormous,—
Nor was the distance to climb so exceedingly small,
And I came to the conclusion, as soon as I found it,
That all my previous big climbs were just,—
nothing at all.

My big climbs, my tall climbs, my climbs made with climbers,—in short, all my previous climbs, were just nothing at all.

IV

There are few things accomplished without difficulty.—
You'll find this the case in love as elsewhere,
(For we all of us know of that romantic fable Of Pyramus and Thisbe,—that buxom young pair;
And you'll distinctly remember,—for so runs the fable,—
That they did all their kissing through a hole in the wall),—
But I wish to remark that their great difficulty As compared with this climbing, was nothing at all.

The digging the hole, and the kissing done through it, may, both these combined, were but nothing at all.

V

But with much difficult climbing, I succeeded in reaching
The limb where the nest was,—at the risk of my life,
And straightway proceeded to haggle the limb off,
With the sharpest-known blade of my dull-bladed knife.
Then I drew the nest towards me with the greatest of caution,
And just had my hands on the precious, round ball,
When, *hang it,—confound it,*—(excuse the expressions).—*D cerulea's* nest contained nothing at all.

Contained simply nothing, not a single thing in it, not even an egg-shell,—no, nothing at all.

VI

I tell you in candor, my brother collectors,
That this business we're up to, depends largely on chance;
For the collector's experience is dreadful uncertain,
And much of his experience is not all romance,—
His looked-for achievements turn out to be nothing,—
When he expects something great, he finds something small.—
And how oft is it true when he thinks he's found something,
Disappointed, he finds that it's nothing at all
Just merely nothing,
expressed by a cipher, in something this fashion,—0—just nothing at all.

VII

Disappointment and sorrow is what we are doomed to,
In this cold, cruel world where we take our abode;
And we must not expect to find everything sunshine
Nor travel without finding stones in the road.
And now, my kind readers, I'll finish my ditty,—
But first, if you'll allow me, your attention I'll call

To the fact that most fables end up with a moral,—
If you ask me what mine is,—it's just nothing at all.

Not even a moral, and no point to my story, and the whole tale has amounted to nothing at all.

—Homo poeticus.

Answers to Queries in Nov. Oologist.

First; as to whether a crow can talk if its tongue is not split.

There seems to be an idea, prevalent over much of the United States, that if a crow's tongue is split the bird will be enabled to talk. Common sense, however, ought to tell us that if a crow cannot talk without its tongue being split there is no use in splitting it. I believe no crow could ever be taught to speak as well as a parrot, but that they are able to speak many words is beyond question. I have been the owner of one talking crow, and have seen and heard another that could swear "like a pirate." And all this without any cutting of the tongue. This latter crow's taste ran to the mimicry of animal sounds, such as the cackling of hens, the barking of dogs, etc. I think it will be found that certain crows possess more talent for speaking words than others.

The bird whose notes are described as sounding like "Sow, sow your wheat, sibley, sibley sibley," is doubtless the White-throated Sparrow. In Bradford Torrey's charming book, "Birds in a Bush," a story is told of a farmer named Peverly who received an injunction to sow wheat from this same bird. The White-throat has acquired other names from its song. In the White Mountains, Torey says it is called nightingale from its habit of singing late at night, and in other parts of New England it is called Peabodybird from a fancy that the bird says "pe-a-body" instead of "sibley" or "peverly." Wilson Flagg has also worded the song as: "All day whittling, whittling, whittling."

WILLARD N. CLUTE,
Binghamton, N. Y.

D. A. Young, Washington Heights, Ills., reports unusually large flocks of blackbirds this fall.

C. B. Vandycok, Odu, Ills., writes: "In reply to the article in Nov. OOLOGIST headed 'An Ornithological Leech,' would say I vary in my opinion, as

most birds take a bath in the early morning. I think it more possible for the leech to have adhered to the bird's body while bathing as the Leech is a water insect and seldom, if ever, elsewhere."

Several correspondents have furnished us with notes relating to queries and articles in Nov. OOLOGIST, but from lack of space we can print only the ones of greatest interest and value.

Irvin Martin, Topeka, Kans., writes that while herding cattle early in August he observed an Albino Cowbird, and says:

"Its wings and neck were slightly tinged with brown, but the rest of its body was almost pure white,"

R. I. Root, Alton, Ills., writes: "A farmer, living about three miles from this city, shot and killed a male Ba'd Eagle on his place about two weeks ago. Owls are very plentiful around here this year and come into the city a good deal lately."

In most cases it is utterly impossible to name birds and eggs from the meagre and incomplete (often fanciful) descriptions furnished.

H. A. Dunn, Cissna Park, Ills., sends us a list of the common birds of his locality. He also mentions of finding a House Wren's nest in the coupling of a freight-car and another in the nest of the Domestic Pigeon.

G. R. Palmer, Washington, Ga., says:

"Last season a gentleman was hunting near this place and saw a large bird (snow white) which he succeeded in shooting and skinning; he then gave it to me.

After examining the bird I found that it was a species of hawk.

As it is the only white hawk (albino) that I ever saw, thought it might be of interest to the readers of the OOLOGIST to hear about it."

Can some of our readers inform us the proper name for a game bird common on the plains of Texas and Kansas, known as the "Doe Bird." Our

correspondent thinks they are mere species of the Plover family.

I found two quails' nests Sept. 9th, about 10 ft. apart; thirteen eggs in each nest, nearly fresh. Is not this later than usual for nests?

W. L. ROWLEY,
Lenox, Mich.

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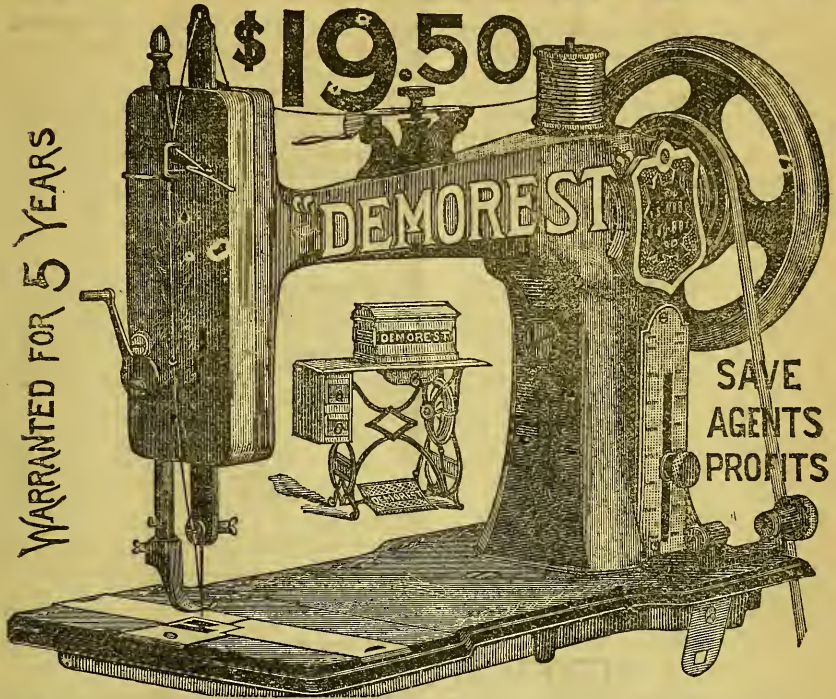
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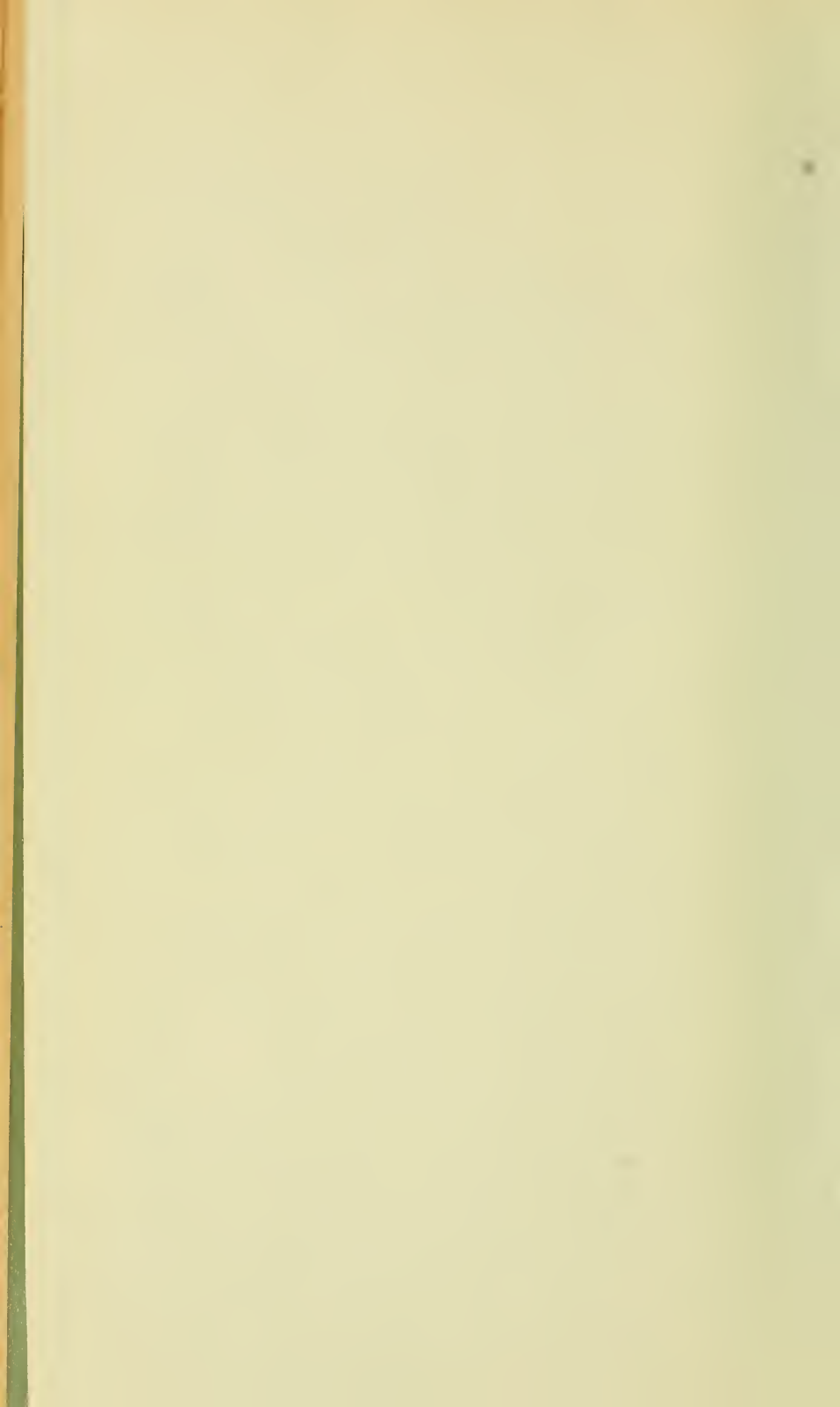
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