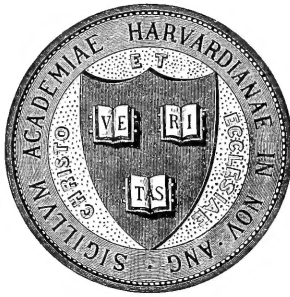


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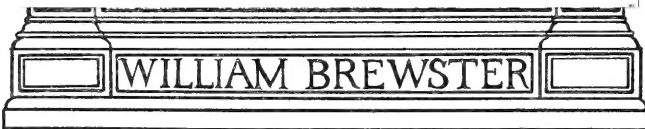
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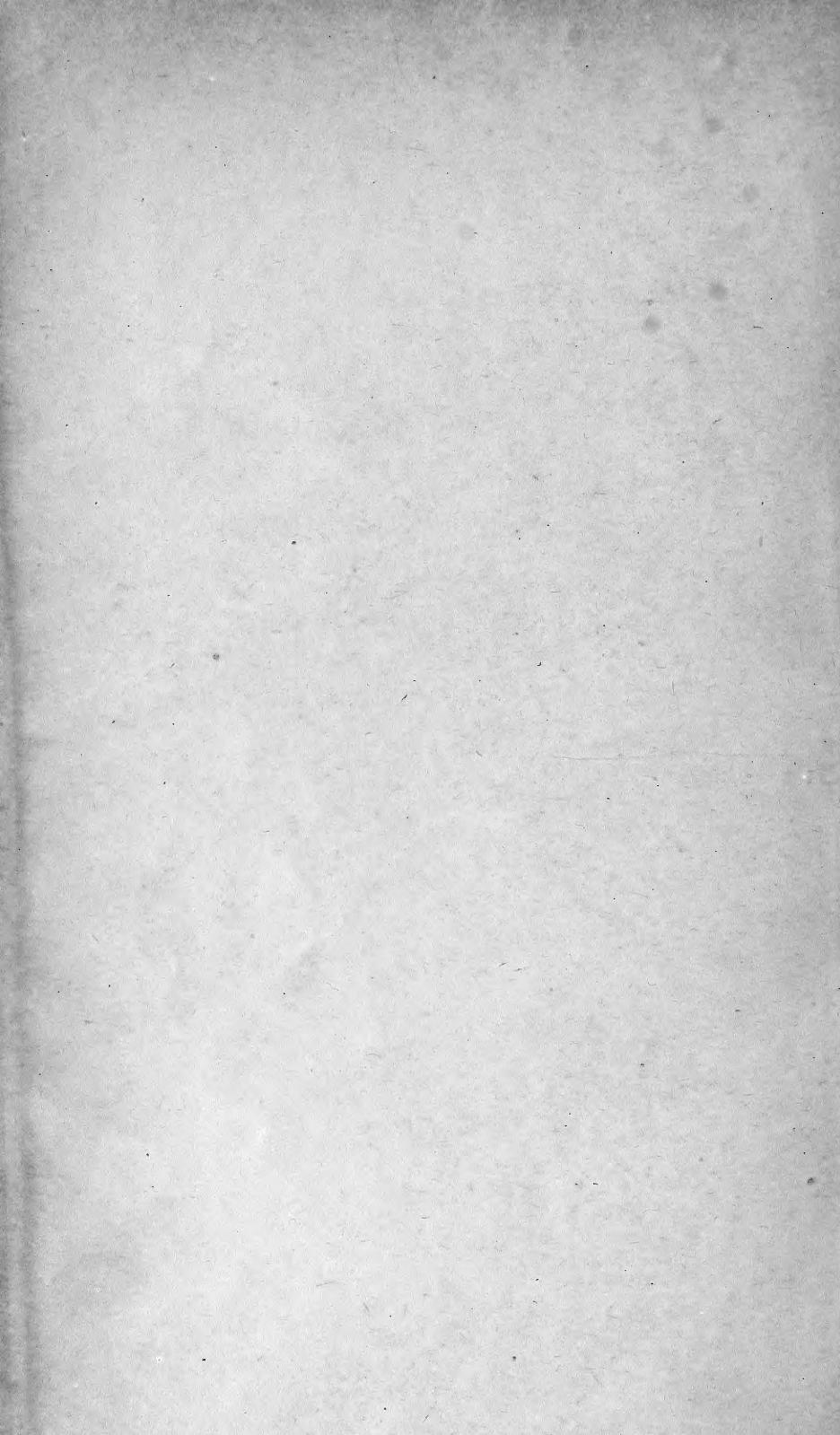
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— FOR THE —

STUDENT OF BIRDS,

THEIR NESTS AND EGGS.

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Vol. V, No. 1.

ALBION, N. Y., JAN., 1888.

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THE OOLOGIST

Vol. V, No. 1.

ALBION, N. Y., JAN., 1888.

PUBLISHED MONTHLY,
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The Brown Thrasher.

Harporhynchus rufus (Linn.).

BY OLIVER DAVIE.

I know not whether to wonder most at the range and variety of this bird's natural song or at his powers as a mimic.

In the latter consideration I would not dare to place him on the same plane with the far famed Mockingbird, but the scope and diversity of his natural song notes are something wonderful, and when heard under favorable circumstances fills the mind of the hearer with admiration for the bird whose lyrical powers are among the first of feathered songsters.

Never shall I forget the early dawn of a May morning in 1875, when the song of this bird first fell on my ears. I was bent on making a collection of the birds of Franklin Co., Ohio and many a spring morning, often long before daybreak, found me in the woods with my gun and note-book in hand.

It was one of those mornings when the whole face of creation was fresh and gay, when the gentle gales seemed freighted with the odors of budding vegetation, when everything tended to inspire the thoughts to muse on Nature's grandeur.

The sun's rays had not yet streaked the eastern sky and the mornings gray cast a lurid light over field and forest. From out the blue firmament, still twinkling with stars; came the crackling sound of the Purple Martin, and the guttural cry of herons could be distinctly heard as they winged their way in the calm morning air. The song of the cricket was on the wane and the croaking of the frogs dying away as the morning dawn was brightening. Near by flowed the quiet Scioto, along whose banks the sandpipers whistled while the cackling and crowing of fowls in the

neighboring farms told of the approaching day.

The grayness of dawn soon decayed and the clouds of floating mist vanished before the rising sun. A number of sprightly Goldfinches flew in their undulating manner through the air, and now the leafing trees along the river bank and in the little woods near by seemed swarming with birds; everything appeared to be animated with beauty, perfume and song. I listened to the multitude of mingled voices as they rang out in the pure atmosphere but they were scarcely distinguishable.

In another instant there came a sound surpassingly rich and melodious, like a voice from the spirit land. It was the plaintive notes of the Thrasher charming his mate with a love-song of bewitching sweetness in the boughs just above me.

I harkened to the delightful strain and a soft melancholy stole over my mind in the glorious dawn, while the dew-drops on the drooping branches glistened like jewels in the bright sunlight.

He sat on a bough with his brown and speckled plumage ruffled; his wings and tail drooping, but his head was turned heavenward, and as his throat swelled the wild, artless harmony of this great minstrel's song echoed and re-echoed throughout the woodland. He was a rustic musician and extravagant with his powers.

At first I thought his notes were the rustling of leaves until he burst forth with the lively chatter of the House Wren, then came the soft plaintive notes of the Bluebird followed by the loud *ker-ker-ker* of the Red-headed Woodpecker and the hurried clucking of the Golden-wing; again and again he repeated the mellow piping of the Kildeer Plover as it settles down on a pebbly shore. Sometimes his voice would die away into a liquid tone like the murmuring of a fountain, when suddenly he would

break forth again into the loud voice of the Robin or the harsh notes of the Kingfisher.

The songs of all the birds of the woods seemed to be within the range of his vocal powers. Even the subdued accent of the Nuthatch as it climbs about the trunk of a tree was distinctly uttered and the loud musical song of the Tufted Titmouse came from his throat clear and strong. The singular reverberating song of the Swamp Blackbird seemed to be one of his favorite melodies, often repeating it and interluding it with his sweet ventriloquistic strain that sounded like the trill of rippling waters. All of these, and his flute-like notes of the Meadow Lark which seemed to come a great distance across the meadows will never be effaced from my memory, and as each spring returns I long for the woods where I can hear again his matchless voice.

The Brown Thrasher usually occupies a lofty position while singing; morning and evening are the chosen hours for this exercise.

It is a shy, active bird and when inhabiting woods it generally retires to the most secluded parts. It loves the security of dense thickets and the solitude of deep swamps; at times several of them may be seen running along on the fences catching insects, now and then darting into bushy hedges or brush heaps to elude observation; every movement is accompanied by a graceful switch of the tail, and when an intruder approaches near its nesting place he is greeted with the familiar alarm note, *chuck chuck*. In August its food consists largely of wild berries of which the young seem to be particularly fond.

The bird inhabits Eastern United States and as far west as the Rocky Mountains, north to Maine and Manitoba, and south into Eastern Texas. It breeds nearly wherever found; making its nest in low bushes, or stumps, in clusters of wild vines and briars; in heaps of brush-wood and often on the ground. It may be frequently found nesting in the fruit trees of quiet orchards, and in trees situated in unfrequented places,

When the nest is placed on the ground where the soil is wet and clayey the eggs

become addled; three instances of this kind have come under my notice, and the eggs have failed to hatch. The same observations have been made by a number of my correspondents. The nests are rather loosely constructed of twigs, strips of bark, withered leaves, and black fibrous roots lined with horse hair and a few feathers.

The eggs are greenish-white in color thickly marked with reddish-brown dots, usually more numerous at the larger end. The number laid ranges from four to six and the average size of a large series is 1.08 by .83. Quite a number of these birds confined in cages have come under my observation and strange to say they never uttered a note of song. Even when reared from the nest, and under the most favorable conditions they were at all times perfectly mute, except that its alarm note is often sounded. When thus confined the plumage likewise fades; the feathers lose the gloss which they have when the bird is in its natural habitation and the eye which was once a bright orange yellow has now lost its fire and has turned a pale, sickly yellow.

Written for THE OOLOGIST, Dec. 10—1887.

Bald or White-headed Eagle.

Habituatus leucocephalus SAVIG.

Although the White-headed Eagles constantly appear in the wilder portions of New England, they are rare in the vicinity of Boston; thus I do not remember of having seen more than three or four, within the past fifteen years, at Newton, and the last one I observed was a fine adult which flew slowly by a few days ago, early in February, 1880. I have little doubt that these fine birds breed even in Massachusetts but such instances are very rare and in order to study this species to perfection, one must visit Florida where there are more nests in a given area than in any other section, and I have several times found three or four eyries, all occupied, within the radius of a mile.

These birds begin to breed in Florida very early in January, and the nest is usu-

ally placed in a huge pine, many feet from the ground. The first nest that I found was at Lake Harney, during my earliest visit to the state and as I was desirous of seeing what it contained, I determined to cut down the tree, for all my efforts to climb the huge bole, which was, at least, four feet in diameter, proved fruitless. Aided by an assistant, we succeeded in accomplishing the long, difficult task and the huge tree which had defied the gales of hundreds of years, fell with a resounding crash to the earth. We hastened to the nest which had evidently been occupied for years, for it contained at least a cart-load of sticks, many of which were decayed. In falling, the material had become somewhat scattered and upon pulling it over, we discovered two downy young, about the size of a common fowl, both of which were dead, having been killed by the shock. It may be assured that I was not very much pleased with the result of this method of investigating the contents of Eagles' nests and I have never since taken the trouble to cut down a tree in which these birds had placed their domiciles.

When the nest is approached, the parent Eagles do not exhibit any great degree of solicitude, merely flying about at long rifle range and uttering a harsh cackling note. They have a singular habit of dropping, at such times, when shot at and uninjured just as if they had been hit, and I have seen a female turn over several times, almost exactly like a Tumbler Pigeon. The males are particularly shy; in fact he will often leave the vicinity when he perceives an intruder.

On the eighth of March, I obtained young partly fledged at South Lake and on the nineteenth of the same month, saw the young sitting outside the nest; although they were fully fledged and as large as their parents, they were unable to fly but made frequent efforts to fly in air, balancing themselves on one foot, while they flapped their wings violently, but they could not evidently muster up sufficient courage to launch out.

I have intimated that the White-headed

Eagles occupy the same nests for years, and that they also guard it throughout the year, may be seen by the following instance. On the twentieth of April, I discovered a nest built in a solitary pine which stood on the north end of Merritt's Island and, as the Eagles were flying about it, uttering the cackling note of alarm, I concluded that they had eggs, so I laboriously ascended to the nest which was at least fifty feet in air with but few intervening branches. When under the nest, however, I found that I could not get into it, as it was, at least, six feet in diameter and projected over my head like a shelf. So I descended, but as the Eagles still continued to fly about and exhibit every mark of anxiety, I once more went up to their domicile and, after great exertions, succeeded in tearing away a portion of the nest so that I could look into it, when I found, much to my disgust, that it contained nothing but fish bones, the young having evidently left some time previous; in short, when I once more reached the ground, I saw them, in company with their parents, circling around the place and since that time, I have observed Eagles behaving in a similar manner late in the season.

As will be seen by the foregoing account, the nests are not very easy to get into, even when one succeeds in reaching them. I once ascended to a nest placed in a dead tree on one of those small keys which lie on the extreme south coast of Florida; and after making considerable effort, succeeded, by the aid of a limb, in getting into, or rather, on to the top. I found a perfectly flat platform, about six feet in diameter, solid in structure, where I could stand upright or even move about. It was empty, and after spending some time in examining the adjacent country, of which my elevated situation afforded an excellent prospect, I attempted to descend but, to my astonishment, this was not an easy task as I could not see the limb by which I had ascended, for it was a mere stub and did not project above the edge of the nest which was, at least, four feet thick. I was alone, my men having gone to the yacht

which was riding at anchor some two miles away, and I began to think that I was effectually caged and that I should be obliged to throw down a greater part of the nest in order to reach the limb, and indeed, had began to do this, when I unexpectedly came across it, swung myself over the edge, and was soon on the solid ground. This last nest which I have described, was not over thirty feet in air and I have seen them built even lower on the isolated keys of which I have been speaking.

These Eagles feed largely upon fish which they sometimes procure by robbing the Osprey but they often capture it for themselves by diving into the water. They will take wounded Ducks, and I once saw one swoop down and carry away a Buffle Head which I had just shot and which was lying on the water only a few yards distant.

While encamped on a small island in the Gulf of Mexico, near the mouth of the Suwannee River, I heard, one morning, a loud squealing among the half-wild hogs, of which there was an abundance in the place and, taking my rifle, went out to ascertain the cause of the commotion. I found that three Eagles were attacking the newly born progeny of an old sow and she was endeavoring to defend them. The little grunters, of which there were several, had taken refuge under the top of a fallen tree which, however, only afforded them partial protection; thus the Eagles could see them and, tempted by the dainty titbits, would swoop downward and endeavor to grasp the little black and white pigs in their talons but were constantly repulsed by the anxious mother who bravely defended her offspring, at the same time giving vent to some of the most ear-splitting squeals that ever a distressed hog uttered. I do not know how the strife would have ended, had I not interfered with my rifle so effectually that two Eagles lay dead upon the ground and the third flew away badly frightened. The Bald-headed Eagles, as they are sometimes called, breed in the North late in February and on Grand Menan, where they sometimes nest on rocky cliffs, during the first two weeks in

March.—*Maynard's Birds of North America.*

How We Shot a Golden Eagle.

While a friend and I were rabbit hunting a few miles north of Detroit on Dec. 3rd, 1887, our attention was called to a flock of crows on the wing. They appeared to be in great confusion and their loud continuous cawing could be plainly heard though the birds themselves were scarcely visible. Curious to know, what had caused this disturbance, I requested my friend (who fortunately had a pair of field glasses) to try and find out. He applied the glasses to his eyes and after looking a few moments, he informed me, that the crows were chasing a large bird, that they were making for the woods in which we were and that by concealing ourselves we were likely to get a shot. Upon this plan we immediately acted, my friend taking a position behind a large oak, while I got under a thick hazel bush. In this position we remained until the bird had arrived within gun shot, then rising I gave him my right barrel but was only rewarded by a cloud of feathers. This didn't turn him however and when he got nearly over me I gave him the remaining barrel the result being a clean miss. Quicker than I can write it, I had a cartridge in the gun and taking a quick aim fired. I think I hit him for he dropped a few feet but the next instant he had gained his former elevation and speed. Seeing that he was making straight for the place where my friend was concealed, I paid no further attention to it but kept my eye on the tree, behind which I knew he had hidden. One, two, three, and four seconds passed; would he ever shoot? It didn't seem so. Suddenly a puff of smoke issued from a low bush near the base of the tree, followed by a loud report. I turned toward the eagle (for an eagle it really was, and a large male of the Golden species at that) and was just in time to see it fall struggling to the ground. Well, the time I took in covering the space between the eagle and where I was, can hardly be equalled. The moment

he struck the ground, he threw himself upon his back, and offered fight. While standing there watching him, it occurred to me, that the crows were pretty quiet since I discharged my gun. I turned and looked for them but they were nowhere to be seen. They had probably considered the climate a little unhealthy in our vicinity and had escaped to the woods at our right. I again turned to the eagle; there he lay just as I had seen many a hawk and owl do before. While trying to think of some plan to carry him home, my friend's dog approached to near. I fancied I could see a wicked flash in the eagle's eyes, when out went one of his claws; this was followed by a howl of pain and the dog disappeared in the bushes. This was more than my friend could stand, and picking up the gun, he fired at the bird at six paces. On picking him up I found that his head and breast had been blown to pieces. Leaving him where he lay, we continued our hunt, getting six rabbits, and returning home just in time to sit down to a good warm supper.

Grant H. Rouse, Detroit, Mich.

Jottings from Florida.

Feb. 24th I collected a set of two Ground Dove eggs fresh; nest was situated on a dead stump two feet from the ground. composed of fine roots and grass.

March 16th I took a little walk in the neighborhood of a lake, and found three Logger-head Shrike nests; each nest contained five eggs, all fresh. The nests were situated in very scrubby Oak trees, at an average height of eight feet; were composed of twigs, moss, and horse hair. The Loggerhead Shrike is a very common bird here, raising two and three broods a season, beginning to build early in March; it has a habit of perching itself on a tree near its nest and, knowing this habit, it is not difficult to find their nests. The natives call this bird the Butcher Bird (and with some reason) for it certainly does "butcher" the smaller birds.

April 6th collected a set of four Sparrow Hawk eggs, fresh; nest was in an old Flicker's nest, in an old pine snag fifteen feet up.

This nest was lined with moss, the only instance I ever knew of these nests being lined with anything. The eggs are generally laid on rotten wood in bottom of hole.

April 6th collected a set of four Kildeer eggs, fresh; were laid on the ground in a slight depression in the vicinity of a pond.

April 7th collected a set of two Florida Screech Owl eggs; were fresh. Nest was in an old Flicker's nest, ten feet from the ground. Eggs were laid on bare bottom of the cavity.

April 8th found two sets of Boat-tailed Grackle eggs, fresh; the nests were situated over water in bushes. Nests were composed of straw, moss and mud, and lined with fine roots. This Grackle will often build three or four nests and only lay in one of them. Why is this? The average number of eggs laid in any one nest here is three (3), I have only found one or two nests containing four; have often found them containing two with incubation far advanced so the set must have been complete.

April 19th collected a set of two Florida Screech Owl eggs, were fresh; nest was in an old Flicker's nest twenty feet up.

April 22nd found several Mocking-bird eggs; nearly all were fresh.

April 25th my chum and I went collecting to a Herony five miles from home. We got there all right, and immediately proceeded to "strip" (the eggs are laid over water), we waded in and collected some forty or fifty sets of the Little Blue and Louisiana species, three-fourths of which were fresh. The average number of eggs laid was three; some contained four, and one contained five. Their nests were built over water in bushes, composed of sticks loosely laid together, making a very frail nest. In an average nest, you can see eggs from below. It is not a very pleasant task (if it should be called such) to wade in after the eggs, as there are lots of Alligators and very poison snakes in the water (I came nearly stepping on one, Ugh!) We started home about three o'clock p. m. arrived all safe, but very tired.

May 16th collected a set of Logger-head Shrike eggs, were slightly incubated.

May 20th I found a Red-headed Woodpecker's nest, containing six fresh eggs; I happened to pass the same snag several days afterwards, and seeing a Woodpecker fooling around, I pounded on the snag (our way of finding out whether they are at home or not) and was somewhat surprised when a Redhead flew out of the hole. I climbed up and found six more fresh eggs. Twelve eggs from one bird; who can beat it on a Redhead.

May 24th collected a set of three Killdeer fresh.

May 25th collected a set of thirteen Florida Quail, fresh; nest was by an old dead tree, composed of grass mainly.

July 24th collected a set of two Ground Dove eggs, fresh.

Now Mr. Editor, I did not intend to take up so much of your valuable space and time, but if this is not worthy of your notice, please consign it to the waste basket and oblige. With best wishes to all Oologists I remain,

Very truly,
A. L. Quaintance, Archer, Fla.

Destructive Nesting.

Some Serious Charges Made Against the English Sparrow.

Dear Sir:—Inclosed I send a clipping from *Lewiston (Maine) Journal* which may be interesting to the readers of the *Oologist* and I think the writer is in the right in regard to the English Sparrow. I find that our native birds are fast disappearing, so much so that our State passed a law to prevent egg-collecting. But from a long careful study of them, have proven to me there are three dreaded enemies to our Maine birds. First the Crow, second the Squirrel, last and worst of all, the English Sparrow.

The English Sparrow destroys 60 per cent.,
The Crow " 25 "
The Squirrel " 10 "

If any one disbelieves this, let him go out and carefully watch these pests, and he will come back convinced of the truth and

say, "away with them." The above figures are not of a days work, but of several years careful study, and what I have seen; if there is not something done, our State will soon be minus our harmless birds.

You will say, I have only 95 per cent., what becomes of the 5 per cent., well they are destroyed by various means, snakes, &c.

E. X., Maine.

A great deal has been said and written about the English Sparrow. It is claimed on good authority that the first successful colony of the birds was imported to Portland, Maine, in 1858, and at about the same time into New York, Brooklyn, Philadelphia and other eastern cities, in most cases the birds did well. They multiplied and spread gradually to neighboring towns. But the process of diffusion was slow at first, and it was not until 1870 that the species can be said to have established itself throughout the eastern states, and to have begun in earnest its westward march. From this time until the present the marvellous rapidity of its multiplication, the surpassing swiftness of its extension, and the prodigious size of the area it has over-spread are without parallel in the history of any bird. Like a noxious weed it has taken root and spread itself over half our continent before the people were awake to the evil of its presence. For many years it was looked upon with favor, and both food and shelter provided for them. He is a hardy, aggressive prolific bird, possessed of more than ordinary cunning. He takes advantage of the protection afforded them by the proximity of man, thus escaping nearly all the enemies which check the abundance of our native birds. Its fecundity is amazing, in the latitude of New York, and southward it hatches as a rule, five or six broods in a season, with four to six young in a brood, thus estimating the annual product of a pair to be twenty-four young of which half are male and half are females, and assuming further for the sake of computation that all live with their offspring it will be seen that in ten years the progeny of a single pair will be 575,716,983 698. As the towns and villages become filled to repletion the overflow move off into the country and the sparrows' range is thus gradually extended. Occasionally, however, it is suddenly transported to considerable distances by going to roost in empty box cars and travelling hundreds of miles. When let out again it is quite as much at home as upon its native heath. Our own cars returning empty except for these stow-aways, introduced the pests into St Johns, N. B., in 1883, and about the same time

into Monston, Fredericton and St. Stephen in New Brunswick.

That the English Sparrow is a curse which should be systematically attacked and destroyed, the action taken by the agricultural department of the United States government will testify. Questions relating to the English Sparrow were contained in the first circular on economic ornithology issued by the above department (in July 1885) during the current year, a special circular has been prepared with special bearing on this question, upwards of 5000 copies of which have been distributed. Answers received from thirty-two hundred persons show the English Sparrow to have established itself in thirty-five states and five territories. They show the sparrow to be an enemy of our native birds, its belligerent disposition forcing them to abandon their former nesting places. The birds which have suffered most from them are the robin, catbird, bluebird, wren, song sparrow, chipping sparrow, yellow bird, oriole and finch's, whose cheery presence in the parks and lawns in the nesting season, we now rarely enjoy. Again he is the enemy of the gardener and fruit grower, for in addition to the injury brought about by depriving our gardens and orchards of the protection afforded by our native insect worm birds, the sparrow causes a direct loss to our orchards and gardens, amounting in the aggregate to no less than several millions of dollars per annum,—affecting almost every crop produced by the farmer, fruit grower, and truck gardener. In the early spring it prevents the growth of a vast quantity of fruit by eating the germs from fruit buds of trees, bushes and vines, of which the plum, cherry, apple, currant and grape suffer most. Lettuce, peas, beets, radishes and cabbages, are attacked in turn and devoured as soon as they show their heads above the ground.

As an insect destroyer he is a perfect failure, but as a defiler of buildings, disfiguring them by his nests and excrement, he, on the other hand, is a perfect success. Instances are noted where he has seriously injured ornamental vines by the chemical action of the excrement. The luxuriant English ivy, which once covered portions of the Smithsonian Institute in Washington being thus totally destroyed by them. Our own custom house in Portland, a massive building of dressed granite, credited with being the finest custom house building in the country, is covered with projecting cornice which might serve as a resting place for the pests, with unsightly strips of wood filled with nails, points upwards, as a measure of protection against the sparrow.

For these reasons the sparrow must go. But how shall this end be accomplished? Other countries have found it necessary to greatly deplete the public treasury for the purpose. He should be systematically attacked and destroyed before such course becomes necessary in this.

By concerted action and by taking advantage of its gregarious habits much good may be accomplished with little or no expenditure of money. The sparrow is a wary, cunning bird, and soon learns to avoid the means devised by man for its destruction.

In the winter time if food is placed in some convenient spot at the same hour each day, the sparrow will gather in dense flocks to feed, and large numbers may be killed at one time by firing upon them with small shot. Poisoning is attended with much danger and should only be attempted by official sparrow killers. In this connection it should not be forgotten that the sparrow is an excellent article of food, equalling many of the smaller game birds, in fact it is commonly sold in southern restaurants under the name of "Rice-bird"

Ground Dove.

Chamaepelia passerina.

On October 12, 1887, I found nest of this species, *on the ground* in an orange grove, near Lake Helen, Fla. It contained set of two eggs *perfectly fresh*. I think this is the latest on record, for this species. Nest was in a slight hollow in the ground, lined with dry grass and leaves, sheltered by a bunch of weeds growing over it. In April, (1884,) number of *Young Oologist*, Mr. T. D. Perry says: "Have been collecting fifteen years and *never* found nest of this bird *on the ground*. They begin building last of April and I have found eggs early as May 5th." He also gives Aug. 31st as the latest nesting of this bird on record. In No. 6, Vol. I of the same paper, J. S. H., Tampa, Fla. says: "I found nest of Ground Dove in orange tree 6 ft. from ground Sept. 11th, incubation advanced. In this locality the Ground Dove usually nests *on the ground*." I think I have broken the record for late nesting, Oct. 12 and *perfectly fresh* too. Next.

L. S. Morrison, Lake Helen, Fla.

Sale of an Egg of the Great Auk.

Dear Sir:—My father has sent me the following particulars of a sale of an egg of the Great Auk, which might be of interest to the readers of the OOLOGIST.

Yours &c., W. R., Toronto, Ont.

"At Mr. Stevens's auction rooms, London this week, Dec. 14, a large number of Oologists assembled to witness the sale of an egg of the Great Auk. Before offering it, Mr. Stevens remarked that in 1880 two broken eggs of this bird were sold by him and that they fetched 100 guineas and 102 guineas respectively; this being equal to \$1,000 for the two eggs. Of the recorded eggs twenty-five are in eighteen museums and forty-one in nineteen private collections, forty-three out of the sixty-six being in Gt. Britain. The first bid was made at 50 guineas (\$250.), and the egg was eventually knocked down to Mr. L. Field at 160 guineas (equal to about \$820). A rather high price for a bird's egg."

Nesting of the English Sparrow.

Seeing so much in the papers about the "Torments" the "English Sparrows" I thought I would write of what I observed the summer of '87. There is one place where I go three times a week on a delivery wagon, that attracts my attention, and that is a very large button-wood tree, that contains twenty-one nests of this bird. The nests are from 9 to 15 inches across the top, and scattered all over the tree; it makes a curious looking tree. Another nest of this bird is not more than 25 yards from the store where I work, and the nest was placed in a dead rose bush, not more than six feet from the ground, but no eggs were laid, they left the nest for some reason.

P. C. Washburn, Taunton, Mass.

Bank Swallow.

During the breeding season, these graceful little creatures are constantly seen skimming over the water, now and then dipping in, then executing a graceful curve,

soar far up into the sky.

Their burrows are somewhat similar in construction to the Kingfisher, only smaller, being about four inches in diameter, and about two feet deep. At the end of the burrow is placed the nest, which is usually made of grass, feathers, or small sticks, and lined with down. Sometimes only a few sticks put together seem sufficient. The eggs are five or six in number, and when fresh, are of a delicate pink hue. They measure about .50 x .68.

C. F., Princetown, N. Y.

A Day with the Herons in Florida.

On the 27th of April, 1886, with a couple of companions, I started for a place called Bird Pond, of which I had heard much from the natives of that vicinity. Bird Pond, as it is called, is a small pond densely surrounded by trees and is full of button-wood bushes, varying in height from four to twelve feet. It is situated about twenty miles south of Gainesville, Florida, in Alachua Co. In spring hundreds of Herons come to breed at this pond. When we reached the place, we climbed trees to get a good look at the pond, which was a beautiful sight to the collector's eye. There were hundreds of Herons, some sitting on their nests, some flying, and some wading in the water. The beautiful White Egrets and Great White Herons and their dark cousins the Louisiana, Little Blue, and Great Blue Herons all joining their notes in one confused medley, made pleasant music. After getting a good look we descended and prepared to wade, for we had no boat and if we had we could not have propelled it through the thick bushes. We then started forth gathering the eggs in our hats, while the terrified Herons quacked and flapped over our heads. The nests of the Little Blue Herons were simply a few sticks placed loosely together in a bush, varying from four to eight feet from the water. The nests of Egrets and Night Herons were similar only a little larger, while the nests of the Snake Bird were much more bulky, and lined with green twigs.

After gathering all the eggs we could conveniently carry away, we started for home. We found that we had eggs of the following, viz., Snowy Heron, Little Blue Heron, Louisiana Heron, Green Heron, Night Heron, American Egret, and Snake Bird. We felt well repaid for the days tramp and that night slept peacefully, to dream of Herons, Egrets, &c. Oologically,

T. G. Pearson, Archer, Fla.

Among the Arctic Terns.

On June 13th, of the present year ('87) I made arrangements with the owner of a small fishing boat, to land me on Pumpkin Island, Eastern Egg Rock, and Thrum Cap Island. On the 14th, we came within sight of Pumpkin Island.

As we neared the shore, the Arctic Terns rose from the rocks by the hundreds, with screeches that were intended, perhaps, to drive us from their abode, but nevertheless we landed. Before I left the island, I had collected 176 sets of the Arctic Tern; 170 sets contained 3 eggs each, 2 sets contained 4 eggs each, and 4 sets contain 2 eggs each; I did not find a single set that contained more than 4 eggs. I found the average size of the eggs to be 1.64 by 1.20.

The nests were placed on rocks, composed of a few pieces of grass and sea weed; some sets were placed on the bare rock.

I might have easily taken 300 sets of three eggs each, and I intended to take a few more than I did, but on learning from a fisherman that as many as five hundred eggs were taken a few days before I arrived, by people who live along the coast. I asked him what they did with them, and he answered saying, they would go on the Island and smash all the eggs they could find, and a day or two after the smashing they would go on and gather all the eggs they could find, the smashing was done so that there would be none but fresh eggs. I again asked him what they did with them, and he said they used them for all the purposes that civilized people use hen eggs.

I went from Pumpkin Island to Thrum Cap Island, where the Black-crowned

Night Herons breed by the hundreds. I will perhaps describe my adventures on this island some future time.

Henry E. Berry,
Damariscotta, Me.

A Robin

Wintering in Western New York.

On January 22d, 1887, a mild spring-like day, I saw a Robin, perched in an apple tree, in a door-yard primming his feathers as calmly as though it were an April day.

The Robin was again noted Jan. 27th, which was a sharp, winter's day, with snow on the ground.

Our Robin left us last fall, about the first of November, but on the 21st of November, I saw a single specimen, which has remained in the vicinity of my home ever since, I think, as I noted it on the following dates: Nov. 22, 24; Dec. 1, 10, 26; and on January 1st, 1888, when it perched in a tree by my window chirping loudly as if wishing me a Happy New Year.

I relate these instances, hoping that they may be of interest to you.

I would also say that on the 27th of December 1887, a very cold day, with several inches of snow on the ground, I noted a single Song Sparrow, flitting along a fence by the roadside.

Neil F. Posson,
Medina, N. Y.

For the past four years we have had the OOLOGIST printed at a large printing establishment in Rochester; this has caused us much inconvenience, and frequently a full months delay in the issuing of our little Journal making it very unpleasant for its patrons, and ten times "unpleasanter" for its Editor. This issue with the future ones for '88 will be printed at home; the first few numbers may not look quite as well as former ones, for as yet it is new work for our printers, but we are sure that each succeeding number will be an improvement on its predecessor.

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 OOLOGIST, Oct.-Dec. and Jan., were not mailed until Feb. 13th, therefore do not hesitate in answering any advertisement or notice appearing in them through fear of their being *old*.

The Feb. OOLOGIST will be out before March 1st, March issue on March 15th, and the April and following ones *on time*.

To the readers of THE OOLOGIST. We will mail, post paid and gratis, to every one sending us their address on a postal card, a tasty souvenir of bird life. Be sure and send us the card before March 31, 1888. R. B. Trouslot & Co., 37 & 39 College Ave., Valparaiso, Ind.

All prices quoted in Jan. BULLETIN will hold good until April 1st. Davie's "*Egg Check List*" and Minerals excepted.

We want you (if you are not already a subscriber) to subscribe for the OOLOGIST at once. If you would rather send us first-class Bird's Eggs, we will send you the OOLOGIST during '88 with Premium for \$1.00 worth of Eggs of any the species on following list, at Jan. NATURALIST'S BULLETIN prices. If you have not quite enough to make the one-dollar's worth you can divide the amount you lack by two and send it to us in stamps or postal note with the eggs. This offer will hold good until APRIL 1st ONLY. Nos. wanted:—

2, 4, 10, 15, 16, 27, 36, 38, 41, 42, 51, 63, 63a, 67. Any of the Warblers (except 93), 115, 122, 123, 128, any of the Vireo's, 151, 155, 157, 168, 170, 170a, 181, 193a, 197, 231b, 231c, 233, 237, 240b, 258, 261a, 263, 264, any of the Orioles, 282, 293, 300, 306, any of the Flycatcher's from 312 to 326, any of the Hummingbirds, 354, 357, any of the Woodpeckers except 378 and 378b, 382, 387 388, any of the Owls or Hawks from No's 394 to 455, 459, 473, 477, 480, 482, 497, 501, 516, 525, 526a, 555, 557, 572, 582, 583, any of the Ducks, Geese, or Pelicans from 594 to 641, 642, 658, 671, 691, 693, 723, 729, 735, 733a, 736, 742, 760, 761, 763. We can also use eggs of any of above species at $\frac{1}{2}$ rates in exchange for other eggs.

The 2d. edition of Davie's "*Egg Check List*" is exhausted and we have not a single copy left even for reference. The new edition which is in Press (See announcement on cover page of this OOLOGIST) bids fair to be of many times greater value than any previous one. During the past few years we have sold fifteen hundred copies of this invaluable work and we have yet to find the first collector that does not consider it well worth the amount invested.

We need about 50 copies of the Dec. '86 and Jan. '87 OOLOGIST (they were stitched together) and will allow 10 cts. each in exchange for them, until we receive the required number; all must be in good condition.

Ridgway's Manual of North American Birds.

We have received from a friend the following Review of this invaluable work.

"A short time since I received one of the first copies of this work. At the first glance I at once believed that of all publications on ornithology this book was destined, to lead. Since then I have had it within arms reach of my desk, and though other works were equally as handy, Ridgway's has received the preference in all cases requiring a book of reference for identification of specimens.

Unlike most works heretofore published, this manual gives the name and description of every known bird occurring in North America north of the Isthmus of Panama. The names of those occurring in the United States printed in larger type, which makes them readily distinguishable from the others. Besides mentioning the appearance of a species in North America it also gives the other localities it may inhabit. In the preparation of this work, originally projected by Spencer F. Baird, the author has had unlimited intercourse with the National Museum at Washington as well as the largest public and private collections in the land, thus enabling him to give average descriptions and measurements, which, for reliability can not be surpassed. In describing eggs the average measurements of six specimens are taken of each species which, with the color description of nest breeding place etc., makes it a comparatively easy matter to identify many questionable specimens.

As a work of reference it will prove invaluable to every student of Birds, whether old or young. Its descriptions and measurements are not only complete but are exact and reliable, and I believe that when it becomes thoroughly known, that Ridgway's "MANUAL OF NORTH AMERICAN BIRDS" will be to the American Ornithologist what Webster's Unabridged Dictionary is to the English speaking people."

From West Virginia.

EDITOR OOLOGIST:—Never having noticed an article from a West Virginia collector in your excellent little paper, I have about concluded that the Oologists in this section are few, or they don't wish to give any one the pleasure of hearing from them on the subject of "bird life." Now in this locality (Greenbrier Co.) there is an abundance of bird life which I think will bear investigating. Having having been on a long tramp yesterday through a track of woodland be-

longing to my father, I kept my eyes open; and what did I see? Why, an abundance of Snowbirds, Golden-crowned Kinglets, Nuthatches, Chickadees, Goldfinches, Cardinals, Crows, a Great Horned Owl and a pair of Red-tails. The Red-tails nest here, and I think the Bubos also build here but I have never had the pleasure of finding a nest. November 4th, 1887, I shot a Great Northern Shrike near here, which is, I think, the first one killed in this locality. Now, Mr. Editor, don't you think the Oologists of W. Va., ought to wake up and help the science of Oology along. Thaddeus Surber, White Sul. Spr's, W. Va.

The Red-shafted Flicker.

One of our beautiful birds of California is the exact counterpart of the Yellow-shafted Flicker of the eastern states, the Red-shafted Flicker. Like its eastern relative, it is known by numerous names; Yellow-hammer, Red-bellied Woodpecker, Redwing, Golden Woodpecker, etc.; Yellow-hammer is by far the most numerous, but why it is called Yellow-hammer I am unable to state for it hasn't a spot of yellow on it. The following is a description of the bird as found in the *California Geological Report (Ornithology) of 1870.*

Shafts and under surface of wings and tail, orange red, a red patch on each side of cheek, the throat and a stripe beneath the eye bluish white, back glossed with purplish brown, crescent on breast, spots on the belly, incomplete transversed bands on back, black.

Through the same report I learn that it seldom excavates its own hole, but where it does a rotten branch is almost always selected.

The Red-shafted Flicker eats ants and berries as well as worms and larvæ. I have often seen boys and men kill these birds to eat, and they say that they are very nice. In roaming about I have found the Red-shafted Flicker in wooded districts, also in plains where the willows that line some ditch or slough were the only trees in sight. The eggs, usually six to nine, are pure glossy white. H. C. L.

From Lincoln County, Maine.

May 15. First set taken 1887 being a set of 4 Bluebird, fresh, taken from a hollow limb of an apple tree.

May 19. Took a set of 4 Pewee eggs, fresh, out of a nest situated on a beam in a shed; one egg had a few spots around the larger end, which I think is a very rare thing. (quite common—Ed.)

May 20. Took a set of 5 Brown Thrasher eggs, fresh, out of a nest composed of roots, very loosely put together; nest situated in a pile of brush, about six inches from the ground.

May 22. Took a set of Pewee eggs, fresh.

May 27. Took a set of six White-bellied Swallow eggs, fresh, nest composed of straws, twigs, and hair, with a thick lining of feathers, situated in a bird house.

May 28. Took a set of 5 Bluebird eggs, fresh.

May 30. Two eggs of Yellow-shafted Flicker.

June 1. Two eggs of Yellow-shafted Flicker.

May 30. Took a set of 4 Cliff Swallow eggs, incubation advanced.

May 31. Took a set of 4 Yellow Warbler eggs, fresh, nest contained one egg of the Cowbird.

June 10. Took set of 4 Bobolink eggs, fresh, nest composed of pine sprills.

June 11. Took two sets of Bobolink eggs, six in each set, incubation slightly advanced; nests composed of pine spills.

Note. I find it a very easy matter to take as many sets of the Bobolink as I wish, by watching the birds fly to and from the nest.

June 14. Black-crowned Night Heron, forty eggs, mostly in sets of four, incubation well advanced; collected on Thrum Island, Lincoln Co., Me.

June 15. Took a large number of Arctic Tern eggs, fresh. The eggs were placed on the bare rock, sometimes on a little sea-weed; most sets contained three eggs, some sets two eggs; none contained more than three; collected on Pumpkin Rock, Lincoln Co., Me.

June 16. Took a set of 4 Spotted Sandpiper, fresh.

June 26. Took a set of 4 Cedar Waxwing, fresh.

Henry E. Berry, Damariscotta, Me.

The Bullock's Oriole.

BY H. C. L., TULARE CO., CAL.

A great many of the western birds resemble the same eastern species but are smaller. In the far west the Bullock's Oriole takes the place of the Baltimore of the east.

In the beautiful Lucerne valley they are very numerous; they flit about the trees, now and again showing their beautiful plumage to the wondering person below who might be listening to its sweet song. The nest is a master piece of workmanship, so light that the lightest breeze rocks gently the wee birds, yet so strong that it hangs throughout the winter, withstanding the winter gales.

I remember wandering beside a little stream, either side was lined with willow trees, one bent far out over the water, and on one of its slender limbs an Oriole had built its nest; so that while the female was hatching the eggs, the male can join his song with the ripple of the cool sparkling water that flowed below. I looked into the nest from the bank on which I stood, and saw there a nice set of five pretty eggs; I did not take them for I had enough in my collection.

The Oriole uses a great variety of materials with which to build; but never takes more than it really needs. Fiber, yarn, string, horsehair, rags, paper, etc., are all put to some use by this ingenious bird.

The eggs, like all the Orioles, have scrawly marks over the larger end, creamy white with a bluish tinge, the markings are dark umber. The average number here is six; I have often found seven in a nest.

For the convenience of our friends who desire to bind their OOLOGISTS we will print an index of Vol. IV in next issue.

Acadian Flycatcher.

The nest of the Acadian Flycatcher (*Epidonax vadius*) is found, in this locality, in low moist woods, but it is not an uncommon thing to find them in high dry woods.

They are usually found suspended from a forked twig, overhanging a small brook, which winds its way through the woods.

These birds call the collector to their nest, by their shrill *chir-weep*. Although the birds never leave the vicinity of their nest, while the intruder is about.

I have seen but few sitting on their nests, and these would leave while I was yet some distance from the nest.

Following are descriptions of the nests and eggs collected by the writer the past season, ('87).

Set 1 Collected on May 28 contains three fresh eggs, of a cream color, with a few spots of reddish brown near the greater end. Nest composed of small twigs, leaves &c., suspended from horizontal twig of beach six feet from the ground.

Set 2 Same date, contained three fresh eggs. Nest composed of small twigs, walnut blossoms, lined with fine rootlets, placed at the extremity of a beech limb, eight feet from the ground.

Set 3 Collected on May 29, also contained three fresh eggs. Nest, grass, small twigs and downy substances lined with fine rootlets placed on a drooping branch, eight feet from the ground.

Set 4 May 29, contained four fresh eggs. This is the finest set in the series, being a rich cream color, with bold spots on the greater end with a few small specks over the entire egg. Nest composed of small twigs, leaves and walnut blossoms, lined with fine rootlets, suspended from forked twig of beech fifteen feet from the ground.

Set 5 Same date, contained four fresh eggs. Nest composed of the usual materials, and was suspended from drooping branch, nine feet from the ground.

Set 6 Same date, contained four fresh eggs. Nest composed of the usual material, suspended from a drooping limb, fifteen feet from the ground.

Set 7 Collected June 3rd, contained four fresh eggs: nest as usual and nine feet from the ground.

Set 8 Same date, contained three eggs, incubation begun, nest composed of the usual materials, placed in a forked twig, at the extremity of a drooping maple limb, ten feet from the ground.

Set 9 This set was collected on June 5, contained three slightly incubated eggs, nest as usual on a forked twig, twelve feet from the ground.

Set 10 Was collected on June 11th, contained three fresh eggs, nest composed of the same materials, and suspended from a forked twig five feet from the ground.

Set 11 June 12th, four eggs advanced in incubation, nest composed as usual and placed nine feet from the ground.

Set 12 Collected on June 15th, contains three eggs some what advanced in incubation, nest composed of the usual materials, placed in a small bush eight feet from the ground.

Set 13 Same date, contained four fresh eggs. Nest as usual and placed ten feet from the ground.

Set 14 Collected on July 3, contains two nearly fresh eggs, nest placed on forked twig ten feet from the ground.

Several of these nests contained eggs of the Cow Bird. On several occasions have I known the birds to abandon their nest, when touched by the hand, before it was completed, and even after the bird had deposited one or two eggs.

J. W. Jacobs,
Waynesburg, Pa.

Mr. Thos. D. Porcher of Willington, S.C. writes us that a White Humming Bird has appeared in his yard, but as yet, he has been unable to capture it.

A. B. R., of Weymouth, O. writes that on May 4th, 1887, he took a fine set of four eggs of the American Woodcock. The nest was placed in a fence corner at the edge of the woods.

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.

One pair 10-in. Roller Skates, one pair Rosewood Drumsticks, Houghtaling's Hand-Book of Useful Information, Six Genuine Confederate and Old Continental Bills, The Hornet's Nest, and Scott's Tales of a Grandfather, for the following sets with original data: 1, 13, 63, 67, 98, 153, 170, 170a, 254, 260, 273, 275b, 289, 304, 315 & 460, and a good blowpipe and 1 12-100 and 1 18-100 Drills and three Embryo Books with handle. Write first, F. H. TALLMAN, Moravia, N. Y.

WANTED.—To exchange California curiosities for eastern ones. ELBERT SAWYER, Box 242, Santa Rosa, Cal.

WANTED.—A set of 2 375a Western Horned Owl, a set of 2 Sand Hill Crane and following sets with nests: Cal. Bluebird, American Red Start, Chimney Swift, Short-billed Marsh Wren, Long-tailed Chat and Orchard Oriole. Also send list of any sets you may have with nests. Will give good exchange for above. H. W. DAVIS, North Granville, N. Y.

To Exchange for single eggs: several perfect sets of 2-6, 6 eggs each. Naturalist's Bulletin prices as a basis. I will give with each set free, one set of 153-5eggs. R. A. Wagner, Minneapolis, Minn.

I have stamps, coins, Chinese and others; some very rare "Hard Time" Canadian paper money; Birds' Eggs and Curiosities, which I will exchange for any good articles in curiosity line; would like Confederate, Colonial Currency especially. Send list of what you have, and want in exchange. H. E. Pendry, Gaines, N. Y.

WANTED:—Ferrets: please send lowest price, for Cash, Zach Taylor, Dunkirk, N. Y.

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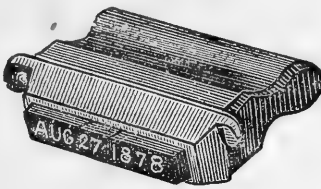
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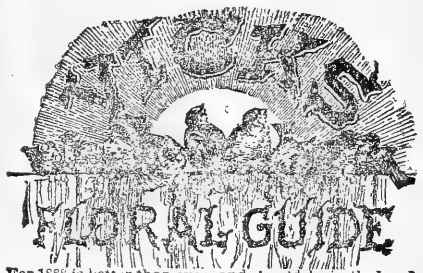
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Vol. V, No. 2.

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The Egg of Æpyornis Maximus.

The Colossal Bird of Madagascar.

BY GEORGE DAWSON ROWLEY, M. A.

As I have lately added to my collection the only egg of the *Æpyornis maximus* which ever came to this country, I venture to make a few remarks upon so interesting an oological specimen, and of the bird which laid it.

Three different parts of the world appear to have possessed enormous tridactyle birds, each of which opens out a great courser to our view. North America points to the foot-prints of the *Brontozoum giganteum* in the sand stones of the Connecticut valley; New Zealand boasts of her fifteen or twenty species of *Dinornis*, of which the *Moa Dinornis giganteus** is the largest, and Madagascar has lately revealed to us the existence of the *Æpyornis maximus*. The *Brontozoum giganteum* belongs to the Triassic period of geology, the vast antiquity of which, in some degree, weakens our interest. For the mind's eye retrospectively looking, takes dimly into its vision an object seen through countless ages of bygone time. The two Island Giants are well ascertained to have existed not very remotely, in fact in 'the Recent;' and come home to our imaginations in all their vivid reality, as things only of yesterday, or perhaps even to-day, as is thought by some, though of this I never have had any very great hope.

The most interesting discovery of the *Archæopteryx macrurus* Owen, in the quarries of lithographic limestone at Pappenheim, near Solenhofen, Bavaria, the only known speci-

mem of which may now be seen in the British Museum, places the osseous remains of birds (though this differs from all known aves in structure) much farther back in the geological periods than was before supposed, this rock being a member of the upper oolite. Vide Sir Charles Lyell's *Antiquity of Man*, p. 451, ch. xxii. As our business at present is with the avi-fauna of the last few hundred years, it is not proper to diverge into a discussion of 'the bird which never flew.'

There are three eggs of the *Æpyornis maximus* extant, the largest and finest eggs in the world. Paris possesses two and some fragments, the one in my collection is the third. When I purchased this, I was assured that it exceeded in magnitude the two others, which I find from a paper entitled *Compte Rendu des Seances de l'Academie des Sciences*, No. 4, 27 Janvier 1851, par M. Isidore Geoffroy Saint-Hilaire, tome xxxii. p. 101, to be the case.*

Previous to its falling into my hands, it had been shown at the meetings of the following societies in London: the Geologists' Association, Zoological Society, London Institution, and Geological Society. In the newspapers its long diameter is stated to be 15 inches, but I found by actual measurement, its real dimensions are as follows: Shape an ellipse, major axis $12\frac{1}{4}$ inches, minor axis $9\frac{3}{8}$ inches, great circumference $34\frac{3}{16}$ inches, small circumference $29\frac{1}{8}$ inches, weight avoirdupois 3 lbs. $11\frac{1}{2}$ oz. nearly. Contrast these with the following taken from Ostrich eggs in my cabinets. Smooth North African Ostrich: major axis $6\frac{1}{2}$ inches minor axis 5 inches, great circumference

*The two Paris eggs appear to be as follows:—

	ft.	in.	ft.	in.
Great diameter - - -	1	1.38608	1	0.59866
Small diameter - - -	0	8.85843	0	9.05529
Great circumference - - -	2	9.46519	2	9.07148
Less circumference - - -	2	3.96327	2	4.34698

**Manu* is the general name for bird in the groups south of the equator, from Tahiti, westward, to Samoa and the Friendly Islands. The word *Moa* is strictly limited to the domestic fowl.—Vide *Athenæum*, N. 1885, Dec. 12, 1863.

18 $\frac{3}{4}$ inches, less circumference 17 inches. A rough South African Ostrich has major axis 5 $\frac{3}{4}$ inches, minor axis 5 inches, great circumference 17 $\frac{5}{8}$ inches, less circumference 16 $\frac{1}{2}$ inches. The former of these was picked out as a very large egg, but the axes of the *Æpyornis* give nevertheless a proportion of nearly two to one. Are we, then, to make the former double the altitude of the Ostrich, viz.: 14 or 16 feet? This question has been dealt with by M. Geoffroy Saint-Hilaire, from whose writings I derive chiefly my knowledge of the bird and its bones. He is of opinion that we cannot go that length. With the Paris eggs came the lower portion of the metatarsal of the left leg, found in the same locality with at least one of the eggs. This, he says, indicates a bird with shorter legs in proportion, than the ostrich, yet with a much thicker body, and he puts the height of the Madagascar bird at between three metres and four metres, i.e. 9 ft. 10.11237 in. and 13 ft. 1.48316 in. and leans to the belief, that it slightly exceeded the New Zealand species in altitude. He computes the contents of his eggs at about 8 $\frac{3}{4}$ litres, i.e. about 7 quarts 1 pint, and equal to those of 6 ostriches, 17 emeus, or 148 hens, a statement which Professor Owen confirms, but justly says, that eggs of birds* are not always in proportion to the size of the species that laid them. It is true this is most strikingly the case in *Apteryx Mantelli* or kiwi, the egg of which, as stated by Dr. Scalter, weighs 14 $\frac{1}{2}$ oz. while the living bird is 60 oz., so that the egg is nearly equal to one-fourth of the bird. The cause of this exceptional case can be explained, it is not common in the brevipedes; the example of the Talegalla or brush turkey can hardly adduced. Certainly eggs do vary. It has been considered that the weight of a domestic fowl equals 48 of her eggs, while that of an ostrich is equivalent to a hundred of her's. See *Wild Sports of the World*, p.

*In reptiles the eggs are extraordinarily small. In the case of saurians *Alligator Lucius*. and *Crocodylus vulgaris*. it is astonishing how such huge bodies could ever spring from such small eggs.

323. Nevertheless in general we are pretty safe, I think, in taking the eggs of the *Struthiones* as being nearly in proportion to the birds which laid them. In a new publication: *A First Year in Canterbury Settlement*, by Samuel Butler, p. 139, the author states 'that a gentleman living at Kaikoras possesses a Moa's egg, it is ten inches by 7 inches, and was discovered in a Maori grave.'

It is curious that the Turks and Arabs also appear to place ostrich eggs over their tombs, and I believe certain African tribes do the same. But to return—as there were so many species of the *Dinornis*, it is impossible to say that the egg spoken of by Mr. Butler belongs to *Dinornis giganteus*. The authenticated egg of this species has, therefore, still to be found. It is perfectly clear to an oologist, I think, that the embryo contained in a space of 10 by 7 inches, would never equal, in bulk and stature the bird produced from an embryo in an ellipse, whose axes are 12 $\frac{1}{4}$ by 9 $\frac{3}{8}$ inches. Neither is it, perhaps, quite satisfactory to judge of a bird by a portion of its metatarsal* alone. The bones of at least half-a-dozen are necessary because we have to take into consideration the sexes, which may vary a little, the age, if adult or not, and that variation of size, plumage, &c. on which Mr. Darwin builds his theory of natural selection.† In many tribes this is considerable. It is possible, nay most probable, that the single Paris metatarsal fragment is not that of the largest and finest *Æpyornis*, it may not be even an average one, while we are contrasting it with the specimens of *Dinornis* picked out of hundreds. My own impression therefore is, that the argument, according to our present most imperfect data, tends to show, that the *Æpyornis maximus* exceeds the *Dinornis* in bulk, if not in height, The large footprints of the

* The bone to which the toes are articulated, —Owen.

† Dr. S. Thomson, in his book on New Zealand, vol. 1 p. 22, certainly speaks of an egg with diameters 12 inches and 9 inches, found with a human skeleton. He gives a circumference 27 inches. These dimensions are much smaller than those of my specimen.

waders on a tidal shore, in a stratum 2,000 feet thick in the Connecticut valley, do not indicate, I believe, a frame as large as that of the Moa. Professor Owen says 12 feet high. But of these American Ornithicnites I do not speak. M. Geoffroy Saint-Hilaire says the Madagascar bird approaches the *Dinornis*, as a species, but is generically distinct, in which Professor Owen also agrees. Vide Owen's *Paleontology*, p. 80, one of the most valuable works of the present day.

To both fabulous qualities have been assigned, such as killing and eating an ox in the former case, and devouring the Maori children in the latter—they were, however, vegetable feeders. It is possible the *Dinornis* may have lived upon the Tutu (pronounced Toot) which, on first coming up, resembles asparagus, a kind of fern common in New Zealand and much esteemed by sheep. (Butler's *Canterbury Settlement*, p. 97.) Its claws have been thought well adapted for tearing up roots of fern. I think it very likely that fire exterminated the Moa, as has been said. Man has very nearly, if not quite, cleared off the Gare fowl, *Alca impennis*.

The Dodo, *Didus ineptus*, also, probably came to an end from man's voracity; while cats are said to be rapidly turning the Dodo-like or tooth-billed pigeon of the Navigator Isles, *Didunculus Strigirostris*, into an extinct species. I trust the zeal of British ornithologists will not allow this form to go out of the world without retaining specimens of its skins, bones, and eggs, for the use of future generations—a duty we owe to them: science suffers from the negligence of our ancestors, which reflection should stir us up in our generation; we must, however be quick. The *Apteryx* only lingers, while even the *Emeu Dromus Novæ Hollandiæ* is greatly diminished in numbers. Races of birds and animals, like those of men, having served their appointed time in the course of nature, by nature's laws are doomed to depart and thus demonstrate the temporary character of all the productions of this earth. The first Paris egg was discovered in 1850 by M. Abadie, capitaine d'un navire marchand, in harbour at Madagascar, on

the S. W. coast of the island. This was perforated at the end and used by a native for domestic purposes. Soon after, another perfect specimen of nearly equal volume, taken from the bed of a torrent, in the remains of a small landslip came to light from the N. W. extremity. Later, a third and some bones, were discovered in a recent formation. This last egg was unfortunately smashed on the voyage to Paris, where the three were sent by M. Malavois, a French gentleman of the Isle of Reunion or Bourbon, who received them from Madagascar. My egg was found at Mananzari on the E. coast (this is not Mananari farther North on the same side) at a depth of forty five-feet in a hill of ferruginous clay, 'dans le terrain diluvien,' by Malgaches when digging for an iron mine, and was sent to the Mauritius and thence to in 1858 to Paris, by Messrs. Thomas Lachambre & Co. of that island. Circumstances caused it to fall into the possession of M. J. F. Brunet, secretary to the French Charitable Association, London, for whom Professor Tennant undertook to dispose of it. To both these gentlemen I am indebted, for their readiness to furnish me with all the information in their power. Some bones are said to have been found with the egg, but they were unfortunately broken before they were taken out. This I the more regret, because the fragments at Paris are so very imperfect. The surface is much stained with clay, consequently the fine lustre, which I suppose it originally had, has vanished. The colour was probably the same when first laid, as that of the Ostrich, *Struthio camelus*, viz. a pale yellow white. In granulation it resembles South African specimens of the same bird, but the indentations are vastly coarser and larger. The very marked difference between the eggs of the North and South African Ostrich in size and granulation, was first pointed out by my friend the Rev. H. B. Trixtram in *The Ibis*, but it is not yet determined, I believe, if these two birds form distinct species or only races, or either. Nature has taken care to wrap up the egg of the *Æpyornis maximus* in a shell of the

very greatest strength: had it been otherwise it could hardly have stood the wear and tear it must have undergone, for though the bird has existed probably in modern days, yet it, I should say, only lingered. Therefore, this last-found egg may be many hundred years old, but taking it at two hundred years, that is a long time for an egg to remain in clay. In my specimen some heavy substance rattles when shaken, and I have been asked if it contains embryo—but I do not think this likely: perhaps it may have in it one of those calculi common in Ostrich eggs, which vary in size from a pea to a marble; I have one now before me, which appears to be of the same substance as the shell—it will not scratch glass. In *Wild Sports of the World*, by Greenwood, p. 324, speaking of these calculi or concretions of shell, he gives the following: 'I find Barrow says, these are pale yellow, in one egg we found nine, in another twelve.' Thunberg says: 'a stone is sometimes found, hard, white, flat, and smooth, about the size of a bean, they are sometime, cut and made into bottoms.' The substance in my egg appears very like one of the above; but I hesitate to satisfy my curiosity, to do which, I must bore a hole in a specimen at present in the most perfect condition, and as regards England, unique. These concretions have nothing to do with 'the gizzard stones' swallowed by birds for the purpose of increasing the triturative power. Mr. Butler says, p. 139, on the Moa: 'Little heaps of their gizzard stones are constantly found; they consist of smooth and polished flints and cornelians, with sometimes quartz—the bird generally selected rather pretty stones' (how like the Ostrich taste this is); 'I do not remember finding a single sandstone; these heaps are easily distinguished, and are very common.' Livingstone says, ch. vii. p. 154: 'the food of the Ostrich consists of pods and seeds of leguminous plants, with leaves of various kinds; and as they are often dry, he picks up a great quantity of pebbles, many of which are as large as marbles.'

If the *Æpyornis maximus* was a layer of one egg, I should imagine more would

hardly be found, though this would not absolutely make it so very scarce, for Darwin in his *Origin of Species*, p. 66, says, 'the Fulmar Petrel, *Procellaria glacialis*, lays but one egg, yet it is believed to be the most numerous bird in the world.' Should it, on the contrary, have had as many as the Ostrich, Emeu, and Rhea of South America, our chances must of course be improved: I incline to the latter opinion.

The nests of the Rhea, according to Darwin, contain between twenty and thirty eggs each, laid, however, by several females. Perhaps the Madagascar bird, which was probably polygamous, had the habit of scattering eggs all over the country, as does the Rhea and also the Ostrich. Darwin says of the former: 'in the months of September and October, the eggs in great numbers lie, either scattered or single, all over the country.' If this was the case with the species of which we are treating, the four eggs obtained would most likely be solitary ones, and a full nest of *Æpyornis maximus* may yet be discovered, particularly as the immense strength of the shell appears to defy time. But bones are our chief desiderata: these will probably turn up in some bog or banks of a river. Rheas were seen, by Mr. Darwin, swimming across the Santa Cruz river where it was four hundred yards wide, with a rapid stream. Sturt came upon two Emeus in the same way in the Murrurbridgee in Australia, and one of the great eggs was at least washed out by a stream. Bones of the New Zealand Giant were found in a morass, and in such a situation I should search in Madagascar.

It is strange that so colossal a creature could have lived in modern days and yet escape notice. M. Geoffroy Saint-Hilaire, quoting Mr. Strickland (*Annals of Natural History*, No. 23, Nov. 1849, 338) states that M. Dumarele, a French merchant, sent an account of an enormous egg, in 1848, to M. Joliff, surgeon of the Geyser. This was seen by him in Madagascar at Port Leven, but he could not buy it of the natives, as it belonged to a chief of the Sakalawas tribe, and on account of its rarity,

was held in great estimation by them. Most likely M. Dumarele's specimen is one of those in Paris.

Perhaps the bird, though probably now extinct, has not been so more than two hundred years, as some of the cartilages, according to the French account received by me with the egg, were still adhering to the bones when found. The condition of the shell, perhaps, can hardly be called semi-fossil: it is said to be three times the thickness of the Ostrich's. Of all the bones in a bird, we could scarcely have selected one more valuable than the metatarsal to science, as indicative of fixed ornithological laws, which is so far most fortunate.

The Malgaches, which inhabit the south of Madagascar, own no allegiance to the Hooah sovereignty, and that circumstance I believe renders it difficult to search that portion of the country. When, however, time and opportunity afford, I hope that it may fall to the lot of an English Gentleman—one who has of late done so much towards elucidating the very wonderful fauna of Madagascar, Mr. Edward Newton, of Mauritius—to discover and place before the world such bones of this species as may determine exactly its size and character, and enlighten us as to the other particulars of its habits and structure which we so much desiderate. Accident, such as the plough of the American boy, and modern researches, finding here a bone and there a bone, bring many interesting creatures to light; doubtless Sinbad's Roc had some origin—it is not a myth without a starting point. How many extraordinary forms have passed away without leaving even a footstep behind! Could we only read the roll of the Inspired Ornithologist to whom 'wisdom was granted and who spake of beasts and fowls;' whose pages may be said to have come direct from the Creator, what wonders it would not unfold—wonders which would command our attention, notwithstanding the late attempted depreciation of the Sacred Records! Neither would a volume on birds, of papyrus from Alexandria, come down to us amiss. But as these are not within our reach, we must depend

upon our own efforts to arrest the present and recover the past, the search after which creates so keen an interest at this day in scientific minds, and has conferred so much imperishable fame upon the illustrious names which our learned societies now contain among their members, whose works are a lasting proof to posterity that they have not lived in vain.

as this paper was going to press my attention was called to Mr. Strickland's translation of M. J. G. Saint-Hilaire's pamphlet in *Annals and Magazine of Natural History*, 2nd Series, No. 39, March 1851, p. 161, and also Professor Owen's remarks upon the same subject, in the above periodical, No. 75, March 1854, p. 229. Neither of these papers had I seen, nor was I previously aware of their existence. I therefore append a portion of Professor Owen's valuable remarks. He gives the following admeasurements of the Paris egge:—

	Ovoid egg			Ellipsoid egg		
	ft.	in.	lin.	ft.	in.	lin.
Greatest cir. lengthwise	2	10	9	3	9	6
Breadthwise	2	4	3	2	5	6
Extreme lgt. in a str't line	1	0	8	1	0	5

'The portions of bones, of which casts were exhibited' (at the Zoological Society,) 'consist of the lower end of the right and left metatarsal bones and the upper end of the right fibula. These are nearly equal in size to the corresponding parts of the skeleton of the Dinornis, as the following dimensions demonstrate:—

	Æpyornis		Din. gig.		Casuarius	
	in.	lin.	in.	lin.	in.	lin.
Ex. br'dth across the trochlear condyles	5	0	5	6	2	3
Transverse diameter of shaft 6 inches above lower end*	2	9	2	3	0	11½
Antero-posterior diameter of shaft 6 in. above lower end	1	3	1	5	0	7

*One third length of the entire bone of the Dinornis giganteus.

'In neither the Dinornis nor Æpyornis is the metatarsus perforated, as in Casuarius and many other birds, above the interspace between the outer condyles: that interspace simply deeper, or curved higher in both. The outer trochlea, which is entire in both portions of the Metatarsi in Æpyornis, is in a marked degree, smaller than in Dinornis, as is also the inner trochlea, as far as one

may judge from the posterior part which is preserved. The interspaces of the trochleæ are wider posteriorly in *Æpyornis*, and the outer one is more angular at its upper end. The middle portion of the posterior surface of the lower third of the shaft of the metatarsus in *Æpyornis* is more produced than in *Dinornis*, and a ridge is continued from it to each lateral trochlea, dividing the back part of the shaft above them into three surfaces; whereas the corresponding surface in *Dinornis* is simply flat from side to side. Above this part in *Æpyornis* the posterior surface on each side of the middle prominence is concave and meets the anterior surface at a ridge which is narrowest at the outer border of the bone. In *Dinornis* both borders of the lower third of the shaft are thick and rounded.

The *Æpyornis* does not show any trace of the rough tract for attachment of a back toe, as in the *Palapteryx robustus*; in this respect it resembles the *Dinornis*. At six inches from the lower end of the shaft begins to be concave along the middle of the forepart, the concavity deepening as it ascends; whereas in *Dinornis* the anterior median concavity of the shaft does not begin to appear until above the upper half of the bone. In this character the *Æpyornis* resembles the *Cassowary*; but it differs from the *Cassowary* in much narrower or sharper lateral margins of the shaft of the metatarsus. Like the *Cassowary*, however, the breadth of the shaft is greater in proportion to that of the trochlea than in *Dinornis* or *Palapteryx*.

It would be hazardous to conclude as to the length of the entire metatarsus from the breadth of the distal end; for this is equal in *Dinornis giganteus* and *Palapteryx robustus*, whilst the length of the metatarsus is 1 ft. 6 in. in the one, and 1 ft. 4 in. in the other. I think it more probable, however, that *Æpyornis* had a shorter rather than longer metatarsus than the *Dinornis giganteus*.

That its legbones were smaller is significantly indicated by the difference of size in the fibulæ.

	<i>Dinornis</i> in. lin.	<i>Æpyornis</i> in. lin.
Longest diam. of upper end	2 11	2 9
Shortest diam. of upper end	1 4	1 0

This bone in *Æpyornis* shows a flat, full, oval articular facet on its tibial side, of which there is no trace in *Dinornis*.

Upon the whole, therefore, Professor Owen concluded that the *Æpyornis maximus* did not surpass in height or size the *Dinornis giganteus*, and it was more probably a somewhat smaller bird.

The fragments of the egg of *Dinornis* or *Palapteryx*—of what species of course cannot be determined—show, after arriving approximately at their size by a curve of the fragments, that the shell was not only absolutely thinner, but relatively much thinner than the *Ostrich*, and afortiori than in the *Æpyornis*. The air pores, also, have a different form, being linear not rounded, and the external surface is smoother.

In the smoothness of the shell, the egg of the *Dinornis* resembles that of the *Apteryx*; in the thickness of the shell and the comparative roughness of its exterior, the egg of the *Æpyornis* more resembles that of the *Ostrich* and *Cassowary*.

It is most probable that the entire eggs of the *Æpyornis* were excluded in the usual fertile state, but had suffered such want of interruption of the usual heat requisite for their incubation as to have become addled.

Professor Owen proceeds to give measurements of the egg of the *Apteryx*. I remark that Professor Owen makes the long diameter of the Paris egg rather smaller than M. Isidore Geoffroy Saint-Hilaire, also that the eggs of *Æpyornis maximus* and *Apteryx*, both of which I have in my collection now before me, present to the eye of an oologist such extremely different appearances, that to compare them and thence draw a conclusion as if they were eggs of the same species, would appear to lead to a mistake. M. O. Des Murs, I believe, has gone so far as to form a classification of birds from their eggs. Without giving an opinion on this idea, I will only say that eggs do give very valuable information with

respect to birds; and in no case, which ever came under my observation, have I found greater difference than in respect to the above mentioned. I look upon the egg of the Apteryx as purely exceptional. The very strong texture of the shell which nature has used for the care of the *Æpyornis maximus* has a meaning surely, and I construe it thus: she had a larger and heavier embryo to deal with. The localities of deposit for each egg may have been different; eggs which are laid on wood in holes of trees, certainly have harder shells, such as those of the Picidæ (in spite of which I have known a claw stuck through them) the Madagascar egg had no such cause for strength, no rocks probably to resist. However, I do not of course oppose myself as regards the comparative altitude of these great birds to the recorded opinion of great an authority as Professor Owen, and we can only hope to obtain at some future time a series of complete skeletons of the bird.

I have said that I believe the colour of these large eggs resembles that of the Ostrich in which I observe Professor Owen concurs: they never had the green of the Emeu, for in that instance the strong green is laid on, in a granulated network, so to speak, and the shell beneath is even stained, so strong is the colouring matter. Now the granulated network of this egg remains, and clearly never had any such powerful green on it as that which stained the egg of the Emeu.

In reference to the large size of the egg of the Apteryx, Professor Owen remarks:—'The young bird must be excluded unusually well developed, with a complete clothing very like the parent, and capable of using its limbs and beak for its own safety and support.' The period and mode of incubation in a state of nature would be a matter of interest in this species.

BRIGHTON: March 12, 1864.

[This paper was published in 1864 by Trubner & Co., London, and Thomas Page, Brighton.—Ed.]

Fish Crow.

Corvus ossifragus WILSON.

Just after dark on the fourth of December, 1876, the Yacht Nina was hoisted to, some miles at sea, off North Island, South Carolina. All day we had been sailing down the coast before a fine breeze, but now the

wind was freshening and, as the dangerous Roman Shoals lay just in our course, we had decided that it was best to put into the Pedee River. Ducks, Loons, and other sea birds had been flying towards land for the last few hours, great cumulus clouds were rolling across the darkening sky, the sea was rising fast, in fact everything indicated a coming gale. We were waiting for the moon to rise for, although the Georgetown Light sent its guiding rays to us, the passage across the bar was intricate and difficult to follow in the darkness. Soon the east brightened, and then the silvery disk came pushing upward, quickly illuminating the waves which were beginning to toss wildly under the influence of the rising wind. Giving one more look at the chart which I had been somewhat anxiously studying, I came on deck and we put our little vessel's head on her course, steering directly toward the land. For an hour or more we dashed onward, till at last we could see the low, black line of the coast. As we drew nearer, we could discern the white sandy beach shining in the pale moonlight, then the sound of breakers came to our ears but still we resolutely kept on for I knew that our only safety lay in this course. Suddenly, just as we seemed to be leaping into the now foaming breakers, we swung around and ran along the smooth beach just outside the breakers. It soon became apparent why we took this way for we could see a long line of white-capped waves breaking over a shoal that lay to the eastward. So we ran on between the land and reef until the great, luminous eye of the light-house opened upon us from behind the palmetto trees that stood on North Island, then we once more turned landward, this time sailing directly into the mouth of the river and anchored under the lee of a point. It was well for us that we did for in an hour the wind was blowing such a gale that, sheltered as we were, our yacht dragged her anchor and we were obliged to put over a second.

As we laid there two days I had a fine opportunity of collecting the birds on the neighboring islands. I never remember seeing a more lovely spot than North Island. It consisted of small hillocks with ponds interspersed at intervals, while the whole was covered with a thick growth of trees; the evergreen live oak, stately magnolias, glossy-leaved bays, beautiful palmetoes, and large holleys grew in profusion. They were covered with vines and draped with long streamers of Spanish moss, and the whole was surrounded by a ridge of white sand which formed a very appropriate setting for the most perfect gem of an island that I ever saw.

The wind was blowing hard and cold

from the North-east but but, as the trees formed a perfect shelter, hundreds of birds were congregated there and by far the most numerous were the Fish Crows; in fact they greatly outnumbered all the other species put together. They were evidently migrating for they came down the coast in an almost unbroken stream and continued to fly all day. I think I saw more pass the island than I ever saw before. It did not seem possible that there could have been so many of these Crows in existence for they could be counted by the tens of thousands. I have always found that they accumulate in large flocks in winter and have noted immense numbers on the prairies of Southern Florida, but nothing that I had previously seen ever gave me the impression which I that day received regarding the abundance of these birds, and I was thoroughly satisfied that the Fish Crows were not in any danger of being exterminated, at least in the section of country which they inhabit north of South Carolina.

The Fish Crows are essentially maritime birds and, as will be inferred by the above remarks, gregariously inclined for the greater portion of the year. They spend their time about shores, not only of these but of large bodies of water, subsisting largely on what they can pick up on the margin. They have, however, a singular habit of hovering over the surface in order to catch any floating object, and I have seen several thus engaged at the same time when they so nearly resembled Gulls that, had it not been for the flight and note, they might have been taken for a black species of this latter named family. They do not, however, depend wholly upon the water to supply them with food, for they are very fond of the fruit of the palmetto and I have also found them feeding on the spicy berries of the bay.

The Fish Crows are not always, however, content with such diet but, unfortunately for the Herons, Cormorants, Terns, and other birds which breed in rookeries, are extremely fond of eggs and will always eat them whenever a favorable opportunity offers but, as they regard the parent birds, especially the sharp-beaked Herons, with the utmost respect, they never visit the nests excepting in the absence of their owners. The Crows are always on the alert, however, and when a nest is left unguarded, even for a moment, they will dart into it, plunge their beaks through the shell of the eggs and carry them away. I once found a nest of a Fish Crow built in a low tree which was completely surrounded by the shells of Cormorant's eggs, each of which was emptied through a hole in the side.

There was a rookery on a neighboring island and the Crows spent their time flying about it, frequently returning with an egg. Whenever we visited a heronry or Cormorant rookery the Fish Crows had a fine time; for, evidently undaunted by what we were after and knowing that the parent birds would retreat before us, they came in numbers and, as they were not shy, would always manage to obtain their share of the eggs. Indeed upon one occasion they carried away all the eggs from a heronry, consisting of upwards of a hundred nests, in an hour's time.

Of the three species of this genus which occur in Eastern North America, the Raven is the least active, the gravest and heaviest flyer; next, as an intermediate, comes the Common Crow; while the present species represent the other extreme, being full of nervous activity, flying with a quicker motion of the wings, and seldom sailing. They also stop suddenly and will wheel as readily in the air as a Red-winged Blackbird. They move in straggling flocks and as they go utter the *ha-ha* which, although not much lower than that of the Common Crow, has such a peculiar intonation as to be recognizable at once. They migrate constantly through the winter, and large numbers often pass a given point, thus I have seen them flying for several hours over the Everglades. At such a time, if I shot one and it fell where its companions could see it, they would hover over the spot, then circle about, vociferating loudly, often coming within a few yards of my head. They appear to select particular spots as roosting places, generally in swamps, to which they return before sundown and depart after sunrise. These Crows breed about the first week in April, frequently in communities but I have found single nests. The structures are very large for the size of the bird and are placed in trees. Taken altogether the Fish Crows can scarcely be considered as useful birds but they are decidedly characteristic of southern maritime scenery, and many a barren reach of sea-board is enlivened by their energetic movements and quaint cry.

I have spoken of the Fish Crows as inhabitants of the sea-shore, but I have also found them on the rivers in the interior of Florida and judge that they occur on large bodies of fresh water some distance from the sea, yet think that in winter they are by far more numerous along the coast. I have seen them as far north as Norfolk, Virginia, as late as the tenth of November, but they were migrating then, yet it is possible that some remained all winter.

—From *Maynard's Birds of Eastern North America*.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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Feb. BULLETIN will be out March 15th. Large sales and so much other business has caused the delay.

The few remaining copies and parts of copies of Maynard's "Birds of New England" as advertised in the Dec. OOLOGIST are being rapidly "snapped up" by collectors knowing their value,

We have already booked a large number of orders for "Davies 3rd edition." The wide awake collector is bound to have one of the first copies.

The paper on the Egg of the *Epyornis* was sent us by Mr. J. Tennant of England, and was published at 25c per copy. As it will prove of more than ordinary interest to many of the readers of the OOLOGIST and will also allow us to "catch up" we print it in full.

Exchanges and Wants.

Brief special announcements. "Wants," "Exchanges" inserted in this department for 25 cents per 95 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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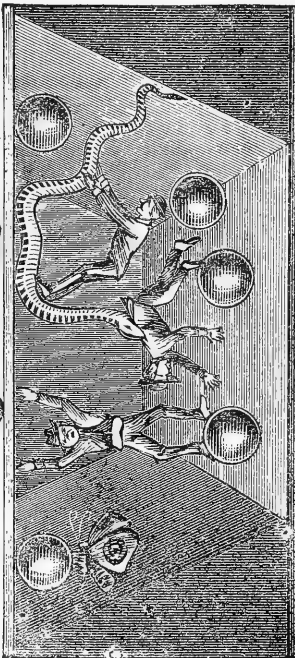


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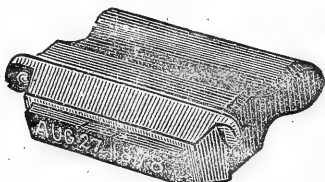
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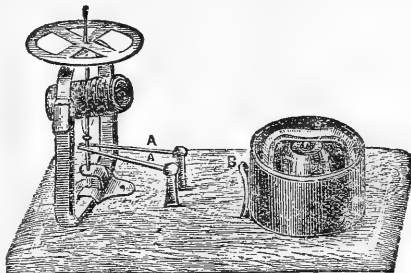
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THE OOLOGIST

Vol. V, No. 3.

ALBION, N. Y., MARCH, 1888.

PUBLISHED MONTHLY,
50¢ PER YEAR.

Icterus Spurius—Eastern Race.

J. M. W., Norwich, Conn.

The Orchard Oriole comes to its summer home in Southern Connecticut just before the apple-trees break into efflorescence; to be exact, and speaking by the record, on the 6th and 7th of May. Though returning with the Baltimore Oriole, thenceforward there is no association of the congeners. True, both have a *penchant* for apple-trees, and a common instinct for safety makes each species often select the pear-tree at our back-door for a building site. But in the tops of the great elms, 60 feet from the ground, where swings many a cradle of the Baltimore, is never seen the cup of gold filagree of his mahogany-colored cousin. It is well for the singing bugle-call of Baltimore to reach us mellowed and softened from those lofty arcades, but *I. spurius* must pour its flood of summer melody into our very ears from a lowlier perch.

There were no Orchard Oriole's eggs to be had here a generation ago and to-day the bird itself finds no place in our farmer's limited avian list. But it is here to stay all the same and its eggs no rarity now. Finding the seasons of lessening rigor, the invaders spread from the South-west corner of the State along the shore, and remaining littoral birds to us for some years, have now crept up our great water ways the Conn., the Thames, and the Housatonic, and become generally dispersed about the State. Though shooting a specimen here now and then, and finding it breeding rarely along the Sound, it was not till June 19th, 1879, that I took its nest near our city; nor shall I soon forget the manner of taking it. Reader, did you ever go birds'-nesting at

night? Two miles south of the city I had marked the pair of new-comers, building on the extremity of an apple-imb, 20 feet from the ground near a farmer's house. Now this farmer had just prosecuted some boys for breaking up a turkey's nest, and was not supposed to be open to any argument or allurements of a devotee of our beloved science. A raid by day being out of the question, I determined to take that clutch of eggs by night; so impressing our coachman into service and taking a 24-foot ladder in a lumber-wagon, we drove at 2:45, of a dark morning to the scene of action. After falling over a stone wall with the ladder on top of us, we managed to raise our burden near where I had marked the birds down, though it was too dark to see the nest on the outline of the limb; but while my assistant steadied with his weight below, I started up the ladder which seemed to me as I climbed to be reared straight on end and reaching up into outer darkness itself. But as I groped for the top round, something like a black bat of the night slipped away through my legs, and I knew then we had made a close guess as to the position of the nest. Securing the trio of eggs, I sawed off several feet of the bunchy limb including the nest, and, as I afterward found, about a peck of green apples the size of hog-walnuts. Just as we strapped the ladder to the wagon and started for home there was a flash of light in the farm house, the door opened, and out bounded a fierce bull-dog only to find that the robbers had taken wing. Though nine years have passed, the brown dry leaves and shrivelled clusters of fruit still adhere to that limb which hangs in our cellar to this day.

The next season, in June 1880, taken in the city limits, a boy brought me a nest and eggs of this species to determine. I gave him a set each of Buteos and Osprey's for

his rare find. But now it is extremely common at some points along the Sound in this county. Maynard, in his *Birds of Florida*, refers to the all-prevailing music of the Orchard Orioles in Wilmington, May 25th, 1872; change the date to the second week in June, 1887, and the place to the fishing village of Noank, in this county, and the description might well apply to the noonday flood of burning summer song poured forth by these birds nearer home. At Groton Long Point where this Oriole breeds plentifully, unlike its congeners it is at peace with all the feathered neighbors. I have seen it breeding on the same tree with the pugnacious Kingbird and twice on same limb with the Parula Warbler. Like other widely distributed North American species, it is not so prolific as the Western and Texan races, and three eggs is often the nest complement here. At Long Point, where all the trees are shrouded with *usnea*, it deftly hides the nest but does not abandon the favorite nesting material of golden grasses, and the yellow cup, draped and hidden by hanging lichen of palest green with the constant orange lining, makes some examples of these nests, when taken *in situ*, creations of most exquisite beauty.

A Water Blow-pipe.

Some two years ago on returning from a long tiresome days trip after eggs, I chanced to pick up an "Oologist" and opening it came across an article headed, "A Water Blower." You may rest assured I devoured its contents with interest, and in less than an hour, had a "Blowpipe," complete and in working order.

Having that day collected a large number of eggs, I immediately had a chance to try it, and must say, it worked admirably. I think all persons, who have tried it, will believe me when I say, I blew these eggs in the time it took me to blow one before.

Since that time, I have never been without one and also, have never blown an egg by the old method as the new is safer, cleaner, quicker, and by far the easier.

I have since blown rotten eggs that would turn a persons stomach by the old method.

For the benefit of those who have not seen or who, having seen, have not heeded the advice of former article, I will try and describe one and how to make one in as few words as possible.

Procure a one gallon can, six feet of rubber tubing $\frac{1}{4}$ inch, one brass blowpipe and a small ring of same kind.

Make a hole in side of can near the bottom, a little smaller than rubber tube, so you will have to squeeze the tube to get it into hole. Into this hole, put one end of tube and into other end of tube, put blow-pipe.

Now set can on top of a wardrobe, book-case, or something of the kind, to give the water a fall of same distance, and you are ready to go to work.

Drill a hole in egg same as you would by old method and, holding over a plate to let water and contents drop into, let the water in at the hole the same as you do wind.

In a short time it will be blown and when blown, it is also rinsed and then you need only blow water out and egg is clean.

You can lay small eggs in the palm of your hand and there is no danger of breaking while blowing.

I have also some fine drawn glass tubes for blowing small eggs.

When eggs are blown, bend rubber tubing at the end just behind blow-pipe and slip on ring to keep water from flowing when not in use.

I hope that everyone of your readers who have not a "blower" already, may see this article, if such it may be called, and that not one, who sees it, will fail to make one immediately, for the coming season and having made it, I assure you he will never be without one. E. F. Koch,

College Hill O!

Collect Sparingly.

While reading the Oologist I have noticed several articles regarding the taking of large numbers of Heron, Tern, and other eggs, by persons whose aim is, apparently, to

pilfer as many nests as possible. Not content with a few sets of each kind, these "Collectors" seem to vie with each other in the number collected.

So wide spread has this practice become, that many of our native birds are rapidly nearing extermination. Bird destruction and egg collecting have, within the past few years, reached such alarming proportions that many states have been forced to enact laws to restrict it. But this does not deter some, who go on collecting, and trust to luck to escape the law.

The Audubon Society for the protection of birds, has done much to discourage this mania for "collecting" eggs, but there yet remains much to be accomplished. Can not the Oologist and the Oologists of America do something as well?

Far be it from me to cry down any one really interested in the study of birds and their eggs, but we can certainly exercise more mercy in obtaining such specimens as are necessary for the purpose of study.

William N. Clute, Binghamton N. Y.

Bird Intelligence.

The Trial and Execution of an English Sparrow.

I write this to let you and the readers of the Oologist know of a funny and strange way in which a theiving Sparrow was punished. Last year while the birds were building, a pair of English Sparrows built their nest in the cornice of the Court House, but they had a good many difficulties to struggle against, and other Sparrows would steal the material which was brought to build with, and as fast as they would bring straw, the robbers would steal it. The birds got tired of this, and when the thief came again he was surrounded by a lot of other Sparrows who had gathered to help their companion. Presently the Sparrow was pushed off the ledge, and around his neck was twisted a string; he would fly up on the ledge, but was driven off by the others, and at last wore himself out and hung there till he was dead. The other pair went on building as though nothing

had happened, though the dead bird hung there several days. This is the fact, and the trial and execution was witnessed by a number of people. I am of the same opinion as Mr. Surber about the oologists of this state waking up and letting the oologists of other states know of the birds and their habits.

R. W. Patterson,
Parkersburg, W. Va.

Nesting of the Cardinal Grosbeak.

The nesting habits of this beautiful, though simply-clad bird, are known to very few collectors, owing to its occurrence in only a few scattered vicinities of our country. In the state of Kentucky, however, from whence I write, it is quite plentiful, and I have had ample opportunity to observe its habits.

Davie may be right in stating that the "Red-bird" is not migratory, but I have never seen it in our vicinity in winter, nor in very early spring, and it seems quite certain to me that it winters South.

Cardinalis Virginianus nests at very variable times, but his domicile is generally constructed about the middle of June. At this time he may be seen late in any sunny afternoon, perched on the topmost branch of the tallest tree in the neighborhood of his nest, and pouring forth his simple and oft-repeated song, which in mellowness and beauty of tone, rivals that of the Mockingbird.

The female generally keeps herself out of view, and she alone does the incubating.

The nest is as a general thing, placed in a small thicket, selected not as much for its density as for its secluded position. Here we may find, in a briar or thorny bush, about 5 to 10 ft. above the ground, a large and loosely-constructed nest of twigs and weedstalks, with occasionally a leaf or two, and lined roughly with finer grass-stems.

The eggs of this species, usually four in number, present a diversity of sizes, shapes, and markings equal to those of the Rose-breasted species. The typical egg is very much in color like the common Cowbird

excepting a shell-marking of purplish drab, giving it a much richer appearance. In some eggs before me, the spots almost conceal the ground color, while others are flecked quite sparingly; and the sizes are almost as variant.

The Cardinal Grosbeak has a peculiar, and to the collector, very vexing habit of breaking the eggs of its own nest in an attempt to carry them off, when it has been touched by the intruder, or even when the bird has reason to know it has been discovered.

I once found a nest accidentally, while on an errand, and without even touching the nest, went on, intending to secure the eggs on my return. What was my surprise and vexation, however, on coming back just in time to see the female bird stick her bill into and try to fly off with the last egg!

I have never seen this habit of the bird mentioned in any accounts of it, but I am certain of it from *repeated* experience.

F. W. Clay, Ann Arbor, Mich.

Notes from Southern Kansas.

1887—July 27th I took my last set for '87 which was a set of three Yellow Billed Cuckoo. Nest in an elm tree about twenty feet up. Incubation advanced.

Sept. 20th. I saw an English Sparrow carrying straws for its nest. Isn't that rather late?

Oct. 25th. I counted twenty-seven Night Hawks flying south-east. They did not congregate in flocks but flew by, one by one. I did not see two together in the twenty seven.

Nov. 3rd. Saw a Little Screech Owl in a grove about a half mile west of town. It is a rare visitor here.

1888—Jan. 23rd. Saw three flocks of geese containing forty seven flying northward. They were flying high. It is very seldom they ever light near here during their migration.

Feb. 18th. The birds have commenced to arrive here. Saw several Chickadees, Sparrows, of all kinds, many Blue Jays, Crows, Blue Birds, Wood-pecker and Nut-

hatches.

Feb. 20th. Saw a pair of English Sparrows building their nest. That is, I mean the female was doing the building, while the male sat close by attending to his toilet.

Feb. 21st. Discovered a pair of Blue Birds building their nest in a fence post; the nest was about half completed.

Feb. 22nd. The Robins arrived here today. I saw quite a number for the first time this year.

I have seen several English Sparrows building during the past week. These pests begin early and rear from four to six broods in a season. I remember of seeing one carrying material for its nest during the latter part of September.

They place their nests in such places that no body can get at them, and on account of their numbers they can drive away any species that dares to molest them. They generally rear their young in peace.

Charles T. Hepburn, Fort Scott, Kansas.

An Odd Nesting Place.

On a barn in the suburbs of New York City, there is a weather-vane in the shape of a horse, which has in it a bullet hole a little over an inch in diameter.

Now a weather-vane is at the most, but an inch and a half in thickness, but still this small space was utilized, by a pair of house wrens, as a home, and here they have bred for two years. I often sat and watched these little workers, trying to carry small sticks into this tiny space, but as the entrance was in the bottom of the horse, they never succeeded in the undertaking, and at last gave it up, and built their nest entirely of soft materials.

They never seemed to mind the motion of the vane, and many a time as I have been passing, I have stopped to listen to the clear sweet notes, coming from that small throat, as the male bird perched upon the horse, sang his love song to his better half, while she tended her house-hold duties upon the inside. In this stronghold they have raised three broods; one the summer before last, and two last summer, the latter brood containing seven young.

W. J. S.

A Moonlight Trip

After a Nest of the American Osprey
And Other Interesting Notes.

I was very busy during the collecting season last spring and had but few chances to collect. I knew of an old nest of the American Osprey and determined to visit it at my first opportunity. I had seen the Hawks around the nest several times and I thought it must contain eggs.

One moonlight night a companion and myself rowed across the bay to the island on which the nest was situated. After we had hauled the boat up we started cross-lots for the nest. On the way we found a Crows nest in a cherry tree.

I climbed up and found upon reaching the nest, that it contained four eggs. I took them and then went on a quarter of a mile further to the Hawks nest. It was situated in the top of a button-wood tree about fifty feet from the ground. I strapped on my climbers and began the ascent, and after a tiresome climb came to the nest. To my delight it contained four fresh eggs.

I placed the eggs in my hat, and took the hat in my mouth and thus brought them safely to the ground. I see in "*Davie's Check List*," that the number laid is usually three. I have frequently found four eggs and on one occasion I found a nest containing five young Hawks.

I was very fortunate last season in finding full sets. The first find of the season was a set of four English Sparrows on Apr. 20th. The nest with many others, was built in between the sticks in a large Fish Hawks nest. I found a set of six common Crow's eggs, five Purple Grackle, eight Black-capped Chickadee, four Green Heron, five summer Yellow Birds, four Black Crowned Night-Heron, seven Belted Kingfisher, five Cedar Wax-wing and eight Yellow shafted Flicker. The Flickers nest was found in the side of an ice-house. The nest was made by hollowing out the seaweed used to pack the ice in. I had to rip off a board to obtain the eggs.

C. M. W. Aldrich, Greenport N. Y.

Not a Birds Nest.

One day last spring, a fellow collector and myself were out collecting in a thickly wooded ravine. I had climbed a tree for a Wood Thrush's nest, when I spied a rather large nest in an adjoining tree. I pointed it out to my companion and he straightway began to climb for it. When I had descended, he had pretty near reached the nest. He was so anxious to see what was in the nest that he put his hand into it as soon as he could reach it. He took it out a great deal faster than he had put it in; so much so in fact that he nearly fell from the tree.

His hand was not all that came from the nest, for it was followed by two half grown flying squirrels that tumbled "pell-mell" to the ground. I caught them without difficulty, as they were too young to escape; and they afterwarde became very pretty pets.

Their nest was an old Blue Jay's filled with leaves. My chum said he could not imagine what in the world he had put his hand into when he felt that ball of fur; and I guess the squirrels did not like his intrusion either, from the way they acted.

Charles Hepburn, Fort Scott, Kan.

Two-Storied Nests of the
Meadow Lark.

Noticing the inquiry of Walter D. Porter of Jefferson Wis. relative to two-storied nests of the Meadow Lark, in your issue of Oct. and Dec. 1887. I desire to relate a similar incident. In July 1886, I found a nest of the Meadow Lark, in a low and wet piece of meadowland, double or two-storied, with four eggs of the Meadow Lark, not incubated but spoiled. A second nest had been built within and above the one containing the eggs, but at the time of my observation no eggs had been laid in the upper nest, or they had been taken out by some one else.

Near the same place, and about the same date, my Father found a double nest of the Meadow Lark, with the egg of the cow-bird in the lower nest and a set of incubated eggs of the Meadow Lark in the upper nest.

Lorie P. Akers, Des Moines Iowa.

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

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April OOLOGIST will be out by April 15th and May Number will undoubtedly be on time. The cause of March issue not being out at the time promised was due, chiefly, to our printer running short of type. New type had been ordered, but order was delayed at the Type Foundry.

TEN DOLLARS worth of premiums will be given to the writers of the three best articles in May OOLOGIST. Prizes are to be selected by the winners from our "Job Lots" as offered in the NATURALIST'S BULLETIN. The winner of the 1st prize can select \$5.00 worth, 2d prize \$3.00 and 3d prize \$2.00. Every article in May issue of 100 words or over will enter in the competition, and the prizes will be awarded by an impartial committee to the three best, most instructive, and valuable articles. All articles will of course be written on subjects of interest to the Ornithologist and Oologist.

The Pewee.

This is a common bird, and one about which much has been written, but I

thought a few notes from my own observation on its nesting in this locality, might possibly be acceptable.

They arrive here about the first week in March, and pair, and begin building by the middle of April. They make a very pretty nest, composed principally of mud, covered on the outside with moss, and lined with horse hair, fine dry grass, or feathers, usually placed on the rocks along the creek, plastered at the side and bottom to a narrow ledge of rock, from four to sixty feet high. The nest is about $1\frac{1}{2}$ inches deep, and about $3\frac{1}{2}$ inches across on the outside. Their eggs are pure white, about every other set containing one or more eggs more or less spotted with small, reddish-brown dots. The eggs average .80 by .62, pointed at the smaller end.

They lay sometimes but three eggs, as I have found sets of three with incubation advanced. Their usual number, however, is four, sometimes five and occasionally six, being found. Nearly every nest contains also an egg of the Cowbird. They raise two, if not three, broods a season, as the list will show. The following are a few typical sets, including the earliest and latest dates for the last three years:

- 1885, June 27—Set of 3, and 1 Cowbird's, fresh.
 1886, May 11—Found 4 eggs with inc. adv. and left them.
 June 16—Got 4 fresh eggs from above nest.
 May 11—Five eggs ready to hatch and one young bird.
 July 2—3 eggs, incubation advanced.
 1887, May 2—4 fresh eggs.
 June 10—5 fresh eggs.

D. T. May, Poland, Ohio.

Among the Coots on St. Clair Flats.

One afternoon in early May while sitting on the side porch, preparing a set of Rail's eggs for my cabinet, G. — (an old chum of mine) came along and asked me to take a trip with him the following day to the St. Clair Falls. At first I refused, telling him I had Jim's house to repair, (Jim was was my pet crow) but he insisted so earnestly, I at last consented. I was awakened a little

after sunrise the next morning by old Jim, who from his favorite perch in an apple-tree near my window, was making quite a series of sounds. Introducing among other imitations, the cackle of the hen, and the baa of sheep. At times he would stop as if to take breath and calice, then break out in a fit of swearing, cursing, and cawing. After a hasty breakfast I took my valise (made expressly for egg collecting) and hurried toward the Griswold St. Dock, arriving just in time to purchase a ticket and board the Steamer Grey Hound. On the upper deck I found my chum. At ten o'clock we reached our destination. While my chum took our luggage to the hotel, I looked around to see what I could find in the way of a boat. A few minutes walk brought me to a boat house kept by an old German. Here I succeeded in hiring one, though with some difficulty, as the old man seemed unwilling to let one to such young and inexperienced hands, but finally by adding an extra quarter and a plug of tobacco we got him to give us the best one had, and two pair of oars. Upon inquiry we were informed that the Coot bred in great numbers directly across the channel; accordingly we turned our attention in that direction. A steady half hour pull pull found us at least 3 miles from the hotel and in one of those small channels numerous in all the marshes on the St. Clair Flats. We were borne silently yet swiftly with the current for at least another half mile, when, rounding a bend we came suddenly upon a Sand Hill Crane, standing on one leg in nearly a foot of water. Seeing us approaching, he spread his huge sand colored wings and with a flap or two rose lazily in the air, flying slowly across the marsh toward the main channel. Entering another channel we started back in a round about way. Arriving within a mile or two of the hotel we anchored our boat; taking off our shoes and stockings and rolling up our pants, we stepped into the water. At first it seemed very cold, but we soon grew accustomed to it and struck out boldly through the wild rice in search of nests. Near the boat in a bunch of reeds, I took the first nest of the day; it was a nest

of the Florida Gallinule, containing 9 eggs. I had hardly congratulated myself over my good luck, when a joyful shout from my chum caused me to look in that direction; there he stood knee deep in water holding a small egg in his hand; he said it was a Rail's egg and that there was a nest near him containing 8 more. Telling him not to call when he found another, I turned and made off in the opposite direction. In the first 100 yards, I found nothing, but upon emerging from the thick reeds into more open water, I saw a Thich-billed Grebe sitting on her floating nest of reeds and grasses. Upon seeing me she slid quietly into the water; that was the last I saw of her, although she kept up a continuous crying while I remained in the locality; the nest contained 8 fresh eggs. This is the largest set I ever found, the average being from 5 to 7. From here I stepped into a clump of wild rice, the first thing my eyes rested upon was an old Marsh Wren's nest. At this instant the distant boom of thunder came rolling over the marshes and the reed tops began to rustle and sway back forth before a brisk wind which had just sprung up. Looking around I was surprised to see dark clouds appearing in the west, warning me that a storm was fast approaching. Hastily gathering a set of Coot's eggs which I nearly stepped on. I hurried toward the boat, my chum reached it before me and had everything ready, so all I did was to jump in and take the oars. Well, we had a hard pull of it, but succeeded in reaching the hotel just as the storm broke out.

It soon passed over, however, and we spent the remainder of the afternoon in collecting Coot's eggs in the vicinity of the boat house. After we had gathered all that we desired, we returned to the hotel to await the coming of the steamer. Nothing more need be said except that we arrived home in due time, tired, though well pleased with our days collecting. Thus ended one long to be remembered day among the Coots on the St. Clair Flats.

J. Clair Wood Jr.,

Detroit, Mich.

A Brown Thrush in Confinement.

On the 5th of July, 1885, while collecting eggs, I found the nest of a Brown thrush; it was beautifully situated about three feet from the ground, and surrounded with leaves. The cry of the old bird first attracted my attention; I understood her to tell me that her nest was not far away. I looked for it and found it. The nest contained five eggs, and was composed of twigs and horse hair, and was lined with grasses and leaves. My desire long before this was to get one of these birds into my possession while young, so I left the nest untouched.

Two weeks after this I went to the nest and found five young Brown Thrushes. These were about one or two days old; I returned to the nest almost every day and the young Thrushes grew larger. At last I thought it would be about time to take one, which I did. I fed it with flies and worms. On the following morning we awoke earlier than usual, from the cries this bird uttered. We had to put the food into his bill, which he opened very wide, when anybody came to him, for two weeks; then he ate a little himself, and soon afterwards as well as other birds. He is very fond of spider. In the Jan. No. of the OOLOGIST I read that these birds would not sing in confinement, if this is so, mine is an exception. After it was about 1 year old, it sang beautifully, but not as loud as they do when they are free. He is very tame, I often open the door of his cage, and let him fly in the room; he will then come to me if I catch a fly or a spider for him. If he is teased, he will make use of his bill. His mother occupied the old nest the following year, but never after that. These birds are very numerous in our neighborhood.

Max C. Fernekes, Milwaukee, Wis.

A Suggestion.

It seems to me, that if we oologists intend to stand up for bird-protection, (as we should) we ought to have some limit to the number of sets which we take.

Now I have always advocated collecting sets, because so much more can be learned from them than from single eggs, but I *do* that when we find a large number of nest of a certain species which vary but little, instead of taking all we can "clutch," five or six of the most typical sets ought to satisfy us. Then, if after that, we find any really peculiar sets, we might take them if we wanted to.

I limit myself (with a few exceptions) to five full sets of the same species in a season, and I think I learn nearly, if not quite as much from them as I would from twenty or thirty sets, while I don't feel so much like a "Great American Egg Hog," as some writer has expressed it.

I admit that if one should be so lucky as to find a large number of rare nests, it would be considerable of a temptation to take them all, but then, we must be careful, or with too many greedy oologists, and other "instruments of destruction," some of our birds will become so rare *that we can't find any at all*.

A good many will say they want to have a large number so the can trade them for other eggs—well, all I can say to this is, that although exchanging may be very good to a certain extent, I had a good deal rather have sets of my own collecting, than those collected by others.

Arthur H. Howell, Brooklyn, N. Y.

A Large Set of Eggs of the Red-headed Woodpecker.

In the January OOLOGIST, A. R. Quaintance speaks of taking two sets of six eggs each, of the Red-headed Woodpecker, and asks for an equal.

While collecting on Crow Cr., Weld Co., Colorado, last May, I took a set of ten eggs of the Red-head. The eggs varied in size from the ordinary size, down to the size of a Song Sparrow's egg. Incubation varied from fresh in the smallest egg, to advanced in the largest. The nest was in the end of a rotten limb of a large willow, about twenty feet from the ground.

R. C. McGregor, Poway, Cal.



The Naturalist's Bulletin

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All prices quoted in this BULLETIN will hold good as long as stock holds out, or until changes are made in some future BULLETIN.

The collection of Indian Relics which we promised to catalogue in this BULLETIN is, as yet, in our possession, but we have been so very busy during the past three months that we are unable to fulfill our promise, but will endeavor to furnish our Friends with a complete list within 30 days.

Prices in Jan. BULLETIN for Birds' Eggs will hold good until May 20th.

Next BULLETIN will be our *Indian Relic* issue, and will contain a large list of these Relics at remarkably low prices, and also many Job Lots at rates less than expense of collecting.

We have accumulated a large lot of odds and ends, some of which are very desirable and others the opposite. We have packed them up in "Job Lots" and have commenced to list them in this BULLETIN at prices, in many cases, less than one-half the actual cost to us. At our low prices we cannot send prepaid, but will send by Mail, Express, or Freight, securely packed at purchasers expense. In order 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.

JOB LOTS.

NO.	DESCRIPTION.	PRICE
1	50 Sand Crab Backs, weight 10 oz.	\$.75
2	120 " " " 18 oz.	1.50
3	12 Sea Spider Backs " 4 oz.	.40
4	1 1/2 p'ts small white bivalveshells, 13 oz.	.60
5	8 King Crabs, Sea Spider, Egg Case of Periwinkle, 2 Skate eggs, 3 or 4 shells, &c. poor lot.	5 oz. .50
6	20 shells and 10 seeds of Dreyflich Nut from China, "Big tree" Cone, 18 Skate eggs, poor.	10 oz. .40
7	35 perfect pairs of Mazon Creek Fossils, a very fine collection of Ferns, Weeds, Shells, Insects, Worms, &c.	13 1/2 lb. 4.00
8	18 unpaired Mazon Creek Fossils, and 1 lb. of Pike's Peak Minerals, 7 lbs. oz.	.75
9	33 Imperfect Brass Blow pipes 5 oz.	1.00
10	Lot of Cola. & Western Spec. Silver Ore, &c., 3 lb.	.50
11	50 Strombus alatus, (poor) 3 1/2 lb.	1.25
12	50 Strombus Alatus, 4 lb.	1.25
13	65 " " 5 1/4 lb.	1.50
14	50 Fasciolaria distans, 1 1/2 lb.	1.50
15	45 " " 1 1/2 lb.	1.31
16	100 Money Cowries, 5 oz.	.20
17	65 Small Strombus, Fla., 16 E. I. Olive Shells, 2 1/4 lb.	.60
18	5 Valutes, 2 Silver lips, 2 Cones, 5 Naticas Strombus, Tiger Cowry, Large Pyrula, Dosina, 7 Fulgrus Olive, Harp, 4 Papa raceus, 2 Ceylon Snails, & 2 Sponges, 2 lb.	1.00
19	7 nests of the Bell's Vireo, and 2 nests of the Blue-grey Gnatcatcher, fine lot, 3/4 lb	1.10
20	3 Tiger Cowries, 2 Mottow Cowries (New Orleans Expo. and Chaut.) 1 lb.	.50
21	9 pol. Pearl Plates, Chinese Shells, 2 1/2 lb	1.25
22	2 Japan and 1 Chinese Ear, 2 Japan Ear prepared for ash trays, 1 Valve of Furbio Claw, 1 1/2 lb.	.50
23	20 Little Conchs, 10 Rock Murex and 2 Cones, 10 oz.	.50
24	9 Fasciolaria, 12 Cones, and 3 Ceylon Snails, 7 oz.	.50
25	3 Sponges, 3 large Italian Pine Cones 1 1/4 lb.	.60
26	Lot Mixed Shells for Fancy Work, 1 1/2 lb	.50
27	3 Valuta junona, a very rare shell, 2 poor and one very poor; good ones are worth \$5.00 ea., 14 oz.	2.25
28	24 Sea Gophers (we have retailed hundreds at 25c ea.), 9 oz.	1.75
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 1/2 lb.	.75
30	3 bchs. Sea Kelp to which are clinging Mussel Shells by the doz. Kelp Root, a Moss Ball, Sea Fan, 10 oz.	.60

THE OOLOGIST.

<p>31 2 Calcite, Tripolite, Semi-opal, 6 pcs. Geodes, 2 Stibite on Datolite, Fluorite, qtz. Xtals, Amphibole, Amblygonite, 1 lb Glauconite, Yel. Sandstone, Albite from Tyrol. Barite from Eng., qtz. Tufo, Aragonite, qtz. Xtals, 6½ lb. 1.00</p> <p>32 6 Barite Xtals, Eng., 1 Smoky qtz. Xtal, 1 single, 1 twin, and 1 tripled qtz. Xtal, 3 Selenite Xtals, &c., 50 Fossil Shark teeth, very small but perfect, 10 oz. 1.00</p> <p>33 27 Channel Bass, 21 Tarpon, 5) Pearlfish and 1 Sturgeon Scale, Mussels and Ear Shell, Tooth of Sperm Whale, 4 Eye Stones, 5 oz. 1.00</p> <p>34 50 U. S. Revenues (1c - \$1.), 75 var. postmarks, 50 U. S. Stamps, 100 var. of Foreign Stamps and 3 var. Chinese Coins, 2 oz. 50</p> <p>35 2 Doz. Cards Marine Algae. Mtd., 4 oz. 75</p> <p>36 8 Mazon Creek and 6 Iowa Fossil Ferns, 1 Brazil Agate, 4½ lb. 75</p> <p>37 60 Showy Valves of Pecten irradians, 2 Silver lips, 2 Crab backs, 12 oz. 75</p> <p>38 70 Moss Agate (Chippings from Rawhide Butte, Wyo., 10 oz. 2.00</p> <p>39 30 Small Carnelians, Lake Pepin, Minn. 3 oz. 1.00</p> <p>40 115 Small Moss Agates, Wyo., 7 oz. 2.00</p> <p>41 Datolite, Lot Fibrous Asbestos, Agates, Amazon Stone, Quartz Asbestos, Lead region spec., Celestite Italy, 1 lb Microline Pike's Peak, 12 Xtals Smoky Qtz. 4½ lb. 75</p> <p>2 1 Mammoth and Curious Sponge Bahamas size 8 in. x 12 in., 6 oz. 1.00</p> <p>43 25 Trap Door Spiders in Alcohol, good, 1 lb 2.00</p> <p>44 Same as Lot 43, poor 1 lb. 1.00</p> <p>45 8 Small Sand tubes, 10 Moss Agates, 3 Rattle Snake Rattles, 3 var. Ivory Nuts, 3 dry Tarantulas, 8 oz. 1.25</p> <p>46 16 2d-class Nests of the Tarantula or Trap Door Spider, 3½ lb. 2.00</p> <p>47 11 Mammoth S. C. Clam Shells, size 5 in. x 7 in. 1.00</p> <p>48 19 Small Spar, Gypsum, Talc, Green Qtz, Graphite, Mica Slate, Hornstone, Ochre, 3 Micas, Agate, Marl, Tourmaline Black Mica, &c. 3½ lb. 75</p> <p>49 "Cobble," Rio Dolores, Colo., also fine spec. of Pet. Pine bark and Jasper Conglomerate, same locality, 1½ lb. 60</p> <p>50 Nests of each the Ruby-throated and Costa's Hummingbird, Magnolia and Black-poll Warbler, Black Grosbeak, Hermit Thrush, Warbling Vireo and Chipping Sparrow, 13 oz. 80</p> <p>51 One very fine nest of each the Black-chinned, Ruby-throated, Costa's, and Anna's Hummingbird, 6 oz. 2.00</p> <p>52 Contains fine fossils—10 Strophomena alternata, 5 Leptaena serica, 6 Streptorhynchus nutans, 9 oz. 75</p> <p>53 30 Sea Gophers, 10 oz. 2.00</p> <p>54 20 leaves from Chinese Book, 10 sheets of Chinese accts., 2 cards "Big tree" Moss, 5 cards Pacific and 10 of Atlantic Algae, 3 oz. 1.10</p> <p>55 9 Semi-opal and Moss Agate Chips, 2 Devilfish Eggs, 4 Skate Eggs, 14 Tarpon Scales, 2 King Crabs (poor), 15 Mam. Urchin Spines, 3 Mameya Nuts, 14 oz. 80</p> <p>56 3 Clusters Qtz. Xtals from Desolation Isle, Sand tube, Fossil Leaf, odds and ends, 2½ lb. 50</p> <p>57 1000 Guinea Peas or Black-eyed Susans, ½ lb. 50</p> <p>58 Chinese Back-scratcher, Curious 17 in. long; Ash-tray of Pearl Shell, Straw-covered; and 6 Coins; all Chinese, 9 oz. 1.00</p> <p>59 45 2nd-class Skate Eggs, 150 Blue-backed Money Cowries, 5 Olive, 5 Sun, Valute, Cone, and Turritella Shells, Shell pocket-book, 2½ lb. 1.50</p> <p>60 to 70 Each contain a fine 1 in. by 1 in. spec. of the following Minerals:—Porphyry,</p>	<p>Gneiss, Tourmaline, Novaculite, Agatized and Petrified Wood, Talc, Chalcocopyrite, French Sandstone, Serpentine, and Magnesite, 15 oz. 30</p> <p>71 to 78 Each contain 30 var. of the Minerals from the following list, size ½ in. by ½ in.:—Agate, Quartz, Garnetiferous Granite, Petrified Wood, Conglomerate, Gneiss, Porphyry, Asbestos, Tale, 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, Tufo, Copper Ore, Flint, Asphaltum, Onyx. ¾ lb. 60</p> <p>79 to 83 Each contain 30 var. of same Minerals as in last lots, size 1 in. by 1 in. 2½ lb. 95</p> <p>84 Pkg. of 10 Minerals, 5 Iowa and 5 Mazon Creek Fossil Ferns, 4 Mica, Hematite, 3 Drusy 2 oz., 1 each of Caingorum, Qtz. Xtals, Tufo, Lithomarge, Corundum, Green Feldspar, Andalusite, Enstatite, Bk. Mica, Asbestos, and Chalcedony, 3½ lb. 90</p> <p>85 4 Clusters Qtz. Xtals, 3 Fine Texan Fossils, 3 Texan Fos. Rock, 5 fine Marcasite, 5 Opal Wood, 2 Bk. Mica, 2 Rose Qtz. Jasper, Chalcopyrite, Forest Rck, Pyrites, Lead, &c., 4½ lb. 1.25</p> <p>86 30 var. Scientifically Named Con. Native Woods, size ¾ in. by 1 in. by 3 in., bark on edge, a fine spec. of each the Wood, Bark, and Cone of the Cala. Mammoth Trees, 1½ lb. 75</p> <p>87 1 Dried Cuttle fish, can be soaked out and made into a fine alcoholic spec.; Fine Fos. Fish in 2 pieces: 1 E. I. Fan Shell (Pinna), 1 Valve brk, 13 oz. 1.50</p> <p>88 10 oz. Creep, 5 oz. White Lily, 5 oz. White Rose leaf, and 8 oz. small White Bivalve Shells, affine lot of White Shells for fancy work, 2½ lb. 1.50</p> <p>89 2000 Small Flat E. I. Snail Shells, quite prettv, 1 lb. 1.00</p> <p>90 50 E. I. Cowries, 9 Strombus, 125 Gold and Silver, 75 Small Conch, 20 Peanut, 100 Small Pearl Snails: 25 Money Cowries and 100 Horn Shells, 1 Ceylon Snail and 350 Guinea Peas, 1½ lb. 1.25</p> <p>91 300 Chinese Screw Shells, 13 oz. 75</p> <p>92 100 fine E. I. Olive Shells, 1 lb. 75</p> <p>93 1 quart wet mixed E. I. Cowry Shells, several species, 1½ lb. 1.00</p> <p>94 to 101 Each contain the following all good specimens:—1 Fossil Shark Tooth, 1 Arrowhead, 1 Spec. Limonite, (very fine) 3 Money Cowry, 1 egg of Sand Shark, 1 Star Fish, (good), 1 Purple Sea Urchin, 1 Sea Gopher, (rare and curious) 1 Alligator Tooth, 2 Gray Sea Beans, 1 Red Sea Bean, 1 Brown Sea Bean, 1 Liver Bean, 1 Ivory Nut, 1 Chinese Coin, 1 Bill Confederate, 100 Foreign Stamps, (all different) This was our famous \$1.15 Collection of which we sold hundreds, the regular retail price of spec. was \$2.15; 1½ lb. 75</p> <p>102 10 Nam. Minerals, 6 Clusters of Gypsum Xtals, 2d Halfie from Syracuse, N. Y., 3 Psilomelanes? 3½ lb. 65</p> <p>103 Contains the following 74 Coins:—22½ 1c. Canada; 10 2c. Belgium; 18 1c. Nova Scotia; 3 10c France; 1 ½d., and 2 1d., England; 1 Prince Edw. Is'd; 1 1p., 3 2p., and 7 5p., Germany; and 6 Chinese, 15 oz. 1.25</p> <p>104 800 Mixed For. Stamps; 55 5c Post. Due 100 3c Post. Due; 45 Japanese Stamps; 4 Bills of Canadian Hard-time Money, Fine 6 in. Spec. of Cactus Wood, Devilfish Egg, 6 oz. 90</p> <p>105 14 Clay Stones, 3 Crinoid Stems, Stalac tite, 6 Fossils, 4 very fine, rare, Crinoid heads, 4 Maz. Cr. and 2 Ia. Ferns, 7 very</p>
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THE OOLOGIST.

	fine Pentremites, 3 Moss Agates, 3½ lb....	1.00
106	12 Arrowhead chips of Jasper, Chalcedony, &c.; 20 Named Minerals; Pebbles from Ala., Ga., Eng., Montana; and 11 from Lake Ontario; 6 oz. of Quartz and 9 oz. Qtz. Garnet, and Tourmaline sand; 19 Small Lake Sup. Agates, 300 Rice Shells, Hornstone, Cluster of Qtz. Xals, 4½ lb...	1.20
107	88 Cape May "Diamonds" 100 Broken Fossil Shark teeth, a few good ones, 1½ lb	1.00
108	1 Spec. Calcite coated with Stibite, 1½ lb	.60
109	3 Japanese Hair Ornaments, odd and curious, 5 Jap. Book Marks of Natural Wood, 4 oz.	.75
110	8 Fancy Hu. glass vials or Tubes filled with Shells, Corals, &c., at the time of blowing, and cannot be taken out without breaking the vial, 1 lb.	.75
111	Same as Lot No. 110, ½ lb.	.75
112	15 very fine Hot Spring's Quartz Crystals and 16 smaller ones, 4½ lb.	1.50

*More Job Lots
next Bulletin.*

MINERALS.

Bargain List for 1888. Advanced collectors should send 2c stamp for complete Mineral Catalogue. Our specimens, although cheap in price, are not in quality. Other dealers charge 5c for our 2c specimens &c., &c.

Actinolite.....	\$0 03 to \$0 25
Alabaster.....	03 " 15
Agate.....	03 " 3 00
Agatized Wood.....	03 " 50
Albite.....	02 " 25
Allanite.....	02 " 25
Amber.....	15 " 1 00
Amethyst.....	05 " 3 00
Amphibole.....	05 " 25
Analcite.....	05 " 25
Andalusite.....	15 " 50
Anhydrite.....	02 " 25
Anthrophyllite.....	03 " 25
Anthracite.....	02 " 10
Apatite.....	02 " 15
Apophyllite.....	03 " 25
Argentiferous Galena.....	02 " 50
Aragonite.....	02 " 50
Arsenopyrite.....	02 " 35
Asbestos.....	02 " 25
Azurite.....	03 " 25
Barite.....	02 " 25
Bituminous Coal.....	02 " 10
Bog Iron.....	02 " 50
Biotite.....	02 " 15
Borax.....	02 " 10
Bronzite.....	02 " 25
Buhrstone.....	02 " 25
Cairngorm.....	02 " 25
Calamine.....	03 " 50
Calcite.....	02 " 50
Calcareous Tufa.....	02 " 50
Cannel Coal.....	02 " 15
Calc Spar.....	02 " 25
Carnelian.....	05 " 2 00
Cassinite.....	03 " 15
Cassiterite.....	02 " 10
Catinite.....	02 " 50
Celadonite.....	02 " 25
Cerollite.....	05 " 25
Cerussite.....	10 " 15
Chalcedony.....	02 " 3 00
Chastolite.....	15 " 50
Chondrodite.....	03 " 25
Chalcopyrite.....	02 " 25
Chalk.....	02 " 15
Chromite.....	02 " 15
Clay-stones.....	03 " 25
Covelite.....	05 " 25
Coquina.....	02 " 50
Conglomerate.....	02 " 25
Coke, Native.....	02 " 15

Copper Ore.....	05 " 25
Copper Pyrites.....	02 " 25
Crocidolite.....	05 " 2 00
Cryolite.....	02 " 25
Cubanite.....	02 " 20
Cyanite.....	03 " 25
Datolite.....	03 " 25
Dendrite.....	02 " 50
Diamond.....	40 " 75
Dolomite.....	02 " 25
Dogtooth Spar.....	05 " 1 00
Elaeolite.....	03 " 25
Dawsonite.....	02 " 25
Electric Stone.....	03 " 1 00
Enstatite.....	02 " 25
Epidote.....	05 " 25
Feldspar.....	02 " 50
Flint.....	02 " 25
Flintolite.....	02 " 25
Franklinite.....	03 " 25
Flos Ferri.....	03 " 25
Flourspar.....	02 " 25
Forest Rock.....	02 " 50
Galenite.....	02 " 25
Garnetiferous Albite.....	03 " 25
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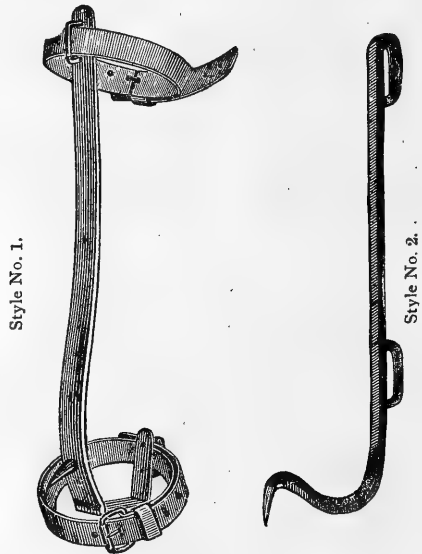
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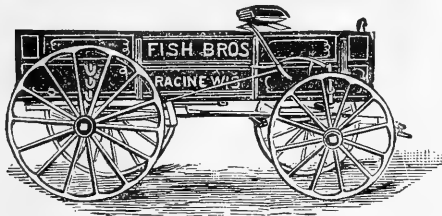
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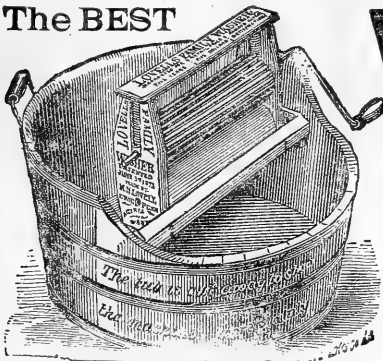
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THE OOLOGIST

Vol. V, No. 4.

ALBION, N. Y., APRIL, 1888.

PUBLISHED MONTHLY,
50¢ PER YEAR.

Boat-tailed Grackle.

Quiscalus major.

Among the most noticeable land birds of Florida are the Boat-tailed Grackles. This is partly due to their large size, but is mainly owing to the fact that they make themselves conspicuous by their loud notes and ostentatious display. As they are generally regarded as harmless birds they are seldom molested and thus have acquired confidence in man, becoming very tame. Indeed they are the most unsuspecting of any birds of such large size that I ever saw, and I have frequently passed within two yards of them as they sat on the low bushes on the bank of the river. But wherever the tourists go, they are prone to shoot everything that they see, and the Jack-daws, as they are called, soon become aware of this propensity, so that they are very shy about cities or towns. Being remarkable sagacious birds they do not remain long where they are persecuted, but retreat to the wilder sections where they are very abundant, and where I have had many opportunities of observing their habits.

Like the preceding species, the flight of the Boat-tailed Grackles is somewhat heavy and decidedly marked, for the long, keel-shaped tail gives the bird a peculiar appearance and looks as if it were too heavy for the remainder of the body which is often kept at an inclination, with the head highest. I do not think these birds are as agile in aerial evolutions as the other Blackbirds for they seldom wheel in circles, but fly more in a direct line; in fact this species is characterized by their dignified movements, even when walking. They spend a great portion of their time on the ground, frequenting the neighborhood of streams and other bodies of water into which they wade in search of mollusks,

crabs, etc. Throughout the winter these Blackbirds assemble in large flocks, some of which are wholly made up of males while others are composed mainly of females, but by the first of March these large assemblies break up into smaller companies and both sexes come together. Then the males begin to sing, but perhaps I am violating the rules of harmony when I call this peculiar lay a song. Yet, although the chirp is much harsher than that of the Crow Blackbird, the remainder of the performance is much different. It consists of a series of sharp, short, though clear, energetic notes uttered somewhat rapidly, and taken in connection with the primeval surroundings, produces an effect which is exceedingly pleasing.

As I have remarked before, the east side of Indian River is mainly composed of dry prairies through which are interspersed little ponds. The space occupied by the water is small, but it is surrounded by a belt of marshy ground, of a greater or less extent, which has thickly grown to high, coarse saw-grass. This rank herbage which is often six feet high, is the chosen resort of the Boat-tailed Grackles, and the nests are fastened to the large stems. Sometimes there will be willows near the water, and on a few occasions I have found the nests in them. The average height of the structures above the surface was four feet, but I took one from a branch of a tree that was placed ten feet from the ground.

This was quite exceptional, in fact it is rare to find them elsewhere than in the grass. The birds began to breed in the Everglades by the second week in March, and I found them nesting in the rushes in the islands at Salt Lake by the seventeenth of the month, but it was as late as the third of April when I visited the breeding grounds mentioned above. The eggs had

evidently been deposited for some time, as they nearly all contained embryos, but some were fresh. The usual number was two, indeed out of at least thirty nests only one contained three. Farther south, in the Everglades and in the Indian Hunting Grounds, I almost always found three.

This is all that I ever obtained but Mr. C. H. Nauman has taken four, three are, however, the usual number deposited. The birds were quite solicitous for the safety of their eggs, chirping loudly and alighting quite near us. The males were present and evinced considerable interest, for they elevated the feathers on their heads, fluttered their wings and joined in the general outcry. But they have a singular way of exhibiting their excitement which I never observed in other species, for they draw the nictitating membrane of the eye backwards and forwards very rapidly. At this time they also uttered a croak which resembled the alarm note of the Green Heron. I do not think that the males share in the duties of incubation but they certainly care for the young when they appear. I found the fully fledged nestlings flying at Lake Harney by the first week in May, and Mr. Nauman writes me that they bring out two or even three broods in one season. I have seen the Boat-tailed Grackles as far north as Pamlico Sound in North Carolina, on the twentieth of November, and at Smithville on the twenty-second, but I did not meet with them after this along the coast until we reached the St. John's River. This was during the cold season of 1876-77 when they would be much more likely to seek warmer quarters. I do not think, however, that they remain above Florida during winter, but they migrate northward in the spring as far, at least, as Virginia.

From Maynard's Birds of Eastern N. Am.

Frank H. Lattin, of Albion, Orleans Co., N. Y., is a dealer in natural history specimens, instruments, supplies, and publications of all kinds. Every A. A. Chapter should have a copy of his complete catalogue and price-lists before making purchases. His specimens are the very best, and his prices will be found to be much lower than those of any other reliable dealer.—*Three Kingdoms.*

The Destruction of Our Native Birds.

Dr. F. W. Langdon, of Cincinnati, recently delivered an address before the Society of Natural History, of that city, in which he discussed the subject of "The Destruction of our Native Birds" from what he admitted to be the unpopular side. A portion of his address will be found of much interest to general readers, nevertheless, and it is here given.

"The main proposition," he said, "sought to be established by the report of your committee, the Committee of the American Ornithologists' Union, and papers of similar tenor by various individuals, is: That our song birds, insect-eating species, and smaller birds generally are in danger of suffering notable decrease in numbers, or even extermination, by reason of the demands of fashion for millinery and dress ornaments: the bloodthirsty disposition of the 'bad small boy;' the market gunner or 'pot hunter' and the the ornithological collector and student.

"In support of the claim that the demand for millinery purposes is the chief cause of an anticipated extermination of song birds, we find numerous high-sounding figures in the various papers referred to. Let us see what figures these are and to what birds they apply. Mr. William Dutcher states (quoted also by your committee) 'that 40,000 terns were killed on Cape Cod in one season; that at Cobb's Island, off the Virginia coast, 40,000 birds, mainly gulls and terns, were contracted for by an enterprising woman from New York to ship to Paris; that 11,018 skins were taken on the South Carolina coast in a three months' trip of one dealer; that 70,000 were supplied to New York dealers from a village on Long Island. Note, if you please, that these large figures apply to 'coast birds, mainly or entirely, therefore composed of gulls, terns, and the 'shore' birds. My friend Mr. George B. Sennett is also quoted as stating that he overheard the agent of a millinery firm endeavoring to make a contract in

Texas for 10,000 plumes of egrets (a species of heron, or fish-eating wader). Then, in another place is an estimate that the number of grebes shipped, mainly from the Pacific slope of North America, must range far into the ten if not hundreds of thousands. And my friend Mr. Dury has drawn your attention to the fact that the herons and other water birds have been destroyed by thousands in the swamps of Florida.

'Now, the argument sought to be sustained by this startling array of figures is that we are in danger of allowing the extermination of species desirable to man on account of their song, or economically valuable to the agriculturist as insect destroyers; and the poetical quotations and crude generalizations which are invoked to excite our sympathies are such as relate to the latter species—*i. e.*; song birds. In other words, while in the statistics cited, mainly gulls, terns, herons, and 'shore birds' appear prominently in the foreground, the moral is pointed chiefly, if not entirely, at 'song birds'—so that the nonornithological reader is extremely liable to the impression that the figures themselves apply to the 'song birds' as much as to any others, and to have his sympathies aroused accordingly. But when informed that these are almost wholly a marine species—gulls, terns, and 'shore birds'—the scavengers of the ocean and ornithological tramps, so to speak, most of them being migrants, whose home is far beyond the confines of civilization; whose only 'song' is a mere 'screech or squawk,' anything but musical to human ears, and which are not in any degree beneficial to man except for their feathers—these facts considered, does it really seem so bad to make merchandise of their plumage for ornamental purposes?

"As for the destruction of thousands of herons and other water birds in the swamps of Florida and Texas, this effects neither song birds nor civilization, since their notes are no more pleasing than those of the gulls and terns; and they are doomed to extirpation regardless of milliners and fashion whenever civilization drains and cultivates their nesting and feeding places. If we look at this part of the subject in an economic

light, we shall see that these birds, chiefly herons, are the natural enemies of fish, so that their destruction, in the long run, directly favors the increase of food for man. Furthermore, their habitat is in districts entirely uninhabitable to the human species, and they would forever remain unknown to man but for the ornithologist, the sportsman, and the milliner.

Now, leaving the gulls, terns, shore birds, grebes, and herons for the present, let us examine some of the figures of our pessimistic friends which do apply to song birds, and their use for millinery purposes. Here we are struck at once with the absence of definite figures, and in their place find such generalization as 'many song birds, and 'war of extermination' on catbirds, robins and thrushes. One New York taxidermist is quoted as having 30,00 skins of 'crows, crow blackbirds, red-winged blackbirds, and snow buntings.' The first three species of disputed or doubtful benefit to man on their omnivorous diet, and with no song worth mentioning, excepting the clear whistle of the red-winged blackbird; while the fourth species is a far northern sparrow, a winter visitor only in the United States, irregularly distributed, subsisting chiefly on seeds, and with no more song, while with us, than the European sparrows in our streets.

"Again, the extent of territory from which this 30,000 skins were derived is not mentioned—a very important item, as I shall hope to show later.

"The most definite observations as to the use of song birds are those of Mr. F. W. Chapman as the result of two afternoon walks in the 'shopping' districts of New York. He gives a list of 40 species observed, of which 15 only can, by the most liberal classification, be denominated song birds, including two sparrows, which are only winter visitors in the United States. The aggregate number of individuals belonging to this lot is stated at 174, which may be classified as follows: Song birds and useful species 30; useful but not song birds, 38; birds of doubtful and negative value, 106. Among those classed as of negative value are some really objectionable as destroyers of useful

species, namely, the shrikes and jays. The others in the negative list are chiefly terns, gulls, grebes, and shore birds.

"To this I may add my own observation, made yesterday, of a wholesale milliner's stock in this city. Taking a dozen or two of boxes at random from the the stock, here is the list: Twenty-four tropical blackbirds (South American); 24 tropical orioles; 20 tropical kingfishers—habitat Mexican border to Brazil; 12 tropicals, (South American); 6 large and very wicked-looking jays, (not recognized as North American); 6 pigeons of a species whose habitat is West Indies, Central and South America; 12 white-shouldered blackbirds, not North American; 24 maroon tanagers, Brazilian; 6 heads of California quail; 1 Red-shouldered blackbird; 137 skins, of which 7 only are undoubtedly North American, and none of these 7 song birds.

"I should not omit to mention the statement of my friend Mr. Dury as to seeing 'bluebirds by the bushel' in a taxidermist's stock in New Jersey. Now Mr. Dury does not say how many bushels, but we may suppose three bushels at one hundred skins to the bushel to be a pretty fair stock. Three hundred bluebirds killed in the State of New Jersey, with an area of 8,320 square miles, is equal to one to about every thirty square miles and we are not assured that they were taken in one season either. Does any one suppose that this one bluebird to thirty square miles would create a noticeable gap in the fauna? but how small are these figures, and how scanty the facts as compared with those relating to the gulls, terns, herons, &c. To be sure, we find mentioned by Mr. Allen, and quoted by your committee, 'the million of rail and bobolinks' killed in a single season near Philadelphia. These, however, have been destroyed annually for the benefit of Philadelphia and New York epicures for many years before bird wearing came into fashion, so it is out of the question to charge their destruction to 'bird wearing ladies.' And even with this formidable rate of destruction we do not see that either species has become extinct or even noticeably diminished in numbers. But suppose we consider, for the sake of argument, that birds

are destroyed equally for millinery purposes—songsters and beneficial species along with those of negative value economically considered. To what extent are bird wearers responsible for their destruction?

"Prominent among the statements made in Mr. J. A. Allen's paper, and quoted by your committee in the use of birds for millinery purposes, is the assertion that 10,000,000 American women are of a 'bird-wearing age and proclivities.' Some might consider this an exaggeration, which it probably is, but for the sake of a basis we will admit it to be true. Mr. Allen further estimates, allowing for the making-over necessities of the economically disposed ladies, that 5,000,000 birds per year will be required to satisfy the demand.

"Now, what effect practically will this have on the bird fauna of America, for as two-thirds or more of the birds of any one North American locality are migrants, and many of them pass from South to North America, and *vice versa*, we must estimate the effect on the continent at large, as we do not limit the bird wearing ladies to any one locality. Moreover, the ornithologist who attempts to identify the contents of boxes of birds skins in our millinery establishments will find the vast majority of exotic forms, as I have already noted. The ultimate influence of the destruction of birds, then must be estimated by the number of birds in the whole country. Now, unfortunately for our purpose, we have no reliable census of American birds, as applied to individuals, but, following the example of Mr. Allen, we may estimate that 15,000,000 square miles comprised in North America and West India Islands will average at least 200 birds to the square mile, (and I think my ornithological friends that are present will agree with me that this is an exceedingly moderate estimate.)

"According to our estimate, then, we would have a bird population in the Americas of 3,000,000,000—that this is not an excessive estimate is evidenced by the fact that Alexander Wilson computed the number of pigeons alone in a single flight is over 2,000,000,000 or 1,500,000,000 pairs.

Now, another very moderate estimate would allow at least two birds to each pair for natural increase so that 3,000,000,000 must be destroyed annually, by all causes in order that the bird fauna shall remain at its present proportions; in other words, until that are destroyed there will be no decrease in numbers. Now, the proportion destroyed for millinery purposes taken at Mr. Allen's estimate of 5,000,000, and allowing another 5,000,000 for South America, Canada and, Mexico, and the West Indies, would be as 10 to 3,000, or as 1 to 300; the other 299 meeting their death from other causes. In other words, a death mortality rate of $3\frac{1}{3}$ per 1,000, while a rate of 20 to 25 per 1,000 in the human species excites no comment whatever.

"The actual rate in the birds is manifestly much less than that above stated, since a section of the country with only 200 birds to the square mile would probably be the rare exception rather than a frequent occurrence. Be it noted, furthermore, that the constant demand for novelty to which the fashions are due prohibits a continuance of even this low mortality rate for many years in succession.

"Figures aside, however, it is a self-evident fact that all species of animals and plants require checks to their maximum rate of increase. (The human population of the United States, at the ordinary rate of increase, would number four to every square yard of the earth's surface in less than 700 years.)

"Now, of the many natural checks upon the increase of birds, some are removed by civilization, others are increased. Then, again, there is even a higher factor that governs the increase or decrease of different species -- which is unknown to us except by its effects, namely, the inherent capacity of the species itself to increase. As an instance of the disappearance of a species without known cause we have the case of our own paroquet, a bird abundant in large flocks throughout the Ohio Valley in the first quarter of the century, noted by Audubon in 1831, as rapidly diminishing in numbers; by Ireland and others, in

1838, as only met with irregularly, and as straggling flocks. While we have no recorded date of their appearance in this State between 1840 and 1862, when a single flock of stragglers were noted in Columbus. Throughout their range we have the same accounts of constantly diminishing numbers, as we had before the days of bird wearers, taxidermists, or pot hunters, or ornithological collectors in the West. In accordance with this capacity some species are to-day increasing, while others are dying out, much as the did in former geologic times before the human biped made his appearance; and man to-day is the only one check upon species in nature's vast game of chess, and not by any means so important a one as he is apt to imagine.

"To sum up, then, the practical influence of bird wearing upon our fauna, we may note;

"*First*—That the North American birds used in greatest numbers are gulls, terns, herons, and others, not song birds, nor species beneficial to the agriculturist.

"*Second*—That our most desirable and familiar song birds, such as thrushes, wrens, greenlets, finches, are in limited demand, on account of their generally plain colors.

"*Third*—That of the brilliantly plumaged birds a vast majority come from South America and other foreign countries.

"*Fourth*—That probably enough of shrikes, jays, crows, and other predatory species are destroyed to more than compensate for the few song birds actually killed by man for all purposes.

"*Fifth*—If all were song birds and equally beneficial, the reduction in numbers from this cause would be inappreciable in its effect on the fauna of the country at large.

"Coming down to the consideration of the birds of our own locality and surrounding territory, Mr. Dury has given us a very interesting reference to the abundance of the wild pigeon in this region 25 years ago, and has noted their scarcity at the present day. The last great flight of these birds that I remember here was in the fall of 1865, when the air was darkened with them for the greater part of two days. Now their

disappearance is certainly not due to the demands of the milliners; and while the pot hunter and the 'bad small boy with a gun' have probably destroyed their share, much more influential factors in causing their disappearance in my opinion have been the demands of agriculture and commerce, causing the destruction of the mast-bearing forest where they fed and nested. The same factors account mainly for the disappearance of our larger game and water birds—*i. e.*, clearing forests, draining swamps, and so on. And we might as well attempt to stay the progress of Old Father Time himself as to try to check civilization in order to save these birds.

"But," it may be asked, 'must our civilization eventually cause a birdless country?' Not by any means; on the contrary, we shall find if we study the comparative abundance of birds in general in most civilized sections of our country, that birds are probably more numerous, both in species and in individuals, than they were in the earlier days of its settlement.

"While I am in favor of increase of desirable birds, of the utmost dissemination of knowledge respecting all birds, of the formation of Audubon societies, if you please, and of the popularizing of ornithology in general, I do not think we gain anything in a scientific or practical sense by distorting, misstating, or suppressing facts, exaggerating figures, or by denouncing the well established right of man to use all natural objects for the furtherance of his necessities, his convenience, or his pleasures." *E. e.*

An Odd Nesting Place.

I was reading what W. J. S. says about "An Odd Nesting Place," and it put me in mind of one that I have discovered. Next to my house is the town clock, and in the face of the clock are two holes made to look like key-holes; in these holes, a pair of English Sparrows have bred for two years, and are now building a nest, making the third year. There is no way of reaching the nest without taking out the works of the clock, so you see they are safe from all collectors. When the clock strikes, the don't seem to mind it, and seem to be quite tame. A. S. Brower, Ballston, N. Y.

A Nest in a Horseshoe.

Birds at times select extraordinary places in which to build their nests, situations you would think the least likely to be chosen for such a purpose, as, for instance, under a railway sleeper, where a lark's nest was found not long ago, or in the breast pocket of an old coat hung in an outhouse, in which a robin's nest was found. Tin cans, old kettles, earthenware mugs, flower pots, and other miscellaneous articles have frequently been recorded as containing birds' nests and eggs, or young ones. Our illustration gives a still more remarkable place a bird has chosen in which to build a nest, *viz.*, the interior of a horse's hoof. The nest is that of a spotted flycatcher, a common summer visitor, and was found in a hedge at West Burton, Sussex, and was presented by a gentleman to the British Museum at South Kensington, where it can now be seen. It has four eggs in it. One can only guess how the hoof got to be in the hedge, but it seems likely that some countryman had obtained the hoof with a view of having it polished and the iron shoe brightened, and so making an ornament of it, such as one often sees in the naturalists' shop; he had probably got tired of it and thrown it into the nearest hedge, when it was adopted by our little bird as a nest-holder.—*Sel.*

How to Pack Eggs.

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. Having prepared a suitable box for the specimens, 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.

THE OOLOGIST

EDITED AND PUBLISHED MONTHLY

—BY—

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

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Does It Pay to Advertise in the Oologist?

A few unsolicited testimonials.—Prof. J. A. Singley, of Giddings, Tex., writes as follows, in regard to his one inch adv. in Dec. issue:

"I've been away from home nearly all the time since Jan. 1st, but my wife and my brother, who attend to biz. in my absence, tell me that nearly 150 requests for lists, mentioning the OOLOGIST, have come to hand."

R. B. Trouslot & Co., of Valparaiso, Ind., appear satisfied:

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Gleanings From Our Correspondence.

J. L., Beverly, Mass., writes: "I sent to your office for the January and February numbers of OOLOGIST, and received two papers that I did not send for and did not want, and if you are going to try and pass off old papers on me you have got the wrong man, and if you cannot send me what I send for, you can refund the 50 cts. I sent in Dec, 1887. If you do not send me the January and February numbers before the end of a week from date, you stand liable to be published as a fraud, so to save trouble for both sides send what I want before 7 days."

Sometimes we receive letters like the above, and often, we fear, they are justly merited, but friends, we are doing the best we know how. Truly, we are behind in issuing the OOLOGIST, owing to circumstances which could not, as far as we are concerned, be avoided, but we are doing our best to "catch up." If you have any complaints to make, please make them pleasantly. We 'guarantee satisfaction,' and have yet to find the first instance where we failed to do so. Our feelings are not less blunt than those of our friends, and it pains us greatly to read a letter like the above when we are striving to do the best we can.—Ed.

E. E. F., Jefferson, Wis., would like to know the proper names of the following birds: "Wild Canary, the Big Marsh or Closier Snipe, Yellow Creeper, Clover Finch—this bird always lays its eggs very near a tuft of clover, and the High Holder."

The last is one of the two-score or more names given to the Flicker.—Ed.

W. S. C., of Peoria, Ill., writes: "I have donated my collection of some 150 species to the Peoria Scientific Association, and am still collecting for them. My lot are chiefly in sets, and mostly of my own collecting. As I have no cabinet fit to show them in, I am going to request you, through your valuable paper, to solicit descriptions of style of cabinets used by some of your subscribers."

G. L. W. Mt. Morris, N. Y., queries: "A few mornings ago I heard a bird singing, perched on the top-most branch of a tall elm tree. It made very strange noises,

I never heard one sing before. They are very rare around these parts. I will try and describe it. It was about the size of a robin, it had black wings and tail, its body was of an ashen gray color, more whitish on the breast. Its head was thick and short, its bill or beak was short, the upper part rounding over the under, similar to a hawk's. It made several different kinds of "noises." If you can, please answer through the *Oologist*."

Your bird was a Shrike.—Ed.

Z. L. W., Stoughton, Wis., under date of March 19th, writes: "The birds have come with a rush, saw a Broad-winged Hawk yesterday and one blue bird on the 8th. But this morning a warm rain set in from the south, which has brought the birds, although the snow in the roads is higher than the fences. Have seen several flocks of Geese, Meadow Larks, Robins, Blue birds, Song Sparrows, and Phoebe birds. It has rained so steadily that I have not been able to make much observations except from the door or window. The Prairie chickens commenced coning this morning."

C. S. L., Warriorsmark, Pa., wants to know how to get Baltimore Oriole nests. He says: "They build in this place and always on the end of the weakest branch they can find, generally on a Norway spruce. The nest is very hard to get without breaking the branch."

C. C., Odin, Ill., found his first crow's nest on March 8th. It contained five fresh eggs.

Our friend Kibbe, of Mayville, N. Y., writes: "In the January number of the *Oologist* I saw A. L. Quaintance made a big find in Red-Headed Woodpecker's eggs, and asked who could beat it. On May 28, 1887, as I was passing across the fields to my favorite hunting ground, I saw a Red-head on an old dead tree, and I approached it and saw a hole. So up I went and cut into the nest and to my surprise I found five fresh eggs. Then on June 11th, as I was passing the same tree, and when very near to it, I saw the Red-head fly out of another hole. So up I went again and cut into the new made nest and found four more fresh eggs. Then June 27th, I happened that way once more, and to my great surprise the old Red-head had made another hole and of course I went up once more. This time I found five fresh eggs."

S. E. B., Erie, Pa., sends us a skin of the Great Northern Shrike for identification, and writes: "In the *Oologist* I saw some remarks on Robins wintering north, and the nesting of the English Sparrow. Robins are frequently seen here in the middle of winter, staying generally near the mountain-ash trees and feeding on its berries. There is an old elm in this city that contains at this time about twenty-five English Sparrow's nests, and there is no telling how many will be there in the summer."

M. E. G., Fayette Co., Pa., talks of going into the "business," but we hardly think our eggs will "hatch" and fear we shall lose his patronage: "I received circulars from you some time ago, of specimens and supplies. I do not just understand them. Do you mean so much apiece for eggs or for a setting? I wish to get a Linnet and Mocking bird, and if I have good luck and the eggs hatch, my brother will go in the business and will patronize you. Please let me know soon the exact price and oblige."

Prof. Wheeler, of Scranton, Pa., writes: "Your two packages came duly to hand and contents all found in good condition. To say that I am well pleased with the return is drawing it exceedingly mild."

H. S. B., Rochester, N. Y., writes: "While out in the country Saturday, Feb. 18th, I saw among a flock of common English Sparrows a bird about one-third larger than a Sparrow. The bird was jet black all over. Can you tell me what it was?"

[Could it have been a Cow bird that had been reared by the Sparrows?—Ed.]

In reply to F. N. M., of Leighton, Ala., and many others, we would say that we mail the *Oologist* during 1888 to any person sending us an order amounting to \$2.00 or over. We will also send it during 1888 (including Premium) for \$1.00 worth of desirable first-class Birds' Eggs.

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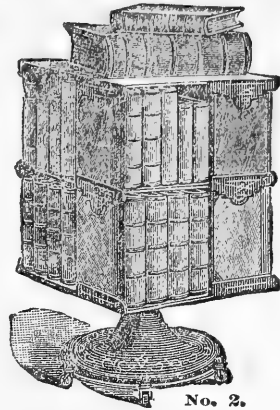
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OÖLOGIST.



Monthly.

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Vol. V,

ALBION, N. Y., MAY, 1888.

No. 5

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THE OOLOGIST.

Vol. V,

ALBION, N. Y., MAY, 1888.

No. 5

OLOGY.

Advice to Live Collectors.

The season for collecting eggs is now approaching. The robin, bluebird, phoebe and other harbingers of spring are putting in an appearance. The frogs have reorganized their orchestra and have commenced giving concerts in the swamps and meadows. The grass will soon begin to look green, and the buds will swell and soon throw out their green foliage. All nature rejoices in her liberation from the icy chains of old winter. Soon all nature will be full of life and activity. Our feathered friends, the birds, will soon commence making arrangements for housekeeping. After mating, they will select a suitable place for their nests and commence building them in earnest, and before we are aware of it they will contain their full complement of eggs. The active collector should get everything in readiness as soon as possible for the spring and summer campaign. His instruments for preparing the eggs for the cabinet should be looked over and placed where they will be ready for use. He should refer to his books on ornithology and oology (of which every *live* collector should have a few), and take a few notes in reference to the time and place of nesting of our birds from the earliest to the latest species. Arrange a mental list in order of nesting, so that he can commence this year's work in a systematic manner, and make it a success.

Too many of our young collectors are very careless in making their collections. *Never* take an egg or set till you have fully identified it, then when it is placed in the cabinet it can be correctly labeled. Collectors differ in opinions in regard to the number of eggs of each species to be placed

in a cabinet; some collect one, some two, of each kind, while others must have the whole "set." Two eggs of a kind make a pretty collection when nicely arranged in a cabinet. For a majority of collectors, two eggs are enough, and especially among that class who collect because it is fashionable to have a cabinet of eggs to show their friends, but as soon as the excitement wears away, their collection is given away to some other person to go through the same programme, or destroyed. Every honest collector should do all he can to discourage this class of collectors.

Another class to be feared is the one that collects because "there is money in it." The love of money destroys all the ennobling qualities of the pursuit. Some persons make a business of collecting because they can sell what they find, never forming a cabinet of their own. They have no more care about the havoc they create among our feathered friends than the rum-seller cares what the consequences may be when he sells a glass of spirits to a man. These collectors have destroyed, indirectly, so many of our rarer visitors that some states have been called upon to make laws regulating this business. It would place some of these so-called collectors under embarrassing circumstances if some one should enforce this law some fine day. All collectors should thoroughly study our laws in reference to this subject and keep on the safe side. By so doing, they can create a moral sentiment in their favor among that class of people who consider *all* collectors "cranks," and who, under the slightest provocation, would haul a "birds' egg collector," as they call them, before the Courts.

An honest and enthusiastic student will be respected by all, and will receive help and encouragement from many sources where none was expected.

We wish to say a word against the indiscriminate collecting of "sets." We are pained to read in our Oology papers that some collector has taken five sets of blue-birds' eggs, seven of the phoebe, ten of the ruffed grouse, etc., in one season. All true collectors should lift their voices in unison against this wholesale destruction of our birds.

E. G. W.,
Three Rivers, Mass.

The Bald Eagle.

This splendid bird inhabits the whole of North America at large, though in some parts only an occasional specimen is seen, while in more favored localities among the huge forests and inaccessible cliffs of the Adirondacks or the region around Niagara Falls it is a comparatively common species.

Often while on a hunting or fishing expedition among the mountains not many miles distant from this village, I have come upon several of these birds at once, playing about over the surface of some small lake, at times seeming to hang motionless on their broad pinions, and then rising in great circles until in the blue space they looked no larger than sparrows and finally disappeared altogether.

Many times I have observed one seated upon some tall tree and endeavored to creep near enough for a shot, but always without success, for I could never even get within rifle range before the wary old bird was upward and away, leaving a very much disappointed fellow to hurl maledictions upon him as he departed.

However, I shall try again this season in the hope that at last I shall obtain this valuable addition to my cabinet.

In regard to the habits of this bird, in spite of his fine appearance and great size, he is very lazy and an arrant coward. For it is a well known fact that he habitually robs the Osprey of his hard earned booty, and as to his cowardice, the little king bird, smaller than a robin, attacks him successfully and drives him from his precincts.

The average length of these birds is three feet, and the expanse of the wings seven

feet, while the wings are unusually broad and strong, giving great capacity for swift and long continued flight.

The head, neck and tail are pure white, the rest of the plumage a deep brown and the eyes are of a straw color, thus giving the bird a beautiful appearance. The colors are the same in the male as in the female, but somewhat duller, and as he is at least three inches shorter, he is much less formidable looking than his mate.

Nest building begins in this locality early in March, and the eggs are generally hatched by the tenth of April. A tall, dead stub with no branches is chosen as a suitable site for their home.

Indeed, I have one in mind now where much to my chagrin, the birds rear their young in security every Spring. However, I would like to see the oologist who could climb that tree; it is six feet thick at the base, and rises for seventy feet without a limb. The top has been broken off in some great storm and the Eagles' nest is placed on the very pinnacle, literally capping it as it were.

I have stood at the bottom and looked up with longing eyes, but I have never dared to attempt the ascent, and have at last come to the conclusion that I never will.

I do not think that I am a coward in regard to climbing trees generally, but I know when I am beaten, and I am willing to give some other fellow a chance.

The nest of this species is built of large sticks, limbs of trees, sods, cornstalks, and in fact, anything that they can carry off. The first year it is not so very large, but a new layer is added every season, until it reaches a considerable size. The one I mentioned, I should say was about five feet high.

The eggs are two in number, about the size of a goose egg, and varying in color from white to a bluish tint.

The young are covered with soft fuzzy down, and have light blue eyes. The down, white at first, soon grows darker, the feathers appear, and at the end of the first year the eyes are a dark hazel. When three years have passed, the white coloring upon

the head and tail begins to appear, and at the end of the fourth the mature plumage is attained and the birds are fully developed.

Although this bird has been chosen as the emblem of our nation, I think considering his cowardly nature, his filthy habit of feeding on carrion, and robbing other birds of their prey, that a much better selection might have been made; and I believe that most of my brother oologists who have had opportunities of observing him in his native haunts will agree with me in this opinion. H. C. C., Potsdam, N. Y.

A Snipe Hunt.

I noticed the article "R." had in the January number, and was much pleased with it. Now I will relate a little snipe hunt he and I had in the fall of 1887.

One morning before daybreak, early in the season, "R." and myself met by appointment at a boat house several miles west of the city. We had agreed to go snipe hunting on some favorable ground recommended by a friend. Everything had been arranged the day before, so all we did was to unlock our boat and push off. We made good headway at first, but as the reeds became thicker our progress became lower and we did not reach the snipe grounds until after sunrise.

As I stepped from the boat a snipe arose about thirty yards to my right. Quickly throwing the gun to my shoulder I emptied both barrels, while he, although hard hit, kept on at a 70-mile-an-hour speed. Soon another snipe was flushed and three shells emptied. I scored two misses, while "R." brought him down with the first barrel. My chum said he would work his way along the northern shore, and that I had better take the boat and pull for the southern. Upon his advice I immediately acted. Just as I reached the opposite shore, I heard the crack, crack of his gun. Pulling the boat well up out of water, I started through the marsh hay parallel with "R." During the half hour that followed, I flushed several snipe, all within easy gunshot range,

but as this was my first experience with them, I succeeded in bagging only one. Returning to the boat, I pulled across and found my chum awaiting me. He had bagged thirteen snipe and one woodcock. This I consider remarkably good, considering the nature of the ground and being without a dog. He said he had heard that quail were plentiful in some old fields about a quarter of a mile away, so we turned our attention in that direction. After hunting over these neglected fields for an hour or two, I flushed a fine covey. "R." led off, shooting his right and left barrels in rapid succession and bringing one bird to bag. With this kind of shooting I was perfectly at home, and my right barrel brought two birds to the ground, while the left I did not shoot, for the birds pitched in some willows before I had time to draw a bead and pull the trigger. We followed them up and after killing all we wanted, retraced our steps to the river.

We soon reached the boat and pushed off, my chum taking the oars, while I took up a position on the front seat, so as to get a shot at any game that might appear. We had hardly started when a large American Bittern arose, but a charge of duck shot caused him to turn a couple of summersaults and fall with a loud splash into the water stone dead.

Nothing more in the shape of game made its appearance, so as we neared the boat house I laid aside my gun and took up "R.'s" Winchester. At this instant we emerged from the reeds into open water and almost upon a flock of butter-balls, which arose in great confusion. Quick as a flash, I had the rifle to my shoulder and sent several balls flying after them, but not being a dime-novel hero, who could hit a five cent piece flung into the air every time at sixty yards, I did not succeed in bringing any down. We soon reached the boat house, and after a long walk over a muddy road reached home. This was about as pleasant a little hunt as I ever had the fortune to take part in. J. C. W.,

Detroit, Mich.

Notes taken at Norriston, Pa., in '87.

April 25. Took a set of three fresh Crow's eggs. On visiting this nest two weeks later, I found a Green Heron had taken possession of it. She had placed a few sticks inside, and laid six eggs which were perfectly fresh; rather a large set, I thought. I secured several sets of four and one of five, of this species, during the season, but this was the largest I ever found.

May 1. Discovered a Screech Owl in a pole in the trunk of a maple tree, about a foot above the ground. After receiving a good nip I secured him, and found him to be a male in the gray plumage; thinking his mate might be nesting somewhere in the vicinity, I looked around, and discovered a Flicker's hole in the same tree about twenty feet above the first one. On ascending to it found his mate, but was somewhat disappointed, on removing her, to find the nest contained four half-fledged young ones. About three weeks afterwards, I found a Flicker had taken possession of the same hole and had laid ten eggs, varying in size from that of an English Sparrow, to the regular size; though they were most all rather small. Incubation was slightly advanced in all. On visiting the same hole this year, 1888, found a male owl, in the gray plumage, had taken up his quarters in it.

July 2. Found a Chipping Sparrow building in an apple-tree near the house, and thought I would watch it up. A few days later, examined the nest and found it contained two eggs of the Chipping Sparrow, and one of the Cuckoo, which by its size, I judged to be a Yellow-billed. The large egg presented quite a contrast to that of the diminutive Chipping Sparrow.

Aug. 5. Took a set of five American Goldfinch eggs, one of which was covered thickly around the larger end with dots of reddish-brown. This was the only spotted one of this species I ever found.

My latest find last season was Sept. 14, when I found a nest of three half-fledged Yellow-billed Cuckoos. The Yellow-billed

are much more common than the Black-billed in this vicinity.

A Flicker wintered here this year; I was much puzzled for a while to find where he stayed in cold weather, but discovered it only by chance. As I was watching him on a walnut tree one day, he suddenly started and flew straight for a house close by and disappeared under the eaves, on a closer examination, I found there was a hole which led straight back to the chimney, where I suppose he kept quite snug and warm. I often saw him fly in and out after that, but he would always stop to reconnoitre, and then go in with a dash.

R. G. B. Norristown, Pa.

 The Rose-breasted Grosbeak.

In Iowa this bird is very common in the summer season, and its loosely made and fragile nest is often seen among the branches of some low tree. As in a good many cases the male alone is bestowed with the gift of beauty, and he may be seen fitting about and among the trees on a summer day, his scarlet necktie and shiny black wings betraying his presence. His call is a sharp and clear whistle, sometimes followed by a harsh rattle like the Oriole. His wings are black, under coverts white, his breast is dusty white with a strip of scarlet across his throat, his head is black.

The colors of the female are plain; brown on the wings, and dusty white on the breast, but without the red strip across the throat.

The nest is a fragile structure, composed of roots and straws, and is sometimes lined with hair. The eggs can often be counted from below; they are generally three in number, sometimes four. I have never found more, though I have found many nests in all stages of incubation. The ground color is a light green thickly spotted with brown and black, mostly around the larger end of the egg. They measure from .94 x .69 to 1.07 x .77.

T. S., Clarinda, Iowa.

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.

We are gaining, and we can not only promise our friends that the June OOLOGIST will be issued on time, but that it will be one of the most interesting ever mailed.

With a very little labor on the part of our patrons, the subscription list of the OOLOGIST can be doubled during the next few months. Hundreds would subscribe if our friends would only show them a copy of your little monthly and solicit their subscriptions. See our special offer for obtaining subscribers, in this issue. Our friends will all be well paid for their trouble, and some of them will receive valuable presents free.

The result of our little prize offer in March OOLOGIST for the best articles in this issue, exceeded our most sanguine expectations. We are not able to print one-half the valuable Mss. we have been favored with and as it would be unfair to exclude the others, whose articles were crowded out from the contest, we have decided to repeat the offer for the best articles in June and July issues. May prizes will be awarded May 15th, and result given in June OOLOGIST.

TEN DOLLARS worth of premiums will be given to the writers of the three best articles in June and July OOLOGISTS. Prizes are to be selected by the winners from our "Job Lots" as offered in the NATURALIST'S BULLETIN. The winner of the 1st prize can select \$5.00 worth, 2d prize \$3.00 and the 3d prize \$2.00. Every article in June and July issues of 100 words or over will enter into the competition, and the prizes will be awarded by an impartial committee to the three best, most instructive, and valuable articles. All articles will of course be written on subjects of interest to the Ornithologist and Oologist.

Nesting of the Chestnut-sided Warbler

One pleasant day about the middle of June, 1887, I started for the woods on a collecting trip, hoping to add a new set of eggs to my cabinet. Upon entering the woods, I strolled carelessly along not seeing anything worthy of note until I came to a small plot of land which had recently been cleared, but being neglected, a dense growth of beeches had sprung up, making a suitable nesting site for many small birds.

I had but just entered this undergrowth of beeches, when a little bird, which I instantly recognized as the Chestnut-sided Warbler, darted out from a small clump of bushes directly in front of me. I quickly parted the thick green leaves, and there, carefully concealed, I discovered a cozy little nest, containing four fresh eggs. Of course I was very much pleased with my discovery, as it was the first nest of this species I had ever found. The owner of this little domain was, apparently, much disturbed at my intrusion, and her vigorous chipping soon aroused her mate, who came hastening to the rescue.

I moved away a short distance where I could watch the movements of these birds, and also to note everything connected with the discovery of the nest, its locality, etc.; and by the way, I hope every collector goes into the field provided with a blank-book in which no fake notes. I should as soon think of leaving my egg-box at home as to go collecting without my note-book.

The eggs were of a uniform creamy white, spotted and blotched, chiefly at the larger end, with different shades of brown, amber and lilac. The average measurements were .68 by .49. The nest, a frail structure, was situated in a small beech bush about two feet from the ground. It was composed of narrow strips of bark, pieces of seaweed, grass and vegetable fibres, and lined with fine grass and hair. The nest measured inside about two and one-fourth inches in diameter, and one and one-half in depth. L. D. L., Freeport, Me.

Nidification of *Ictinea Mississippiensis*

1. The egg of this beautiful Kite is so rare in the cabinets of our numerous collectors, that a description of the bird and its nesting, will interest the readers of the "OOLOGIST." I have been fortunate enough to own no less than six eggs of this rare and active Raptore. In my opinion, this bird possesses as great volitorial powers as its noted relative, the Swallow-tail, and is also a much handsomer bird.

2. These Kites are somewhat gregarious and appear to return to the same locality year after year. A pair visits our field every season, remaining all summer, but as yet I have not succeeded in finding their nest, if they have any near us. Last year (1887), they fitted up an old crow's nest, but for some reason forsook it before any eggs were deposited in it.

3. The birds arrive here in April and are somewhat rare, though their partially gregarious habits make them appear less frequent than is really the case. Though I know only three nests that contained eggs, I have found several old ones that appear to have been built by this species.

4. On the fifteenth of May, 1886, Mr. J. I. Kirby, one of my collectors, discovered a pair of these birds building in the top of a post-oak tree, situated near the mouth of the clear Fork river, in Young County. He did not disturb them until the 21st when he shot the female, only bruising a wing, but succeeding in capturing her. The next day I visited the nest with him, when to our joy we found one egg, pure white, with the usual hawk-like texture of shell, measuring 1.40x1.60, and it was perfectly fresh. The nest was on a horizontal limb near the top of the tree, and was not much larger than that of the mocking bird, being simply a flat platform of twigs. Upon this was placed a quantity of mesquite leaves, with a slight depression in the center for the egg. After examining the nest, we hastened back and turned the captured bird loose; for which act of mercy we were rewarded some two weeks later,

(June 5th.) with a fine set of two eggs, exactly like the preceding and in the same nest. While the first egg was draining, one of our summer whirlwinds (so common here) passed by, leaving a broken egg and a heart-broken oologist.

5. In 1887, presumably the same pair built within two hundred yards of their '86 home, the nest in all respects similar to the one previously described, from which an egg was taken June 29th. It is larger and is smeared slightly with black, not so heavily marked as to obscure totally the white ground. This black is very probably an accidental stain. It was highly incubated. The birds had been driven from several unfinished nests by too careful attention to their movements.

6. Scarcely three hundred yards from these nests, another pair built a somewhat larger one, from which on May 22d a fine set of two immaculate white eggs were taken, perfectly fresh and measuring 1.38x1.59.

7. As will be seen, all these eggs are similar to the one described by Mr. N. S. Goss. in the "Auk" for January, 1885, page 21. They are smaller, for he gives the measure of his specimens as 1.70x1.35. With these exceptions, all the other known eggs of this bird are, I believe, spotted with brown or black. They are probably like those of many other Falconidae, very variable, both in size and color, specimens either pure white or slightly and heavily marked being common.

H. Y. B.,

Stephens County,
Texas.

◆◆◆◆◆

House Wren.

Last spring (1887) a pair of House Wrens took possession of one of the bird boxes put up in our orchard for the use of such of the feathered tribe as might choose to take possession of them. The nest was soon built, which was composed of about two quarts of small twigs and lined with feathers.

May 2d, there was one egg laid, which I left, having resolved to take one egg per day and see how long they would keep lay-

ing. On the 3d there were two eggs, one of which I took, and for the ten succeeding days an egg per day was taken.

They stopped laying for two days and then began again, laying an egg a day for five days more. Then the next day the egg laid was with but few speckles and rough and chalky, not smooth and bright like the preceding. The next three which were laid, one every alternate day, were brown and rough like the last, but with a yellowish tinge, and averaged a little larger in size than any of the others. They then stopped laying again for three days and then started off with average sized eggs for two days, which differed from the rest by being nearly pure white, with faint blotches of lilac, most distinct at the larger end, and with blotches, speckles and scraggly lines of chocolate brown. The following day an egg with the same markings as the last but not smooth nor showing the markings as distinctly as the two before was taken.

The last of the series of twenty-four eggs was laid on the 5th of June, and the second day from the previous one was very thin and chalky, of a dark drab color, without distinct markings, but considerably darker at the larger end.

The same pair remained around the box for two weeks, and then began laying again and successfully reared a brood of nine young birds.

C. G.,
Jackson, Mich.

Nesting of a pair of Chimney Swifts.

In the early part of June, 1887, the writer discovered a pair of chimney swifts just beginning a nest in a small unused shed. Aside from being an unusual location for the nest, it afforded superior opportunities for watching the birds of which we were not slow to take advantage. The nest was glued to the wall at the farther end of the shed, about ten feet from the floor and opposite a small window through which the the birds entered.

At first the birds seemed to to have some difficulty in getting their nest started, and several foundations were made before any

would suit. But this was soon settled, and then the work—in which both joined—went on in earnest. The materials used, were principally dead pine twigs which were woven and glued together, gradually forming a small semi-circular platform, with the edges slightly raised. The greater part of the work on the nest was done in the cool hours of the morning and evening, though the birds were often found working in the middle of the day. While one bird worked on the nest, the other commonly clung to the wall just below; in this position they would sometimes remain for upwards of an hour. Whether this aided in producing the saliva used in constructing the nest, was not ascertained. After more than a week's work, the nest was completed, and on June 20th, the first egg was laid; this was followed by two more, which completed the set, and on June 25th, the nest and eggs were taken.

W. N. C., Binghamton, N. Y.

The Yellow Warbler.

This well known and widely distributed bird arrives about May 1st. On their coming they keep to the top of tall trees, catching the insects to be found so abundantly among the blossoms, though having no song worthy of mention, they at times warble forth a few very pretty notes.

Two broods are raised in one season. My earliest set of eggs was on the 27th day of May, 1887. The nest is generally placed in the crotch of a small sapling, or in a bush, differing much in shape. I have seen nests fully 9 in. in depth on the outside.

The typical nest is cup shaped, 3 in. in diameter, by 2½ in. in depth, composed of grasses, hair, tow, inside bark of trees, small weed stalks, closely interwoven with that cotton-like substance of Cotton-ball tree, lined with same and occasionally with feathers, as in a nest I found.

The eggs, 5 in number, color white with a delicate shade of green, marked with dots and blotches of brown and lilac, averaging .68 by .50 in.

In this nest is nearly always to be found one or more of the Cow Bunting's eggs. The Yellow Warbler having learned by experience the outcome of the affair, she sets to work and builds a new nest over the old, covering the intruder's eggs and may-haps, also some of her own.

Often she does not know the ending and goes on setting on her eggs bringing them forth, the Cow Birds generally preceeding. Instinct teaches him to turn out the rest of the contents; though this is generally the case, I have in my note-book where a nest of this species contained three half grown Yellow Warblers, and one great pot-bellied Cow Bird. When the young leave the nest they are still fed by the parents, eating great numbers of worms, caterpillars etc. They will feign lameness, stretching out the wings and neck. They depart about the last of September, wintering in the South. S. D., Chicago, Ill.

Among the Warblers.

About the 8th of May, 1887, my friend and I took a trip to the "pomace heap". This is the place where pomace is put after the cider is pressed out of it. Let one imagine himself in a narrow road in the woods with pomace piled up on either side of him for a distance of about two hundred and fifty feet. At one end of the road is a highway, at the other, several pine trees, surrounded by an impassable thicket of alders and briers, with a few small maples and birches among them. Along the sides of the road, overhanging the pomace are alders, maples and birches, in some places interwoven with briers and grapevines, while two or three walnut trees rise slightly above them. The air is full of black flies, which are doubtless very palatable—to the birds.

My friend and I are standing in the road, while on all sides are myriads of birds, singing gayly and feasting on insects. Black-throated-green and Chestnut-sided warblers are first to be distinguished, because they make themselves prominent, by getting as near you as possible. But closer examination reveals the fact that Yellow-

rumped, Blackpoll, and Black-and-white Warblers predominate. Three or four male Redstarts are seen, their bright plumage showing off nicely against the fresh leaves, and contrasting as strongly with the other warblers as the Black-throated-blue does with the beautiful Magnolia, or the shy Nashville with that king of warblers, the Blackburnian.

Maryland Yellow-throats are quite common, uttering their sharp notes, and almost always keeping near the ground, in company with their sombre cousins, the Golden-crowned Thrushes, or Oven-birds. A Golden-winged Warbler flies across the road and attracts our attention, but we hear the note of a Prairie Warbler and try to find him, although unsuccessful in our search, we saw several Nashville Warblers, as usual very wild, and some Canada Flycatchers, with their row of spots across the breast. Blue-yellow-backed Warblers are seen, but we cannot find what we are looking for, a Blue-winged-yellow Warbler. "There is a bird I want!" exclaims my companion, as he starts in pursuit of a small bird. He soon returns with what he calls the finest specimen he ever saw—and he has seen several—of the rare Cape May Warbler.

There are some common birds we have not yet seen, and we set out to look for them. We find some Yellow-redpoll Warblers, besides a few Summer Yellow-birds, several Black-throated-blue Warblers, a Magnolia Warbler, and on the ground, scratching in the pomace are numbers of Oven-birds, Chewinks, Maryland Yellow-throats and Wood Thrushes. We do not see many rare birds, although some rare warblers have been taken in this locality.

One day my friend came across a flock of Blackburnian warblers—or rather they came across him, as he was sitting down at the time—and was satisfied with collecting two, which he has now, and I think they are the handsomest birds in this cabinet; he also got a Connecticut Warbler here, besides a Bay-breasted Warbler, a Wilson's Black-capped Flycatcher, and a Green-crested Flycatcher.

C. W. R., Norwood, Mass

THE OOLOGIST.

SPECIAL REDUCTION OF PRICES for BIRDS' EGGS good until July 1st only.

Our prices are lower than ever offered by any reliable dealer. We will not be undersold and should any dealer make better prices than we now offer, you can send us your order at his prices. Our patrons favoring us with large orders before June 1st will do well to read "special offer" on another page. Prices on this list are for CASH only.

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Long-billed Marsh Wren.....05	Least Flycatcher.....66	Green-winged Teal.....50
Short " " " ".....40	Chimney Swift.....12	Wood Duck.....50
Meadow Pipit.....08	Chuckwill's Widow.....05	Scaup Duck.....50
Parula.....20	Nighthawk.....15	Barrow's Golden-eye.....70
Summer Yellowbird.....02	Texas Nighthawk.....50	American Golden-eye.....25
Chestnut-headed Yellow Warbler.....75	Red-headed Woodpecker.....08	Harlequin Duck.....1.00
Yellow-breast Chat.....08	Red-started Flicker.....08	American Elder.....20
Loggerhead Shrike.....10	Flicker.....04	Ruddy Duck.....50
White-rumped Shrike.....06	Heated Kingfisher.....15	American Merganser.....1.00
Cedar Waxwing.....06	Road-runner.....20	Red-breasted ".....30
Purple Martin.....12	Yellow-billed Cuckoo.....12	American White Pelican.....50
Cliff Swallow.....02	Groove-billed Ani.....1.25	Brown Pelican.....20
Barn Swallow.....02	Barn Owl.....40	Common Cormorant.....30
Bank Swallow.....03	Long-eared Owl.....40	Double-crested Cormorant.....18
Scarlet Tanager.....20	Screech Owl.....35	Florida Cormorant.....18
Summer Tanager.....20	Western Horned Owl.....1.00	Brandt's Cormorant.....35
English Sparrow.....01	European Hawk Owl.....1.00	Violet-green Cormorant.....50
American Goldfinch.....05	Sparrow Hawk.....30	Baird's Cormorant.....35
Vesper Sparrow.....05	European Kestrel.....25	Snake Bird.....20
Western Grass Hopper sparrow.....30	Caracara Eagle.....1.40	Gannet.....18
Sea-side Sparrow.....30	Marsh Hawk.....25	Black Skimmer.....08
Lark Sparrow.....68	Cooper's Hawk.....25	Glaucous' Gull.....75
Western Lark Sparrow.....12	European Buzzard.....30	Great Black-backed Gull.....40
Gambel's Sparrow.....20	Red-tailed Hawk.....75	Western Gull.....22
Chipping Sparrow.....02	Red-bellied Hawk.....50	Iceland Gull.....1.50
Field Sparrow.....03	Bald Eagle.....3.75	Herring Gull.....20
Black-throated Sparrow.....40	Gray Sea Eagle.....2.20	American Herring Gull.....15
Song Sparrow.....02	Golden Eagle.....8.00	California Gull.....30
Heerman's Song Sparrow.....10	Mourning Dove.....03	Ring-billed Gull.....25
Chewink.....08	Mexico Ground Dove.....25	Mew Gull.....35
Spurred Towhee.....20	Wild Turkey.....60	Laughing Gull.....15
California Towhee.....68	Ruffed Grouse.....12	Gull-billed Tern.....15
Texas Cardinal.....40	Bobwhite.....10	Forster's Tern.....10
Rose-breasted Grosbeak.....10	Florida Quail.....15	Common Tern.....05
Blue Grosbeak.....35	Texas Quail.....15	Arctic Tern.....10
Indigo Bunting.....08	Ward's Heron.....30	Roseate Tern.....05
Lazuli Bunting.....18	Great Blue Heron.....20	Least Tern.....04
Painted Bunting.....10	European Heron.....20	Black Tern.....12
Dickcissel.....64	American Egret.....18	Fulmar Petrel.....60
Cowbird.....08	Snowy Heron.....10	Leach's Petrel.....15
Dwarf Cowbird.....12	Reddish Egret.....22	Western Grebe.....50
Yellow-headed Blackbird.....04	Louisiana Heron.....08	Pied-billed Grebe.....16
Red-winged Blackbird.....02	Little Blue Heron.....08	Black-throated Diver.....1.25
Bicolor Blackbird.....05	Green Heron.....06	Red-throated Diver.....85
Tricolor Blackbird.....15	Black-crowned Night Heron.....10	Common Puffin.....20
Meadow Lark.....10	Yellow-crowned Night Heron.....25	Murre.....20
Western Meadow Lark.....10	Least Bittern.....18	California Murre.....20
Orchard Oriole.....05	Lapwing.....12	Alligator.....15
Baltimore Oriole.....06	Golden Plover.....40	Black Snake.....15
Bullock's Oriole.....12	Kildeer.....15	Turtle.....10
Brewer's Blackbird.....04	Wilson's Plover.....20	Skate.....05
Great-tailed Grackle.....25	Black-tailed Godwit.....30	Shark.....20
Boat-tailed Grackle.....05	Long-billed Curlew.....50	Devil fish.....20
Purple Grackle.....04	King Rail.....12	
Bronzed Grackle.....04	Clapper Rail.....08	
Starling.....8	Virginian Rail.....15	
Common Crow.....05	Sora Rail.....10	
American Magpie.....20	Corn Crane.....20	
	Purple Gallinule.....30	
	Florida Gallinule.....08	

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Gibb's Advertisement!

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catalogue and circulars.

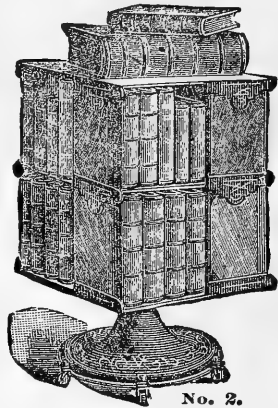
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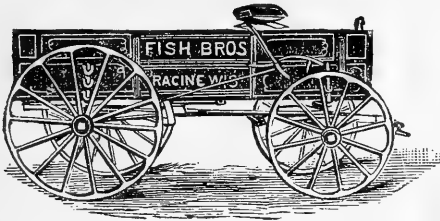
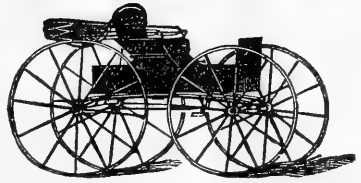
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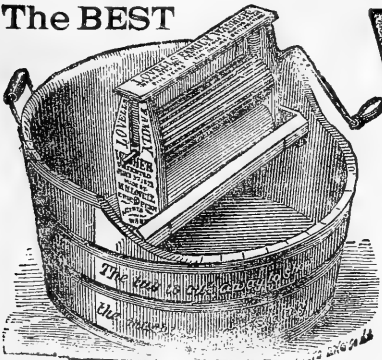
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Indian Relic Bulletin May 15th **10** First-class European Eggs for fifty cents.
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A SPECIAL OFFER.

On June 1st I intend to purchase a new and large stock of Specimens. Knowing that with plenty of ready money I can, not only obtain a large but can also purchase at a much better advantage. Owing to this fact, and in order to increase my sales before June 1st, I make the following LIBERAL INDUCEMENTS to my patrons, viz.

To any person sending me an order amounting to \$3.00 before June 1st, '88, I will give, in addition to all other offers, any two of the Premiums offered with the OOLOGIST, on another page, Nos. 1 to 30.

On an order of \$5.00, any four of Premiums Nos. 1 to 30, or any one of Premium Nos. 31 to 40.

On an order of \$7.50, a copy of Davie's New Check List, 3d edition.

On an order of \$10.00, any ten of Premiums Nos. 1 to 30, or any three of Premiums Nos. 31 to 40, or an Egg of the So. African Ostrich.

On an order of \$30.00 a beautiful set of two Eggs of the Bald Eagle.

On an order of \$50.00 a copy of either Maynard's Birds of Eastern North America, Coues' Key, or Ridgeway's Manual.

On an order of \$75.00, a fine set of two Eggs of the Golden Eagle.

This offer applies to parties ordering Specimens or Supplies from any of our circulars or advertisements, but does not apply to dealers or collectors purchasing at wholesale. It would well pay any collector to get his friends to club their orders together, making it a good large one, thereby obtaining a valuable Premium gratis for his trouble.

REMEMBER this offer holds good until June 1st, 1888 ONLY.

It would also be well to bear in mind that if any other reliable dealer offers Specimens or Supplies at a lower rate than found on my Lists, you can send me your order at their prices. YOURS, FRANK H. LATTIN.

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OÖLOGIST.

Monthly.

50c. per Year.

Vol. V,

ALBION, N. Y., JUNE, 1888.

No. 6

A Letter to Ornithologists and Oologists.

Dunkirk, N. Y., May, 1888.

Dear Sir:—

August 1st, 1888, I intend to issue a New "Ornithologists and Oologists" Directory. A good directory is something we all need, just before the close of the Collecting season, as we are all anxious to make good exchanges.

By sending 10 cts. silver with your name and address, and stating your specialty, it will be entered, and a copy mailed you as soon as issued.

A limited space will be assigned to advertisements at 10 cts. per line of 8 words. Exchange notices 1 cent per word.

For reference address any business house in this City.

Yours Truly,
ZACH TAYLOR.

NOTICE.

The following is a list of the lucky ones, who had tickets in my Prize drawing:

Walter Raine, Taunton.

TICKET.

- | | | | | | |
|-----|-----|-------------------|------|--------------------------|-----------------------|
| 1st | 1/2 | Golden Eagle. | 41. | J. C. Sharp of Toronto. | |
| 2d | 1/2 | Bald Eagle. | 13. | W. C. Flint of San Fran. | |
| 3d | 1/2 | Sea Eagle. | 31. | F. Lattin of Albion. | |
| 4th | 1/2 | Europ'n Merlin. | 2. | Webster & Mead. | |
| 5th | 1/2 | Rifle-leg'd H'wk | 35. | S. D. Gregory, N. Haven. | |
| 6th | 1/2 | Europ'n Buzz'd | 20. | " | |
| 7th | 1 | Fulm'r | 1 | Puffin. 21. | F. Lattin. |
| 8th | 1-7 | Europ'n | oot. | 39. | J. C. Sharp, Taunton. |
| 9th | 1 | Egyptian Vulture. | 46. | W. Parker of Toronto. | |

Witnesses of Prize Drawing.

E. O. Rippon,)
W. J. Parker.) Toronto

FRED ACHESON,

Dealer in and Collector of

BIRDS' EGGS,

Skins, Natural Curiosities, Stamps etc. Send stamp for list. Dealers please exchange. Emporia, Kan.

If you want to know what "bed-rock" prices mean send 2c stamp for price list of Birds' Eggs and Skins.

J. A. SINGLEY, Giddings,
Box 222, Lee Co., Texas.

60m6

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—One first-class Goshawk's egg with data. for best offer in eggs, single or in sets, received within one month. ROBERT W. TRUMP, Germantown, Phila., Pa.

TO EXCHANGE—For first-class eggs in sets, a Baltimorean No. 1. self-inking press and outfit valued at \$8.00. JOHN E. MARBLE, Ann Arbor, Mich.

WANTED—One set of 470a, 449 and one pair of climbers; will give in exchange, Utah birds' eggs in sets with data. FRED M. STEPHENS, Ogden, Utah, Box 845.

A collection of stamps, foreign and domestic, (no two alike), for birds' eggs. WILL DENTON, Decatur, Ill., 670 E Eldorado St.

WANTED—To exchange a taxidermist outfit, consisting of 1 pair scissors, 1 scalpel (ebony handle), 1 cartilage knife, 1 pair of spring forceps, 1 cheap scalpel, and Manton's Taxidermy without a teacher, for best offer of bird eggs either single or in sets. R. O. CRIBBS, Leighton, Ala.

TO EXCHANGE—A magic lantern in good order without slides; arrow beads and eggs, for eggs. ED. COLLETT, Austin, Texas, 1400 Colorado St.

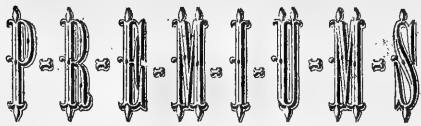
WANTED—A good egg cabinet, rifle and gullar, all in good repair. For any of the above will exchange fine Florida bird's eggs in sets with data. Address ALTIEL QUAINANCE, Archer, Fla.

TO EXCHANGE—Have seven small 'possons with the mother. Will exchange or sell singly or the lot, for best offer. S. A. TAFT, Aiken, S. C.

10 First-class European Eggs, all different, for fifty cents. S. W. DENTON, Wellesley, Mass. 4m3

FOR SALE—First-class eggs of No. 408, in sets of from 2 to 7 at 15c per egg. On orders under 45c add 5c for postage. Address

G. A. TOOMBS, Anaheim,
Box 34, Los Angeles Co., Cal.



For obtaining New Subscribers for the OOLOGIST.

We are anxious to obtain as many new subscribers to the Oologist as possible during the season of 1888.

In another column we offer the choice of 30 premiums to every person remitting 50c in payment for the Oologist for one year. Now if our friends will go to work and get their friends to accept this offer, we will give them in addition to the premiums we give new subscribers, for the name of each and every new subscriber they send us accompanied with 50c to pay for the Oologist one year with premium, the choice of any one of the premium offers, No's 1 to 30 inclusive; or for 3 new subscribers and 10c additional to pay postage and packing, we will give either of premiums No. 31 to 40, or any four of premiums No's 1 to 30.

To avoid any misunderstanding we will give the following example, viz:—We will suppose that Wm. Smith is a subscriber of the Oologist, and knowing the great value of the little Monthly and what valuable premiums are given to each subscriber, he, Smith, goes to his friend Chas. Jones, and shows him the Oologist and tells him all about it and the premiums. Now, Mr. Jones at once sees the great value of the Oologist and in fact cannot see how he ever got along without it; he hands his friend Smith 50c telling him to send by next mail for the Oologist and that as premium he would like No. 8 (an egg of the Black Skimmer). Mr. Smith at once complies with his friend Jones' request, and writes to the Publisher of the Oologist and adds, that for obtaining his friend's subscription he would like premium No. 18 (an alligator's egg).

The publisher of the Oologist upon receipt of Mr. Smith's letter, places the name of Chas. Jones on his books, and sends by return mail to Mr. Jones, copies of the Oologist and premium No. 8 (or any other premium he may wish) and to Mr. Smith the premium No. 18, which he preferred. This transaction is a very simple one, and three parties are very much pleased over it.

1st. Chas Jones, who considers the premium he receives as a gift, for he knows that the Oologist is well worth more than the 50c which the whole cost him.

2d. Wm. Smith, on account of his friend Jones' pleasure, and again to think how easily he obtained a premium worth 25c for, really, doing his friend a favor, and

3d. The publisher of the Oologist feels that his labors in behalf of the Collectors of America are being appreciated, and having the welfare of the Collector at heart, he knows that this subscription counts one more toward the required 1000 which, when obtained the Oologist will don a suitable cover, thus adding four more pages of valuable reading matter to each of its monthly visits, pleasing hundreds of its readers.

Kind reader you either know not or do know how easy a matter it is to carry out the above in reality, we wish you would try the experiment on some collector friend, and the truth of the above will be verified to you.

Sample copies of the Oologist will be cheerfully furnished to all who will use them to an advantage.

See premiums offered to parties sending the greatest number of subscribers before August 10.

Address Publisher of the Oologist, Albion, N. Y.

OVER 25,000 ! Trays ! Trays !

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Wagtail05
Pipit05
Chaffinch03
House Sparrow02
Greenfinch04
Bullfinch08
Rook10
Jackdaw08
Magpie10
Ring Dove10
Pheasant12
Partridge10
Moor Hen08
Tern10
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For Trays and Eggs,
Address

Frank H. Lattin, Albion, N. Y.

The Oologist for 1888.

will be published monthly and sent prepaid to any address for only 50c. Every subscriber sending the full subscription price will be entitled to any one of the following Premiums, viz.:

No. 1 Oologists' Hand-Book; 2 Oologist Directory; 3 100 Data Blanks; 4 200 Tags for Bird Skins; 5 Good Blow-Pipe; 6 Fine $\frac{1}{8}$ -in Egg Drill; 7 12 Checking Lists; 8 Egg of Black Skimmer; 9 Egg of Louisiana Heron; 10 Egg of Forster's Tern; 11 Shark Egg; 12 Devil Fish Egg; 13 Alligator Egg, 14 Geode of Chalcedony; 15 Resurrection Plant; 16 Set of 3 Eggs, with data, of Cardinal Grosbeak; 17 Fine spec. Pink Coral, Caroline Isles; 18 Fine spec. Red Coral, Sandwich Isles; 19 Large Barnacle; 20 2 Beetle Nuts, New Zealand; 21 Package of Coraline, Tonga Bay, S. Africa; 22 One fine spec. each Hot Spring Quartz Xtal & Herk. Co. Doubly Terminated Quartz Diamond; 23 Fine Fossil Fern, in kidney shaped nodule; 24 One extra fine Arrow-head; 25 One Oblong Japanese Coin; 26 Five Chinese Coins; 27 100 var. Foreign Stamps; 28 Two very fine specimens *Oliva literata*; 29 Two extra spec. *Nerita peleronta* and one *Chama Arcanella*; 30 Five var. named *Cypress*.

Should you desire more than one of the above Premiums, you can, at the same time of sending your subscription, select one or more of them at 10 cents each. At any other time you must remit regular list price, which will average 25 cents each.

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(making 85c for Oologist and Premium.)

you can select any one of the following, in place of the above, as Premium:

No. 31 A fine nest of the Tarantula or Trap-Door Spider; 32 a fine Geode of Chalcedonized Coral from W. Fla; 33 A Fine Saw-Fish Saw; 34 A splendid spec. of that large Showy Shell, *Cardium Magnum*; 35 A large spray of either red or pink Coral; 36 An Ivory Apple from So. Sea Isles, very curious. Almost everyone takes it for a large petrified apple, so close is the resemblance. 37 A Mammoth Purple Sea Urchin from the Pacific; 38 One Egg of the American Flamingo; 39 A fine Inkstand handsomely covered with named showy Minerals, mounted with bronze top; 40 One doz. cards of finely mounted Marine Algae from Martha's Vineyard, all different.

Premiums 31 to 40 usually retail at from 75c to \$1.50 each. Should you desire more than one of them you can, if ordered at same time of sending your subscription, select one or more at 45c each; at any other time full retail price must be paid.

Address plainly, Frank H. Lattin, Abion, N. Y.

Maynard's Naturalist's Guide

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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A Nomenclature of Colors for Naturalists and Compendium of Useful Knowledge for Ornithologists.

BY ROBERT RIDGEWAY,

CURATOR, DEPARTMENT OF BIRDS, UNITED STATES NATIONAL MUSEUM.

The present volume is intended to supply a want much felt by the author during the course of his ornithological studies, and therefore presumably experienced by other workers in the same field; namely, a nomenclature of colors and compendious dictionary of technical terms used in descriptive ornithology, together with series of plates or diagrams illustrating the external anatomy of a bird in relation to the terms employed; and such other things as are more clearly expressed by a picture than by a mere definition.

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Dealer and Collector of American and Foreign Coins and Medals, Colonial, Continental and Fractional Currency, Confederate Notes and Bonds, also Match, Medicine and Postage Stamps.

Agents wanted to sell stamps from sheets, for which a liberal commission will be allowed. Coins and Stamps sent on approval to responsible parties. Reference required in all cases. Wholesale selections sent to dealers on approval. 32pp. illustrated 10 cts. Birds Egg & Skin list for stamp. Correspondence solicited with dealers and collectors for mutual benefit. 6m6

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AUGUST 10, '88

We have offered every subscriber a valuable premium, and to every person who will work for us we have offered GOOD PAY.

Now, as an additional stimulus to induce all to send us as many subscribers as possible, we offer 50 prizes to be given to the fifty persons who will send us the greatest number of subscribers before Aug. 10, 1888.

To the person who will send us the largest list of subscribers to THE OOLOGIST, we will give a Copy of Maynard's "Birds of Eastern North America" Publisher's price \$15.00

To the one sending the second largest list, a fine set of two eggs of the Bald Eagle, worth \$10.00.

The third largest list, winners selection from "Job Lots" to the amount of \$7.00.

The fourth largest list, Birds Eggs or Specimens worth \$5.00.

The fifth largest list, "Job Lots" to the amt. of \$3.50.

To the persons sending us the five next largest lists, we will give each an egg of the South African Ostrich: \$10.00.

For the five next largest lists, each, a copy Davie's "Egg Check List," (Third Edition) \$5.00.

For the ten next largest lists, each, an egg of the American Flamingo: \$10.00.

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S. W. DENTON,

Wellesley, Mass.

4m3

THE OOLOGIST.

Vol. V,

ALBION, N. Y., JUNE, 1888.

No. 6

The Family Rallidae in Michigan.

Written for the Oologist.

BY "SCOLOPAX."

This family is represented by seven species in our state, viz: Clapper, King, Virginia, Carolina, and Yellow Rails, the Florida Gallinule and American Coot. Four of these species are extremely common, breeding in abundance in many parts of the state, while the Clapper is only entitled to the name of straggler, and the Yellow Rail is extremely rare. The King Rail is not rare in certain parts of the state and during migration is often taken inland.* †

RALLUS LONGIROSTRIS CREPITANS, (Gmel.)

Clapper Rail; Salt Water Marsh Hen.

This is a rare straggler, seldom if ever seen in center of the state, but probably oftener found around the great lake marshes. Recorded but few times, and absolute proof of capture evidenced in only three instances.

RALLUS ELEGANS. Audubon;

King Rail; Fresh Water Marsh Hen.

Not infrequently taken in the interior of the state during migrations. Rarely taken in many of the southern counties during summer. Breeds along the marshes of St. Clair Lake, River and tributaries. Builds a bulky nest of flags and grass, in which it deposits eight to twelve eggs. Arrives during first two weeks of April and departs in late September or October.

RALLUS VIRGINIANUS. Linn,

Virginia Rail.

An abundant species, only exceeded by the following in abundance. It arrives in the latter part of April, and is so sudden in

its appearance as to cause much wonderment to one interested in bird migration. The writer has studiously watched for their appearance in spring and is still unable to say whether they drop down upon us during cloudy or clear nights. That they do travel by night entirely in migrating is well proven. The flight of this bird is feeble, as is the case of all the members of this family, and from this reason it is fair to judge that the period of migration is long with these short pinioned birds.

This species is more upland in its habits than any of its congeners, and nests, even in fields, that had once been cultivated have greeted the writer on some of his collecting trips. The structure is nearly always placed directly on the ground, if in dry quarters, but is often elevated quite a foot above the surface if it is very wet in the vicinity. This rail is not often so foolish as the Sora, in placing its nest where it will be subjected to the bad effects of inundations. The bird is more often found breeding in low meadows, although they feed in situations frequented by the next.

The eggs are found, fresh and in complete sets by May 22, but rarely earlier, and from this date to July last, sets can be found in suitable localities. The latest taking of a fresh set of eggs in Michigan, is, I believe, August fourth. It appears to me that so late a date must have resulted from repeated spoliations⁵ of the previous sets. It is hardly probable that the rails rear, or attempt to rear two or more broods in season if allowed to nest undisturbed. Six, seven, eight, nine eggs are complements, the writer has found, and never but once the latter number, seven being the usual set. This pretty pink-billed species has about left our southern borders by October tenth.

PORZANA CAROLINA, (Linn.)

Carolina Rail; Sora Rail.

An abundant species found in both peninsulas. Breeds plentifully around lakes

* Covert, in his "Birds of Washtenaw Co.," Mich., says: "Black Rail, one specimen only has fallen under my notice from this county, this specimen was brought me June 4, 1880."

† G. A. Stockwell, in *Forest and Stream*, VIII, 22, 361, says: "Accidental visitor in Michigan," Purple Gallinule.—These records, if they can be called so, have never been verified, hence they are presented here as foot notes merely, s.

and ponds, preferring sluggish marshy waters. The nest is frequently placed so low down that an inundation often submerges the eggs to the sorrow of the disconsolate parents. If the eggs are only one-third or a half covered however, the old birds, both of which alternately incubate, stick to the ship and its cargo. It is not unusual to flush the parents from the nest half filled with water, the eggs feeling warm to the touch, although the marshy water indicated 64 degrees Fahr. What must be the reasoning power of this curious bird, whose temperature registers, if equal to most other birds, 100 degrees Fahrenheit; what the blind incentive that impels it to patiently wait for the appearance of its downy progeny, while the waters rage and the tempests blow? How do the eggs ever hatch if the surrounding water is not over 70 degrees and probably less, and the air at not over 75 degrees Fahr.? That many nest are left each season, their is positive proof from observation; however, many birds are bound to stay if the eggs are only in part above the water, and the farther advanced in incubation the set becomes the stronger the parent is impelled to continue her instinctive duty. Many a time the writer has seen a nest almost completely submerged in which were eggs to the number of five to eight containing embryos of a few days formation to the chick ready to escape from his prison shell, while standing around on the edges of the inundated home of their infancy were three or four demure little black fellows, of from a day to three days out the shell, which blinked in the slanting rays of sunshine, that fell rather obscurely on the nest through the canopy of rushes, flags and cat-tails that shrouded and hid partially, the location of the nesting site.

This interesting species lays from eight to fourteen eggs; the latter large number I have never myself found, but take the note from a friend, ever more fortunate than I in finding surprisingly large sets. My largest set is eleven, with another egg lying just outside the nest, in the water, and looking so nearly in markings and form

like the others that I called it set of twelve, and was content. The nest is composed generally of flat rush stalks of the previous year. I cannot give the proper name of the species of rush although it is familiar. These form, plated and interwoven, quite a neat and truly substantial kind, of slightly hollowed platform, which is generally intimately connected with surrounding reeds &c. The bottom is of coarse rubbish of any kind and unless well elevated the structure is wet and soggy. Nests differ greatly and are often found composed almost wholly of coarse grass, much like the general architecture of the Virginia rail. The nests can be usually, readily distinguished, both in size, the present species building the larger nest, while it is less hollowed than that of *R. virginianus*.

A nest now before me, dry and firm, and well representing the usual size and form of *P. carolina*, is ten and a half inches in diameter and is nearly perfectly circular in form; three inches and a half high, and hollowed to the extent of one inch, which makes ample room for the ten spotted eggs it contains.

This species represents in its family, one of that class embracing many species in various orders that do not lay their eggs and perform the duties of incubation in accordance with generally accepted ideas. Proof positive has demonstrated to the writer, who has observed at least ten nests carefully, that the eggs of this bird are not laid with a regular periodicity; nine eggs being once deposited in a space of seven days, and again fourteen days being occupied in the oviposition of ten treasures. In incubation the peculiarity is even more marked; in set of eight eggs that were under observation from the sixteenth day of the time the first egg was laid, showing a disparity in the emerging of the young commensurate with the predilections of the old bird for incubating. In this observation there was convincing proof to me, that the eggs were incubated from the time the first egg was deposited till the first young appeared. When there emerged the first chick, the egg were all opened and found to contain

embryos from a week in advancement to the feathered young, ready to pip the shell. Even fresh eggs have been found in nests with young perched on its edges; but in these cases undoubtedly the same habitation was occupied by two females as not rarely happens with some other species, e.g. the cuckoos. Out of nearly a hundred eggs, the result of one days collecting a few years ago, the following average dimensions are taken: 1.22 x .91; the smallest specimen being 1.15 x .89 in dimensions, and the largest 1.29 x .93.

This species is, unfortunately for it, like its near relatives, and excellent and easy mark for the hunter, and they are killed yearly in no small numbers, I am sorry to say more for the sport, as it is improperly called, than for food. It is a harmless little bird, and feeds like its relatives, principally upon small mollusks which are swallowed whole in the shell, and the various species of *Neuroptera* found in the form of *nymphae* in the water.

A tame one I once owned fed greedily on the common earth worms, and bits of meat from my hand. It came readily at my approach and after three days of captivity exhibited no signs of fear. The expression, "thin as a rail," is common and does not belie the compressed lateral diameter, seen in these thin but active birds. A skeleton is peculiarly formed, the sternum being only about three quarters of an inch in width. The form, as will be readily seen, is well adapted to their habits of running between the aquatic plants and rushes. So thin are they that some of their slippings through small spaces seem almost incredible. The notes of this species are very peculiar and quite loud.

POEZANA NOVEBORACENSIS. (Gmel.)

Yellow Rail. Embraced in several state lists.

It is not common however, although known to our collectors as early as 1860, the writer has never met with it. Nothing is known of its habits here.

GALLINULA GALEATA. (Licht.)

Florida Gallinule.

Never really abundant in inland portions of the state, though summering in nearly all southern counties around ponds and lakes of marshy borders. Thousands are found breeding on St. Clair Flats and at other points in the immediate vicinity of the Great Lakes. The nests are coarse structures, constructed much in the manner of *carolina*, and are usually placed in even more remote situations from the shore, being built in a position to allow the parent to swim to the nest in all instances, that have met the writers observation. The nest is placed from two, to sixteen inches (in one instance) above the water, and usually the upper part is about six inches above. The materials used in its construction are various, and mainly partake of the same character as those employed by others of the family. The nest is often connected by an arch.

The number of eggs found in complete sets varies from seven to nine in my experience, and the finding of a set of these speckled treasures was considered by the writer, the *neplus ultra* of oological research, for many years.

Michigan eggs average in dimensions 1.69 x 1.21 and are so well know that a description of the speckled specimens need not here be made.

The notes of this bird are so peculiar and weird, when coming from the shrouded edges of the lakes, that notice must be given of their character. All of the members of this interesting family are blessed with peculiarly discordant notes and there is much similarity between them. This species, though perhaps not quite so garrulous as *carolina*, is quite active in its efforts to give its full quota of stridulous chattering and gulping sounds. The notes in the usual style of expression are *Cutt, cutt, cutt, cutt, cutt, qui-ho, qui-ho, qui-ho, qui-hooo*, or often *tut, tut, tut, put, put, corro, corro*, when full efforts are given, the *cuts* or *tuts* are five in number, invariably hereabouts, and six I have never

heard. These notes, constituting the love-song of *gallinula*, are heard at a distance of over a mile, when they come floating across the lake on still mornings. If one is close enough, the answering notes of the female within the tangle of reeds is heard, as she favors her swain with a reply to his musical effort. Her notes are a simple *putt, putt*, and much resemble the call notes of the wild turkey *meleagris*; these call notes are common to both sexes. Sometimes I have heard a continuous squealing note that was fully believed to issue from this birds throat, as the female was probably engaged in nest building or other duties akin thereto.

The flight of the gallinule is peculiar, and though much like that of the following species, really differs from any other bird's. When chased and, the cover for the birds is poor, with small chance for them to escape observation, they will rise and fly with more speed than one would think them capable of. The flight is rarely at any height above the water and twenty feet of elevation gained in traversing a hundred yards is above the average. Often the birds on flying from the water, will so nearly skim along the surface that the feet drag, and without great apparent effort they seem to be running on the water. This peculiarity is also seen in the Coot, in fact the two have habits so nearly alike that they are often mistaken for one-another

FULICA AMERICANA. (Gmel.)
American Coot.

Rarely found summering inland in small lakes. Abundant in portions of the great lakes in situations favorable for them. Breed, I am informed on the St. Clair flats, and as low as 42 degrees, north latitude. To the main portion of the lower peninsula this bird is a transient. Arrives about the tenth of April or sooner, and is sometimes seen by March fifteenth, and remains a month occasionally. Appears again, from the north about September twentieth and stays often till November tenth and occasionally much later. Having never met with this species during the breeding season, I can offer nothing regarding their

nesting habits.

The food of the members of this family is of quite a variety and consists principally of small mollusks and aquatic insects, with the smaller representatives, and of seeds of aquatic plants, sometimes crustaceans and even niriuous and small batrachians in the larger species.

Kalamazoo, Michigan.

Egg Collecting.

Hardly any other branch of natural history is so liable to abuse as that pertaining to the eggs of birds. There is something fascinating about the search for them. The artful devices of the nest-builders to hide their fragile buildings in sequestered places, as if to challenge the acuteness, alertness, and agility of boys; the interesting structure of the nests; and the rare beauty of the eggs themselves: have always proved stronger temptations to idle plunder than the average youth can resist. Yet great harm is done by an indiscriminate robbery of eggs; and while oology, if scientifically pursued, is an entirely commendable and valuable study, yet we have felt obliged to impose certain not severe restrictions upon its pursuit in connection with our Association. Our attitude is sufficiently defined by the following extract from an editorial note in our official organ, *The Swiss Cross*:

"There is no conflict between scientific study and a gentle spirit of mercy. There are, indeed, times when the interests of science require the suffering, and even the death, of insect, bird, and beast; but every true scientist shrinks from these necessary occasions, and makes them as few as possible. There is no room for cruelty in any laboratory. Whenever pain must be caused, it must be made as slight and as short as it can be made. Whenever life must be taken, it must be taken reverently, as a costly sacrifice, and in the speediest and most merciful manner. The responsibility of drawing the delicate line which is to divide between the cursed ground of cruelty and that honorable but sorrowful region in which the

claims of science may properly assume supremacy at the cost of pain, has been forced upon us by the requests of many persons to publish notices of the desired exchange of bird-skins for bird-skins, and of eggs for eggs; and, on the other hand, by the simultaneous and equally strenuous prayers of well-meaning philozoists, that we would strictly refuse to countenance at all either the killing of birds or the taking of eggs. The solution of the question, which we have reached after long consideration, is included in the following rule, which we shall henceforth adopt, with reference to the publication of such exchange notices:

Notices of the exchange of birds' eggs or bird-skins will be printed in the 'Swiss Cross,' provided that the person sending the notice shall be a member in good standing of the Agassiz Association, that his collections shall have been made in conformity to the laws of the State in which he may reside, and that the description of his material for exchange shall be in terms sufficiently accurate to indicate that he is doing scientific work."

The egg-collector's outfit consists of a pair of climbers, a suit of stout clothing (buttons riveted if possible!), a few tin boxes full of cotton, and a note-book. The best collectors take the nest and a full set of eggs, and in such case they need some sort of basket in which to carry them. Less damage is done by actual students, even if they take the nests and all the eggs, than by mere robbers, who perhaps content themselves with stealing "only one egg from a nest;" because the latter are never content with one good specimen, but continue pilfering accessible nests until, in some instances, they accumulate hundreds of useless robins' and bluebirds' eggs, and rob the orchards of their melody. Eggs should be blown through one neat hole in the side, and for this purpose a set of egg-drills and a blowpipe should be procured. The specimens should be rinsed with some poisonous solution, and may then be arranged in cabinets in their proper nests, or in compartments filled with sand, cedar

sawdust, or cotton. The lesson of their fragility is one speedily learned by experience. It is frequently vividly impressed upon the student while, during his descent from some towering pine or oak, he carries his treasures in that most available receptacle—his mouth.

It may not be out of place to caution the young collector against a danger that attends the exploration of deep holes in trees, such as wrens delight in. Unless the opening is evidently large enough to give comfortable room for the arm, *never allow your arm to crowd into a hole beyond the elbow, or you may not be able to withdraw it.*

With eggs as with all other specimens, their value depends largely upon the fulness and accuracy of the data accompanying them. Date, location, and description of birds, both male and female, together with such other facts as may be observed, should be carefully noted at the time of collecting, and to this should be added, of course, the name of the collector.—*Three Kingdoms.*

Bird Voices.

The study of bird voices is both profitable and interesting to any one; but especially so to Ornithologists, and Oologists and all interested in bird life.

As we listen to the various voices of the birds, do we think of the fact, that these notes ever new, fresh and melodious, have sounded from year to year, and century to century, that before man, these winged creatures were on the earth.

There is something in the simple wild song of a bird, that man's art can never equal.

But let us turn to the list of American birds, and notice a few characteristic voices.

The birds of highest physical development are placed last in the A. O. U. List and first in Ridgway's, and well may the place of honor be given them; for in the first family, the thrushes, our finest songsters are found.

The mockingbird, leader of bird music-

ians finds no mean rivals in the hermit and brown thrushes and both cat-bird and robin are good vocalists. Our bright little blue-bird has, besides his beautiful feathers, a song which thanks to his fondness for mans society, we often hear.

Even those fearless mites, the chickadees, enliven the winter forests with what Thoreau calls "a silver tinkling."

The sweet trills of the house wren finds more than an equal in the exquisite songs of her winter relative; but the song of the marsh wren as it darts in and out of the waving rushes and marsh grass, has a great charm for me. The whole family of warblers have an ever befitting name. Chattering swallows and martins have a poetry of motion which hardly excels that of their voices. The sharp notes of the "British Invador" is unfortunately familiar, but our own sparrows have, some of them great singing powers, which are in the cardinals combined with gay plumage. The American Starlings are headed by a fine singer, the bob'olink whose summer life is so well described by one of Bryant's poems, but his less musical notes in Autumn are often ended by the crack of the fowling-piece. The red-winged black-bird's song is attractive to the ear, and the meadow-lark is acknowledged, by Wilson, to have a sweeter voice than the famous sky lark. The voices of orioles, grakles and even the crows are full of interest to the bird-lover. The saucy notes of the jays and low calls of the phoebe are all suggestive, and who cannot recall the jerky voice of the king-bird as he drives his enemies from the neighborhood.

The jewel of birds, the hummer calls our attention by its swiftly moving wings, while the swifts, whip-poor-wills and night-hawks have very decided voices. A martial air has the woodpecker with his upright position, his crest and especially the roll of his drum on bright spring mornings. An appropriate name. "Pigeon woodpecker" is given the flicker from his peculiar voice when love-making.

The kingfisher's chatter offers a contrast to the cuckoos call and the hootings and

screechings of the owl have ever been prominent. The eagle, from the clouds leads the diurnal birds of prey with his fierce screaming, startling, in comparison to the soft notes of pigeons and mourning doves; but still more fascinating to the sportsman is the drum of the grouse and calls of wild turkey, quail, wood-cock, snipe and rail.

Among the waders the killdeer is rightly named *vociferous* and familiar indeed is the voice of the leader of that orderly triangle, moving north or south according to season.

The voices of wild ducks, mallard, teal and canvass-back are followed by those of the multitude of sea birds which are more familiar to those living near the sea shore.

Among these is the Great Auk, conspicuous by its absence, except in name.

I have mentioned a few familiar bird voices but the careful observer can recall a host, musical or otherwise. If our birds were protected as they should be there would be no deploring the lack of song, by the educated public and our thickets, woods and even lawns would be graced by the presence of these feathered musicians. I need not add, collect with mercy towards our feathered friends, for every true Ornithologist and Oologist has their welfare at heart and they chiefly have called attention to the wrongful destruction of the birds. A great work has been begun by the Audubon and other societies which I hope all of the readers of the OOLOGIST will assist in.

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

Result of Prize article competition will be given in next OOLOGIST.

All copy for advertisements and exchange notices to be inserted in July OOLOGIST must be in by June 15th.

We find that a few prices quoted in "Egg List" of this issue are wrong; note corrections in adv. column.

Our Friends will do well to pay particular attention to our liberal offers for obtaining new subscribers to the OOLOGIST.—A very few names will secure valuable prizes.

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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Brown-headed Nuthatch.

This sprightly little fellow is a very common bird here. Beginning to breed early in March, they select some rotten stump and there start a hole after the manner of a Woodpecker. Perhaps, after pecking in a short ways they meet with some obstruction, such as a streak of hard wood; they abandon this hole and try another, perhaps, with no better success than at first. Nothing daunted, however, they try again and succeed in making the hole, meeting with no obstruction. Then comes the nest proper. Usually they pick a lot of rotten wood loose from the sides and bottom, on top of this they lay a layer of fine strips of pine bark; then comes the lining which is a soft downy substance from some vegetable plant.

Eight or ten days later birds incubation going on, which lasts for twelve (12) days. The eggs are very small and delicate; size averages .51 x .60. White ground color thickly sprinkled with reddish-brown dots, sometimes forming a ring around the larger end. I don't think there is more than one brood raised, as I have never found them nesting later than the middle of April.

A. L. Q., Archer, Fla.

Road Runner.

California is the favorite resort of a great many birds; from the wee humming bird to the majestic Condor, that soars so high.

The one that now occupies my attention, is the Road Runner. I remember well the first time I saw a Road Runner. About eight years ago I was driving along a country road in Sonoma Co., when a Road Runner dashed across the road; a comical affair, indeed, a long beak, long legs, and long tail; but he wasn't very long getting across that road. I wanted to get a better look at him, so I yelled whoa, partly to my horse and partly to Mr. Road Runner. My horse minded all right but as for that long legged bird he seemed to think his mamma wanted him, so he lit out faster than ever and disappeared behind a clump of trees.

Not long afterward I found myself in Tulare Co. and very few Road Runners breed there, so I could not study their habits.

Last Summer I noticed a few in San Louis, Obispo Co. but as I was not prepared to study them and it being to late in the season I did not try to get much information.

The only nest I have found was March 15th 1886, containing four eggs.

The Ornithology Report of Cal. can furnish a much better description of this bird than I can.

The following is a description of the bird as given in the Ornithology Report of Cal.

Tail very long the lateral feathers much shortest, an erectile crest on the head, bare skin behind the eye colored bluish white and orange when alive; Legs very long and stout. All the feathers of the upper parts and wings of a dull metallic olivaceous green, broadly edged with white near the end, however a tinge of black in the green along the line of white, which itself is suffused with brown.

On the neck the black predominates. The sides and under surface of the neck have the white feathers streaked centrally with black, next to which is a brownish suffusion. The remaining under parts are whitish.

Primary quills tipped with white, with a median band across the outer webs, central tail feathers olive brown, remaining ones clear dark green all edged and (except the central two) broadly tipped with white.

Top of the head dark blackish blue. Length 20 to 23 in. brown and yellow, bill olive, feet black.

The eggs are dirty white generally 3 to 9 in a clumsy nest placed in a cactus or some other thorny bush.

H. C. L., Hanford, Cal.

Notes on Birds of Beaver, Pa.,

Taken in the winter of 1887 and part of 1888.

1887, Dec. 28, observed a large flock of American Goldfinches, two Blue birds, and a flock of Tree Sparrows.

Dec. 31, shot a Blue bird to-day which was in company with two others.

1888, Jan. 4, observed a Yellow-bellied Woodpecker, and shot an American Goldfinch in its winter plumage.

Jan. 5, saw one Ruffed Grouse, two Cooper's Hawks, three flocks of American Goldfinches which were feeding in a field.

Jan. 14, nothing seen to-day but several Cardinal Grosbeaks.

Jan. 17, shot a specimen of the Tree Sparrow to-day.

Jan. 21, shot a small bird which was running up a tree much in the manner of a Woodpecker, and when identified proved to be a Brown Creeper.

Jan. 29, birds seen to-day are Hairy Woodpeckers, Song Sparrows and Snowbirds.

Jan. 31, observed a flock of Bobwhites (American Quail), Yellow-bellied Woodpecker, and several Bluebirds and White-bellied Nuthatches.

Feb. 3, saw a Sparrow Hawk which was seated on a tree in a field, probably in search of field mice.

Feb. 5, took a short walk and observed one Sparrow Hawk.

Feb. 11, observed two Mourning Doves, one Meadow Lark, three Blue-Jays and one Red-tailed Hawk.

Feb. 14, Observed the first Cedar Waxwing that I have seen this winter.

Feb. 17, two flocks of Crows arrived from the south to-day.

Feb. 18, Crows and Robins are the arrivals to-day.

Feb. 22, noted the arrivals of the following birds: Bluebirds, Song Sparrows, Purple Grackles, and observed a flock of Bob White (American Quail).

Feb. 25, observed nothing to-day but one Yellow-shafted Flicker.

March 2, a flock of Canada Geese arrived

from the south, flying in a triangular form, and kept flying northward.

March 3, several very large flocks of Crows arrived from the south.

March 9, observed one Yellow-bellied Woodpecker, one Yellow-shafted Flicker, and one Purple Grackle.

H. H. W.,

Beaver, Pa.

Preparations for Collecting Eggs.

As the collecting season has now arrived, I will try and give the readers of the OOLOGIST a few hints regarding the collecting of birds' eggs. First of all, he should be always on the lookout for nests that are not familiar to him. It is better to go on a collecting trip alone, for when you have a good many friends with you, they are apt to make so much noise as to frighten the bird from her nest, before you can get near enough to tell from where it flew. A good many birds (such as the Grass Finch, etc.,) escape from their nest by running along the ground and pretending that they have a broken wing, while others will remain on their nest until you have nearly stepped on them. The collector should be always on the lookout for such occurrences and never pay any heed to them, but look and see if you can find her nest at once. A collecting box should always be taken to pack the eggs in. I always carry two boxes with me; one for packing the delicate eggs in, and the other for packing those that are harder shelled. If you are in the woods and find a hawk's or owl's nest, in a tree too large to be climbed without danger, you can climb a tree near this one and see if there are eggs in it; in such a case a fishing pole about 12 feet long with a net about 5 inches in diameter, by 5 inches in depth, fastened at the smallest end of the pole is necessary. With this net you can scoop the eggs, one by one, out of the nest, place them in your packing box and take them to the ground. Hoping this will help the readers of the OOLOGIST, I remain, Yours very truly,

G. H. R., Detroit, Mich.

THE OOLOGIST.

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
"O. e. r. u. s." 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.	2.00
Thick Spears.	.25 " .50

KNIVES.

Curved Back.	.50 " 1.00
Double Edged.	.20 " 2.00
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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

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Medium, " "	.70 " 1.25
Large, " "	1.00 " 2.00

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Arrow Heads, assorted, per doz.	.50 " 1.00
per 100, 3.00 to 10.00.	

Spear Heads, well assorted, 3.00 per doz.	
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Fragments of Pottery.	.05 " .25
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We will send the following collection prepaid for \$3.00.

- 1 doz. good Arrow Heads,
- 1 Celt,
- 1 grooved Axe,
- 2 fine Scrapers,
- 2 " Knives,
- 1 " Spear Head,
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We can furnish the following offered in March BULLETIN. No. 1, 2, 3, 4, 5, 6, 7, 10, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 26, 28, 29, 30, 33, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53, 54, 55, 58, 59, 60, 71, 79, 84, 86, 87, 88, 89, 93, 94, 100, 102, 104, 105, 106, 107, 108, 109, 110.

A new lot of Job Lots will be offered in July Oologist including many bargains in the Indian Relic Line.

"A SPECIAL OFFER."

The ½ p. ad. headed as above, appearing in this issue and limited to June 1st, will be held open until June 15th. We extend this offer in order to give every Collector a chance.

Yours,

FRANK H. LATTIN.

A SPECIAL OFFER.

On June 1st I intend to purchase a new and large stock of Specimens. Knowing that with plenty of ready money I can, not only obtain a larger stock but can also purchase at a much better advantage. Owing to this fact, and in order to increase my sales before June 1st, I make the following LIBERAL INDUCEMENTS to my patrons, viz.

To any person sending me an order amounting to \$3.00 before June 1st, '88, I will give, in addition to all other offers, any two of the Premiums offered with the OOLOGIST, on another page, Nos. 1 to 30.

On an order of \$5.00, any four of Premiums Nos. 1 to 30, or any one of Premium Nos. 31 to 40.

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On an order of \$30.00 a beautiful set of two Eggs of the Bald Eagle.

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On an order of \$75.00, a fine set of two Eggs of the Golden Eagle.

This offer applies to parties ordering Specimens or Supplies from any of our circulars or advertisements, but does not apply to dealers or collectors purchasing at wholesale. It would well pay any collector to get his friends to club their orders together, making it a good large one, thereby obtaining a valuable Premium gratis for his trouble.

REMEMBER this offer holds good until June 1st, 1888 ONLY. It would also be well to bear in mind that if any other reliable dealer offers Specimens or Supplies at a lower rate than found on my Lists, you can send me your order at their prices. Yours, FRANK H. LATTIN.

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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 our risk by mail or express.

Small orders under 50 cents must contain 5 cts. for packing and return postage.

Eggs in original sets, with data, can be furnished when desired.

Second-class specimens can usually be furnished at one-half these prices

Robin.....	\$.02	Blue Jay.....	..04	American Coot.....	..06
Western Robin.....	..10	Horned Lark.....	..18	European Coot.....	..15
Mockingbird.....	..05	Scissor-tailed Flycatcher.....	..10	American Flamingo.....	..65
Catbird.....	..02	Kingbird.....	..03	Mallard.....	..18
Brown Thrasher.....	..02	Arkansas Kingbird.....	..08	Gadwall.....	..1.00
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Bluebird.....	..02	Gr. Crested Flycatcher.....	..12	Widgeon.....	..25
Bush Tit.....	..15	Phoebe.....	..03	Baldpate.....	..65
Carolina Wren.....	..15	Wood Pewee.....	..10	Shoveller.....	..40
House Wren.....	..04	Acadian Flycatcher.....	..15	Cinnamon Teal.....	..35
Parkman's Wren.....	..05	Trall's Flycatcher.....	..15	English Teal.....	..20
Long-billed Marsh Wren.....	..05	Least Flycatcher.....	..06	Green-winged Teal.....	..50
Short.....	..40	Chimney Swift.....	..12	Wood Duck.....	..50
Meadow Pipit.....	..08	Chickadee's Widow.....	..1.50	Scaup Duck.....	..50
Parula.....	..20	Chickadee.....	..5	Barrow's Golden-eye.....	..70
Summer Yellowbird.....	..02	Texas Nighthawk.....	..50	American Golden-eye.....	..25
Chestnut-headed Yellow Warbler.....	..75	Red-headed Woodpecker.....	..08	Harlequin Duck.....	..1.60
Yellow-breast Chat.....	..08	Red-smaited Titlcker.....	..68	American Elder.....	..20
Loggerhead Shrike.....	..10	Flicker.....	..04	Ruddy Duck.....	..50
White-rumped Shrike.....	..06	Belted Kingfisher.....	..15	American Merganser.....	..1.00
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Scarlet Tanager.....	..20	Screach Owl.....	..35	Florida Cormorant.....	..18
Summer Tanager.....	..20	Western Horned Owl.....	..1.00	Brandt's Cormorant.....	..35
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Vesper Sparrow.....	..05	European Kestrel.....	..25	Snake Bird.....	..20
Western Grass Hopper Sparrow.....	..30	Caracara Eagle.....	..1.40	Gannet.....	..18
Sea-side Sparrow.....	..30	Marsh Hawk.....	..25	Black Skimmer.....	..08
Lark Sparrow.....	..68	Cooper's Hawk.....	..30	Glaucous' Gull.....	..75
Western Lark Sparrow.....	..12	European Buzzard.....	..30	Great Black-backed Gull.....	..40
Gambel's Sparrow.....	..20	Red-tailed Hawk.....	..50	Western Gull.....	..22
Chipping Sparrow.....	..02	Red-bellied Hawk.....	..75	Iceland Gull.....	..1.50
Field Sparrow.....	..03	Bald Eagle.....	..3.75	Herring Gull.....	..20
Black-throated Sparrow.....	..40	Gray Sea Eagle.....	..2.20	American Herring Gull.....	..15
Song Sparrow.....	..02	Golden Eagle.....	..8.00	California Gull.....	..30
Heerman's Song Sparrow.....	..10	Mourning Dove.....	..03	Ring-billed Gull.....	..25
Chewink.....	..08	Mexico Ground Dove.....	..25	Mew Gull.....	..35
Spurred Towhee.....	..20	Wild Turkey.....	..60	Laughing Gull.....	..15
Callifortian Towhee.....	..08	Ruffed Grouse.....	..12	Gull-billed Tern.....	..15
Texas Cardinal.....	..40	Bobwhite.....	..10	Forster's Tern.....	..10
Rose-breasted Grosbeak.....	..10	Florida Quail.....	..15	Common Tern.....	..05
Blue Grosbeak.....	..35	Texas Quail.....	..15	Arctic Tern.....	..10
Indigo Bunting.....	..08	Ward's Heron.....	..30	Roseate Tern.....	..05
Lazuli Bunting.....	..18	Great Blue Heron.....	..20	Least Tern.....	..04
Painted Bunting.....	..10	European Heron.....	..20	Black Tern.....	..12
Dickcissel.....	..04	American Egret.....	..18	Fulmar Petrel.....	..60
Cowbird.....	..08	Snowy Heron.....	..10	Leach's Petrel.....	..15
Dwarf Cowbird.....	..12	Reddish Egret.....	..22	Western Grebe.....	..50
Yellow-headed Blackbird.....	..04	Louisiana Heron.....	..08	Pied-billed Grebe.....	..16
Red-winged Blackbird.....	..02	Little Blue Heron.....	..08	Black-throated Grebe.....	..1.25
Bicolor Blackbird.....	..05	Green Heron.....	..08	Red-throated Diver.....	..85
Tricolor Blackbird.....	..15	Black-crowned Night Heron.....	..10	Common Puffin.....	..20
Meadow Lark.....	..10	Yellow-crowned Night Heron.....	..25	Murre.....	..20
Western Meadow Lark.....	..10	Least Bittern.....	..18	California Murre.....	..20
Orchard Oriole.....	..05	Lapwing.....	..12	Alligator.....	..15
Baltimore Oriole.....	..06	Golden Plover.....	..40	Black Snake.....	..15
Brewer's Blackbird.....	..04	Kildeer.....	..15	Turtle.....	..10
Great-tailed Grackle.....	..25	Wilson's Plover.....	..20	Skate.....	..05
Boat-tailed Grackle.....	..05	Black-tailed Godwit.....	..30	Shark.....	..20
Purple Grackle.....	..04	Long-billed Curlew.....	..50	Devil fish.....	..20
Bronzed Grackle.....	..04	King Rail.....	..12		
Starling.....	..8 0	Clapper Rail.....	..08		
Common Crow.....	..05	Virginian Rail.....	..15		
American Magpie.....	..20	Sora Rail.....	..10		
		Corn Crane.....	..20		
		Purple Gallinule.....	..30		
		Florida Gallinule.....	..08		

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Night Hawk.....	.35
Am. Golden-eye.....	.75

Third Edition, Revised and Enlarged.

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The work will contain over 300 pages, exclusive of title-page, preface and Introduction. The price of this valuable work cannot be positively stated, but to my patrons sending me \$1.00 before May 1st the work will be sent them post paid, as soon as issued.

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4m8



1882



THE OOLOGIST.

Monthly. 50c. per Year.

Vol. V, ALBION, N. Y., JULY, 1888. 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.

Specimens from Colorado to exchange for first-class birds eggs. HARRY N. DELANO, 1059 Wilcox Ave., Chicago Ill.

WANTED—To exchange Arrow-Heads and eggs for single eggs. Large eggs preferred. ED COLLETT, 1400 Colorado St., Austin, Texas.

WANTED—To exchange an egg cabinet for eggs, either single or in sets. Write for particulars. D. W. MARSH, Greenville, Mich.

Will exchange Foreign Postage Stamps and bird eggs, for eggs not in my collection. Wm. I. COMSTOCK, Norwalk, Fairfield Co., Conn. P. O. Box, #63.

City residence lot to exchange for Indian Stone Relics, old coins. Minerals or Cabinet specimens of curiosities. C. P. WILCOMB, Visalia, Tulare Co. Cal.

I want the following first-class sets with nests Ridgways numbers. 7, 12, 71, 81, 152, 140, 149a, 209, 260, 261, 263, 271, 273, 315, 324, 388, and without the nests, 360, 361, 407, 527, 534, 536, 538, 540, 549, 550, 556, 607, 609, 638, 673, 688, 737. I also want first-class skins of 688.

A number of rare egg offered for the above, or will pay a liberal cash price for them. J. A. SINGLEY, Giddings, Texas.

TO EXCHANGE—Eggs in sets. Tufted Titmouse, Whippoorwill, Ruby Throated Hummingbird, White-breasted Nuthatch, Cooper's Hawk, and a long list of others. Send lists. J. WARREN JACOBS, Waynesburg, Pa.

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THE OOLOGIST, with Premium, for the balance of 1888 for only twenty-five cents. Full particulars inside.

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20 VARIETIES OF SECOND-CLASS EGGS. Good specimens sent post-paid for twenty-five cents. Enclose stamp for list of first-class eggs. Address, W. E. PRATT, 2513 Indiana Ave., Chicago, Ill.

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Fine Arrow Heads, very low. Axes and Celts. Also the World Renowned Lillie Heads of Kaskaskia Group (Sub Car.) Location Mt. Newman Va. and Tenn, very fine, from 25 cts. to \$1.00 per doz. Arrows from 30 cts. up to \$1.50; Spear Heads 20 cts. Give me an order on and all.

JOHN D. ROINETTE, Xerxes, Tenn.

The prices quoted on Birds' Eggs in this Oologist will hold good until the first of August.

Frank H. Lattin.

SPECIAL OFFERS!



Perfect Indian Arrowheads, 8c each, 4 for 25c, 6 for 35c, 65c per 12. Chinese Chopsticks, 10 inches long, 12c set.

Our Gem box of Curiosities is better than ever. Now contains Chinese horn nut, 2 Chinese lottery tickets, Chinese coin, 2 sea beans, 2 alligator teeth, skate's egg, specimen "electric stone," fossil shell, a smoky quartz crystal and my price list. All labeled, and securely packed and sent postpaid for only 25c.

Rolled-plate sea bean watch charm, 25c.

GEMS!—Obsidian from Isle of Lipari, 5c to 25c Semi opal, Hungary, 5c to 25c; Crocidolite "Tiger eye," from Africa, cut and polished, 35c; Malachites, 10c to \$1.00; Agates, 5c to \$2.00; Garnets, in mica schist, etc., 5c to 25c; free from rock, 25c per doz., a bargain; Trilobites, Calymene Niagarensis, 30c, 40c, and 50c each; Stibnite 5c to 25c; Glauconite, 5c to 25c; Calc spar, all colors and varieties, 5c to \$1.00; Herkimer county doubly terminated quartz diamonds, finest in the world, send for them, 5c to \$1.00 each; Tourmaline, 5c to \$1.00; Flourite, fine, 5c to 50c; Argentiferous galena., 5c to \$1.00; Barnacles from Pacific, 10c each; Alligator teeth, 2c to 15c each; Flexible coral from Africa, 5c to 25c; Sand dollars, 10c each, 3 for 25c.

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114 2 Large Conch, 2 Valves E. I. Clam, 1 Pyruia (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. 1.30

115 Second-class Resurrection Plants, 2 1/2 lb. 2.50

116 29 Second-class Abalone or Hallotis Shells, 8 1/2 lb. 1.50

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FOREIGN EGGS.

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Frank H. Lattin.

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Every fifteenth order I will present a fine large African Ostrich egg. Every 20th, a young live Florida Alligator.

Send at once, you may be the lucky number.

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Birds' Eggs, Oologists' Supplies, Natural Curiosities, &c., Send stamp for list.

12 Variety Eggs 35c. EMPORIA, KANSAS.

"A SPECIAL OFFER."

The 1/2 p. ad. headed as above, appearing in this issue and limited to June 1st, will be held open until July 25th. We extend this offer in order to give every Collector a chance.

Yours,

FRANK H. LATTIN.

THE OOLOGIST.

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
"(Oreon)" Points.	25	" 1.00
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Deep Notched.	10	" .50
Rotary.	50	" 1.00
Serrated.	25	" 1.00
Double Notched.	25	" .50
Top Notched.	20	" .50
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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
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Thick Spears.	25	" .50

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Notched.	15	" .50
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THE OOLOGIST.

Vol. V,

ALBION, N. Y., JULY, 1888.

No. 7

Loon; Great Northern Diver.

Urinator imber (Gunn.)

BY SCOLOPAX.

For the OOLOGIST.

This bird is well known to those persons who have their eyes open for objects of natural history, but to that class who never observe the creatures of land and water, the loon is a shrouded mystery. Considered from all sides; for his peculiarly aquatic ways, remarkable anatomical construction, curious breeding habits, and astonishing call notes, or song if you wish to call it so, this bird, of great swimming and diving powers, is one of our most interesting species, and a study of its habits, differing so widely from those of any other species nesting in this locality, 42 degrees, 20 minutes, north latitude, elucidates many oddities that command our attention and admiration.

This species is quite variable in its vernal appearance, in our locality, sometimes appearing in late February and again not till after the twentieth of March. It is often observed swimming about in the river in open spots in early March, and is occasionally found consorting with the Red-throated diver or loon, *urinator lumme*, (Gunn.) on our streams just previous to the departure of the latter species from its irregular winter sojourn with us. The two loons do not probably associate from any motive of companionship, as the common loon is hardly ever met with in more than twos and threes, but they are undoubtedly brought in contact with their more gregarious cousins from the fact that good fishing grounds are scarce in early March, when the lakes are frozen solid with few exceptions. Several times in the experience of the writer, it has been his pleasure to observe these two species together on our streams, and witness their movements and points of difference, and peculiarities.

The loon of which this article treats, is generally as common as it will be during the season, by April fifteenth, as it is believed that migration north has ceased by that date, and that all birds seen in southern Michigan are located or nearly so for the nesting season. That the birds are mated on their arrival seems probable, as the same pair is known to occupy the same nesting site, or its immediate vicinity from year to year.

In cases where three or more birds are observed on the same lake in proximity to one another, there is evidence of dispute occasionally, but the retirement of one, undoubtedly a male, soon occurs and then the lucky swain and mate are left in undisputed possession of the lake or pond. On larger lakes, it may occur that two or more pairs of birds are occasionally found nesting, but here, never more than one nest is found on a body of water. Many pairs rear their young on ponds of from ten to a hundred acres extent, the old birds seldom feeding on the same body of water to any extent, but seeking their finny prey on larger lakes near by. Several pairs of birds may be seen at one time feeding on one large lake without a nest of the species to be found in its area, and this too, at the time when nesting is in progress, thus showing conclusively, that the birds often seek their food away from home.

About May tenth the nests are begun, or rather earlier, the first evidence of a selected site being the devotion of the prospective parents to a particular portion of the lake or pond. The selection so far as records heretofore prove, is always quite forty rods from the margin of the water and varies from this distance to one-half a mile, always depending on the depth of the water. The loon is pre-eminently an aquatic species and never attempts trips on land, or even through mud and water. It may well be doubted if this bird could move with anything but the slowest and

most painful efforts on a rough dry surface. A bog, old muskrat's house, (*Fiber zibethicus*), or one of those peculiar formations in some lakes, found rising from the bottom which it is difficult to account for, but of very old vegetable matter, form the base of the loons nest. On this foundation is heaped more or less vegetable material, of dead aquatic plants principally, the bulk of the matter being soft and pliable, and of the nature of substances usually found at the edges of lakes. Elevations seem to be unnecessary, to the loon's ideas of housekeeping, and they select, contrary to advice given in the good book, the very lowest place, actually above the surface of the water, to be found. The rains may come and the winds blow and yet the loon cares not, even if the eggs are partially submerged. She sits with the greatest patience, waiting the day when she shall be rewarded for the labor which instinct dictates. I cannot assert from positive proof that the eggs hatch after being partially submerged, as my cupidity never has allowed me to leave the nest untouched, as an experiment, the finds ever remaining good ones and not to be overlooked by an avaricious oologist. It may be asserted from observation, however, that young, but a few days old have been seen in the vicinity of deluged nests, lately occupied.

The nests are oblong in shape, being all of twenty inches long and twelve to fourteen wide. The eggs are placed about one-third of the distance from the rear or hind part of the nest. To be more explicit, the old bird invariably sits in a certain position, always with the head toward the deep water, and the eggs are situated well back from the middle of the parents body. At the slightest evidence of danger the bird pitches forward into the water, with greater celerity than would be expected, and reappears from fifteen to twenty-five rods away.

The eggs, invariably two in number, quite two-thirds the size of a goose egg, olive-brown in color, and marked more or less thickly with a darker shade, are deposit-

ed from May twelfth to the thirtieth. There is an interval of two days between the depositing of the two eggs. The young on their appearance take immediately to the water, swimming and diving as if to the manner born, and quickly learn to conceal themselves from observing eyes. It is very interesting to observe the movements of a family soon after the young appear. It has been my good fortune to see a young one sitting on the broad back of one of its parents and borne along by the rapid swimming of its protector. When the old bird thinks that danger is past and that the young may with safety again swim about, the body is quickly lowered in the water leaving the offspring swimming about on the surface. The young also, it appears to me, hang to the old one's tail or other feathers when it dives, as I have repeatedly observed them when just behind or on the side of the parent when it disappeared, and they would reappear at quite a distance in the same relative position. From this it is fair to judge that the young catch hold of the feathers of their parents to facilitate removal from places of danger.

The eggs which are great and curious additions to a cabinet, vary in size from 3.32 to 3.87 in length, and from 2.18 to 2.37 in smallest diameter, and often differ exceedingly in size in the same set. In thirteen nests that I have had the pleasure of finding, only one pair of eggs were of a light shade, or almost a dirty greenish white, the general color being a heavy olivaceous brown potted and splashed with markings of a darker shade. The eggs in a few cases are of the regulation ovoid shape, and about equally often are found of the elliptical form, so nearly so that the ends would remain indistinguishable were it not for the markings which in a majority of instances are rather thicker at the larger end. The term, narrowly oval, would perhaps, best describe the usual shape.

In conclusion the peculiar notes of this bird should be described. Any one who has heard the effort will remember the sound.

To me the loon's voice is music, as heard on the lake while fishing or in camp as one sits near the fire. The sound of the common notes are nearly *loo loo loo loo*. There are notes, *Ko ahee loo loo loo*, which are not so common, and more particularly uttered during the nesting season. The common call notes are *qui ho*, which I have heard imitated so closely by a friend of mine, that a distant loon would answer at once. There are notes also resembling guttural chucklings and whineyings, difficult of description.

In conclusion would say that the expression "Crazy as a loon," cannot be applicable to this species. If any one thinks the loon a fool, let him try to shoot one.

Eggs of Mississippi Kite.

I notice what a correspondent (H. Y. B.) says in the May number of the OOLOGIST, about the eggs of Mississippi Kite, and as his article is liable to create the impression that the eggs of this species are marked with "brown or black." I'll give a full history of all the eggs of which I have any knowledge. I published the first authentic account of the nest of this species (with remarks on the eggs) "Ornithologist and Oologist" of November, 1886. The previous number of that journal contained an account of the finding of a nest of Mississippi Kite containing one egg blotched and spotted with brown. The female was shot from the nest and on dissection another egg was found in the oviduct; this egg was "faint bluish-white" and "unmarked."

In the article referred to above I stated it as probable, that like some of the other Raptore the Mississippi Kite sometimes laid spotted eggs. In commenting on this, Capt. Charles E. Bendire of the U. S. National Museum, in the January, 1887, "O & O" has this to say. "We have four of these eggs" (in the National Museum) "all out of different nests. All are as Mr. Singley states; a dull bluish or greenish white, and absolutely unspotted. There is a bare possibility that an occasional egg of this species

is more or less spotted, just like in Cooper's and the Marsh Hawk; but as a rule they are unspotted."

The eggs known to collections so far are the *spotted* one referred to above; those collected by Col. Goss *vide* "The Auk." January, 1885, four eggs collected by the Messers Rachford of Beaumont, Texas. Seven sets taken by Col. Goss in Southern Central Kansas in 1887, *vide* "The Auk" October, 1887. One set of two eggs taken by me in 1887. The six eggs mentioned by "H. Y. B." in May number of this Magazine; and four sets taken by me during 1887; as well as a set of two eggs taken this season. I also had one egg of this species brought to me last season; making fourteen eggs of the Mississippi Kite that I have seen. Five of the nests contained two eggs each, one three, and another one; while another nest had three young in it.

All of these eggs were pale bluish white *unmarked*, with the exception of a set of two eggs and for some time I was inclined to think these were marked by the birds, until it struck me that if it was a nest stain it would be, presumably, tannic acid and an application of iron in solution proved this to be the fact, as the iron combined with the acid and made an inky blotch where it was applied. If "H. Y. B." will carefully treat his marked eggs with Muriatic acid he will see the markings disappear. Now as all of these eggs with *one* exception were unspotted, I think I am safe in saying that your correspondent was in error in saying "With these exceptions, all the other known eggs this bird are, I believe, spotted with brown or black." I also call upon the editor of the OOLOGIST to prove that the eggs are not "pure white" but of a bluish tinge.

J. A. S.

An egg of the Great Auk, a bird now extinct, was sold in London a few days ago for \$1,000.

Nesting Habits of the Brown Pelican.

Common among the water birds of South Western Florida, is the *Brown Pelican*; at all seasons of the year he may be seen flying over the water of the bay or gulf in search of food. He or she is sometimes alone or in company with others, (generally 5 or 6) flying along at an altitude of 40 ft. perhaps; he suddenly turns his rear end up and his head down and into the water he goes "ker-souse"; in a minute he flaps his wings and flies away in search of more prey. A skilled lot of fishers are the pelicans and many are the fish consumed by a single pelican in a year. The only ailment known to me that troubles the pelican is "consumption" (of fish and not dangerous) therefore rather late in the spring the pelicans hold a "caucus" and pick out a locality suitable for nesting. They generally nest in the same place every year but not always. The first day each female selects a suitable place for building her nest and then (judging by a meeting I once saw) "promptly at twelve" they fly away to "hash". The ones I saw went nearly twenty miles before settling down to business. During the next few days they are kept quite busy making their "Home sweet home".

As may be imagined, the sight of a pelican flying in the air with a branch in his huge beak, is extremely ludicrous. Diligently do they work and the nest is soon finished; and then to the pelican, "their's no place like home" for three months. The nest is rather a large structure, but not out of proportion and is composed of mangrove limbs or twigs and lined with coarse grass and green leaves. It is generally not very deep, but sufficiently so to be perfectly safe for the eggs. The Pelicans always build in a mangrove tree on a small key, on this coast. The nests are generally 12 ft. from the ground, but vary from 8 to 16. On the completion of the new nest, the female takes possession of her new home and sets quietly, and in a week or ten days the set is complete.

The eggs usually number 3, but I have

taken sets of 4, and once took one of 5. Their color is chalky white and the shell is generally rough and almost always covered with dung stains. The shell is quite thick and tough, and very hard to drill. The eggs have been eaten by some of the coast people, but they pronounced them "rather strong." Hundreds of Fish-crows, however, think them very good and improve every opportunity to steal them. In three or four weeks the young birds are out and of all the ugly things, they "take the cake." Perfectly destitute of clothing and lying on their side in the nest, they are, in deed, "queer chickens." Plenty of fish are supplied by the fond parents, and they are constantly picking away at them with their queer beaks. By the time two months have passed they have transformed into a large bird, and would bear comparison with a turkey. They are now really handsome, for they are covered with pure white down, and very neat looking they are indeed.

But woe unto the rash fellow who stands under their home, for no matter how skeptical he may be in regard to its raining fish, he will soon be convinced of the truth of the statement, for unawares he will find himself covered with half digested fish. His pockets full, his hat brim full, and the scent, oh my! far worse than that of a certain chicken thief. That person is certain to give Pelican rookeries a wide berth in the future, or at least to "stand from under."

As time goes by the true feathers come, and the Pelican takes on a suit of gray, and by Autumn is ready to fly. At the end of two or three years his head becomes pure white, and a portion of his neck yellow and brown, he is now truly a handsome bird, and unless shot, lives a long and happy life. Harmless, peaceable, and self-supporting, the Pelican is truly a very interesting bird. Long live the Pelican.

C. S. M., Bonifacio, Fla.

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.

An extraordinary amount of work has made July OOLOGIST very late.

Owing to the fact that we have received so many articles of merit for the Prize Competition and that we will soon issue a new list of Job Lots, we have decided to delay the awarding of prizes until after the Aug. OOLOGIST, thereby giving all competitors a fair chance.

Desiring to make our subscription list as large as possible during the next few months we have decided to send the OOLOGIST for the balance of '88 and allow you to select any one of the regular full year premiums, Nos. 1 to 30 inclusive, for 25 cents. Tell your friends. We had ought to be deluged with short term subscriptions, for in most cases the premium alone is worth 25 cents, so that parties accepting this generous offer will be receiving the OOLOGIST for the balance of '88 gratis.

We are offering our patrons many valuable presents in order that they will do a little work in behalf of the OOLOGIST, and we regret that they do not seem to realize at the present time the small amount of labor required to obtain one of these valuable prizes. From the present outlook six or seven new names will be the largest list sent in and according to our offer our friend sending these few names will capture the 1st prize, a book which cannot be purchased at any of your book stores for less than \$18.00. We consider this big pay for a small amount of labor. Every person sending us *only two* subscribers we will *guarantee* to capture one of the prizes. We have extended the time for closing of the competition until Aug. 20th. Let each person interested in the welfare of the OOLOGIST send in a few new names. Big pay guaranteed and if you are not convinced of the fact after the prizes are distributed we will make you more than satisfied. 25c subscriptions will count same as full year ones in the competition, but with the 25c subs. we can allow you no premium in addition to allowing you to compete for the Prizes that are to be distributed as soon after Aug. 20th as the lucky ones can be determined.

A White Egg of the English Sparrow.

On July 6th, 1888, while collecting Eng. Sparrow eggs in an old oak covered with ivy, I came across a nest containing four young E. S., together with a pure white egg. The egg was undoubtedly that of *P. domesticus*. It was highly incubated. The young birds had not been hatched more than two or three days.

It was quite a surprise to find an egg, and still more so when I saw it was pure white without a spot.

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

Notes on the Breeding Habits of the
American Flamingo, Etc.

(*Phœnicopterus ruber.*)

BY C. J. MAYNARD.

There are, perhaps, a few birds throughout the world, noticeable alike for their brilliant coloration and peculiar form, which are so little known as the American Flamingo. No American naturalist has hitherto visited their breeding grounds, or at least no correct account has yet appeared of their breeding habits. Indeed, so vague has been our knowledge of the manner in which these singular birds construct their nests, that I find upon consulting a work of an eminent ornithologist, which only appeared last winter, the author of which evidently had the works of all other writers at hand from which to supplement his own notes, that, although nothing positive is stated relative to the breeding habits of our Flamingo, it being clearly intimated that nothing definite is known, a cut is given, taken from a photograph, of a group of three birds and a nest. *These birds were mounted and the nest was artificial*, while all convey erroneous ideas as to the attitudes of the birds, situation of the nest and surroundings, judging from my experience with the birds on the Bahamas. But I am not writing an article in which to criticise the doings of others, I merely mention the matter as illustrating the general ignorance of ornithologists upon the incubating habits of these birds.

Knowing as we did before we went to the Bahamas, that any facts relative to the habits of the Flamingoes were desirable, we considered the matter of sufficient importance to organize a special expedition, in order to search for their breeding grounds. There are several islands among the Bahamas to which the Flamingoes resort, but we chose Andros, partly because it was the most accessible from New Providence, but mainly because being of considerable extent—ninety miles long by thirty broad—we trusted to find the birds less dis-

turbed there than elsewhere, more especially as the island is only sparingly inhabited, and that wholly by negroes.

May 14, 1884, found us on board a little sloop-rigged vessel, sailing northward along the barren western coast of Andros Island, under the guidance of a negro whom we had found on the eastern shore of the island. We had come through one of those singular inlets which intersect Andros from shore to shore, known as the Southern Bight. The western portion of Andros for some ten miles from the coast, is a vast, flat plain of marl, but a few inches above the level of the sea. A few scattering mangroves, usually dwarfed, grow on these extensive salinas, and there are also a few clumps of low buttonwood bushes growing at wide intervals in the drier portions, while a sparse growth of coarse grass and a few weeds, renders the general whiteness of the marley surface more conspicuous through offering a slight contrast. Numerous estuaries make into the land, not only from the sea, but also from the bights, so that the surface is cut up with creeks, bays, lagoons, and ponds, in all of which the tide rises and falls.

We had already been in search of a Flamingo rookery for three days, and I will not here detail the disappointments to which we were subjected as we visited spot after spot where Flamingoes had bred in past seasons, after going many miles into the interior, only to find them deserted. We had at length come out on to the nearly unknown west coast, and as related, were sailing along, our guide (one of the most faithful men I ever encountered) was at the mast-head keeping a lookout over the level plains for Flamingoes. He assured me that a large body of these birds could be seen several miles. I must confess, however, that through continual disappointment I had quite lost faith in ever finding a Flamingo rookery on Andros, and was sitting on deck idly gazing over the side, watching the then familiar objects clearly seen through the pelucid waters, but without regarding them much, when I heard

my guide exclaim. "We don't go to Wide Opening to-day, massa!" Now as Wide Opening was the point to which we were bound and which we were most anxious to reach, as our time was limited, this was not very welcome news, for I was certain that our observing pilot had perceived that we had run into some cul-de-sac among the numerous sand banks, from which the wind was unfavorable to extricate us. My first look then, with this idea in my mind, was ahead at the surface of the water, for the light green spots which indicate shoals. Not perceiving any of alarming extent, my next glance was upward at the black face above us, when, from the triumphant expression on that good humored countenance I saw at once that sand bars were not in the question.

Springing into the rigging as the negro descended, I was soon aloft gazing to the eastward. There, far in the interior, I could see a long, low, ruddy line, like a brilliant crimson sunset cloud, resting on the level land. Then I knew that we should surely study the habits of the American Flamingo on their breeding ground.

An hour later we stood within 300 yards of 5,000 Flamingoes. We were drenched to the skin and covered with white mud, having had to wade three creeks, in which the mud and water was arm-pit deep. But what did that matter? Minor affairs were forgotten in the magnificent spectacle before us. The immense flock of huge crimson birds being alarmed began to raise their wings, flap them and honk hoar-ely. Here we paused for a moment's consultation then leaving Mrs. Maynard (who had bravely kept up with us) to hold back Spottie, the dog, I pushed rapidly forward, closely followed by my negro guide. There was not a single bush to shelter us, so we were in open sight of the birds, and when we got within about 200 yards of them they began to pour out of the Rookery, running out from among the nests in two wide columns, one to the right and one to the left of us, for the we came up directly in the center of the nesting. When each bird, as it came out, had acquired a sufficient impetus by

running a short distance with wings half raised, it spread its long pinions fully, moved them rapidly a few times, and thus launched upwards into air. The movement of so many black-tipped wings in contrast with the scarlet bodies, long necks, and peculiarly formed heads, resembled rapidly whirling wheels. Each Flamingo was now trumpeting with the utmost power of its lungs. This, added to the rush of so many wings, produced an almost deafening uproar. This together with the sight of so many large birds, excited my negro almost to frenzy. Before leaving his house he had armed himself with an old-fashioned musket, which he had charged with nearly a quarter of a pound of powder, on which he had rammed down a quantity of oakum, then poured in a handful of BBB shot. With this gun and ammunition he had expected to do great execution, hence his excitement. We had now arrived at the margin of a body of water about a hundred yards wide, a kind of estuary making in to the westward of the rookery. This, although not deep, would have prevented us from moving fast, so I turned as I came upon the beach which bordered this water, and ran down it toward the end, in order to come up to the birds that were rising on the northern portion of the rookery.

My man by this time was so crazed by a nearer sight at the hundreds of scarlet and black birds, that he quite lost his head and began yelling at the top of his voice, as he dashed after me, "Don't fire, massa; don't fire! don't! don't!" At this moment I heard a report like a cannon, and fairly felt the ground shake. Turning, I saw that the negro had discharged his gun with the muzzle pointed into the water. He stopped running, whether voluntarily or from the recoil of his weapon, I cannot say, instantly dropped the butt of his gun to the ground to reload, but never for a moment ceased his cry of "Don't fire! don't fire!" By this time I was within a hundred yards of the nearest birds, almost all of which were on the wing. Here I came to a sudden pause, and although I must acknowledge that I was more excited than if I was

after a flock of peeps, I did manage to bring down six Flamingoes with two discharges of my faithful harmless Scott. At this moment I once more heard the roar of the huge musket, and turning, saw that the negro had fired into the air. At this moment perceiving one of the birds that I had wounded running away, the excited guide dashed off after it, but the long legs of the slightly wounded bird led him such a race that we did not see either bird or man for as least an hour, when they came back together, the bird dead, hanging over the shoulder of the man.

We had now ample leisure to collect our thoughts, as the birds had moved away to a distance and alighted. As we came up to the rookery we had seen hundreds of birds sitting on their nests with their legs doubled under them, not hanging down as is usually represented, and when we came to examine the nests we saw at once the absurdity of this theory. Some completed nests containing eggs were only six inches high, some, on the other hand, were at least four feet above the water. Now a bird with legs two feet long might manage to dangle its legs down from a four foot nest, if it chose to put itself in such an uncomfortable attitude, but it surely would experience some difficulty in doing this on a nest only six inches high. Many nests were fully eighteen inches in diameter on top, and some three feet broad at the base, quite a straddle for a bird the legs of which are placed only some two or three inches apart.

The rookery occupied about a half-acre of land, or rather what was once land, for all, or nearly all, were surrounded by water, and were built on a kind of peninsula which had water on three sides of it. The nests were constructed wholly of marl piled layer upon layer, without waiting for any layer to dry, for in some cases the bottom was as soft as the top. In scooping up the marl the birds evidently use the lower mandible of the bill, while it is spread and flattened with the feet. The clay is not gathered at random about the nest, but from a pit on either side, or often from three pits, and it is the joining of these pits that

causes the nests to be surrounded with water. None of the nests are constructed quite to the margin of the peninsula, thus a dike nearly surrounds the rookery. I say nearly, for this was broken through on the southern end, and the water from the creeks flowed in, thus the slight inland tide rose and fell among the nests.

The nests were, as a rule, not over two feet apart, measuring from their base, but they were generally constructed in groups of from three to seven or eight, each one being joined to one or two of the others at the base, oftentimes for a foot or more. This rookery had evidently been used for at least one year previous to this, as we saw many nests, especially the higher ones, which had to all appearances been constructed on top of an old foundation. New nests built throughout of soft marl were, on the average, only a foot high, and were built in a certain part of the rookery. All of the nests in the older part of the rookery contained eggs, as a rule only one being deposited, and this was placed on the slightly cup-shaped top of the truncated pyramid. Incubation had begun, and in nearly all the eggs the embryos were considerably advanced. Thus we could judge that the birds had laid all the eggs that they would that season. We estimated that there in the neighborhood of 2,000 nests, and in all of these we found only some fifty sets of two eggs, and three in one case only.

There is considerable waste among the eggs from two causes; first, by the eggs rolling off the too slightly hollowed tops of the nests, and we found many in the water; second, from the eggs sinking into the soft mud of the newly formed nests. We found quite a number almost buried from having been deposited before the top of the nest had hardened sufficiently to support their weight. The tops of the old structures were nearly as hard as stone, while the whole edifice was so firm that we could walk over the nests, stepping from one to another. The whole nesting presented a most peculiar appearance, reminding one of a pottery, in which large inverted pots had been set out to dry, each being surmounted by a chalky white egg.

But space will not admit of continuing, and, in fact, the above description must be regarded as only merely random remarks taken from a more detailed account of this nesting which will appear in my work entitled *A Naturalist in the Bahamas*, now being published. The engravings I have drawn on wood from sketches made from nature, and are intended for my book. — *Naturalist in Florida*. Sept., 1884.

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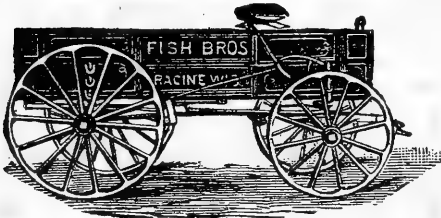
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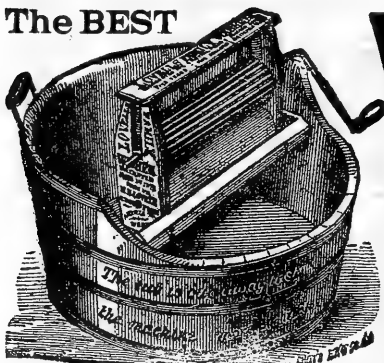


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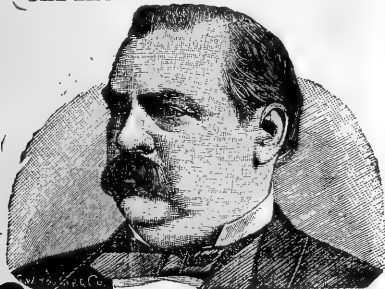
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Birds mounted or in skins. Am. Cross Bills, Redpolls, Warblers, Woodpeckers, Owls, Sparrows and others. Send prices and get mine. **JESSE T. CRAVEN, Holley, N. Y.**

7m3

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American

Flamingo!

We have left about 100 sets of one egg each of the American Flamingo, collected by Prof. C. J. Maynard, on his Bahama trip. See full particulars of the collecting of these eggs in his article on the Flamingo in this OOLOGIST.

For the next 30 days we offer these eggs to our patrons at the following low rates, prepaid:

One set.....	\$0.75
Three sets.....	2.00
Nine sets.....	5.00
Twenty sets.....	10.00

Safe delivery guaranteed. Prices good until Sept. 1st, 1888.

Address,

Frank H. Lattin,

Albion, N. Y.

Last Fall we purchased Prof. Maynard's entire stock of eggs, including 500 sets of the Flamingo, nearly all of which we have sold. Collectors will do well to favor us with an early order, as our stock will soon be exhausted.

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To take orders for large portraits which we paint from all kinds of small pictures. Large Profits, and No Risks. Send at once for terms.

E. W. CURRIER, Artist,
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Prize Competition for obtaining new subscribers for the Oologist extended to August 20th. From present outlook less than ten new names will take the first prize worth \$18.00. It will pay you to send in a long list of subscribers at once.

AGENTS WANTED
JUST PUBLISHED—HISTORY OF THE REPUBLICAN PARTY.



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THE



OÖLOGISY.

Monthly.

50c. per Year.

Vol. V,

ALBION, N. Y., AUG. & SEP., 1888.

No. 8 & 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 purchases cannot be admitted to these columns under any circumstances. Terms, cash with order.

FOR EXCHANGE—A few fine sets, each of Limpkin and Cha-cha-laci. Also some other desirable species. THOMAS H. JACKSON, West Chester, Pa.

INDIAN and Mexican Curiosities, bows, arrows, pottery, buckskin goods, New Mexico minerals, blankets etc. Will exchange for specimens in Geology, Conchology and Oology. Correspondence solicited. H. STEVENS, Santa Fe, New Mexico.

A FINE Collection of 300 first-and second-class Birds' Eggs, 70 varieties, to exchange for a second hand J. W. Pepper challenge or patent 16 in. head 6 in. brass shell snare drum, or any other good make snare drum; must be first-class in all respects. Address E. E. FERNHOLZ, P. O. Box 28, Jefferson, Wis.

FIRST-CLASS Birds' Eggs, in sets and single to exchange for sets. W. E. PRATT, 2513 Indiana Ave., Chicago, Ill.

WANTED—A good noiseless Fickett Gun, and good work on Ornithology. To ex. a collection of over one hundred varieties of eggs. C. E. WEALES, Clinton, Ark.

I HAVE A FINE snare drum, which I will exchange for the best offer of Birds' Eggs received within one month. For description, value etc., write to VAN H. LEWIS, Potsdam, N. Y.

TO EXCHANGE—For first-class Eggs in sets, a few fine sets of Swainson's Warbler and other eggs in sets, for eggs not in my collection. send list to G. NOBLE, Savannah, Ga.

WANTED—To exchange Kansas eggs in sets or single for eggs or a good book on Birds; Wilson or Burroughs is preferred. JOHN MYKRANTZ, Paola, Kan.

FOR BEST OFFERS of single Eggs (1st- or 2nd-class) received in next three weeks, I will give 1st-class sets with full data as follows: 456½, 402½, 800½, 516½, 745 1-1, and 583 1-1; also other 1st-class and a list of 2nd-class at ½ hand-book rates. ARTHUR E. PRICE, Grant Park, Ill.

TO EXCHANGE—For a Smith & Wesson 22 cal. Revolver in good condition, sets 378 1-7, 1-6, 1-5, 1-4, 326 1-4; single eggs Nos. 351, 257, 357, 557, 685; one copy of Davie's Check List, 2d edition, in good condition. B. F. BASSLETT, Barre, Mass.

CITY RESIDENCE lot to exchange for Indian Stone Relics, old Coins, Minerals or Cabinet specimens of Curiosities. C. P. WILCOMB, Visalia, Tulare Co., Cal.

FOSSIL FISH, large size, fossil flies, opals, topaz, Herkimer Co. xls., Malachite, Jasperized wood, Opalized wood, etc., for fine minerals cabinet size above 3 x 4. LEO MAHLER, 238 East 39 St. N. Y. City, N. Y.

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A choice collection of over 100 species of Birds' Eggs, worth \$30, also a good set of Oological instruments. Will sell the entire lot for only \$10.00. CHAS. C. WHITE, Terre Haute, Ind., care of B. F. Havens.

A FEW CHOICE sets of American Avocet, four eggs each, for sale at \$1.00 per set. Order at once. Address Box 845, Ogden, Utah.

NICE SEA SHELLS only 20c. per large box. Coral 10c.

WILL N. COLTON,
Box 658, Biddeford, Me.

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Then write for full printed instructions and a pound of my celebrated compound, enough to prepare twenty birds, and send one dollar in stamps or cash, or write and tell what you have in specimens to exchange.

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EMBALMING.**

We formerly sold this process for three dollars, and we make the above reduction for **30** days only.

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Birds mounted or in skins. Am. Cross Bills, Redpolls, Warblers, Woodpeckers, Owls, Sparrows and others. Send prices and get mine.
JESSE T. CRAVEN, Holley, N. Y.
7m3

W. F. GREANY,

827 Brannan St., San Francisco, California,

Dealer and Collector of American and Foreign Coins and Medals, Colonial, Continental and Fractional Currency, Confederate Notes and Bonds, also Match, Medicine and Postage Stamps.

Agents wanted to sell stamps from sheets, for which a liberal commission will be allowed. Coins and Stamps sent on approval to responsible parties. Reference required in all cases. Wholesale selections sent to dealers on approval. 32pp. illustrated 10 cts. Birds Egg & Skin list for stamp. Correspondence solicited with dealers and collectors for mutual benefit.
6m6

THE OOLOGIST.

Vol. V,

ALBION, N. Y., AUG. & SEP., 1888.

No. 8 & 9

Reminiscences of 1886.

During the summer of 1886, it was my privilege to be in the woods and fields, the larger part of every clear day, and consequently I saw a great deal of bird life, and was able to carefully study the habits of certain species, a few of which I here record. I think perhaps they may be of interest to my Oologist friends.

One of the most beautiful of our feathered summer residents is the Ruby-throated Humming-bird. Its nest is exceedingly difficult to find, as the exterior is entirely covered with minute bits of lichen, resembling, to a casual observer, an old knot or wart. Another reason is that the parent bird when going to the nest, never flies directly to it, but hovers for a moment, a few feet from the place and then darts so suddenly to it that an experienced watcher cannot always determine the course it has taken.

The nest of which I am about to speak was commenced on June 2 1886, and was built in an old pear, which had hardened on the tree without falling. This peculiar nesting place was in an orchard about 150 ft. from a dwelling house, and when I first saw the birds sticking their bills into the fruit, I supposed them to be feeding on insects which had located there. As soon as they had emptied the cavity however, leaving nothing but the thick tough skin, they commenced to bring small pieces of cotton and paper which they deposited in the empty pear-skin and by the 10th of June had completed as neat a little home as the birds could wish for. The first egg was laid four days after the nest had been completed, and a second was added two days later, both eggs being clear white, unspotted.

I have seen it stated that a humming-bird only took eleven days to hatch, but in this case the first bird was not born until the fourteenth day after the complement of eggs had been deposited, and the second egg

hatched during the following night. The young birds stayed in the nest until they were nearly as large as their parents and were fairly pushed out of the nest for want of room.

Another interesting species is the Great Crested Fly-catcher. I took great pleasure in watching a pair of these birds constructing their nest in an old hollow stump in the woods. The nest occupied by them during the previous year was in a hole in a butter-nut tree about 30 ft from the ground, only only a short distance away, and the birds undertook to move the nest from their last years abode into their new quarters. Both birds kept busy flying backward and forward, carrying feathers, bark-lining and dead leaves, for nearly a week and when the nest was finally completed they had filled up the cavity in the stump, which was fully six feet deep, to within two feet from the top. The eggs, five in number, were of a brownish color beautifully streaked with a rich reddish brown. A very noteworthy fact in regard to the cunning of this species is that as soon as the first egg is laid a cast off snake skin is placed in the mouth of the hole; evidently to frighten away would be intruders, who might otherwise disturb the nest. These birds are very peaceful as a rule, but when attacked I have seen them drive away a pair of King-birds from the vicinity of their, the formers, nest.

The third and last species which I will here mention is the Baltimore Oriole. This beautiful bird, named on account of its colors, after the noted English Lord Baltimore; is, I think, without a rival as an architect. The instinct of the young bird, may be, and probably is, to build a swinging nest, but year by year it improves on all other former attempts until the nest of a five year old bird no more resembles the first nest built by the same bird, than a small white cottage resembles a four story brown stone house. I have in my study a series of five nests of this species, built

THE OOLOGIST.

in successive years in the same tree, and presumably by the same birds. The tree was a large elm directly opposite of our residence, and the nests range from 3 inches deep at first to 14 inches the depth of the last. The first nest is composed of wotted twigs, carpet ravelings and string, and is very poorly built, in comparison with the last nest, which is entirely made of the glistening fiber of the milkweed firmly woven into a strong pouch larger at the bottom than at the top, and lined with horse hair.

I once shot a male Baltimore Oriole during the period when his mate was occupied hatching her eggs. The missile used was a green grape, thrown from a sling, which had the effect of stunning the bird. He recovered in a few minutes and I put him in a large cage just outside the window. He tried hard to get out at first, but finding that impossible, commenced to sing and made himself generally at home. His nest was in a pear tree in the yard, and the following day his mate left her eggs and flew up to the cage, where they seemed to hold a brief consultation. The female then returned to the nest, where she continued her parental duties; every morning, however, making a call on her captive mate.

I kept the male in confinement for sixteen days, feeding him on bird seed and worms, which he devoured greedily, and he became so tame that he would take the worms out of my hand.

As soon as the young were born the mother, finding it hard work to keep her young supplied with food alone, was greatly distressed and flew about the cage picking at the wires and trying her best to liberate her imprisoned mate. This was too much for me and I opened the cage door and away they both flew to the pear tree.

The cage remained where it was for the remainder of the summer and every day the pair would come over to my window and, entering the cage fearlessly, feed on the bird-seed and carry off the worms to their hungry little ones in the nest; while the male always took his morning bath in the

tub which was kept supplied with fresh water for his benefit.

When the young were grown they would not go near the cage and the old birds never, to my knowledge, returned to this locality.

H. T., Montclair, N. J.

My Annual Trip to Seven Mile Beach.

On May 22nd, of this year, I decided to pay a visit to my favorite collecting ground, Seven Mile Beach, in search of the Fish Hawk's eggs. The day in question turned out to be all I had wished for. When I awoke at day-break, old Sol. was just rising out of the dark blue waters of the ocean (as it seemed), and as he rose higher and higher, he gradually assumed the shape of a huge balloon, with the blue waters of the ocean forming a basket. Hurriedly getting everything in readiness, I started for Townsends Inlet, where I took a boat for Seven Mile Beach. On the way, however, I stopped for my companion, Ed. Wells, who was just on the point of starting out in search of me. After arriving at the Inlet, we were soon on our collecting ground.

The first place visited was a large swamp in which was situated a large heronry. We had just entered the edge of the swamp, when an immense flock of Green Herons, frightened at our approach, took flight and settled far out on a large strip of salt meadows. We now commenced to search for nests, but we had no trouble in finding them, for nearly every bush and tree contained one or two nests, and on some trees, three nests were found. The nests contained from three to five eggs each, the usual number being four. In about one hour collecting we took 67 eggs in sets, and could have taken plenty more. We now started for a strip of woods in which we could plainly see several large bulky nests which I knew to be nests of the Fish Hawk. On our way there we crossed a small strip of meadows, on the outer edge of which I flushed a Spotted Sandpiper, and after a

diligent search of a few minutes located the nest which contained a set of 3 fine eggs, which I soon packed snugly away in my collecting box. I now started for the nests above mentioned and was soon convinced that they contained eggs, for the actions of the birds were very pronounced. They flew down close to our heads, all the while uttering plaintive cries of distress. I at once commenced to ascend to the nest, which I soon reached and was surprised to find that it contained a beautiful set of three fine eggs. These I quickly deposited in my collecting box and had commenced to descend, when I was very much surprised at seeing a Grackle fly from among the loose material of the Fish Hawk's nest and upon investigating I found snugly built in the bottom of the Osprey's nest a nest of the Grackle, containing a very fine set of five eggs. Still another surprise awaited me, for in a hollow limb of the same tree I located a nest of White bellied Swallows, containing a fine set of seven eggs.

After packing these eggs away we started on our way and soon found another another nest of the Fish Hawk, containing a nice set of two eggs. The finest set of the day was found on a strip of Salt meadows, on a rotten Cedar tree, about twenty-five feet from the ground. This set contained three eggs, for fineness of coloring and markings I never saw the. These eggs were so thickly covered with reddish brown and umber, that the ground color could not be seen.

They measured about 2.49 x 1.74 2.48 by 1.70 and 2.51 x 1.75 and are now in the collection of Harry G. Parker of Chester.

For our days work we secured 23 Fish Hawks, 67 Green Heron, 3 Spotted Sandpiper 7 White bellied or Tree Swallow, 5 Grackle, and 3 eggs of the Fish Crow. Quite a fine lot of eggs, for one day's work, I think.

Hoping all my readers may have success in the field this season, I am,

Oologically Yours,

C. S. ., Sea Isle City, N. J.

In Defense of Birds.

Some collectors seem to boast of the number of specimens they take, mentioning the taking of several hundred eggs of one species as if it were something to be proud of. Thus one person writes of taking fourteen sets, or forty seven eggs of the Acadian Flycatcher. Another says he collected one hundred and seventy six sets, or more than five hundred and twenty-five eggs of the Arctic Tern, and vaguely hints at taking many Black-crowned Night Heron, or "Quawks" eggs. Still another mentions getting as many of several kinds of Heron's eggs as three could carry, while a fourth, presumably one of the same party, collected forty or fifty sets of Little Blue and Louisiana Heron. It is a good plan to limit the number of sets taken of each species to five, but one taking only five sets of each species every year in a few years has more eggs than necessary. I collect as many as I can of some kinds, such as Hawks, Crows, Blue Jays etc. and always try to kill the birds, not to identify the eggs, but to put the birds where they can do no more harm. Every collector ought to be able to identify most eggs beyond a reasonable doubt by the nest, eggs, surroundings etc. and if he cannot he has only to spend a little more time and watch the bird when she returns to the nest. One day last summer I found a Chestnut-sided Warbler's nest containing four eggs: as the bird was not on the nest I was sure of their identity and so went away and was gone about an hour. When I returned the bird flew off and I saw on one of the eggs what appeared to be a piece of a leaf. On closer examination I saw that the egg was just hatching, and soon a young Chestnut-sided Warbler appeared. I should have felt very badly if I had shot that bird.

I notice that most eggs taken by "Egg Hogs" are of such kinds as build in colonies or are quite common. They never mention taking numbers of eggs of useless or harmful birds, or finding nests of rarer ones. Perhaps they spend all their time collecting and blowing eggs of such species as Robin, Catbird, Bluebird, Pewee, Song

Sparrow, Herons and Terns. As for myself I should be ashamed to show twenty or thirty sets of Pewee's eggs, or five or six sets of Quail's eggs, of from fifteen to twenty each. I once knew of a nest of Quail which contained twenty two eggs. Some persons would have taken it just because it was a large set, but I do not want a lot of eggs in my collection which are just alike. I have but two American Quail's eggs, which are all I want.

Now I do not want anyone to be offended by these remarks. for I merely advocate collecting more varieties of eggs, rather than so many of one variety, and identifying eggs by seeing the bird, not by needlessly killing her. I cannot see why any collector should not be satisfied with at most, three or four sets of each kind, and perhaps two or three sets of some kinds that vary greatly. If every person should take all the eggs he found, how long would we have any birds to lay eggs? While I like to see a person interested in birds, I think that the more he studies them the more he should learn to love and defend them.

C. W. R., Norwood, Mass.

Two Days Field Work in Waukesha Co., Wis.

Ed. OOLOGIST:—I thought I would tell you about two collecting trips I made this year, so here goes. As May 30th was Decoration day, we had a holiday; so I thought it would be a good time for collecting. Pewaukee Lake is six miles long and about one mile wide. The lower portion contains some large bogs, covered with tall grass; just the place for Rails. A friend and I started out about 10 o'clock and after rowing about half an hour, came to the first bog. We had on rubber boots, so we jumped onto the bog taking an oar along so that if we should step into a hole we would not go clear through. After searching for half an hour and finding nothing but two sets of Swamp Sparrows, and a lot of Red-winged Blackbirds eggs (which we

did not take), we went to a larger bog about a quarter of a mile away. Here we found nothing at first and were just going away when I saw something which made me yell: It was an American Bittern sitting on her nest. We walked right up to her but she would not leave her nest, so I lifted her off with an oar, and then she flew a short distance and lit again. The nest, which contained 5 drab eggs, was made of pieces of dead flags, and was situated on the ground at the foot of some high grass. We then left that bog and rowed to another where we found a fine set of seven Carolina Rails. When we found the set, there was no bird in sight. The nest was built of grass and placed a little way from the ground in a clump of reeds. We left that bog and went over into a bay on the west side of the lake, which was filled up with cat-tail flags. We had gone but a short distance when our boat ran into and upset a Least Bittern's nest. It contained two eggs which luckily were not broken. We went a little further and found a great many nests, (all containing eggs of the Yellow-headed Blackbird), which are somewhat rare in this region. Soon we saw a bird slip out of a bunch of grass, and on going to look, there lay seven Gallinule eggs in a slight nest, fastened to the grass. We were about to start for home when I spied a bird slide into the water from what we thought a piece of bog, but which proved to be a Thick-billed Grebe's nest, containing seven eggs. The nest was a mass of mud and reeds, with a slight depression on top for the eggs. It floated on the water, being loosely attached to the flags around. while we were examining the nest, it began to rain, so we made a bee-line for home with a great many new eggs, and much satisfaction with our trip by water.

The next trip was on June 8th. This time I went alone and by land. I went south of here about two miles to a large marsh about 4 miles long 2 wide. At this season it is quite dry. I walked straight out across it and round a set of 4 eggs of Wilson's Phalarope, which are not uncommon here. They are very hard to find as

they look so much like the ground around them. I ran across several sets of Bobolinks, one of which had seven eggs in it, all of them smaller than the average. I reached a wooded island in the marsh and soon found two sets of five each, of the Red-headed Woodpecker, and one set of six Downy Woodpeckers. As I was walking along I saw a Black-billed Cuckoo's nest against the trunk of a tree about ten feet up. It contained 3 eggs. The bird though generally very shy, did not fly away, but sat on the tree with her wings spread out and her mouth open, till I left. As I was returning through the woods, I saw a Barred Owl flying over head and pretty soon I saw a large nest in an oak tree about 50 feet up. Just as I reached the tree, a large bird flew off, which as I only got a glimpse, I thought was an owl. It did not take me long to get up there, but when I looked over the nest it contained no owl's eggs, but 4 Broad-winged Hawk's eggs. I now started for home and on the way found a set of 4 Field Sparrows. I thought I was a very lucky collector that day.

D. C., Pewaukee, Wis.

The Great Auk.

The Great Auk, a bird now supposed to be extinct, was the Penguin of the North Atlantic. It had a squatty goose-shaped body and was from 28 to 30 inches long on an average. It had wings however, that were only between 5 and 6 inches long, and it was therefore incapable of flight. Its legs were further backward than those of any other bird, and this made walking difficult and compelled them when on land, to maintain an upright position. When disturbed it waddled away about as fast as a man could walk, taking very short steps, but taking them rapidly. It fed on fish crustacean and other marine animals which it pursued under water and for which they could dive a great depth. It could swim as rapidly as some of the most lumbering birds can fly.

Although on account of its fishy food it

was somewhat oily when in good condition, it was so much esteemed by the sailors, that its numbers diminished continuously from the time the banks of Newfoundland began to be much frequented, so that by the beginning of the nineteenth century it was no longer hunted for food. So few were to be had, they were not worth the time required to take them. However, in the year 1807, a British privateer varied its occupations of pursuing French vessels and impressing Yankee sailors, by going to the islands off Greenland for a supply of fresh Auk meat. Great numbers were killed, many being left dead because the ship had all she could use. In 1810 the people of the Faroe Islands, being threatened by starvation on account of the failure in the fisheries, visited Iceland and about completed the destruction begun by the privateer. That the Auk never recovered these blows was due to the fact that the Auk laid but one egg a year. It made no nest, but deposited the egg on the bare rock. It was an astonishingly large egg, averaging nearly 5 x 3 inches in length and diameter, and shaped like a California pear. Being small at one end, it would, when the wind moved it, simply roll in the arc of a very small circle. It was of a creamy-white color, irregularly marked with brown and black patches, and is one of the rarest of birds' eggs.

J. L., Chicago, Ill.

Cuckoo Nests.

June 6, I discovered a nest of the Black billed Cuckoo, which contained four eggs and one large light colored egg of the Yellow billed Cuckoo, with incubation from fresh to far advanced. The nest was a mere platform of sticks lined with a few pieces of grass and leaves placed in a small clump of thorn bushes, about six feet high.

June 9, I was fortunate enough to find a nest of the Yellow billed Cuckoo, with four eggs, two eggs were nearly fresh, while the other two were somewhat advanced.

A. B. R., Weymouth, Ohio.

Van Buren County, Arkansas, Notes.

Before commencing with the notes, perhaps it would not be amiss to state that THE OOLOGIST finds its way this far into the wilderness, and with no regrets on my part. It well deserves the patronage of every oologist.

The birds locating in this neighborhood are of many varieties and numerous, though their nests are more difficult to find than in a more settled country. Some of the most conspicuous are as follows:

March 16th, Carrion Crow—By accident while rolling stones I found a nest containing two fresh eggs. The bird was frightened from her nest by the thundering noise of the boulders on their downward course. Upon searching a few minutes the nest was found in the bottom of a crack in the rock. I descended about ten feet into the opening and secured a set of two fine eggs, which were placed upon a bed of drifted leaves. They were fresh and of a dirty cream color, blotched with reddish brown and an occasional spot of lilac aggregating at the larger end.

They were very different in shape. Length 3.25 by 2.10.

April 21st, Black Capped Titmouse—When coming in from a turkey hunt one morning carrying a gobbler on my back, I noticed a small hole in a decaying pine stump. Upon investigating I found it to be occupied by the female Chickadee engaged in setting. She did not leave the nest when I looked in, but awaited further developments. I saw that she was not going to leave the nest of her own accord, so I jarred the stump to let her know I was getting impatient, and that she was in danger. She flew away uttering a cry of distress I hated to commit the tragedy but could not resist the temptation, this being my first nest of this kind. The stump was soon opened and I found myself in possession of a fine set of six eggs. Incubation had just begun. Color white speckled with reddish brown, forming a faint wreath about the larger end. Length, 58 by 48,

The nest was made entirely of the inner bark of trees in little straw-colored strips.

These lively little birds are here all the year singing there song of Chick-a-dee-dee.

April 25th. Black and White Creeper.

A set of five eggs were taken from the roots of a Black Oak shrub. The female was much grieved by my presence, and did everything in her power, I suppose to attract my attention. She would flutter along on the ground as though she was badly crippled and could hardly go, but gradually getting farther off. She did this repeatedly chirping continually, and coming closer each time, thinking I would pursue.

The eggs were five in number and nearly hatched. The color is dirty-white or creamy, spotted with brown gathered into a wreath around the larger end. Size 66 by 55. The nest was on the ground and composed of a bunch of Oak leaves lined with fine grass stems and rootlets. These birds appeared here about the first of March and it seems that they have all left, either going North or returning South.

June 27th. Carolina Wren. Just at dusk on this day I secured a nest and set of five eggs of this species.

The location was indeed a fine one. The nest was placed in a hole in the side of a cliff. The rock is sandstone made up of layers of hard and soft material, the soft having worn away leaving a crevice extending back some eight inches. This was amply filled with coarse moss, leaves, and rootlets with an occasional feather and piece of snake skin. The nest is dome shaped, with very thick walls and a small opening in the side.

Eggs; fresh, whitish, spotted with reddish brown mostly at the larger end. Size, 64 by 75. Another nest was found in the roots of a maple tree just over the edge of deep water.

This seems to be the winter location of this species.

July 13th. Ruby-throated Hummingbird.

Although this little bird is very plentiful here, I have looked in vain for its nest until

the 13th of July, when I was working on a shingle tree and kept hearing its humming noise in a certain tree till I resolved to investigate I found the nest situated on the limb of a small Black Oak about forty feet from the ground. It was a very pretty nest and contained two young.

Besides the Birds above mentioned the Pileolated Wood-pecker, Whip-poor-Will, Chuck-wills-widow, Blue-Gray Gnat-catcher and many other small rare birds make this their home.

C. E. P. Pinnacle Mt., Ark.

The Purple Martin.

This social and half-domesticated bird arrives from the south early in May. Its summer residence is universally among the habitations of man, who having no interest in his destruction, and deriving considerable advantage as well as amusement from his company, is generally his friend and protector. Wherever he comes he finds some hospitable retreat fitted up for his accommodation and that of his young, either in the projecting wooden cornice on the top of the roof or sign post, in the box appropriated to the Blue Bird.

Some people have large conveniences formed for the Martin, with many apartments, which are usually fully tenanted, and occupied every spring, and, in such places, particular individuals have been noted to return to the same box for successive years.

Wilson says in regard to this bird, "I never met with more than one man who disliked the Martin, and would not permit them to settle about his house. This was a penurious, close-fisted German who hated them because, as he said, 'they ate his peas.' I told him he must certainly be mistaken, as I never knew of an instance of Martins eating peas; but he replied with coolness, that he had many times seen them himself 'blaying near the hife, and going schnip, schnap,' by which I understood that his bees were the victim, and not the peas, which charge could not be denied.

Its nest is constructed of anything at hand, leaves, twigs, straws, bits of string, rag and paper. Its eggs are pure glossy white, pointed at one end, and measures from .95 to 1 in. in length by .68 in. in width. The eggs are from four to six in number.

B. W. M., Amesbury, Mass.

Black Snowbird.

(*Junco hyemalis.*) Scl.

The Snowbird is a winter resident here, arriving about Oct. 20th, before cold weather has fairly set in, and immediately becoming abundant, swarming about brushy hedges, waste fields, and other places where food can be plentifully obtained. The first snow or cold snap usually sends them to the neighborhood of houses, where they become very tame, entering stables and out-houses to pick up seeds and crumbs which may have been dropped there. It is in such situations that they spend the coldest portion of the winter, retiring into holes in hay-stacks in severe weather.

They are usually in large straggling flocks on their arrival, but these soon split up into smaller parties, which roam about from house to house in search of food, flying in a peculiar, jerky manner, the white on the tail showing conspicuously at each impulse. Although as above noted, they are usually found in at this time of the year in small parties, I have sometimes seen large straggling flocks, usually with an admixture of Tree Sparrows, drawn together by a common cause—food.

Towards Spring, there being now no occasion for staying near houses, these small flocks reunite and form large ones, which, however, loiter well into April before moving north; when they do, their place is supplied by birds which have wintered further south, so that Snowbirds may be commonly found until the last week in April. I saw a single straggler on May 3rd of this year, in company with some White-throated Sparrows.

The note of the Black Snowbird is a chirp common, however, to nearly all the Fringillidae, so that it is not distinctive. It also has another note, not so frequently uttered as the last, which somewhat resembles the clicking of the bird's bill: Still another, which I have only in the Spring, consists of the syllable "tew," trilled, and given with a peculiar intonation, impossible to express on paper. Besides these, it often gives in the Spring, just before departing, a trill almost exactly, like that of the Chipping Sparrow. All, except the last two, of these notes are frequently uttered on the wing.

The above mentioned sounds are entitled only to the name of notes, but the Snowbird has a true song, heard only in the Spring, consisting of mellow notes strung together into a rambling ditty. All the individuals of a flock usually sing at once, and the effect is much as when the Robins are singing early on a Spring morning, but indescribably softer and sweeter.

The Snowbird is one of our most useful winter birds, its only rival being the Tree Sparrow; farmers do well in encouraging both. I have seen entire fields grown up with weeds, cleaned out; that is, the seeds were cleaned out by these industrious and energetic little birds, whose small crop is compensated for by their numbers. Even when insects were to be obtained, the crops of the few birds I examined were filled wholly with seeds. Many a time on a mild winter's day have I stood by and watched a flock of these restless little birds in a field, the lazier part merrily hopping around on the ground, picking up the seeds which their more industrious neighbors on the weeds above had obligingly, but unintentionally, taken the trouble to shake down for them.

The Snowbird breeds from the New England States and New York northward, but is also known to nest in the higher mountain ranges of this State (Pennsylvania).

Notes for Collectors.

CEMENT.

R. fine whitening	2 oz.
Gum Arabic	2 oz.
Finest flour	½ oz.
Ox-gall	one teaspoonful.

The whole to be dissolved and mixed with water into thick paste. This is well adapted for fixing shells, bird's eggs or any other purpose.

An excellent way to preserve bird's eggs for cabinet is as follows: After blowing the contents out of the eggs, suck the blow pipe full of clean water and inject it into the egg with force. This cleans the shell thoroughly. When the shell gets dry, which will be in a day or two, get a small glass syringe, which can be purchased at any drug store for ten or twenty cents, and inject the empty shell with a strong hot solution of Nelson's gelatine. It can be bought at any grocery store. Blow this out again while warm and wash the shell in hot water before it gets dry. This method varnishes the inside of the shell, and makes those that have lost their internal pellicle or lining on inside very much stronger. I tried this method on a pair of night hawk's eggs, of which species the delicate, grayish-blue tint soon fades. I injected one in the manner described and the other was not. In the first the grey is perfectly defined, in the other it has entirely disappeared and is of a dirty white color. Those that have already lost their color are greatly improved by this method.

The young Oologists who have not the ready money to buy a pair of climbing irons and want to go egg collecting that day can apply to the Central Telegraph office in any town and they will generally let you have a pair for the day by giving security.

The only difficulty in using the climbers' irons for making the ascent of large trees is that it is very hard to hold on with the hands. I have fixed a piece of barbed wire, same as is used for fences in the country. The piece can be made from two to six feet in length, bending the ends of the wire into small loops, and tying a cloth around each loop to keep from hurting the hands and to

encircle the tree with it on an ascent, and by putting the hands into the loops, and leaning backwards, and pulling the wire upwards as you climb higher the ascent can be made much more easily than without it.

Sometimes Oologists may come in contact with that nasty vine, Poison Ivy, or Poison Oak. It has three leaves somewhat resembling the common five-leaved (*ampelopsis*) seen climbing up the side-walls of many city residences. Its flowers hang in loose bunches, and the berries are of a pale brown. It presents two forms, the one erect the other climbing, the latter ascending the tallest trees and adhering with wonderful pertinacity. The effects of the poison are different on various persons, as some may handle it in any shape with impunity, while with others the mere fact of their catching the breeze as it blows over the plant while in bloom has been known to produce cases of severe poisoning. The best known receipt for its cure is as follows:

One cup of water, one-half teaspoonful of "sugar of lead," dissolved in the water. Bathe the sores with it twice a day. This is used for removing the sores from the surface of the skin, but not internally. Glauber's salts or syrup of figs must be taken internally to remove the poison from the system. Great care must be taken in the handling of the *sugar of lead* as it is deadly poison if taken internally. One or two applications of the solution of sugar of lead cures most cases. Let a physician do it for you.

A nice book which every Oologist should have is the August, 1886, number of the *Century Magazine*. It contains an article entitled "The Sea Birds at the Faroe Islands," numerous engravings of the sea birds and nests and eggs of those islands. Price, 35 cents. Can be bought of any bookseller.

C. A. H.

Nashville, Tenn.

A Ruffed Grouse Query.

On May 6th, Mr. Comer, a friend of mine found a nest containing four eggs of the Ruffed Grouse. Taking the eggs he put

in their place a common hen's egg and on visiting the nest a few days later he found the "Pheasant" had deposited three more eggs. Taking the three eggs and leaving the hens as a nest egg he waited ten days and again visiting the nest found six more eggs, also found the bird had deserted her nest. Isn't this a rather strange occurrence?

Answer.

W. Va., White Sul Springs.

How to make an Instrument Case.

I send you a description of how to make a case for egg drills and blow pipes, and if you think that it is worthy, I would like you to put in the *Oologist*.

Get two pieces of soft wood, one piece about 3-16 and the other about 3-8 of an inch thick. Have both pieces the same size; long enough to lay your instruments lengthwise on them, with the wood protruding about $\frac{1}{2}$ an inch at each end, have them wide enough to lay your instruments side by side about $\frac{1}{2}$ an inch or less apart, with about $\frac{1}{2}$ an inch at each edge. Take a pen knife, or better still, a small carving tool, and cut places in the thickest piece for each of your instruments to fit in very loosely, and a little below the surface; next get some velvet and cover one side of each piece; on the side with the grooves, on the thickest piece. Glue it on, and while it is wet push the velvet down into the places cut, by pushing the instruments down into their places, and pulling at the edge to smooth it out. Hing the two pieces together, with small hinges or a piece of cloth, and cover the outside with Alligator skin, cloth, or anything you choose, put a small hook on it and it is completed.

J. H. F. Jr., Baltimore, Md.

A Two storied Nest of the Kingbird.

The other day I found a Kingbirds nest with four fresh eggs in it, when I went to put the nest off it came apart, and behold there was another nest with three more eggs in it, slightly incubated.

D. C., Pewaukee, Wis.

Some of Our Falconidæ.

Foremost among the hawks of this region appears the Red Shouldered Hawk (*Buteo lineatus*.)

It is too well known as a bird to require much description, excepting as regards its breeding habits. In this region fresh eggs may be obtained from April 1st to May 1st.

They build their nests in tall trees, and seem to prefer low swampy land, covered with a growth of tall timber to any other, as a nesting place. The nest is composed of sticks and lined with evergreen, with now and then a feather. The Red Shouldered hawk lays from two to four eggs, which average 1.18 inches by 1.70 inches in size, but they vary considerably. The eggs are of a bluish color, spotted and blotched with different shades of reddish brown. Sometimes the coloring is very obscure, as in a set of four eggs which I took this spring.

PIGEON HAWK.

This is a very rare hawk, about here at least. As yet I have not been fortunate enough to secure any eggs, but in an inaccessible stub, sixty feet from the ground, a pair breeds in safety each year.

In appearance this species is a "pocket edition," so to speak of the Duck Hawk. Its feet are slender and its tail is nearly square. It averages twelve inches in length and twenty-one inches in breadth. Its back and head are dark brown, and its tail is crossed like that of the Red Shouldered Hawk by light brown or gray.

The Pigeon Hawk is shy and cautious and exceedingly hard to approach. Its food consists of robins, sparrows etc., with an occasional mouse.

This species roams over the greater part of North America, and is not uncommon near Great Slave and Great Bear Lakes.

RED TAILED HAWK.

The Red Tailed hawk is not often found hereabouts, but during the season, I have secured a set of three fine eggs of this species, together with the female bird. The nest was in a tall oak tree, and was com-

posed of sticks, lined with coarse grasses. The eggs were beauties, being heavily marked with amber and brown, averaging 2.42 by 2.05 inches. This was the second nest I ever found.

They usually hunt in pairs, sitting on a broken tree, and darting after their prey at the proper time.

COOPER'S HAWK.

Accipiter Cooperi is common here, and it breeds abundantly. Its nest is placed in tall trees, and is composed of sticks and bark. The eggs, which numbers from two to four, are marked, on a bluish-white ground, with brown. Their usual size 1.95 by 1.58 inches. This hawk is the "Chicken hawk" of farmers, but its proper food is mice and small birds. "*Accipiter*," is quite shy, and will usually desert its nest if climbed up to.

MARSH HAWK.

This bird is generally distributed throughout temperate North America. As a rule, it is quite abundant here, nesting on the ground in low damp places. This species lays from three to six bluish eggs, sometimes marked faintly with brown, but usually immaculate. They measure 1.80 by 1.40 inches.

The food of "*Circus*" is mice, frogs, lizards and small snakes. It is a strong flyer, but does not soar to any great height upon ordinary occasions. Its cry is shrill and impatient resembling "pee pee pee."

SPARROW HAWK.

This sprightly little hawk is well known, but is often confounded with the Pigeon Hawk. I recall an instance of this kind, when a fellow told me where there was a Pigeon hawk's nest, and offered to take me to it. I accepted his offer, and was piloted about six miles through "New Testament Swamp," as it is called and shown a tall tree with a hollow limb, out of which projected a few twigs. Neither of the parent birds were in sight. I strapped on my climbers and ascended the wicked looking elm stub. I threw the bird out of the nest and took no

farther notice of her, but bent my eyes upon the bunch of twigs in the hole. Judge of my disgust, ye who can, when I saw, instead of a fine set of six eggs, listed at \$2.50, a measly, ill-conditioned set of five Sparrow hawks, worth 35 cents each. At any other time I should have been fairly well satisfied but now, when I had made my mind up for a set of Pigeon hawks, for that Sparrow hawk to have the effrontery to lay her uninvited eggs there was simply outrageous.

This hawk feeds upon mice, grass hoppers, beetles and other insects, which it follows with great eagerness. He is a swift flyer, and is capable of remaining on the wing for a considerable time. This bird lays its eggs in hollow trees or in deserted wood-peckers nests. The eggs, which are from four to six, are very handsome, being white, marked with reddish brown, often so thickly as to entirely cover the ground color. The eggs are 1.36 by 1.15 inches in size, subject to variations, both in size and color.

AMERICAN OSPREY; FISH HAWK.

This hawk, as is to be supposed from its name, lives entirely upon fish, which it catches with great dexterity. They are very strong flyers, and are migratory, arriving here about the first of April, being closely followed by numerous Bald Eagles, who rob the Osprey of his food whenever it is possible. The Fish hawk often hooks to large fish, and sometimes they are drawn under by very large ones, as it is not very easy to withdraw its sharp toes from the back of its prey.

The Bald Buzzard, as this species is often called, is very peacefully inclined, never attacking birds. Grackles have been known to build nests in the outer limbs of a Fish hawks nest, and both raise their broods. The Fish hawk is very devoted to its young, and will defend them to the last extremity.

It will be noticed that this hawk is very strong and muscular, being well-knit and without a superfluous load of leg and tail feathers.

The Fish hawks nest is a huge "raft" of sticks and limbs, usually placed in a tall

dead stub. The eggs are handsome, and are marked with reddish brown, very thickly around the larger end. I have a set of four of this species in my possession, which have each of them a single blotch of umber, entirely concealing the smaller end of the egg. Those in my collection average 2.42 inches by 1.75 inches in size, and are very heavily marked.

The Duck Hawk is occasionally seen in this locality, but not often.

SHARP SHINNED HAWK.

The range of this small hawk is large, and it is very common. It builds a large flat nest in evergreen thickets, making them of small twigs with rarely any lining. This species lays four or five white eggs, marked with umber and sepia of varying shades. They measure 1.35 inches by 1.15 inches, but vary in size.

GOLDEN EAGLE.

This noble bird inhabits all of North America and Europe. In the Adirondack Mountains in Franklin, Hamilton, St Lawrence and other counties is quite abundant.

The Golden Eagle is very cleanly in his habits, removing all blood and dirt from his feathers after each repast.

I have nothing to say concerning the nidification of this bird, but I sincerely wish I could write a lengthy article on this subject from my own personal observations. I have seen one Golden Eagles nest—from below—and expect when flying machines that are practical are invented to take a set of eggs from that brush heap, but at present I have no desire to be let down over an abyss—I won't try to tell how deep—down, down, for a hundred feet to the shelf on which the nest is situated.

Bald and Sea Eagles are to be found in this county, but as the former was so ably described in the May OOLOGIST, and as I have never seen any of the latter, I will not say anything about them.

V. L., St. Lawrence Co. N. Y.

THE OOLOGIST

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—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.

Davie's "New Key and Egg Check List" has been promised "sure" some time in October.

Our patrons we fear are becoming too much accustomed to "unavoidable delays."

This OOLOGIST is a double number and although dated "Aug. and Sept.," is issued Oct. 8th.

It has taken so much of our time during the past month to attend to other matters, that the prize winners of the "New Subscriber" contest have not been determined. We will endeavor to announce the result in Oct. OOLOGIST. We might add that every competitor will receive a prize.

The result of the prize "article" contest we will endeavor to announce in the November OOLOGIST. We know that the delay must be very annoying to our friends, but it is necessary in order to give all a r chance.

October OOLOGIST is now in press and will be mailed about the 15th.

Jim.

The sun has long since disappeared below the western horizon, far off in some distant part of the woods the merry tinkle of the cow-bell can be heard mingled with the melancholy wail of the Whip-poor-will and a series of other strange noises. In the tamarac swamp, just beyond the clearing, the chery whistle of the Screech Owl is heard, while from the deep timber beyond issues the sharp bark of a prowling fox. A rabbit springs up at your feet and disappears in the darkness, some bird disturbed from his slumbers, utters a cry of alarm and flutters away among the bushes. An Owl from a tree near by, glares at you with eyes gleaming out strangely in the darkness. Suddenly borne upon the breeze, comes the whistle of a steam-boat, and soon the distant glimmering of electric lights reminds the hunter that home is not so far away after all.

I had been Partridge hunting and was now returning with six brace of these handsome game birds, just as I emerged from the thick timber a distant caw, caw, reached my ear, glancing along the margin of the forest I beheld two crows flying toward me, to step back into the under brush and hastily sling a cartridge into my breech-loader, was but the work of a moment, then crouching as near the ground as possible, I awaited their approach. I could not see the birds, but judging from their occasional caws, should say they had arrived within a few hundred yards, when the stillness was broken by the report of a gun. Looking out of my place of concealment I was just in time to see the female, (as was afterwards proved) turn a graceful summersault and plunge head foremost into the under-growth. The male, without stopping to learn her fate put all the power he could muster into his clumsy wings and dashed forward, but the next moment, as if apprehending danger, turned and started across the fields. It was a long shot, but my only chance, so taking a hasty

aim, I fired. The smoke soon cleared away enabling me to see master crow lying on the ground not dead, but wing-tipped. As I went towards him he regained his feet and started off at a rate of speed simply astonishing. I gave chase, soon overtook him, and he became a prisoner, tucked snugly away in my game-bag. Returning I picked up my gun and partridges and was about to leave the spot, when a chery voice behind me said, "Well, old boy, what luck," I turned quickly and beheld my chum. This was a very agreeable surprise, for I had expected to cover the six miles of real estate that lay between me and home alone. "R." like myself had been partridge hunting, but not being successful had turned his partridge hunt into rabbit hunting and now had eleven of those little animals, besides a brace and a half of Quail, and crow number one. The time passed pleasantly and we reached the city in good time. Next morning I made a coop into which I put my wounded captive. Upon examination, I found the second joint from the end of his right wing had been broken, thus making a very slight wound which would heal in a day or two. He was named in honor of a good-hearted old negro Jim. Jim (the crow,) occupied his coop all summer, but when the cool windy days of October came and the birds began to assemble for their journey south, I felt sorry for him and one day decided to let him go. Taking him tenderly from his place of confinement I tossed him high in the air, with caws of joy he rose higher and higher until he appeared no larger than the English Sparrow, then started out in an eastern direction, and soon disappeared among the clouds. That night, upon returning home from school, who should I see sitting on the porch, but Jim. He had probably come to the wise conclusion that there was no place like home. His capture took place in the spring of 1885, and he remained with us until the fall of 1887, when he was shot by a poorly-aimed rifle ball, intended for a cat,

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

Orioles as Foster Parents.

A few weeks ago I found the nest of a Baltimore Oriole. After sawing off the limb from which it was suspended, I found the four eggs which it contained so far incubated as to be useless. Not wishing to throw them away, I placed three of them in the nest of an Orchard Oriole in the garden, after removing the four eggs which her nest contained. She did not seem to know the difference but continued to sit and in a few days the eggs were hatched. The young birds are now fully feathered and ready to leave the nest. I consider this rather unusual, as the birds will frequently quit the nest if at all disturbed.

F. W. Mc C., Leighton, Ala.

Notes From Greenbriar Co. W. Va.

June 11, took a fine set of four eggs of the Wood Thrush. On examining these eggs I found one had little black spots distributed over the surface, which would *not* wash off. Isn't this a rare occurrence?

June 16, found a set of six spotted eggs of the Pewee. A friend brought me to-day a fine specimen of the Pigeon Hawk, *A. columbarius*, which he had killed on its nest. The nest contained four eggs, but my friend broke three of them in shooting the bird. I have positively identified the above.

June 17, found a nest of the Cerulean Warbler, *D. caerulescens*, containing one young nearly ready to leave the nest. This was in the Alleghanny Mountains, 9 miles east of here, (White Sul. Sprs.)

On May 3, I secured a fine specimen of the American Bittern, male, with the help of a revolver. This is the first specimen I ever saw shot in this county.

April 11, Three Gt. Blue Herons were seen, but they defied all efforts to get a shot, and after staying here a few days continued their journey northward.

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

THE GREAT INTERNATIONAL FAIR,

To be Held at Buffalo, N. Y., Sept. 4th to 14th, 1888.

The grand International Fair that is to be held in the City of Buffalo, Sept. 4, 1888, supplies a long-felt demand and should be hailed with delight by everyone interested in the growth and enterprise of this great country.

The advantages to be derived from such an exhibition are many. They are not only the impetus given the various industrial and agricultural interests of our land, the calling out of the people from isolated localities to see and exchange ideas with the activity and bustle of the world; but a great fair, founded on so broad and liberal a basis as the one to be held in Buffalo, is a great source of strength to the State and County Fairs of the country.

Manufacturers and breeders cannot afford to fit up costly exhibits for the small premiums and little advantages to be obtained at State and County Exhibitions, but with their exhibits once in shape to compete for the prizes of the great International Fair, they can afford to take the same to the smaller fairs of the country.

For some years St. Louis has stood out as the only American institution that approaches the great European fairs. What St. Louis has been to the West, Buffalo no doubt will prove to the East, and even more, for her natural advantages are far greater.

Situated in the midst of a most thickly populated country, with railroads extending in every conceivable direction, she is accessible to hundreds of populous cities and villages. The grounds selected for the site of the Exhibition are the very finest the country can afford. They comprise nearly ninety acres of land, finely located in the most desirable part of the city, extending from the great Parkway Boulevard nearly to Main street. Upon the one side the grounds are approached by the Belt Line steam railway; upon the other by the Main street and Belt Line street cars. But most of all the grounds are directly connected by a double-track steam railroad with the Falls of Niagara, thus making that great cataract a most powerful drawing feature. This one advantage places the location above any the world could furnish for a grand Exposition or International Fair. Trains will be constantly running from the Grounds to the Falls and returning, so that those who wish, for lack of time, to crowd the matter, can see in a single day, nature's sublimest effort and the grandest achievements of man.

As seen by the illustration we present to-day the buildings are to be unsurpassed by any fair buildings in the world. The cut is of the Main Building, which forms a rectangle, enclosing two grand courts, surrounded by

promenade galleries and covered by immense translucent glass roofs. In the centre of these courts there will be beautiful fountains playing amid pools well filled with aquatic animals and upon the water's edge may be seen here and there representations of the waders family, stroking their feathers or stretching their long necks to spear fish from the well-stocked pools. From these fountains there will be walks among luxuriant palms, rare foliage beds and flowers that make the air heavy with their rich perfumes, mingled with the vibrations of sweet music from the orchestra. Imagination can scarcely serve one in conceiving of the picturesque views these courts will present, as one strolls along the spacious galleries or sits in the easy seats of the "smokers alcove," and views below him a vast garden of tropical plants and flowers and playing fountains, while from the band stand between the two courts, there comes the finest music the country can afford.

Turning to the right as one enters the main building will be found the states and national exhibits, filling up the space to the northeast tower, where will begin the display of machinery in motion, occupying the entire stretch of the building back of the open courts and around to the southeast tower, from which to the main entrance will be found the balance of the state and national exhibits. Upon the second floor will be found the competitive exhibits of dairy products, fruits, grains, farm produce, ladies' textiles, food, fish and fish products, apiarian products, carriages, bicycles and tricycles, cutlery, firearms, surgical instruments, illuminants, electricity and electrical appliances, paper, printing, bookbinding and stationery, furniture and fancy goods, pottery and glass, jewelry, clocks, chronometers, musical instruments, archaeology, natural history, etc. Among exhibits of no small importance the one of Natural History Specimens to be made by Mr. Frank H. Lattin of Albion, N. Y., will attract considerable attention. Mr. Lattin has been allotted the entire center, (400 sq. ft.) of the S. E. Tower, Main Building, and over one hundred barrels and boxes of specimens have already been received for this display. Some of the principal features of this exhibit, outside of showing specimens and curiosities of every form and nature, will be an exhibit of over 6000 Mound Builders relics containing implements and relics of the stone age, of almost every known form and in an almost perfect state of preservation.

A collection of North American Birds' eggs, representing over 400 species, in original sets and containing over 2000 specimens. A \$500 collection of minerals, containing many unique and valuable specimens; and Sea Shells, Marine and other curiosities without limit. It will well repay a Naturalist to come a long distance to look over this exhibit.

Between and including the two north towers will be the grand art galleries, and here the wealthy citizens of Euffa,c propose to rid the Queen City of the stigma that she is slow in matters of art, for in these galleries will be gathered the most costly canvases money can furnish. The rich galleries of the old world will contribute the works of the old

masters. On the wall will hang the choicest products from the brushes of living artists, and the niches will be filled with marble, exquisitely shaped and given life by the sculptor's magic chisel. Negotiations are pending for that great masterpiece of religious painting, "Christ on Calvary," before which the crowned heads of Europe have gazed in rapture, and hundreds, whose hearts were never stirred by pulpit oratory, have felt the moist tear on their cheek as they read the sad story of our Savior's sacrifice, written on a single page by the divinely guided brush of the world's greatest artist.

Leaving the main building, where one could spend weeks and each day find something new, and passing on the North, will be found an open space containing acres of land, laid out in streets and drives where will be displayed, in private buildings and under daily decorated tents, the exhibits of the manufacturers of agricultural implements. Here will be the mammoth Wind and Traction Engines, Plovers, Mowers, Binders, and the thousand and one products of the inventive minds that have labored to make the toil of the farmer easier, and enable Mother Earth to bring forth sufficient food to supply the rapidly increasing population of the world.

Then turning to the East will be found the "Fanciers'" building, a structure three hundred feet square filled with poultry and pets. Upon the one side will be heard a chorus of crowing cocks, from the deep sonorous tones of the Brahma to the shrill notes of the Bantam. While upon the opposite side there will be a responsive chorus from the bench show of dogs, ranging from the mighty St. Bernards, that have done service in the mountains of Switzerland, to the hairless midgets of Mexico. Shetland ponies, the delight of the children, and pets of all kinds will occupy the remainder of the building, in the center of which will be an open court, where will be a constant exhibit of trained dogs and trick ponies. To the East of this will be another building, three hundred feet square, devoted to the exhibit of Draft Horses—those mountains of bone and flesh, imported from England, Scotland and France. Next to this a similar building for thoroughbreds, hunters and trotters, of which last class there will be the greatest galaxy of kings and queens of the turf ever gathered in one place. Then comes a mammoth building devoted to fat cattle and beef breeds; then another to the dairy breeds, where will be found the black and white Holstein, the Cherry Red Devon, the Dun Colored Swiss, the Red Polled, the Fawn Jersey, the little Kerry Cattle of Ireland, "that never look up for fear of missing a bite," the Sacred Zebu that have been worshiped for centuries by the natives of India. Then come the long sheds of sheep and swine.

And still this is not all. There are yet to be seen the great turf events—two weeks of trotting, running, steeple chasing, polo playing and chariot racing. Sports from the rising to the setting of the sun.

Over one hundred thousand dollars will be offered in premiums, as a stimulus to inventive genius and for the advancement of America's breeding interest.

Nearly a half million of dollars are to be expended by those interested in the enterprise and nothing will be neglected that can contribute to

make this in fact as well as in name an INTERNATIONAL FAIR.

This article was intended for the August OOLOGIST, but as our time was so much taken up in preparing for the Exposition, and afterwards in attending the same, we were unable to get it out on time, and at this date, Oct. 4th, we are just getting nicely caught up again and while many valued orders and much correspondence was delayed through Sept., we think that we have nearly "caught up" and we trust, to our friends entire satisfaction.

The Great International Fair or Exposition was a great success, as was also our exhibit, and while the space allotted to us seemed at first very large, we were unable from the lack of it to unpack all of our specimens; we could have filled 800 feet instead of the 400 feet which we had. We made 5 entries, viz.: One on each, Birds' Eggs, Indian Relics, Minerals, Shells, and Exhibit of Natural History Specimens.

Our friends will be pleased to learn that as a result from making these entries we were awarded FIVE FIRST PREMIUMS.

As to what others thought of our exhibit we take the following from the Buffalo *Lightning Express*, Sept. 6th:

"What are the wild waves saying, sister? Go to the collection of sea shells in the south-east corner, second floor, and hear for yourself. Mr. Frank H. Lattin, who has charge of the handsome booth does not, however, devote himself entirely to shells, but to nearly ever natural specimen obtainable upon the earth, under the earth or in the waters thereof. The people stand around his railing all day studying the corals, sea urchins, fossils, Indian specimens, birds' eggs and other interesting objects too numerous to mention. The entire collection comes from Albion, N. Y., and is an extensive and interesting one."

Also from the same paper, Sept. 11th:

"There are so many things interesting and instructive in the Fair that one hardly knows which to admire the most. It is safe to say the department of natural specimens draws as large a crowd as anything excepting, perhaps, the Hungarian Band and Supt. Morin. There is a large space in the form of a square in the southeastern part of the building on the second floor, which is full of shells, relics, curiosities, and birds' eggs. Frank H. Lattin, of Albion, N. Y., has this stand and well deserving is he of the crowds that frequent his place."

Davie's Egg Check List

—AND KEY TO THE—

NESTS AND EGGS OF N. A. BIRDS'.

Columbus, O., Aug. 20, '88.

Dear Mr. Lattin:—

Your letters of inquiry are before me. At this date, nearly one-half of my NESTS AND EGGS OF NORTH AMERICAN BIRDS' is out of press.

Owing to the fact that I have lately come in possession of most valuable notes regarding the nesting and eggs of some of the most rare species of our N. A. birds, I have purposely delayed the work in order to obtain and incorporate them. I have done this because the book would have been very incomplete without them. Many of the eggs have never been described in any periodical or book, and I could not afford to see my work progress through the press without these additions, although they did come to hand a little late. Some of these notes are on the nesting and eggs of the rarest species of Water Birds, the text of which is all printed and in order to incorporate these I shall be compelled to print an Appendix.

Another cause of the slowness with which the work progresses, is the fact that the proofs are all sent to Philadelphia and read by a competent person and then returned. As this too is the final edition of this work, it must not be put through hastily—far more attention and care must be bestowed upon it than the former editions received, because it contains fully three times the amount of matter.

It is almost an imposition to ask you to publish again another excuse for the delay of the work. Doubtless your subscribers will not accept it, and I do not see how you are going to master the situation in which I have placed you. Don't mention the work again in print until it is out of press, which will be some time in October *sure*.

Very Truly,

OLIVER DAVIE.

Of Special Importance.

The delay in issuing the OOLOGIST, filling orders and attending to our correspondence during the past month, we know must have been very annoying to our patrons. In order to straighten matters satisfactorily, pay good interest on delays and to make each and every one of our friends good natured, we make all the following offers, which at the prices quoted will *never be duplicated*:

Upon each and every order netting me \$1.00 or over you may see fit to send me on or before Nov. 6th, 1888, for anything I advertise in this OOLOGIST, I will give 20 cts. worth of specimens, gratis. On an order of \$5.00 I will give \$1.00 worth. On an order of \$10.00, \$2.25 worth, and on an order of \$25.00 I will put in specimens worth \$6.00 additional.

In accepting either of these offers my friends can name such specimens as they may prefer for the "extra," but in case I can not spare the ones they prefer, privilege is reserved to substitute others equally desirable.

Faithfully,

FRANK H. LATTIN.



The Naturalist's Bulletin

Is published occasionally (at least three times per annum) and circulated gratuitously by FRANK H. LATTIN, Albion, Orleans Co., N. Y. Should you desire a copy, write for it. If you are a subscriber for the Oologist for 1888, or send us 25 cts. for anything we advertise, or if you send us 6 cts. we will mail you each issue of the BULLETIN soon as published, during the year.

Prices in this BULLETIN will hold good during the balance of 1888 and doubtless for anything except Birds' Eggs and Instruments during '89.

We have in preparation several new Catalogues viz.: One of each Birds' Eggs; Minerals; Shells and Marine Curiosities; Indian Relics; Scientific Publications; and of Manufactured Articles (Jewelry, Novelties &c.) from Minerals, Shells &c. This series of Catalogues will be published as soon as possible after Nov. 1st but we can promise none until Jan. 1st.

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Third Edition, Revised and Enlarged.

Davies' Egg Check List

—AND—

KEY TO THE NESTS AND EGGS OF NORTH AMERICAN BIRDS.

With Introduction by

J. PARKER NORRIS,

AND ILLUSTRATED WITH

12 Full-page ENGRAVINGS

Arranged and numbered according to the new A. O. U. Nomenclature. This work has become indispensable to all students of Oology; assisting them in identifying Nests and Eggs while in the field, and has taken the place of those expensive works, usually beyond the reach of many collectors. The third edition will be the final stereotyped one, and will be the most complete, accurate, and valuable work of the kind in existence. (Covess' Key and Ridgway's Manual not accepted). It will contain full and accurate descriptions of all the Nests and Eggs of the Land and Water Birds of North America, including European Species known to occur in America, known to date together with the breeding range and habitat of the species and ornithological synonyms. It will have a complete analytical index and 12 full page illustrations besides many smaller ones.

The work will contain over 300 pages, exclusive of title-page, preface and Introduction. The price of this valuable work cannot be positively stated, but to my patrons sending me \$1.00 before May 1st the work will be sent them post paid, as soon as issued.

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OF THE YOUNG OOLOGIST AND OOLOGIST can now be furnished, handsomely and strongly bound in cloth, as follows:

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Our Prices are lower than ever offered by any reliable Dealer.

WE WILL NOT BE UNEDRSOLD and should any dealer make better prices than we now offer, you can send us your order at his prices.

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All eggs are carefully prepared, being blown from one smoothly drilled hole in the side, and are warranted true to name.

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European Merlin.....	.40
Sparrow Hawk.....	.30
European Kestrel.....	.30
Caracara Eagle.....	1.50
American Osprey.....	.50
Marsh Hawk.....	.25
Cooper's Hawk.....	.25
Sharp-shinned Hawk.....	.50
American Goshawk.....	2.00
Harris's Hawk.....	1.25
European Buzzard.....	.30
Red-tailed Hawk.....	.50
Western Red-tail.....	.75
Red-shouldered Hawk.....	.75
Red-bellied Hawk.....	.75
Swainson's Hawk.....	1.00

Broad-winged Hawk.....	1.00	Willet.....	.35	Baird'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 Rail.....	.12	Glaucous Gull.....	75
Turkey Buzzard.....	.50	Clapper Rail.....	.08	Great Black backed Gull.....	50
Black Vulture.....	.50	Virginian Rail.....	.12	Western Gull.....	25
Passenger Pigeon.....	1.00	Spotted Crane.....	.50	Herring Gull.....	20
Mourning Dove.....	.03	Sora Rail.....	.20	American Herring Gull.....	20
White-fronted Dove.....	.50	Corn Crane.....	.20	California Gull.....	30
White-winged Dove.....	.50	Purple Gallinule.....	.25	Ring-billed Gull.....	30
Ground Dove.....	.20	Florida Gallinule.....	.08	Mew Gull.....	45
Chachalaca.....	1.50	American Coot.....	.06	Laughing Gull.....	20
Wild Turkey.....	.60	European Coot.....	.50	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
Californian 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.....	.70	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.....	.05	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.....	.60
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.....	.10
Lapwing.....	.15	American White Pelican.....	.50	Ostrich.....	1.50
Golden Plover.....	.40	Brown Pelican.....	.20	Emeu.....	2.50
Kildeer.....	.20	Sheldrake.....	.20	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, but 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, NICKELLED AND ENGRAVED. Neatest and the Best made.	
No. 1, 3.32 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 3 hooks, (assorted sizes), 72	
CALIPER RULES, soft for marking eggs, 08	
LEAD PENCILS, soft for marking eggs, 08	
OOLOGIST CEMENT, per bottle, 10	
NATURALIST CEMENT, 20	
CLIMBING IRONS, strapped ready for use, by Express, 2.25	
Embryo Scissors, cheap, 25	
" " Xtra, 50	
" " curved, 1.00	
Syringes, hard rubber, for rinsing eggs, 80	
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, 25c., 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.	
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1 Davie's Key to Nests and Eggs of N. A. Birds, \$1.00	
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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	
3 Embryo Hooks and handle, 75	
1 Embryo Scissors, 50	
1 White Metal Blow-pipe, 25	
1 Caliper 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	\$0.12
.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	.07
.05	.20	8	10-32	.01	.07
.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
.25	1.35	23	1-2	.13	1.07
.31	1.50	24	3-16	.14	1.20
.35	1.70	25	1-4	.15	1.33
.37	1.80	26	1-16	.18	1.47
.41	2.00	27	1-6	.20	1.75
.54	2.60	28	1-2	.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.

Cunese Pearl Snail	\$0 35 to \$2 00
" Banded Snail	40 " 60
" Blotched Snail	40 " 60
" Trocaus (Top)	25
" Spider	15 " 1 00
" Harp	25 " 75
" Haliotis	05 " 13
" Small Ear	05 " 19
" Strombus	05 " 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 Trocaus	25 " 60
" Cone	10 " 40
" Virgin Cone	25 " 75
" Mitre	10 " 30
" Marlin Spike	30 " 50
" Tiger Cowry	05 " 25
New Zealand White Ear	30 " 1 25
" Green Ear	50 " 1 00
Japan Black Ear	50 " 1 00
" Haliotis	15
Cal. Red Ear (Abalone)	1 00 " 2 00
Same in rough	25 " 75
lanama 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
" Pyraula	05 " 10
" Murex	05 " 15
" Fiddle head	05 " 10
" Bloody Tooth	03 " 15
Zanzibar Cameo	25 " 75
" Tri-ous	75 " 3 00
" White Murex	15 " 2 00
Magpie Trochus	30 " 30
Engraved Cameo	1 50 " 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 Blued Cowry	10 " 25
" Mourning	20 " 50
" Silverlip	10 " 15
" Looked Scorpion	20 " 35
" Orange	20 " 35
" Egg Shell	20 " 40
" Cockle	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
" Black 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.

Olivia literata	\$.05 to \$0 15
Cardium magnum	25 " 50
Murex capucencens	10
Callista gigantea	25

Cardium isocardia	10 " 15
Conus leonensis	10 " 13
Fasciolaria distans	10 " 15
Dosina discus	10 " 10
Sicyotus papyracus	15
Chama arcanelia	10
Uplura Tamplensis	07 " 15
Glaudina parallela	10 " 15
Nerita peleronta	25 " 50
Pholas costatus	05 " 10
Voluta junonica	2 00 " 5 00

Smaller Shells.

Cowry Shells, assorted including *Cypraea Mguta*, *Lynx*, *Arborea*, *Pantherina*, *Hetuola 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 " 15
Frog	" 05 " 10
Screw	" 05 " 25
Horn	" 05 " 25
Guinea Peas	" 02

We have in stock over 50 other var. of small shells,

MARINE CURIOSITIES.

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	30 " 5 00
Vermetus Corals	10 " 5 00
Palm	10 " 3 00
Many species coral not on list	10 " 5 00
Sea Fans	10 " 75
Flexible Coral, Africa	05 " 50
Coraline, Florida	10 " 50
" Africa	25 " 1 00
Purple Sea Ferns	25 " 1 00
Sponges. A large assortment of curious forms and species	10 " 1 25
Venus Coral or Glass Sponge	1 00 " 1 50
Sea Urchins, Atlantic	03 " 10
" Pacific	05 " 10
" large white	15 " 25
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 curious	05 " 25
Lucky tooth from Cod-fish	08
Cards of Marine Algae, Atlantic, each 05; 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 Peri-winkle	50

Miscellaneous Curiosities.

Brazil Nut Pods	40 " 75
Vegetable Ivory Apples	35 " 75
Beetle Nuts, New Zealand	
" 1000 mixed Foreign Stamps	20
" 100 Foreign Stamps, all different	15
Chinese Coins, 15, 3 var. for 10	15
Japanese Coins, oblong 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 Cohaula, N. M.	10 " 25
V Nickels, 1833, without the word cents, fresh from the mint, never in circulation	15

FOSFILLS.

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 " 50
Tribolites	25 " 75
Ammonites	75 " 1 00
Baculites	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.	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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HAMMER STONES.	.25 " .50
" " fine.	.50 " 1.00

Pestles.	.50 " 2.00
----------	------------

Arrow Heads, assorted, per doz.	.50 " 1.00
per 100, 3.00 to 10.00.	

Spear Heads, well assorted, 3.00 per doz.	
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Fragments of Pottery.	.05 " .25
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We will send the following collection prepaid for \$3.00.

- 1 doz. good Arrow Heads,
- 1 Celt,
- 1 grooved Axe,
- 2 fine Scrapers,
- 2 " Knives,
- 1 " Spear Head,
- 1 Pestle,
- 3 var. Indian Pottery fragments.

We could pick you out poor specimens and send you the above collection, postage or expressage extra, for only \$1.50, and on the other hand we can send you the same lot *extra fine* for \$3.00. In each and every case we guarantee satisfaction.

We have nearly 10,000 Flint and Stone Implements in stock, and know that that we can give you better satisfaction for the money than any other Dealer.

As we have neither time nor space to give full descriptions of the implements, we would advise every collector to send us 10 cts. for a copy of Moorhead's Handy Book for Collectors; it gives a

short description of most the varieties of Indian and Mound Builder Implements, illustrated.

We can also furnish Abbott's Primitive Industry; or, Illustrations of the Handiwork, in Stone, Bone and Clay, of the Native Races of the Northern Atlantic Seaboard of America, with 560 pp. and 429 cuts.

1 vol. 8vo. Cloth. \$3.00

Modern Indian Relics.

GENUINE INDIAN RELICS MADE AND USED BY THE SIOUX OF DAKOTA.

War clubs, white quartz head.	\$3.50 to \$4.00
Tomahawks, (very scarce).	.60 to 1.00
Bows, plain hard wood, sinew string.	.20 to 3.00
Bows, sinew wound and sinew string.	4.00 to 6.00
Arrows, feathered and iron points.	.35c or 3 for 90
Knife scabbards.	1.00 to 2.50
Scalp Lock ornaments.	1.00 to 2.00
Game Bags, elegantly beaded.	.80 to 10.00
Head Dresses, colored hair.	1.50 to 3.50
Necklaces of Teeth.	1.50 to 3.50
" " deer claws.	.40 to 2.00
" " of a variety of material.	1.50 to 5.00
Ear Ornaments. Strings of Iroquois shells (wampum).	2.50 to 5.00
Riding Whips (quirts).	1.00 to 3.00
Horn Spoons.	.75 to 1.25
Buffalo horns, ornamented.	1.25 to 3.00
Scalps, difficult to obtain.	10.00 to 15.00
Leggins, children's beaded and fringed.	3.00 to 4.00
Leggins, squaws' " "	4.00 to 6.00
Leggins, bucks' " "	12.00 to 16.00
Buckskin shirts, fringed.	10.00 to 15.00
" " vest, ornamented.	5.00 to 6.00
" " pants.	12.00 to 18.00
Boys' full beaded buckskin coat, fine.	12.00 to 15.00
Squaws' blanket belts, full beaded, fine, 3 to 4 feet.	4.00 to 8.00
Gloves and gauntlets, leaded.	3.00 to 10.00
War Bonnets, rarity.	25.00 to 50.00
Bracelets.	.75 to 2.00
Baby Carrier, heavily beaded & quilled.	7.50 to 10.50
Baby Carrier, heavily beaded, with fancy support sticks.	10.00 to 15.00
Squaws' Work Bag, buckskin.	2.50 to 4.00
Small fancy bags.	.50 to 1.50
Fancy cut head bags, for paint, charms, lucky stones or money.	3.00
Turtles, spiders, lizzards, fantasticaly beaded (medicine charms).	.50 to 1.25
Whetstone cases.	.75 to 1.00
Match carriers, fancy.	.50 to 1.25
Fawn Skin "medicine" bags—half on.	3.00 to 5.00
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Vol. V, ALBION, N. Y., OCT. & NOV., 1888. No. 10 & 11

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THE OOLOGIST.

Vol. V,

ALBION, N. Y., OCT. & NOV., 1888.

No. 10 & 11

A Nest of the American Osprey.

Editor OOLOGIST: Having read in your valuable journal the experiences of many collectors, I have been seized with an insatiable desire to immortalize myself—temporarily, at least—by relating my experience in securing a set of eggs of the American Osprey.

One delightful day in the latter part of May, 1884, in company with three of my pupils, I set out for "Two Mile Beach," about three miles from Cape May City, N. J. We walked to Schellenger's Landing, a mile distant, then rowed somewhat over a mile through the sounds and across the inlet and then walked the balance of the way. "Two Mile Beach" is a typical South Jersey sea beach, with plenty of low sand-hills, a few dwarfed cedars, sweet fern bushes here and there, and an excellent quality and copious quantity of healthy, sociable, insinuating, always-with-you mosquitoes. From the top of a sand-hill half a mile distant we could see the unmistakable nest at the top of one of the cedars. On nearing it we could see that it was tenanted for the year and that the family were at home. The nest was about fifteen feet from the ground. The boy whose reputation for climbing stood the highest attempted the task. He could get far enough to reach the bottom of the nest, but could not be encouraged to get so as to reach into the nest. After his failure the other boys in turn tried their skill at climbing, but with no better results. What was to be done? I wanted the eggs—felt that I must have them; but I had always thought it to be a poor cow that could not beat me climbing a tree. I must try my hand regardless of the future reputation of the cow. Hat, coat, vest, and shoes came off, a fish-line went into my pocket, and I began to climb, I easily reached the point attained by the boys, but to get further than that was certainly difficult. Everything seemed to be in the way, and nothing seemed to offer

any support; but after cutting and breaking a number of twigs and small branches and pulling away a number of large sticks from the nest, by an extremely vigorous effort I obtained a higher foothold and balanced myself right in the base of the nest. Then, as the nest was fully four feet in diameter, I must reach out half of this distance and over the edge of the nest. All this time the birds were getting all too familiar, but the boys with clubs, poles, and hats frightened them so that the annoyance was not serious—to me. Finally, after pulling away all the sticks I could and working my hand over as far as possible, I could just feel an egg, but could not possibly reach two inches farther so as to get hold of it. Then I found a crooked stick eight or ten inches long, and after two or three attempts, hooked around one of the eggs and brought it so that I could take it out. Then I held one end of the fish line and dropped the other end to the boys at the foot of the tree, who tied on the little pail that I had made from a baking powder box, filled it with cotton, and I drew it up, put in the egg and let it down. Then I let the other one down in the same way. They proved to be the handsomest pair of eggs of the *Pandion* that I ever saw of a very true oval shape the regulation cream ground and brown markings quite evenly and regularly distributed, and with just enough evidences of incubation to show that the two constituted the full set. Another row of a mile or more, a few nice weak-fish and crabs taken by the way for a change, a tramp home, an excellent appetite for supper—and, now, two beautiful eggs to recall all the pleasant experiences of the day whenever I look at them. Who wouldn't be a collector?

C. Le R. W., Scranton, Pa.

A Day with the Gulls.

One fine day in June another oologically inclined friend and myself determined to pay a visit to the haunts of the Sea-gull, in hopes of making some additions to our cabinet. We started at about 10 a. m., for a summer resort on the sea, about eight miles by rail from this city. We arrived in good season and started out for the clam flats, where we hired a boat and started off on the "river." We rowed steadily and soon found ourselves in the bay. The water was as calm as a summer's day. We stopped to take a swim in front of a beach cottage which seemed to be uninhabited and town struck out to sea. We were bound for two, rocky islets out about two miles from the point. After a long pull we got out on one of them and securing the boat, sat down to eat our dinner as it was past one o'clock, gulls in profusion circling around our heads. We found a sort of a little cave and sat down there to partake of our lunch. After dinner we read out of the OOLOGIST and then started to look for Gulls' eggs. Clouds of these birds circled round uttering sharp cries. These we identified as Kittiwake Gulls, *Rissa fridactyla*. These clouds of Gulls with their flashing white breasts and unearthly cries, made an impressive and novel scene on that rocky and lonesome islet out at sea. However we thought more of the eggs and as we were not on the side where most of the gulls bred, we walked quickly along the rocky beach, or shore.

It is a strange fact that the gulls breed in the largest numbers on the southern or southeastern shore, while the northern side of the islet is almost deserted. The gulls around us increased in numbers as we advanced, sometimes darting at us savagely as if to peck our eyes out, and here is where the firecrackers came into play. The explosion of one or two of these, (saved from the 4th of July,) drove the Gulls nearest us away and saved our eyes.

We soon found two sets, one in some seaweed on the ground, the other under a rock with no nest whatever. The first contained

two eggs, the second, two young. The eggs varied in ground color from grayish to yellowish or buff color, spotted and blotched with lilac and different shades of brown. I think the average size of those we found was about 2.20 by 1.45. Some, however, were more elongated and others more spherical. We strolled on, finding several more nests among the crannies of a rocky ledge, which rose about 25 feet and faced the shore. I was packing away a set when a shout from my companion, who was exploring along on top of the ledge, made me look up. He had discovered a handsome set of three eggs, which we both thought to be of the Common Tern, but the sight of a pair of the Arctic species convinced us that the find was theirs. We found two more sets, corresponding exactly to the first, which belonged to the Arctic Terns and in fact we saw a number of these birds while on the Island, but not one of the Common species.

On the southern part of the islet was a cliff, some eighty feet in height which was literally alive with eggs. Here we secured all the sets we wanted and also a young gull which we thought might make a pet, the firecrackers meanwhile doing the best of service in keeping off the too obtrusive gulls.

The rocks here were white with excrement. I suppose the gulls have bred here for years uninterrupted.

The lowering of the sun told us that it was time to return and that we would not have time to visit the other island, which abound in Terns and Gulls. We took a "cut" across the islet, instead of going around by the beach, and as luck would have it, we found a Sheldrakes nest in a hollow tree.

The American Sheldrake or "Fish Gull," is often found on these islands off the coasts, generally nesting in hollow trees and sometimes even in fallen trunks. It constructs a nest of grass, moss etc., and often seaweed enters into its composition. I believe Davie says in his admirable "Key to the Nests and Eggs of N. A. Birds," that the nest is *always* lined with down. This one we found was *quite destitute of any such thing*. The eggs were eight in number, size about 2.60 by 1.75, of a yellowish drab or buffy color, hard

to describe. We did not see the male but had a good look at the female with her red head and large crest. After securing this clutch we hurried down to the boat, and I picked up by the way another young gull which we thought would be good company for the other. We dubbed them "Moody" and "Sankey." We arrived at the clam flats in time to catch the six o'clock train for home, tired, but rich in Oological treasures.

And now I would say a few words in regards to collecting sea-birds eggs. First, *be sure and fully identify all specimens collected.* This has been said many times by persons giving advice in regards to collecting, in the OÖLOGIST and elsewhere, but it is doubly necessary to take this precaution in collecting sea-birds eggs, where so many nests of different species whose eggs look alike are found close together. Next I would say have a water blow pipe. In collecting sea birds eggs this is more necessary than elsewhere, as they are generally large eggs and you are also liable to get a greater number, building as they do in colonies, and the labor of blowing 40 or 50 large eggs by the old method is not to be sneezed at. The way of making this machine has been several times described in the OÖLOGIST.

Lastly, I would say to the young collector, don't be a "great American Egg Hog." A collector is more liable to fall into this fault while collecting sea-birds eggs than in the collecting of most others, for breeding close together they are plentiful and easily gathered if you once get near them. The sight of so many eggs is liable to excite the young collector, (I speak from experience,) and make him forget that the sea gull with its harsh cries, has as much maternal affection as the little songster that cries mournfully when its eggs are taken. And with this I will close my article, hoping that the collector may find something of interest in its lines,

W. N. C., Biddeford, Me.

Scarlet Tanager.

I have been collecting birds and their eggs for four years, and have never noticed but two Tanagers in this vicinity until this spring. On May 4, while collecting Warblers, I shot a very fine male specimen in his spring dress of scarlet, trimmed with black. On May 10, two more fine male specimens were shot by myself, and a few days later, a friend shot two males. On June 4, I had the good fortune to find a nest with four eggs, which were the first that I ever saw. In color they were a light green very thickly spotted with reddish brown. The nest was placed in a soft maple tree, on a small horizontal limb about fifteen feet from the ground. The nest was a very frail concern, composed of weed stalks and rootlets, without any lining, and was so thin that by going under the nest a person could look up through and count the eggs.

I have visited the small piece of woods quite frequently since I took the nest and eggs, and every time I saw either the male or female, and I think by their actions they have another nest in some part of the woods, but thus far I have been unable to find the same.

If I wished I could have shot as many as a dozen male specimens this spring without going a mile from town, but I think it a very poor rule to shoot all the birds of one species, just because they happen to come your way one year in five.

E. B. P., Brockport, N. Y.

Albino Eggs.

Seeing J. A. B., article in the July, 1888, number of the OÖLOGIST, regards the finding of an Albino, English Sparrow egg, reminds me that I have one which I collected July 10, '88; size .65x.98. There was five of the usual color also in the nest making a set of 6. I also have a set of 5 Bluebirds eggs which are pure white, average size .70x88.

Mr. W. D. Hills, of this place, has a set of 5 Albino. White-rump Shrike, which he collected in 1883.

C. B. C., Odin, Ill.

Notes from Alachua Co., Florida.

The following from my note-book, are some of the species I have found breeding here during the first two months of the breeding season, this year (1888).

The first nest found Feb. 23, was a Loggerhead Shrike containing four fresh eggs. It was situated in an orange tree eight feet up.

Feb. 9, Loggerhead nest situated in a live oak tree, twelve feet up; five fresh eggs.

March 7, Loggerhead, five fresh eggs.

March 12, Learning of a native that he had found a Black Vulture's nest the week before, containing two eggs, I determined to obtain them. A ten mile ride and a hard hunt revealed two young about four days old. They were not white like the young Buzzards, but black. The nest was on the bare ground by a log in the swampy wood.

March 24. Loggerhead, three nests of five and one nest of six; all fresh.

March 28. Great White Heron, four sets of three each; incubation far advanced. Nest composed of sticks and twigs laid loosely together in bush over water.

March 29. Turkey Buzzard, two fresh eggs; nest in a hollow stump.

March 30. Fla. Screech Owl, two fresh eggs (the usual number of eggs laid by this species here is three); nest in an old Flicker's hole, ten feet up. Also. Brown-headed Nuthatch, two fresh eggs same date.

March 31. Brown-headed Nuthatch, four slightly incubated eggs; nest in a dead pine snag, six feet up. It was composed of bits of wool mixed in with little chips of rotten wood and pine seeds.

April 2. Fla. Screech Owl, incubation advanced; nest in an old Woodpecker's nest, ten feet up.

April 4. Screecher, two fresh eggs. Same date, four fresh Sparrow Hawk eggs; both nests in an old Flicker's nest.

April 5. Brown-headed Nuthatch, three fresh eggs.

April 9. Sparrow Hawk, four fresh eggs.

April 11. Brown-headed Nuthatch, four

fresh eggs.

April 12. Sparrow Hawk, four fresh eggs; nest in natural cavity of a pine stub, ten feet high; eggs laid on rotten wood at bottom of cavity.

April 16. Am. Sparrow Hawk, one set of four and one of five, badly incubated eggs. Also, Bluebird, five fresh eggs.

April 19. Screech Owl, two fresh eggs. Sparrow Hawk, four fresh eggs; and Mockingbird, three fresh eggs.

April 20. Brown-headed Nuthatch, three fresh eggs; "Yellow Hammer," five fresh eggs.

April 24. Sparrow Hawk, two sets of four fresh eggs; Mockingbird, two sets of four; Black-crowned Night Heron, four badly incubated eggs.

April 25. American Egret, three fresh eggs; nest composed of sticks and twigs placed in a bush over water; Green Heron, three fresh eggs; Purple Martin, twenty incubated eggs, four sets.

April 30. Boat-tailed Grackle, several sets of three, incubation fresh; nests placed in thick bushes near water.

T. G. P., Archer, Fla.

A Plea for the English Sparrow.

Having seen several articles in the Oologist about the English Sparrow, and all in favor of extermination on account of the damage done to the farmers' crops. I send you the following "plea for the Sparrow," which I have clipped from one of our local papers, thinking that it might be interesting to some of the readers of the Oologist. The farmers around here make no complaint against the Sparrow, and the only thing that can be said against them here is that they drive all the other birds away and destroy the eggs and nests:

C. S. H. Norristown, Pa.

Even the kind-hearted John Burroughs has given a reluctant assent to the popular verdict against the English Sparrow. But a popular outcry is not always well founded. The noisy, pugnacious, often greedy little bird has such hosts of enemies that it is only manly to see if popular prejudice is

not going too far, and whether or not the English Sparrow is a wholly bad bird.

Some years ago I lived in a town in Western New York, not far from Rochester. In my garden was a fine peach-tree, full of blossoms. As I lived in the outskirts of the town, a Sparrow at that time seldom had been seen in the garden.

One day a neighbor not two blocks away said to me: "The English Sparrows are destroying all the peach blossoms! Smith and his boys are shooting all that come in his yard. But I won't fight the birds. As I can afford it, I prefer to buy my peaches.

"Smith and his boys" saved the blossoms but barely got fifty peaches from a dozen trees and those were mostly too wormy to be used. My tree, untouched by the "blossom destroyers," had less than a dozen peaches, and they were wormy; while the friend who allowed the English Sparrows to work their own sweet will had about a half bushel of fair-cheeked, full-size, beautiful peaches.

At the time when the blossoms were covering the trees, I had a newspaper controversy (through a Geneva journal) with a Rochester fruit grower on the same subject, for I had examined hundreds of blossoms and found the germ of some insect in most of them. I insisted then, and still do insist, that the Sparrows destroyed only such blossoms as not only would have destroyed the fruit for that year, but for many subsequent years. There are portions of Illinois in which farmers are unable to raise wheat on account of the insect known as the weevil. But a great outcry is made that the English Sparrow destroys wheat! How many have made any examination of what was being destroyed in order to tell positively whether the wheat was sound or not? Now, sons of farmers, you may help settle the question. It is not an unknighly deed to defend the character of an unpopular bird.

Put down in a clear space one peck of sound wheat; then ten feet away put down one peck of wheat that is full of weevil; then stand back and wait and just notice what the Sparrows do.

I believe that you will find that invariably the diseased wheat will be eaten first. If the birds are very hungry they may afterwards take the good wheat. But even boys eat as long as they are hungry.

For centuries the crow, too has been shot at, destroyed and abused by men; and to-day how few know—or will believe the good that crows do in agriculture. I refuse to let anyone disturb crows when they settle on my newly-planted corn-fields, and my neighbors, here in Southern Maryland, have to plant far more than I do. I do not

dispute that the crows take some toll for destroying the cut-worms; but I think them entitled to as much as they take.

I took a neighbor through his own corn-field and offered him a dollar for every ear of corn (not yet fully ripe) which had been partially eaten by the crows but which did not show traces of the cut-worm. He could not find one from which the crow had not first taken the worm. In no case could a sound ear be found that had been disturbed by the crows. Still the same man continues to shoot them.

Entomology and ornithology, in their practical application, are branches of agriculture, and there is need of much post-graduate study in the gardens and fields. These Sciences cannot be fully learned in the schools.

—April *Wide Awake*.

Locating a Birds' Nest.

Were you ever disappointed in trying to find a bird's nest? even when you were almost certain that you just saw the bird leave its eggs.

Here is an incident which shows that one can be too hasty, even in locating a bird's nest. A company of school boys were standing on the sandy shore of a small island in the Lehigh River, when a bird fluttered from under a bush and flew out over the water. It was at once recognized as a Whip-poor-will. As the bird flew along the shore for a short distance, all, except one of the boys, agreed that it was going to its nest and concluded to follow it. They did so—followed it around the fifty acre island, and finally came back to the one non-concurring boy. He said that he thought the bird was just leaving its nest instead of just returning to it and that his belief was strengthened by our reappearing without having discovered the nest. Knowing something of the habits of the bird, he searched the shore under the bushes, and was soon rewarded by finding two eggs lying on the bareground.

Thus we "jumped to a conclusion" and got left. The other fellow did not decide so suddenly and he got—the eggs.

H. E. P., Allentown, Pa.

Useful Contrivances for the Oologist.

Mr. F. H. Lattin; I saw in your OOLOGIST for April, a favor asked by C. S. L., Warriorsburg Pa.

So I write these few lines to let you know how I succeed in getting Baltimore Oriole eggs. In the first place I took about 18 inches of copper wire nearly $\frac{1}{8}$ of an inch thick, twisted a loop on one end about one and one-quarter inches in diameter, then had a net crocheted of coarse homespun cotton, which hung down about two inches. This I found to be very useful on many occasions and especially for the different kinds of Woodpeckers. Next I had a "telescope" fishing rod, one that shuts up like a cane. When I came to a nest I would tie a long cord to the pole, the other end to my suspenders, put the net in my pocket, when I reached the site of operations up would come the rod, then I would wrap about 6 inches of the wire around the tip, bend the wire at right angles with the pole and fish for eggs. Then comes the time which will try your patience and nerves, that is in sliding the butt of your rod over some limb or crotch, so as to get your hand on the net. Another useful little article is a small looking glass about 1 and $\frac{1}{2}$ inches in diameter, which you can fasten on the end of your rod in such a way that you may see into the nest, and by so doing you may save yourself from killing the young if there be any. With these three articles I have seen into, and taken eggs out of a nest about 14 feet high, while I stood upon the ground.

In one of your last spring numbers I saw an article headed a "Water Blower," which I believe I have improved upon, thanks to the man who wrote the first about it. In the first place I took about 2 feet of quarter inch hose, and fitted it into a small cork, squeezed the cork into the spigot of the bath tub, put my glass tube into the other end, turned on the water, drilled my egg, held it about one-half inch from the tube, and watched the "inside come outside," then with another bent tube I would blow water out. I find the force of water for an

egg the size of a robin, should be as follows: hold the tube two feet high, and turn the spigot until the water falls three feet from directly under your hand. Of course smaller eggs should have less force.

A. A., Germantown, Pa.

The Cactus Wren.

This remarkable little bird is one of the commonest in our locality. The bird is about the size of an English Sparrow, but builds a very large nest for its size. It is a large structure about fifteen inches long, placed among the Cactus plants. The young collector who tries to reach it generally comes out second best, for the prickly Cactus sticks him all over his body. The nest is oval in shape and looks very rough on the outside. At the end there is a small round hole which runs to the bottom of the nest, this is lined with feathers making a warm, dry place for the eggs. The eggs are of a pinkish color and have different shades, according as the incubation is advanced. I have found four sets of their eggs this season viz., 2 sets on the 31st of March with four eggs each, with the incubation slightly advanced, one nest April 14 containing five fresh eggs and one on April 15 with four eggs also fresh.

A. C. L., Beaumont, Cal.

Game Laws not Enforced.

I have seen in various magazines articles on protecting our birds but have never seen an article on the "Pheasant" *B. umbellus*, which is one of our finest game birds. The fine Grouse is rapidly becoming exterminated and is something is not done, in a few years we shall miss it from our forests altogether. It was formerly found here in immense numbers but of late years has become very rare and all on account of the feebleness of the game laws of this state, (W. V.) Now, if the laws were enforced we should probably have a few left but our officers are of no account. I wish some of our officers would investigate this matter and save

from destruction one of our finest game birds. Our hunters here persist in killing them during "drumming" time which occurs during the early months of spring and summer. During this time the logs on which they drum are watched by the sportsmen(?) who keep himself well hid near by until the bird comes to his accustomed log when the hunter shoots him, now how is this for a true sportsman? And of late years they have actually got to trapping them with steel traps on the logs on which they drum and nearly always catching one. And again, I have seen some gentlemen go out hunting and return with maybe an old female and several young ones a few days old, they having killed the old ones and caught the young ones alive, probably thinking they could raise them, which cannot be done. They nest here in April and May and lay from six to twelve eggs never over twelve. I haven't found but two nests in the last four years and they were both situated beside old logs in a dense forest of swamp oak and thorns. The birds are very wild now and only frequent the densest thickets. During the fall they feed on wild grapes and thorn apples. And now I think if this wholesale destruction could be stopped, a few would be thankful anyhow. I think if this state and a few others were a little more rigid in regard to game laws we would feel better.

T. S., White Sul. Sprs., W. Va.

Bird Notes from Lake Co., Ohio.

Birds are very plenty here. Fifty species were observed last spring, Crows, Bluebirds, Flickers, Nuthatches, Cuckoos, Orioles, Mourning Doves, and Warbling Vireos, are notably abundant. Crows, though very common, are generally safe in breeding time, as their eggs can hardly ever be taken. A number of new birds were noticed last spring, the Maryland Yellow-throat, Black-throated Blue warbler White-crowned Sparrow, Horned Lark and Night Heron. Yellow-throats are quite common now, but I have been unable to discover their nests, Red-headed Woodpeckers, Shrikes, Swifts,

Bobolinks, "Tip ups," Killdeers, Kingfishers, Tanagers, Rose-breasted Grosbeaks, Indigo Buntings, Sparrow and Red-tailed Hawks, and many other birds are common. Night-hawks are often noticed. A good many Hummingbirds, Ruby-throats, are seen. Three or four of their nests have been found here. Quail are not very common, one spent the day in the fields near our house, recently. He would answer our calls readily. His whistle was generally "Bob White," or "More wet," but once in awhile it would be "No more wet." Rose-breasted Grosbeaks' nests have been common the past few seasons, while Tanagers have been more scarce, Virginia and Sora Rails have bred lately, in a small swamp half a mile off. Bald Eagles have their nests every season in the secure top of a large tree, at the Lake, three or four miles north of us.

My first nest this year was a White-rumped Shrike's with two eggs, April 26, a Robin's nest containing one egg was found April 28, other early finds, were Mourning Dove May 2, Blackbird, May 6, and Bluebird, May 7, a fine set of six Kingfishers eggs was also found May 6. A few other nests which I found this season, are Warbling and Red-eyed Vireos, Redstarts, Orioles, Grosbeaks, an unknown Hawks nest; six or eight Indigo Buntings', (2 sets containing spotted eggs,) and Wood Thrushes by the dozen. Here are a few of our earliest arrivals, Crow Feb. 20; Robin and Bluebird, Feb. 22; Flicker and Red-headed Woodpecker, Feb. 23; Meadow Lark, Red-wing and Cowbird, Feb. 24; Red-tailed Hawk, March 8. Thirty wild Geese were seen flying southward, May 20.

B., Perry, O.

Bronzed Grackle.

This bird is very common in this locality in the summer season. Its black plumage has the same metallic luster which is noticeable in the plumage of the crow. The note of the Grackle is not a musical one, it being a short chirping note. The nest, which is generally placed near the top of a tall spruce tree, is deep and composed of dried grass straws woven together. The eggs, four to six in number, are of a blueish green marked with irregular lines and scrawls of black and amber, clouded with lighter shades of black. The average measurement is 1.18 by .84, although I have taken eggs measuring 1.25 by .88.

F. W. C., Wanwatos, Wis.

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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The Result of the Prize Subscription Contest.

The contest, although not as general as we would have liked, must have proven very satisfactory to the contestants. 50 prizes were offered and as there was only 36 competitors, each and every one received a valuable prize, worth fully as much as the total amount of cash sent them; only 15 of the 36 contestants sent us over 50 cts. and of the remaining 21, 17 sent us one new subscriber at 50cts., 2 sent two at 25cts. and two sent one at 25cts.

In awarding the prizes we were obliged to take into consideration, not only the No. of subscribers sent but also the amount of cash and the date of sending. The principal reason for being obliged to take these conditions into consideration was that in August we not only, extended the competition from Aug. 10th to the 20th, but also stated that 25ct. subscriptions for the balance of the year would be counted in the contest. This extension and offer not only

added 14 new contestants to the list, but aided 11 of the ones capturing the first 15 prizes to increase their lists. Thus in making awards, we placed the contestant sending us 2 subscribers at 50cts. each June 1st, ahead of one sending us 4 subscribers Aug. 10th, at 25 cts. This we, and we think our friends will consider the most fair method of determining the rank of the lucky contestants.

The following is a list of the winners. The 1st figures state the amount of cash and the 2nd the No. of subscribers sent.

1st Prize:—Maynard's *Birds of Eastern North America*, W. E. Colby, Benicia, Cal., sent \$6.45 for 20 subscribers.

2nd Prize:—Set of two eggs of the Bald Eagle, Van H. Lewis, Potsdam, N. Y., \$3.75 10.

3rd Prize:—\$7.00 worth "job lots", L. W. Nichols, Jr., Richmond, Ills., \$3.55 13.

4th Prize:—specimens worth \$5.00, Wilfred H. Garland, Saccarappa, Me., \$2.35 4.

5th Prize:—\$3.50 worth "job lots", James Levy, Chicago Ills., \$2.00 5.

6th to 10th, each an Ostrich Egg.
W. Pratt, Lake Forest, Ills., \$2.00 8;
J. D. Sornborger, Guilford, N. Y. \$2.00 5;
Will N. Colton, Biddeford, Me., \$2.00 7;
W. C. Oldfield, Cedar Spgs., Mich., \$1.50 6;
Chas. E. Swett, Saccarappa, Me., \$1.00 2;
11th to 15th each a copy of "Davie's New Egg Check List".

W. A. Lee, New Vineyard, Me., \$1.00 2;
F. W. Curtis, Wauwatosa, Wis., \$1.00 3;
Frank Harris, LaCrescent, Minn., \$1.00 4;
Normie Hall, San Jose, Cal., \$1.00 2;
John T. Parsons, So. Paris, Me., \$.75 3.

16th to 25th, each an egg of the Am. Flamingo.
E. L. Steele, Ct.; C. S. Myers, Neb.;
S. A. Taft, S. C.; U. Clark, Minn.;
J. H. Fisher, Jr., Md.; G. M. Price, Ia.;
F. T. Sterling, L. I., N. Y.; G. W. Smith, Me.;
W. Denton, Ills.; R. M. Strong, Wis.
each 50cts., 1 sub.

26th to 36th, each a specimen usually retailed at 50cts. (a nest of the Tarantula).
H. Mead, Col.; F. Card, Ia.;
L. Grant, N. J.; A. K. Ashworth, Pa.;

T. Surber, W. Va.; H. S. Day, O.;
G. E. McKowen, each 50cts., 1 sub.
F. Darrow, Ia.; Mrs. G. F. Ware, Minn.,
each 50cts. 2 sub.
S. E. Bacon, Pa.; F. L. Burrill, Me., each
25cts. 1 sub.

Prizes 37 to 50 unawarded. List of
contestants exhausted.

Notes of Interest from S. Car.

I have read with considerable interest the articles on birds which appear in nearly every issue of the OOLOGIST, and noticed with regret that very few of them were from S. C. I have not been unable to account for this as we are certainly not to be excelled in the number and variety of our feathery tribe.

The most, or one of the most interesting of our birds is the Blue-gray Gnatcatcher (*Poliioptila cerulea*). The *P. cerulea* is a very domestic little bird, seldom going far from his home and taking great pride in the construction of his nest, which for beauty defies competition. At a distance the nest is often mistaken for a knot on the limb of a tree, but upon close observation you see a beautiful little nest lined outside with star shaped lichens and on the inside with horse hair, small fibrous grasses and soft material. The complement of eggs ranges from four to six, and average .55 x .45, being of a greenish-white color blotched with reddish-brown and slate.

The soft plaintive notes of these little birds make one feel like a criminal when robbing their nests. The most powerful enemy of the Gnatcatcher is the Blue Jay. It is a common sight to see a Jay perch itself on the nest of the Gnatcatcher and after sucking the eggs or eating the young, as the case may be, pull the nest to pieces with their bill. It is a singular fact that the Logger-head Shrike (*Lanius ludovicianus*) though subsisting largely upon young and even old birds of the smaller species, seldom attacks the nest of the Gnatcatcher. It might be that the Logger-head is afraid of the Gnatcatcher as they are very plucky

when aroused, but on this point I have never been able to determine. The Shrike is a particular enemy of the Yellow-throated Warbler. I have often seen them, though not without a battle with the old birds, tear down the tuft of moss in which the nest is always suspended, and devour the contents. In like manner they destroy the nest of the Brown-headed Nuthatch, by pulling down the dead bark which protects the nest. This Nuthatch deserves more than a passing notice, being the smallest of the Nuthatch family and a very interesting little bird in its way. In walking through a wood in the Fall or Winter one would hardly notice the existence of these little birds, they are so small and shy. But pass through the same woods a few months later when the birds are building, and how different; the Pine-land resounds with their noisy chatter, and you may see Mr. and Mrs. Nuthatch flying from tree to tree or creeping in or out of their hole in the decayed portion of a tree, stump or post. Mr. Davie in his excellent work, "The Key to the Nests and Eggs of N. A. Birds," describes the eggs of this species as being next in size to a Humming-bird. Now I must beg leave to differ with him, as I have found that the eggs of the Gnatcatcher in every instance was smaller. The Nuthatch seldom builds a nest, merely laying a few pine masts in the bottom of the excavation; on this the eggs are laid, generally from four to six in number of a white color, profusely sprinkled with reddish-brown, so much so as to nearly obscure the ground color. Have you ever heard of pure white eggs of the Blue Bird, exactly the color of a Woodpecker's? I have found them on two different occasions, in the Spring of 1885.

J. D. F., Charleston, S. C.

Next month we intend to make some very liberal Premium Offers in order to induce you to subscribe for the OOLOGIST for 1889. We would advise our friends not to renew their subscriptions until they receive the Dec. issue.

American Redstart.

This beautiful little bird though not common here, is occasionally found breeding in favored haunts.

It likes woodlands, damp and dry, thickets, wooded banks of streams and occasionally orchards. It seeks its food in the tree tops, plunging after the insects as only a Redstart can, sometimes even turning somersaults. It is admirably suited for its occupation and if it could only be induced to live nearer our dwellings it would do a work which some of the commoner ones, as the Pewee and Flycatcher and Kingbird cannot.

The nest is a handsome cup shaped affair made of vegetable fibers, horse hair, straws and down. It is generally placed in the upright fork of a tree not very far up, though they might build high as it would be very easy to conceal it there. The eggs are from 2 to 6 in number, and average .63 by .48; greenish or grayish white, spotted around the larger end, chiefly with brown or lilac.

E. P. C., Wauwatosa, Wis.

A Tame Hummingbird.

During this last summer a pair of Ruby-throated Hummingbirds have frequented our garden and during one hot day the female bird got into our conservatory and did not know how to get out again. I went in and plucked a handful of flowers and held them up and to my surprise the bird darted down and sipped the honey from the flowers in my hand. I did this several times during the day and at last it got so tame that it lit on my shoulder and then flew on to my hand where it sat and took the honey from the flowers. I caught it and let it out into the yard where it soon joined its mate. Several days afterward I stood in the garden watching them and I plucked some flowers and held them out. The bird came quickly and resumed its former tactics of the conservatory. It has since repeated it several times. They have not departed from our garden yet, although we have had some

very cold weather.

Is not this rather late for hummingbirds to migrate if they are going to at all? Please answer through the OOLOGIST.

C. P. K., Vineland, N. Y.

Two Large sets of Quail Eggs.

In the winter of 1886 having made an aviary and quail run combined, covering in all a piece of ground 7x10 feet square, I caught a pair of California Quail, *Lophortyx Californica*, and put them in it.

On June 2, 1887, the female began to set on eleven eggs, she having laid six others in various parts of the cage. Twenty-four days later she hatched out eleven young only six of which lived to become full grown.

In the spring of 1888 I took out all but two pairs.

On May 1, two eggs were laid and by May 27, thirty-one. By July 2, fifty-five eggs had been laid, when, as the quail had stopped laying and showed no signs of setting I took all the eggs.

On July 7 one of them began to lay again and by July 18, was sitting on eleven eggs.

The eggs of each quail are readily distinguishable from the fact that one lays blotched, and the other finely dotted eggs. One laid 25 eggs and the other 41. Perhaps this is the effect of semi-domestication.

J. V. D., Los Gatos, Cal.

A Pleasant Excursion.

About Sep. 1st 1887. my chum H. P. and I agreed to spend a day among the feathered inhabitants of Peoria Marsh, namely, the ducks. About 3 a. m., much to my annoyance, I felt a tug a my foot. My chum, knowing by experience on other similar occasions that my propensity for sleep in the "wee sma hours" was great, had advised me to attach a string to my ankle and hang the end out of the window. Having thus been aroused, we were soon making our way toward our boat house laden with two breech-loading shotguns, a Winchester,

game bag, and that indispensable article the lunch basket. arriving at the boat house we loaded our truck and were soon pulling across the lake to the feeding ground of the ducks. Having reached the opposite shore we hauled our boat out of the water and proceeded through a thicket of underbrush towards a blind which H. had built the previous day; well ensconced here we awaited developments. A little before sunrise we were rewarded.

Whirr-r-r whir-r-r, and down came a flock of teal about thirty feet from the blind. "Give it to them," whispered H. I emptied my right barrel while H. discharged both barrels, they rose and I gave them my left bringing down one, we counted five of them but did not leave our place of concealment. H. brought his caller into use and soon a drake and two ducks dropped in before us and began to paddle around, but they didn't paddle long for I had my gun to my shoulder in a twinkling, and with the first shot was rewarded by seeing two turn over while H. brought down the third as he was seeking other quarters. I was so much excited I could hardly refrain from leaping into the marsh after them, but was persuaded better by H., who went around the marsh and returned with a "punt" or flat-bottomed boat with which we soon secured them. Didn't they look nice? eight as fine plump ducks as ever gladdened the eyes of a sportsman. Although it was now only ten a. m., we voted for dinner and after partaking of a sumptuous repast, such as only Mother can put up we pulled for home well pleased with our work which was indeed more play than work.

F. P. B., Martinsburgh, N. Y.

Jottings from South Carolina.

April 18th I collected a set of 3 thrush eggs, incubation advanced, nest was situated in a hollow tree about ten feet from the ground; April 21st I took a set of 3 Cardinal Grosbeek eggs, incubation advanced; nest was about a foot from the ground and was

made out of dried grass. April 24th I found two Bluebirds nests with five eggs each in them, incubation advanced; nest in old pine trees. April 25th collected a set of three Cardinal Grosbeak eggs, they were fresh; the nest was about two feet from the ground saw an old nest about a foot over it.

April 27th I got one dove egg fresh; nest in a dogwood tree about twelve feet from the ground. April 28th I collected a set of two Golden-winged Woodpecker eggs—they were fresh; I went up to the same nest on May 7th and got four eggs slightly incubated. May 2d I found a Mockingbird's nest with three eggs in it; I did not take the eggs but knew they were fresh because I had seen the nest about a week before with nothing in it. I found a Tomtit nest with young ones in it. I found a Bluebird nest with five eggs in it, incubation advanced. May 7th found a House Wren nest in a pine tree with young ones. Collected a set of two Cardinal Grosbeak eggs; they were fresh.

C. M. F., Greenville S. C.

Sparrows Outwitting a Rat.

I was watching our neighbor, Mr. C—preparing his grass-plot for the coming summer after spreading a large quantity of oats and covering it lightly with soil, while thus engaged a stray sparrow chanced to alight on the fence, and after watching him for a short time uttered a few sharp notes which hastily called all his fellow sparrows in hearing to him, he joyously told of his observations and they chirped and twittered as if impatient for him to be gone, as soon as he turned his back down they came. my attention was called away for a few minutes but a loud and noisy chattering soon brought me to the window again, there in the midst of the sparrows a large brown rat stood, the sparrows endeavoring to drive him away, but he did not scare worth a cent, by this time many people were looking out of the windows, the chattering of the sparrows being so noisy. The rat remained in full possession of the ground, till one sparrow

more bold than the rest delivered him a hasty peck on the back when he lost no time in making for his hole. Loud and joyful the sparrows chirped, and placing one on guard fell to with a relish to the oats, they were not left in peace long for out came the rat again evidently having made up his mind to obtain his share of the oats, again and again the sparrows assaulted him, he paying no heed till getting angry he seized a sparrow and ran to his hole, while the rest flew to the fence and a great to-do followed, all the sparrows in the neighborhood were called, and as it is very near the Central Park a goodly array was soon collected, now comes the strangest part of all the sparrows held a meeting and looked around them, an old yellow cat lay asleep on the fence in the sun and all their noise did not trouble him in the least, after another meeting they all rose and flew and beat that cat into the yard of Mr. C— they seemed to have lost all fright in their anger, the cat was very much astonished and cowed in a corner, the sparrows flew to the fence again and silence reigned, soon out popped the rat and puss, making one bound, soon had him then the sparrows waited till the cat had slunk away and half pushing half frightening him out of the yard, returning they uttered joyous cries and fell to the oats with a good relish.

L. M., N. Y. City.

[Mr. M. states that not only himself but several others witnessed this interesting occurrence—Ed.]

Large sets of the Yellow-shafted Flicker.

I have read in the OOLOGIST at different times, of large finds of the eggs of this bird, but do not remember any which will beat the two finds which I have made. In the summer of '86, while walking through an apple orchard, I noticed a hole in one of the trees about four feet from the ground, and on pounding on the trunk was rewarded by seeing a Yellow-shafted Flicker fly out.

I stuck my hand in the hole and was surprised to feel a large young bird. On closer examination, I found that the nest contained nine young birds, ranging from about a day old up to well-feathered birds and also five eggs, ranging from fresh to piped.

Another find was made on May 20, last. The nest was situated in a hole in a Buttonwood tree, about thirty feet from the ground and upon examination was found to contain twelve eggs, incubation, well advanced. Who can beat this? Let us hear from you.

C. P. K., Vineland, N. J.

Red Eyed Vireo.

Although the Red-eyed Vireo is a common resident here, (Fairfield Co. Conn.,) I have not seen hardly anything relating to them in the OOLOGIST.

They arrive here about the first of May, and their nests are finished about June 15.

On June 16, '88, I found a nest which contained 2 eggs. On June 19, I visited it again and the nest contained three eggs which I took. The nest was about three and one-half feet from the ground in the top of a small Alder, and as I approached it the bird did not show the least fear, and did not fly off till I was so near I could have touched her. I could see the red in her eyes very distinctly.

The nest was composed of vegetable fibres bleached to a uniform wood color, caterpillar silk, grass, and lined with fine grasses.

The eggs were pure white, sprinkled with fine reddish brown dots on the larger end.

W. L. D.

The Hermit Thrush.

The Hermit Thrush arrives here about the middle of April, and the woods and pastures soon resound with its shrill whree-u. Being a bird of the Canadian Fauna, it is one of the most abundant Thrushes here (in southern Maine) excepting the Robin. It usually inhabits the low, moist woods, and places bordering on swamps. Its song, which is heard only for a short time during the breed-

ing season, is indescribably sweet and pathetic, and is often heard just after sunset. Its nest has been a subject of controversy among Ornithologists, some saying it nests in trees, and others on the ground. According to my experience its nesting is variable, as I have found several nests in low fir and spruce trees from one to three feet from the ground. Its usual nesting place however, is on the ground, sometimes at the foot of a small tree or bush, which serves to partially conceal it. It is a bulky nest, made of dried weeds, grasses and bark, with a lining of finer material, often the leaves of the white pine, sometimes a little hair. It is usually sunk into the ground to its brim, and placed in some secluded spot where it is hard to find except by accident, although I have found it on the side of the road, within a few feet of where teams were frequently passing. Its eggs, usually three or four, rarely five, are of a light bluish green, and measure from .85 to .95 inches in length, by .60 to .65 in breadth. A set of four measure 85x65, 85x67, 85x67, 84x63. They are not distinguishable from the Willson's Thrush with certainty, but are usually a little larger and of a lighter bluish-green. The bird utters a plaintive cry of two syllables when driven from the nest, at other times it has an alarm note or breeding call sounding like whree-u with the accent on the first syllable. The Hermit begins to depart in September, but all are not gone till November.

J. T. P., South Paris, Me.

Western House Wren.

I notice very little has been said through the columns of the OOLOGIST of the Western House Wrens. For three years a pair of these birds built their nest in the cornice work of a house next to ours. So I had abundant opportunity to note its habits.

This lively little fellow is one of our sweetest songsters. As the sun was coming up every morning we could see him perched on the topmost point of the house, pouring forth his sweet song—joyously hailing the

coming day.

For three successive years they reared their young unmolested. On the fourth year a pair of Robins built in a tree close to the house, and when the Wrens came back to their old home they were immediately driven off. Later on a pair of Bluebirds took possession of the Wren's nest and raised their young unmolested by the Robins.

Probably the reason for this is, that the Bluebird is more quiet and "less on the fight" than the sprightly, noisy little Wren, and can get along better with its neighbors.

The House Wren like the English Sparrow, is not very particular about its nesting place. Any hole or nook in a building or fence post, a can placed in a tree, or a bird box will answer his purpose. I once read of one building in the pocket of an old coat hanging away in a barn.

A peculiarity of this small bird is its having such a large bulky nest. It is composed of course sticks, grass, etc., and lined with hair and feathers.

Their eggs are from five to nine, generally six or seven and are nearly covered with a reddish brown dots.

C. T. H., San Jose, Cal.

Another Water Blower.

After reading the article on blowpipes in the March number of the OOLOGIST, I thought I would experiment in the construction of a water blower. I think all who try my method will like it a great deal better than the one described, being simpler and less expensive, as all the materials are very easily procured, make a plug to fit the spout of any pump, cork is the best, insert a small tube or quill in the center of the cork, and plug up all other places in the pump where water might escape, drill a hole in the egg and hold the same as when using the blowpipe, pump slowly letting the water flow into the egg, it will soon be well rinsed, you can make several plugs, having quills to fit different size eggs, using tiny bird quills for the small eggs and so on up to the size of a goose quill, Try it and be convinced of its simplicity.

K. B. M., Clarendon, N. Y.

A Few Words to Observers.

Owing to a busy season I found but little time for oological work during the past Spring and Summer; in fact I took but three sets of eggs. One was a set of 5 Towhee, another of 5 Long-billed Marsh Wren and the third of 5 Red-and-Buff-sh'd Blackbird with which was found an egg similar to a Sparrow's. Was it a Cowbird? I examined several other nests of the Blackbird at the same time, but found no more strange eggs.

The set of the Marsh Wren's were the only eggs in 9 nests which I examined. The eggs were in the first nest I saw. Five of the other nests were completed but unlined and the remaining three were unfinished.

A poultry fancier and also scientific friend of mine has asked me if the Bob-white or American Quail can be domesticated, and also if the introduction of a wild turkey cock among domestic birds would not improve the stock. I should like to hear some one else give their views on the subject. It is very probable that wild blood in domestic turkeys would tend toward hardier more rugged birds and at least in several instances the number of wild birds have been increased by renegade domestic turkeys. The wild turkey is more common in the east than is generally supposed, as the native hunters seldom care to tell of the haunts of this fine game-bird.

It may still be found in considerable flocks within 25 or 30 miles or even less of the national capital.

Will some one please tell about the Fall migration of birds? Within the past month the marshes of the Potomac and Anacostia rivers have become populated with reed-birds, blackbirds and rail.

The market gunners and sportsmen have been hard at work diminishing their numbers, but still they rise in clouds as your skiff is pushed through the rushes and jets of white smoke show that the marshes are still well filled.

Only yesterday as I crossed the river and

passed a group of pot-hunters preparing for their afternoons work, I fell to wondering why they did not destroy the English Sparrows which are there quite numerous; my attention was attracted by a peculiar looking bird among them; another look showed me that it was a partial albino. Its wings and I think the under parts of the bird were pure white, giving it rather a comical aspect. I hope to make myself better acquainted with some of the native birds of my region, and am always interested in the notes and conjectures published in the Oölogist, however trivial they may seem. Long live the Birds!

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

Flying Squirrels Occupying Birds' Nests.

While out collecting one Saturday in May 1886, I noticed a hole in a dead beech tree about twenty feet from the ground, which I took to be a Woodpeckers' nest. I went to the tree, unstrapped my climbers from my back and commenced thumping away at the butt of the tree, when soon a "High-holder" (Flicker) flew out of the hole, this of course convinced me that there was a nest there, so I was not long in strapping on my irons and going up the tree. On reaching the hole I found that I couldn't get my hand into the nest, so I took out my knife and cut my way in, this took me about half an hour, but I got there at last. The nest contained seven fresh eggs, of a pure glossy pink color, but they turned white when blown. I very foolishly left half the eggs for the bird, as I thought, but I found out to the contrary.

About a week later, I and a friend went out in the same direction, so when we came to the tree I told him I had left four eggs in the nest, and he said the bird had left them to be put on the climbers and went up and put his hand into the hole, "but he took it out a great deal quicker than he put it in," for he felt the same kind of fur our friend in the March Oölogist felt, and probably a little more for the nest contained five Flying

squirrels. When he took his hand out three squirrels came floating on the air to the ground, and I caught them very easily and put them in my coat pockets and pinned the jaws down, so they were safe. Then my friend got a twig and poked in the hole and out came another squirrel which caught a branch of another tree and got away from us. He poked again and another sailed to the ground so I caught it. My friend, after hesitating a few moments, felt for the eggs, but they were gone so we supposed the squirrels had eaten them. We each took two squirrels home with us and then a history followed, but I will leave it out as it would not likely be of interest to the ornithologist or oologist.

The Flicker arrived here on April 10th this year, and has been quite plentiful since that date.

A. D., Simcoe, Ont.

American Crow.

Thus far this season I have taken three sets of the Am. Crow. The first was taken April 6 and contained 4 eggs, fresh. The nest which was composed of leaves lined with horse hair, was placed in the top of a small burr oak 20 feet up. On April 14 took a set of 4 eggs. This nest was also in an oak. The eggs are a very light green heavily spotted with brown, dark green and black. On April 16 took a set of 5 eggs. The nest which was in a small oak was composed of grape vines and lined with hair. This is by far the finest set I have seen they look at a distance as though they were a solid dark green color. The crow comes here very early in the spring but stay in flocks and do not pair until the last of March. Around here they are quite common.

E. P. C., Wauwatosa, Wis.

Carolina Parakeet.

The nesting habits of this bird are not very well known as I have never read anything of it in any natural history papers.

The first time I ever met with this bird was in the summer of 1886. After a days collecting I was coming home and I saw a party of boys digging at something in the broken siding of an old ice house. I asked them what they were digging after when one put his hand in and brought out a bird, it looked something like a screech owl without the ear tufts. Its plumage was red. The boys called them "chin pipers," and I did not at first know them but afterwards I identified them as the Parakeet. The next year I determined to secure some of their eggs. I went to the ice house and saw that there were several holes in the side that looked as if they had been gnawed by a rat or squirrel. Thinking these to be the nests I procured a ladder and at once climbed up. I was met at the hole by Mrs. Parakeet who immediately flew off. I secured 2 sets of two eggs and 1 set of three eggs I found the eggs to be of a greenish white color and about 1.38x1.06 in size. They are rough and chalky in texture and are laid far back in the hole, sometimes 5 and 6 feet. They breed in companies and where you find one nest you are likely to find several. The birds are about the size of a screech owl and on the backs and wings are a rusty red color underneath they are dusky white. Hoping to hear from oologists on the habits of this bird, I remain.

T. S., Clarinda, Iowa.


Black-capped Chickadee.

My pleasantest oological find for the season of 1887 was the finding of my first nest of the Black-capped Chickadee, on May 4. About a week before while passing down a wood road through a large piece of woods, on a botanical excursion, I frightened a Black-cap from a small stump. On examination I found a hole 6 or 7 inches deep had been excavated by a pair of the little birds, and a few days after found the hole nicely lined and one egg laid. In all seven eggs were laid but I placed them in my box without blowing them and although well wrapped in cotton I found on reaching home that some of them were broken. This is the first nest which I have heard of being found in my vicinity, although the birds are common.

B. L., Mason, Mich.

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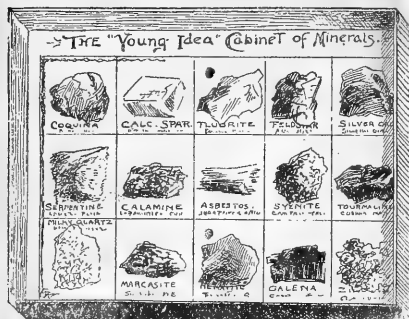
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If you want a copy of March BULLETIN, send two cents.

- 114 2 Large Conch, 2 Valves E. I. Clam, 1 Pyrrula (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. \$1.30
- 115 95 Second-class Resurrection Plants, 2 1/2 lb. 1.50
- 116 29 Second-class Abalone or Haliotis Shells 8 1/2 lb. 1.50

NEW LOTS.

—INDIAN RELICS—

- 125 Contains 11 Spear and Arrow Heads, ... \$1.00
- 126 6 Small Knives, assorted sizes, 1.00
- 127 12 Ass'd Arrow Heads,60
- 128 6 Knives, well assorted, 1.50
- 129 2 War Club Heads,75
- 130 6 Good Scrapers (3 barbed),80
- 131 31 assorted Arrow Heads, 1.50
- 132 6 Scrapers (3 notched),80
- 133 31 assorted Arrow Heads, 1.50
- 134 3 large Spear Heads, (slightly imp.) and 1 broken one,90
- 135 6 Spear Heads (1 rotary), half imp. 1.15
- 133 2 Arrow Heads, mostly small war points, 1.60
- 127 2 small Club Heads and 5 pcs. used either as Knives or Scrapers, 1.00
- 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, 1.75
- 139 10 finely assorted Knives, 2.00
- 140 3 extra fine Knives, 1.35
- 141 6 small Knives,75
- 142 12 small Bird and War Points,75
- 143 4 good Knives, 1.50
- 144 20 pieces, doubtless, used as Knives or Scrapers, 1.50
- 145 20 Spear Heads, part of them slightly imperfect, 2.25
- 146 80 Arrow Heads, 3.25
- 147 116 Arrow Heads, 4.00
- 148 2 Knives and 2 or 3 Drills, and 2 Knives, broken,50
- 149 30 large Arrow or small Spear Heads, ... 3.00
- 150 15 small Knives, 1.50
- 151 11 medium Knives, 2.00
- 152 11 notched Scrapers, 2.00
- 153 15 Scrapers, 2.00
- 154 125 broken pieces of Arrow Heads. Spear Heads, Knives etc., of Flint, Jasper etc. (various forms of barbs or notches well illustrated), 2.25

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OÖLOGIST.

Monthly.

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Vol. V,

ALBION, N. Y., DEC., 1888.

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.

TO EXCHANGE—One pair of 3 lb Indian clubs for best offer of first-class eggs, single or in sets. **FRANK DARROW**, Corning, Iowa.

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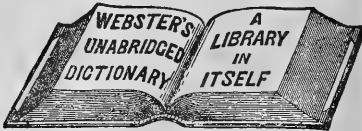
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4	1 1/2 p'ts small white bivalve shells, 13 oz.	.40
5	8 King Crabs, Sea Spider. Egg Case of Periwinkle, 2 Skate Eggs, 3 or 4 shells, &c. poor.	5 oz. .30
9	16 imperfect Brass Blowpipes, 5 oz.	.40
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15	45 Faciolaria distans, 1 1/4 lb.	.90
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17	65 Small Strombus, Fla., 16 E. I. Olive Shells, 2 3/4 lb.	.40
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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
33	27 Channel Bass, 24 Tarpum, 50 Pearlfish and 1 Sturgeon Scale, Mussels and Ear Shell, Tooth of Sperm Whale, 4 Eye Stones, 5 oz.	.75
35	2 Doz. Cards Marine Algaea. Mtd., 4oz.	.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 1/2 lb.	1.00
48	Satin Spar, Gypsum, Talc, Green Qtz., Graphite, Mica Slate, Hornstone, Ochre, 3 Micras, Agate, Marl, Tourmaline Black Mica. &c. 3 3/4 lb.	.50
54	20 leaves from Chinese book. 10 sheets of Chinese accts., 2 cards "Big tree" Moss, 5 cards Pacific and 10 Atlantic Algaea, 3 oz.	.60
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
59	45 2d class Skate Eggs, 150 Blue-backed Money Cowries, 5 Olive, 5 Sun, Valute, Cone, and Turritella Shells, Shell pocket-book, 3 3/4 lb.	.80
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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 Ferns, 4 Mica, Hematite, 3 Drusy Qtz., 1 each of Caingorum, Qtz. Xtals, Tufa, Lithomarge, Corundum, Green Feldspar, Andalusite, Enstatite, Blk. Mica, Asbestos, and Chalcedony, 3½ 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, 2¼ lb.1.00

89 2000 Small Flat E. I. Snail Shells, quite pretty, 1 lb.50

93 1 quart well mixed E. I. Cowry Shells, several species, 1½ lb.50

102 10 Nam. Minerals, 6 Clusters of Gypsum Xtals, 24 Halite from Syracuse, N. Y., 3 Psilomelane? 3½ lb.40

106 12 Arrowhead chips of Jasper, Chalcedony. &c.; 20 Named Minerals; Pebbles from Ala., Ga., Eng., Montana; and 11 from Lake Ontario; 6 oz. of Quartz and 9 oz. Qtz. Garnet, and Tourmaline Sand; 19 Small Lake Sup. Agates, 300 Rice Shells, Hornstone, Cluster of Qtz. Xtals, 4¾ lb.75

107 38 Cape May "Diamonds" 100 Broken Fossil Shark teeth, a few good ones. 1½ lb.50

108 1 Spec. Calcite coated with Stilbite, 1½ lb.30

109 3 Japanese Hair Ornaments, odd and curious, 5 Jap. Book Marks of Natural Wood, 4 oz.40

110 8 Fancy 4 in. glass vials of Tubes filled with Shells, Corals, &c., at the time of blowing, and cannot be taken out without breaking the vial, 1 lb.40

112 15 very fine Hot Spring's Quartz Crystals and 16 smaller ones, 4¾ lb.1.50

114 2 Large Conch, 2 Valves E. L. Clam, 1 Pyruia (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, 2½ lb.95

116 29 Second-class Abalone or Haliotis Shells 8½ lb.1.00

—INDIAN RELICS—

125 Contains 11 Spear and Arrow Heads, 9 oz. \$0.50

126 6 Small Knives, assorted sizes, 4 oz.50

127 12 Ass'd Arrow Heads, 5 oz.30

128 6 Knives, well assorted, 8 oz.75

129 2 War Club Heads, 6 oz.40

130 6 Good Scrapers (3 barbed), 4 oz.40

131 31 Assorted Arrow Heads, 1 lb.75

132 6 Scrapers (3 notched) 4 oz.40

133 31 assorted Arrow Heads, 12 oz.75

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 ¾ 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 Bird and War Points 3 oz.40

143 4 good Knives 9 oz.75

144 20 pieces, doubtless, used as Knives or Scrapers 1½ lbs.75

145 20 Spear Heads, part of them slightly imperted 1¾ lbs.1.10

146 80 Arrow Heads 2 lbs.2.60

147 116 Arrow Heads 2½2.50

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, 11½ lbs.50

156 1 small Axe, 1 short Pestle, 1 Hammerstone, 4lb.60

157 1 Hammerstone, 1 Pestle, 2 small Axes, 3½ lbs.75

158 1 fine Axe, broken and mended, 1 small Axe, 1 unnamed pc, 3 lbs.75

159 3 Axes, 2¾ 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 *Venus mercenaria* from Ind. Shell Heap Casco Bay, Maine, 5 oz.30

161 3 fine shells *Buccinum*, same as Lot 160, 4 oz.30

162 6 *Natica*, 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

165 1 pc. Aztec Skull 2½ x 2½ in., 1 Aztec Vertebrae, 1 spec. Slag from Aztec Furnace, all from Rio Mancos, Colo.; also 3 pcs. of Pottery, N. Y. 4 oz.40

167 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

168 6 Gambling Stones, Va.; 2 Net Sinkers used by the Tuscaroras, modern. 7 oz.50

169 30 Arrowhead Chips, Mich. 16 pcs. marked pottery, So. Car. 40 Arrowheads, Spears, &c., of Quartz, Jasper, &c., Ga. 2¼ lb.1.00

170 3 Arrowheads, Pa., 80 Arrowheads, Spears, &c., Ga., 3 Minerals, 2¾ lb.1.50

171 1 War Club head, Ind., 3 Knives, Ga. 33 Arrowheads, &c., Ga., 2¼ 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, 2¾ lb.90

THE OOLOGIST.

Vol. V,

ALBION, N. Y., DEC., 1888.

No. 12

Ostrich Farming.

On this sunny border of land we are used to seeing almost everything growing in the tropical gardens—even to ostrich feathers, which are a crop that is highly interesting. We crossed the bay by ferry from San Diego to Cororodo on a dazzling morning; were whirled up an avenue between rows of orange trees, peppers and palms, and lingered in the plaza gay in the sunlight with a wealth of odorous blossoms and whispering acacias; paused before the closed redwood gate of the ostrich camp. A man with a long forked pole and with a dog at his heels, answered our summons, opened the closed gates and ushered us in.

"Hey, Pet! hey, Pet! here, Pet! hey, hey, hey!" he called, and down the field from the upper end of the inclosure came "Pet," and all the others "pets" in the most graceful, comical, undulating, waltz-like trot imaginable, poking their long flat bills over the redwood bars at us as though they had paid their "two bits" to see us.

"Oh! they know their names!" we cried in a little gush of admiration. "Which is Pet? Do tell us!"

The man with the forked pole chuckled and reaching through the bars with the stick, picked up a moulted feather that fluttered along on the ground just ahead of him and handed it to us. "They don't know a thing," he said, contradictorily. "They don't know a name, and they can't learn one; but I have to call them something. They don't even know me, and I have taken care of them ever since the chicks were hatched."

Then he proceeded to give us the history of the camp.

The old birds are 31 years of age, and were brought from Cape Colony at a cost of \$500 a piece to import them. The remainder of the herd are young birds, from 2 to 2½ years old, raised at Falbrook, about fifty miles north of San Diego, where a Boston firm has for a number of years conducted an ostrich ranch on a large scale. They have experimented long enough to thoroughly demonstrate that no climate in the world can breed better ostriches than this very spot—and they have not only proven their undertaking a success—they are finding it lucrative in a surprising degree.

Now an ostrich chick is not very "cute," with its big pink eyes, a terribly swelled

neck, and the webbiest kind of feet that separate only gradually into something like toes and will not allow the fowl to get on its legs until it is several days old. But when it begins to develop it becomes more interesting, and after the first week you can fairly see it grow. Soon the soft gray fuzz with which it is covered begins to lengthen out into little downy sprouting mustaches of feathers, and it really looks cunning. Day by day it grows fluffier, its wings take shape and short bristling quills, like a hedgehog's quills, push into sight along its wing-edges. These are its future plume-spines. By degrees, as the biped's legs and neck lengthen, its gray plumage deepens in shade if a male, lightens if a female. In the course of time the male bird's coat turns to a jetty black, relieved only underneath the wings and along their edges by pure white plumes; and his legs and bill are a vivid scarlet. He is a great beauty now, and when he lifts his wings broadly and comes waltzing down his park over the white sand in the dazzling sun, we forgive him for all his lack of brains and almost envy him his plumes.

But alas, poor fellow! he loses his beauty soon enough. When he arrives at the mature age of 1 year his lovely plumage must be plucked and marketed. Formerly, in his wild state, the only method known for this process was to "wind him down" and strip him of his plumes after his hard death. Now he is plucked with comparative ease while very much alive, and then set free to grow another crop, which he usually brings to perfection about every nine months. Only his tail and wings, however, are despoiled; his body-feathers are not disturbed.

The feat of plucking the bird requires only a little strategy to accomplish it easily. Two men enter the camp together. In one corner a high stall, 3½ feet wide, is constructed. Into this stall one throws a handful of grain; the bird thrusts his head in to pick it from the ground; the second attendant gives him a swift, but gentle shove, which sends him further into the stall, when No. 1 thrusts a hand well along his neck and crowds his head along into a stout stocking-like bag made fast to the stall at the further end. The bird is caged, and the plucking or clipping process can begin at once, the picking being done from behind—as it is only in front that he kicks.

It is essential that the wing plumes be cut or pulled with great care, as in them

lies the high value of the feather crop. Each wing, in good condition, yields an average of twenty-five long plumes, usually pure white; the tail yields several; and, in addition, the wing also furnishes the "tips" which make the milliner's pretty and stylish trimmings. At from 3½ to 4 years of age the ostriches get their growth and are completely feathered; but their wings are always frail. They are for ornament rather than for use, and no ostrich is ever able by its wing power to fly or even lift itself off the ground.

An ostrich is not a bird that one cares to make much of a pet of; and it has the advantage of being a fowl of value, that even the most covetously-disposed will manifest no disposition to steal. One kick from that dangerous claw which, when the bird runs on grass, carries a toe as sharp as any needle, is usually sufficient to cause its memory to linger in any would-be thief's mind for a lifetime. Especially when the hen is laying will the male develop viciousness in an extraordinary degree, and it is dangerous for even the herder to attempt to cross their inclosure in near proximity to the breeding couple's nest.

A pair of the Coronado birds commenced excavating a nest in the rear of a clump of mahogany bushes very near the entrance gate; but, finding this place too public, they removed operations to the upper end of the inclosure, where they are now at work and more screened from observation. They are not so sheltered, however, that we could not get sight of their basement-nest; and a queer structure it must be when completed. They dig it from the hardest sand, the male using his claw until enough loose earth is thrown up to be removed by their flat bills, when they both fall to work industriously. When perfected, the nest is about eight feet across and three in depth, and here the hen deposits an egg on each alternate day, until a litter of some twenty is laid. I inspected yesterday's egg, lifted it, measured it, weighed it—but did not bring it away; it was too valuable for that. I found it six inches long, about fourteen inches at its smaller circumference, and weighing three pounds and nine ounces. What an omelet a fresh laid one would make for a breakfast!

The herder had a basket of eggs freshly gathered, which he is storing to send to Fallbrook, where they are hatched by incubator. If the hen is allowed to incubate her own eggs her setting season is six weeks; and the male comes in for his share of duty by setting at night. But it is not profitable to put hens to hatching when the incubator can perform this work even better than the mother.

About the middle of December is the bird's real moulting season, but a few feathers are all the time being shed. There is a mite that gives ostrich-breeders much trouble, and from which it is impossible to keep entirely free. Whenever feathers are plucked it is necessary, on account of this insect, to let them lie exposed for two or three days, when the mites die and can easily be shaken away.

If an ostrich becomes sick, which is but seldom after their growth, there is little that can be done, unless it is to give them "salts;" but in case of accident—and they are constantly receiving broken legs on their own battle-field—a hospital is necessary, and is provided in every camp. We saw one poor fellow nursing his unfortunate limb while we were there, but he looked full of fight in spite of his probable pain, and he roared like a young lion.

Ostrich diet consists entirely of green stuff and a little grain. Alfalfa, vegetables of all descriptions, and corn are the staples. The Coronado Beach Company supply one hundred pounds a day of vegetable trimmings and waste truck from the big hotel and the company's gardens. There are always cracked and withered and left-over green things that are useless for the tables; and these are served up as regular rations at the camp; but anything decayed the flat-billed feeders despise. They also require chopped bones and pounded sea shells, as chickens require gravel. It is found that regularity in feeding, and a wholesome supply of nutritious vegetable matter, will greatly increase the feather product over that of birds left to graze at will, as in their own country.

The care of herding is not great; their wants are few. An inclosed park of sand, where the sun strikes full for long hours of the day, regularity of food, and occasional water are about all that are necessary. At night they sit on the sand wherever they happen to be when the sun goes down, disdaining any kind of roost or shelter. Nor will anything induce them to seek shelter when it rains. They seem hardy, and, when full grown, are not sensitive to ordinary cold; although the air inland, where it is uniformly dry, is preferable to the damp air of the immediate coast, particularly in rearing young. For this reason incubation at Fallbrook has proved surprisingly successful, owing largely, no doubt to the long duration of the sunny hours each day, there being nothing to shut off the full power of the sun's rays.

No ostrich ever seems to get domesticated. They are always timid, always frightened at the least stir or sound, and ready to lift their wings and scurry away

with that peculiar swift, swimming movement of theirs. So fleet are they of foot that it is claimed that no horse can outrun them; and so untamable are they that even the dog raised with them and hanging about their camp every hour of the day stirs a panic whenever he dashes into their midst between their redwood bars.

"You ought to have seen my attempts to introduce a young Plymouth Rock cock into their camp," the herder says, prodding into the inclosure with the forked stick, and bringing out more feathers. "I thought it would be a fine thing to get them wonted to each other, and I gave them a splendid young fellow for company. But he drove every ostrich so the wall. No sooner did they venture down to get a morsel of food than he went at them spur and bill, and they had to beat a retreat. Their big eyes tempted him, particularly; and he pecked at them until I was obliged to take him away by sheer force and shut him up elsewhere."

"You want to know what this forked stick is for? Well, see here." He gave it a sudden twist, and lo! it laid hold of the long, featherless neck of an ostrich and grasped it as if in a vice. "I never go among them without that; it is not safe to go into an enemy's camp unarmed."

No one eats ostrich flesh nowadays. It is tough, strong and unpalatable; although some Indian tribes have been known to be fond of it. But we all delight to wear their feathers. And when the milliners' bills come in this fall we shall understand why those lovely thirty-inch, pure white natural plumes are so much higher priced than the cluster of nodding bright-hued tips that have been dipped in dyes. Only of the pure whites can we be sure that they are perfectly *au naturel*—even the blacks must be steeped in color sometimes to brighten up their jetty appearance. Yet the pretty pale grays, and the popular seal browns are almost always sold in the shades that they are grown.

As we came home by brisk motor between the orange rows, a gay party of eastern tourist were on board waving some long fan-palms about, which an accomodating gardener had cut for them in the plaza. We looked at them and thought how neat those palms would be on our white wall. Then we waved our feathers. They looked at us, and no doubt they thought how neat those feathers would be on their traveling hats. And so, waving our plams and feathers, we all came home highly pleased with this land of tropical birds and trees.

—E.C.

ESTELLE THOMPSON.

An Afternoon's Collecting Trip.

I Think no collecting affords more real, solid enjoyment than searching among the reeds and rushes for the nests of water birds. My outfit consists of a large satchel, to pack the eggs in, and a fish basket divided off into two departments, one for large and the other for small eggs. This I use when obliged to leave the boat. I used to wear high rubber boots, but the collector cannot imagine, unless he has had some experience, how very uncomfortable it is to step upon a nice looking piece of grass, which proves to be a bog-mire, precipitating you, waist deep, into slimy water, out of which you crawl, leaving your boots behind you; or suddenly sitting down, to find upon rising that your boots are full of water a portion of which you carry about during the day. So I have laid them aside for fall shooting when the water is low and the inland marshes nearly dry.

On the afternoon of the 26 day of May, 1887 two friends and myself started for a marsh a quarter of a mile inland, into which I had been led the fall before, while stalking blue jays. A four mile walk up a railroad brought us to it. It is a quarter of a mile long, 30ft. wide and appears to have been, at some remote period, a river bed, but is now covered with reeds and rushes. Surrounding it is a dense woods of tamarack, beech and other trees, is infested by millions of mosquitoes, and inhabited by, but few birds except the blue jay and owl. We had not proceeded far when we struck a colony of red-winged blackbirds. The males arose, met us half way and hovering over our heads, uttered plaintive cries. Soon the females began to leave their nests, perch upon the bushes and join voice with the mates. The majority of the nests were placed in the usual manner among the dried reeds, but many were in the young willows and bushes. As the blackbird is a very common breeder here we did not disturb their nests. "M" found the next nest by flushing the bird (A king rail) from it. It was placed in a wild rose bush and contained 9 eggs. This fin

filled us with hope and we hurried on. A large bird flushed near me and it required but a single glance, at its peculiar flight, to identify it as the king rail. Hastening to the bunch of marsh hay, from which it had risen, I saw the nest. It was partly submerged in water and composed of grass and weeds upon which were deposited the 12 eggs. We soon reached the end of this marsh and struck off through the woods towards home. After a walk of several rods we came to a clearing covered with marsh hay here many marsh wrens had made their homes, but, although we searched all we could find, we found no eggs. It was just after leaving this place that "R" found his first nest. We were going up a steep ridge, when glancing upwards he beheld a red-shouldered hawk's nest. It was situated in the fork of a tall oak tree and could not be climbed even with climbers, but, finally by the aid of a sapling and much boosting, "R" reached the first limb of a large tree near it. I handed him a fence rail which he extended across, making a sort of bridge over which he scrambled and was soon looking into the nest. He said that it contained one young hawk and one rotten egg. The egg was immediately thrown down, but the hawk, young as he was, threw himself on his back with a cry of defiance. Finally, after several unsuccessful attempts, "R" got him by the nape of the neck brought him struggling, down to the first limb and tossed him to us, where he fell into the coat stretched out to receive him. On our way home we found one more nest, this a song sparrow's, was placed on the side of a ditch and contained four incubated eggs.

J. C. W., Detroit, Mich.

Notes from California.

March 24. My first find for '88 was a fine set of W. Red-tail Hawk. The nest was in the top of a large oak tree; and was about two feet in diameter outside, and ten inches inside. From the ground I could see the skeleton and skin of a Cotton-tail

hanging over the side of the nest, and climbing up, was agreeably surprised to see two fine eggs. These were of a dull dirty-white with reddish blotches. This nest was about five miles from Oakland.

March 30. Found to-day another W. Red-tail Hawk's nest, but as it was in the top of a hundred-foot redwood tree with no branches for the first thirty feet, I concluded that I did not want that nest.

April 15. Collected to-day two sets of Anna's Hummingbird and a set of two Barn Owl. The hummers' nests were both on branches of the cypress and each contained two eggs. The Barn Owl's nest was in a deserted barn. The eggs were pure white and spherical.

April 21. Rufus' Hummingbird; collected to-day a set of this beautiful species. The nest was built on a branch of a cypress and contained two fresh eggs. Both nest and eggs of this species are so much like the Anna's that without seeing the bird it is impossible to identify them. To-day, also, a set of four Californian Brown Towhee.

April 25. Gambel's White-crowned Sparrow; a set of three fresh eggs of this species were taken to-day. The nest was composed of weeds and grasses, placed in a low bush growing in a creek bed. The eggs are very handsome, being of a light color thickly marked with large blotches of chocolate.

May 1. Lutescent Warbler; took a beautiful set of five eggs of this species. I was walking through some dense woods, when a bird suddenly flew up from my feet. Of course I knew what that meant, and immediately got down on my knees and began to hunt for the nest. After quite a little search I found it, snugly hidden in a clump of ferns. It was composed of grasses, leaves and strips of redwood bark. The eggs were five fresh and in shape and color exactly like a set of Blue Yellow-back Warbler which I have in my collection; white with numerous reddish spots and blotches. The bird kept hopping about in the trees near us, sometimes coming quite close and chirping continually.

May 1. First set of Black-headed Grosbeak was taken to-day: four fresh eggs. Also a set of Green-back Goldfinch; four eggs.

May 5. A friend brought me two sets of Mudhen (Am. Coot) of eleven eggs each and one set of Mallard Duck; seven eggs collected in some marsh land near Niles, Cal.

May 6. Went out in the hills and collected among others, three sets Bullock's Oriole of five four and four eggs respectively; three sets of Green-back Goldfinch of three four and five eggs, and one set of Black-headed Grosbeak; three eggs. The nests of the Orioles were built in the very tops of some willow trees growing over a creek. They were pensile, about nine inches long and very beautiful, being made of strong grasses and horsehair interwoven, lined with down from the willows. The eggs are about as large as those of the Baltimore Oriole and of the same color.

May 13. Took a set of W. House Wren; seven fresh eggs; and also a set of Lazuli Bunting; four eggs, incubation commenced. The nest of the last named bird was made entirely of grasses and placed in a small bush. The eggs of this species are of a pale blue color.

May 16. A friend of mine collected for me to-day, a set of ten Cinnamon Teal eggs; taken near Niles, Cal.

May 24. Collected to-day, a handsome set of five W. Meadow Lark. These birds are quite common here, but their nests are very hard to find, being built right on the ground in the pastures and grain fields. The eggs are like the Eastern Meadow Lark. Found also to-day, a set of Russet-backed Thrush. This nest was built in some blackberry vines that hung over the side of a bank, and was composed of dead leaves, mud and moss. Eggs four, incubation advanced. They are green, about the size of a Wood Thrush's egg and thickly covered with brown spots.

May 26. Took first set of W. Lark Finch for this year. These birds are common in some localities and very scarce in others. They build on the ground and in low bushes

or trees, never building higher than seven feet. Their eggs are white, with brown markings and lines, sometimes forming a circle around the larger end, sometimes distributed liberally all over the egg. They usually lay four eggs.

June 6. I took, in Santa Cruz Co., a set of four Spurred Towhee, incubation well advanced. These birds build their nests on the ground in deep woods, and are therefore rather difficult to find. The eggs are so thickly covered with small reddish-brown spots that is hard to detect the ground color.

June 17. While out trout fishing in Santa Cruz County I found a nest of the Blue-fronted Jay. The nest was about fifteen feet from the ground in a sycamore tree, and was very bulky and heavy, being built of mud, dead leaves and twigs, with a deep cavity for the eggs. These were four in number, larger than the common Jay's and of a light green color, covered with dark spots.

These are not all of the species that I have taken but space forbids and I must close.

T. L., Oakland, Cal.

Items of Interest.

EDITOR OOLOGIST:

I noticed in your last issue an article on pure white eggs of certain species, *i. e.*, English Sparrow and White-rumped Shrike. I can add a little by saying that I have in my collection, a set of four pure white eggs of the Cliff Swallow, taken here.

I would like to announce that during the past season, I have been preparing a list of the birds of Orleans county. The list, now complete, shows 170 species of which 83 are summer residents, 13 residents, 47 migrants, 9 winter visitants, 3 stragglers, and 15 cannot be assigned with certainty to any one particular list. 86 species are known to breed in the county.

N. F. P., Medina, N. Y.

Notes from St. Lawrence Co., N. Y.

The Yellow-billed Cuckoo.—This bird is a summer resident here, but its nest is not found nearly as frequently as the Black-billed species. The nest is placed in a bush about six feet from the ground and contains four or five bluish green eggs of a light shade. These eggs fade upon exposure to the light.

Short Eared Owl—Resident. It nests in thick bushy forests building a nest greatly resembling that of the Common Crow. The eggs are from three to five in number, pure white, measuring 1.54 by 1.22 inches. This owl is sometimes called the Marsh owl, on account of its frequenting marshes and low meadows in quest of frogs and mice.

Whip-poor-will—This bird is common here in summer, but as yet, I have been unable to secure any eggs. Like the eggs of nearly all the goat-suckers, they are elliptical and colored almost exactly like the bird.

Bartrams Sandpiper—Common summer residents, breeds extensively. The nest is a slight depression in the ground lined with a few grasses. This bird lays four buff eggs, spotted with brown, measuring 1.70 by 1.30 inches.

The flesh of this bird is highly esteemed for food, and they afford great sport in their season.

The following are some of my finds for 1888: Great Horned Owl, three eggs; Little Screech Owl, six eggs; Red-tailed Hawk, three eggs; Red-shouldered Hawk, two, three and five eggs; Sparrow Hawk, five eggs, American Woodcock, four and five eggs, Bartrams Sandpiper, three sets of four, Maryland Yellow-throat, four eggs, Traill's Flycatcher, three eggs, Belted Kingfisher, two sets of seven and one of six eggs, Night hawk, two eggs, Cedar Waxwing, five eggs.

Yesterday, Aug. 6, while returning from a tramp through the woods, my dog Vixen scared up a grass finch and began smelling around the place where she flew from. Thinking perhaps there might be young birds in the nest, of which Vic is very fond, I heaved a rock at him and drove him off. Upon examining the nest, to my surprise I

found it to contain three eggs, which proved to be perfectly fresh. Is this not rather late for fresh eggs of the Grass Finch?

Last spring, I found over thirty crows nests. One of them contained five fine eggs and a "cull." The latter had a faded gray appearance, as if it had been left in the sun and rain for several years. It was very light and upon breaking it on my gun barrels, I found it to contain a lump of half liquid matter the size of a pea. I am not aware of the fact that crows occupy the same nest twice, yet this seems the only solution, unless the bird that laid it was "no good." Will some one enlighten me.

In June I came upon a set of eight Bluebirds eggs in an old Woodpeckers hole. They were highly incubated, so I left them. It is the largest set of Bluebirds I ever found and it may be possible that two females occupied the same nest.

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

 Arrival of Birds in DeKalb Co., N. E. Indiana.

"And above, in the light of the star-lit night Swift Birds of Passage wing their flight.

Through the dewy atmosphere."—*Longfellow.*

The first date is when the bird was first seen; the second date, when next observed. Canada Goose, March 21., (only flock seen.)

Great Blue Heron, Mar. 29, Apr. 11.

Green Heron, May 2.

American Woodcock, Apr. 7, 14.

Spotted Sandpiper, Apr. 28, 29.

Killdeer, Mar. 15, 16.

Mourning Dove, Mar. 31, Apr. 1.

Red-shouldered Hawk, Mar. 17.

Sparrow Hawk, Mar. 29, Apr. 3.

Yellow-billed Cuckoo, May 23, 24.

Belted Kingfisher, Mar. 31, (probably arrived earlier.)

Yellow-bellied Sapsucker, Apr. 14.

Night Hawk, May 8, 9.

Chimney Swift, Apr 30, May 2.

Ruby-throated Hummingbird, May 9, 12.
 Kingbird, Apr. 27, May 3.
 Crested Flycatcher, May 9, 12.
 Phoebe, Mar. 19, Apr. 7.
 Wood Pewee, Apr. 14.
 Prairie Horned Lark, Feb. 7, 8, Mar. 13,
 May 7, 8, 16, 19, 22, 23.
 American Crow, Feb. 18, 19.
 Bobolink, Apr. 30; May 3., (all males).
 Cow Birds, Apr. 6, 14.
 Red-winged Blackbird, Feb. 22, 23.
 Meadow Lark, Feb. 21, 23.
 Orchard Oriole, May 20.
 Baltimore Oriole, Apr. 26, 27.
 Bronzed Grackle, Feb. 29, Mar. 2.
 Purple Finch, Apr. 14, 21.
 American Crossbill, Mar. 13, 17. (flocks,
 male and female).
 Chipping Sparrow, Mar. 17, 19.
 Song Sparrow, Mar. 9, 14.
 Fox Sparrow, Mar. 31.
 Towhee, Mar. 17, 19.
 Cardinal, Apr. 24, 28.
 Rose-breasted Grosbeak, May 2.
 Indigo Bunting, May 14, 15
 Scarlet Tanager, Apr. 28, 30.
 Purple Martin, Apr. 13.
 Cliff Swallow, Apr. 28.
 Barn Swallow, Apr. 14, 28.
 Tree Swallow, Apr. 28
 Bank Swallow, (Nesting May 6.)
 White-rumped Shrike, Mar. 27.
 Yellow Warbler, Apr. 28, 30.
 Myrtle Warbler, May 19.
 Chestnut-sided Warbler, May 19.
 Bay-breasted Warbler, May 12.
 Black-poll Warbler, May 12.
 Black-burnian Warbler, May 19.
 Maryland Yellow-throat, May 6, 7.
 American Redstart, May 6, 7.
 American Pipit, Apr. 21.
 Catbird, Apr. 28, 29.
 Brown Thrasher, Apr. 11, 14.
 House Wren, May 4, 5.
 Brown Creeper, Mar. 31, Apr. 11.
 Golden-crowned Kinglet, Apr. 7, 8.
 American Robin, Mar. 7, 8.
 Bluebird, Feb. 18, 21.

The birds were somewhat later than usual this spring. Last spring the Robins arrived, Feb. 14, Bluebirds, Feb. 16, Geese,

Mar. 7, Crows, Feb. 5, House Wren, Apr. 30; and other birds about as much earlier than this year.

J. O. S.,

Waterloo, Ind.

The Bank Swallow.

These graceful little creatures breed extensively in this locality. On a beautiful June morning I started in company with that indispensable article, the lunch basket, for a number of large banks where I had been informed that the "Sand Martin" bred extensively.

On reaching these banks I was not disappointed. As I approached nearer to them, I could see in some places in the banks such large numbers of holes and birds, that it resembled very much a huge honeycomb alive with bees.

I immediately went at work collecting what sets I wanted, which was but 5 sets. Although I could have collected a hundred sets. The hole in which this bird nests is excavated by the bird in the perpendicular face of a bank. Their burrows are somewhat similar in construction to those of the Belted Kingfisher, only smaller and more curved; being about four inches in diameter and ranging from one and one-half to four feet deep. The termination is somewhat enlarged, and at the bottom is placed the nest of a few twigs, grasses and feathers. In some cases there is no nest at all, and the eggs are placed at the extremity of the burrow on the sand. The eggs are of a delicate pink hue; three to six; oval; size about .74 x .78.

These energetic little Swallows took possession of these banks above referred to, a few years after they were dug, which was about ten years ago, and have made them their summer residences ever since; and neither do they seem at all disposed to evacuate their homes, although hundreds of their eggs are destroyed annually by the rail road employees who constantly work among them digging away their homes.

H. E. B., Damariscotta, Me.

THE OOLOGIST

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—BY—

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

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Jottings.

In order to be able to mail the Premium List Supplement with this issue, the OOLOGIST has been, necessarily delayed. The compiling this same premium list has taken, with other pressing matters, so much of our time that the Prize Article Contest, as yet, remains undecided. The contest will be decided in time, so that the names of the lucky writers can be announced in next OOLOGIST. The winners will really gain on account of the delay, as we are steadily adding to our list of "Job Lots," and shall have a full page of new ones to select from in the next issue.

Remember that any Premium No. mentioned in the PREMIUM LIST will be sent you with the OOLOGIST for '89 for only 50cts., or if you have already subscribed 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 and packing must be sent additional.

We have endeavored to make our Premium List so attractive that our friends will value their copy very highly, we trust that they will have every one of their friends, interested in curiosity collecting, or in Natural History of any of its various branches. Send for a copy.

SPECIAL NOTICE:—We want, at once, fifty copies of the June OOLOGIST. For every copy you will send us, we will send you *five* copies of the YOUNG OOLOGIST, '84 and '85, or 10 checking lists, or a copy of either the OOLOGIST HAND-BOOK, or DIRECTORY, or 50 assorted Data Blanks, or 100 Bird Skin Tags. Send on your June OOLOGISTS at once. This offer holds good until Jan. 15th, 1889.

A Mammoth set (?) of Robin Eggs.

In May, 1885, I found a nest of the American Robin, containing 11 fresh eggs. There is no similarity in shape and very little in color; some being nearly white and others nearly as dark as a Catbird's. Has anybody else met with a like occurrence?

W. C. M. Albany, N. Y.

Wisconsin Field Notes.

May 15. Took a set of twelve eggs of the Red-headed Woodpecker. They varied a little in size. Has any collector ever taken as large a set as this of the same species? If so please answer.

May 17. Took a set of four eggs of the Cliff Swallow.

May 26. Took a set of eleven eggs of the Virginia Rail.

May 29. Took a set of five eggs of the Least Bittern; the nest also contained an egg of the Sora Rail.

June 2. Took a set of three eggs of the Long-billed Marsh Wren.

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

Notes from Florida.

The following is taken from my note book, including the seasons of 1887 and 1888.

1887, April 10, Set 4 fresh eggs Loggerhead Shrike. The nest was composed of old string, woven together with small twigs and situated in an orange tree, about 10 feet from the ground. Also, about the same date, set 5 fresh eggs of Yellow-shafted Flicker, set 2 fresh eggs Night Hawk and 3 fresh eggs of Gray Kingbird. The nest of this Flycatcher is, invariably, built over the water, in this vicinity. How is it in other places?

The following sets were taken during May, set 3 fresh eggs Loggerhead Shrike, Mocking Bird 4 eggs, Meadow Lark 3 eggs, and 5 sets of Least Tern, 3 sets of 2 and 2 of 3 eggs. The eggs were laid on the lake shore about 2 miles from my house. At one time hundreds of Terns came to this place to breed, but rarely come since it has been settled.

June, Killdeer 3 fresh eggs, Least Tern 2 fresh eggs, Yellow-billed Cuckoo 2 eggs, Red-winged Blackbird 3 sets of 3 each, Chuck-wills-widow 2 eggs, incubation $\frac{7}{8}$.

1888. April 19 Cardinal Grosbeak 3 eggs, April 22 Carolina Wren 4 eggs, also, same date Blue Bird 4 eggs, April 24 Mocking Bird 3 eggs, May 14 Yellow-billed Cuckoo 2 eggs, May 17 Cardinal Grosbeak 3 eggs, Night Hawk 1 egg, same date, May 20 Killdeer 1 egg, Night Hawk 2 eggs, May 23 Night Hawk 2 eggs, June 1 Night Hawk 2 eggs, June 4 Sparrow Hawk 1 egg, set not complete.

W. E., Thonotosassa, Fla.

Yellow-billed Magpie.

In the United States are two species of the Magpie, differing in almost nothing save one has a yellow bill, while the other has a black bill,

The Yellow-billed Magpie belongs to California, while the other is found more northward and in the middle portions of North

America.

The Ornithological report of California says that it is very abundant in California, especially in the central part of the state. I cannot say that I found it very abundant in the portion where I spent over five years; in Lucerne Valley, Tulare County. To the contrary, I saw very few, the first year or two I saw several pairs, and in 1883 I found a nest containing five eggs resembling very much the eggs of the American Crow. Since 1885 I haven't seen a single magpie in that region. I never saw any about Santa Rosa Sonoma Co., neither have I seen any about Los Angeles. I found a great many in San Luis, Obispo Co., quite a distance from any habitation. This leads me to believe that they do not like settled places, but prefer wild country.

Their note resembles somewhat the human voice, which they may be taught to imitate like a parrot. They chatter away and have a call like pit, pit.

The nest I found was made of coarse twigs woven together, round, and having an entrance in the side, it was a large nest for a bird of such a size. The eggs were whitish greenspotted with lavender. The food consists of animal and vegetable matter that can be found to eat.

H. C. L., Tulare Co., Cal.

**A Query and Observation
of Interest.**

EDITOR OOLOGIST:

Seeing C. B. C's article in the Oct. and Nov. number of the OOLOGIST, regarding the white eggs of the Bluebird, I would like to ask him through your paper, whether or not the birds were identified, and what peculiarities they had, if any?

I have in my collection a set of six pure white eggs of the Bluebird, which I collected in Ithaca, N. Y., in 1883. The nest was in a hollow limb of a butternut tree, about twenty feet from the ground. The birds which I identified were very dull in color.

W. J. S.

**Faunal Changes, DeKalb Co.,
N. E. Indiana.**

Not many years ago, and in fact within the memory of many of the older inhabitants, this county was covered with one grand forest. Only here and there at a distance of from one to three miles from each other stood the settler's modest cabin with its few acres of clearing. At this time the Indian had gone, leaving only the marks of his camp-fires and a few mounds and stone implements scattered here and there. Wolves and deer were not abundant. Only the birds,—multitudes of the noblest birds our section of the country ever produced, alone remained to fill the mind of the early settler with wonder and awe. Noble birds, not that they excelled others in sweetness of song or beauty of plumage, but because there seems to be a certain stateliness connected with them, partaking of the grandeur of the vast forest that sheltered their legions. But what great changes a few years have wrought! The "never-ending" woods has been converted into a smiling open plain, well dotted with beautiful groves. The land of this county is mostly rolling but in some parts is almost level. It has a few beautiful streams and only one or two small lakes. A few swamps still exist, although the genuine Indiana Cat-swamp was by no means uncommon in former times. As the appearance of the land has changed so also have its feathered inhabitants. Some species have disappeared entirely, while only a few individuals of others still linger much after the manner of the Red Man when driven from his native haunts. Chief among our noble game birds may be mentioned,

Meleagris gallopavo (LINN.)—Wild Turkey. We speak of it first because we regard it as one of the most magnificent birds that ever inhabited our section. It seemed to be a part of the wild forest and bush-covered swamp where the old "gobbler" strutted around with solemn pace, assuming all the dignity of the most pompous old monarch. They were common even

abundant residents, to be met with in retired places. They bred here extensively and some of the settlers relate accounts of finding their nests and setting the eggs under the domestic hen; the young turks appearing in due time, only to wander off into the woods as soon as old enough. After the breeding season they congregated in flocks of sometimes as high as a hundred individuals, and their *quit-quit* was not an uncommon sound to the pioneer boy. But they are gone. The pot-hunter was their untiring enemy. None have been observed for several years.

The species next claiming our attention is *Ectopistes migratorius* (LINN.)—Passenger Pigeon. Perhaps this was the most abundant migrant that ever passed over, or visited us. And it was more than a migrant, for it certainly bred here. We can hardly credit the stories of the immense numbers of these birds once found here. They tell us of hundreds and thousands of pigeons, flocks and clouds, yes, acres and square miles of pigeons, that nearly obscured the sky and the sound of whose wings was like a distant cataract! During the season of migration they would pass over in countless numbers for days. When they selected a woods for a "roost" they would cover the trees for acres, until they broke them down with their own weight. Lighting on a wheat field they would move across it, the rear part of the flock flying over the front, presenting the appearance of a huge rolling mass of forest leaves driven by the wind. But these accounts can only be listened to by the wondering young ornithologist; he will never be permitted to see anything of the kind here. Will he be compelled to see such a diminishing of the numbers of *our* common birds in *his* short life-time? The last great flight of these birds was about the year 1865. The last flock noted by me, was in 1883. I found a nest containing one egg of this species in 1885. They are now, probably extinct within the county.

Branta Canadensis (LINN.)—Canada Goose. Formerly an abundant migrant, occasionally stopping near small lakes,

Has been known to breed near the small lakes a few miles north of us. They have been growing more and more uncommon each year until now a large V is a rare sight. I only saw one flock this year ('88). There were thirty of them on the ground in a field within a stone's throw of me: probably had lost their course.

Colinus virginianus (LINN.)—Bob-white. Formerly quite numerous. Hard winters and the sportsman's gun have almost exterminated them. They are more common now than two years ago.

Geophloeus pileatus (LINN.)—Pileated Woodpecker. Was once a tolerably common resident; the king of our Woodpeckers known among the farmers as "Woodcock," "Logcock," etc. Usually met with in tamarac swamps. None have been seen for a number of years.

Corvus Americanus (AUD.)—American Crow. Is undoubtedly becoming less abundant each year. The long flocks, both ends of which would almost be lost in the distance are a thing of the past.

The *Anatinae*—River Ducks. During the migrating season, large flocks of a number of species, frequented our ponds and streams and many were summer residents. They are very uncommon now.

The Owls—*Syrnium nebulosum* (FORST.) *Megascops asio* (LINN.), and *Bubo virginianus* (GMEL.) were formerly much more common than now. They are driven away into the most unfrequented places. *Bubo* is fond of chickens and for the sin of one all must perish, regardless of the benefit they be to the farmer both as destroyers of vermin and nocturnal songsters.

While man has been the direct cause of the extermination of some of the species noticed, the disappearance of some of them can not be attributed to the plume-hunter, the collector or the "small boy," but is the inevitable result of the march of civilization, the "survival of the fittest." And the stories of their great numbers will undoubtedly be regarded by the students, of future generations, as the inventions of a race of enthusiastic cranks. But while we mourn the loss of these interesting birds

we can see their places taken up (not in so great numbers, perhaps) by more musical and more useful species. Our song birds are undoubtedly increasing in numbers. We now have the Orioles, Thrushes, Warblers, Sparrows, Finches, Wrens and Bobolink as common birds; and we can only hope that they do not go the way of the birds who inhabited the "forest primeval" or go to make room for the despised English Sparrow.

J O. S., Waterloo, Ind.

Davie's Egg Check List.

Nov. 22nd, 1888.

Dear Sir:—

Below we print another letter from Mr. Davie. We will make no more apologies or new promises, as Mr. D's letter is sufficient. Our past promises for the work have been based on information direct from Mr. D., and as an agent, we no more control the publishing of the work than does the reader.

From my knowledge of the progress of the work, I think my patrons can depend on receiving a copy as soon as issued. I will further add that I will send the OOLOGIST for '89, gratis to every purchaser in advance of this work. This offer is made to help pay interest on the delay.

The price of the work will doubtless be increased as it will contain over 400 pages, but until Feb. 1st, we will take subscriptions at \$1.00 per copy.

Faithfully, FRANK H. LATTIN.

Columbus, Ohio, Nov. 8, 1888.

Dear Friend Lattin:

I write to say that a thousand and one duties involving upon me, the vast amount of original matter which has accumulated from all sources for my book, the care and time required to arrange it for the press, after writing my manuscript twice, has knocked the date of publication "clear out of time."

The date, of publication now will be when every dealer like yourself receives a complete copy of the book. 208 pages will be off the press this week, and the progress of printing will continue without interruption.

Yours, OLIVER DAVIE.

The Audubon Monument.

The New York Academy of Sciences, acting in co-operation with other associations of New York and the American Ornithologists' Union, proposes to erect a monument to John James Audubon, whose remains rest in Trinity Church Cemetery, New York City. A design substantially as represented in the above engraving, has been selected. The ornamentalions, however, will all be changed to represent animals and plants, with which Audubon was familiar, selected for the most part from the plates in his magnificent books. The estimated cost of this monument is \$10,000, which the committees of the co-operating societies wish to raise by a general subscription, hoping, indeed, that all American naturalists of whatever branch of study, shall be represented. Thus a large number of small subscriptions is more desired than a limited number of large contributions, and rather than planning to raise the whole sum necessary in New York City, it is wished that the enterprise take a more national character. Subscriptions from 25 cents to \$1.00 have been received. Contributions should be sent to Dr. N. L. Britton, Treasurer, Columbia College, New York City, by whom they will be promptly acknowledged, and the names of the donors will be permanently recorded in the the published Transactions of the Academy of Sciences.

There are few publications in this country, if any, that can number among its readers as many ardent followers of the immortal Audubon as the OOLOGIST. This although a strong statement is an established fact, and to verify its truthfulness to the promoters of this worthy enterprise, we trust that each and every reader of this article will add their "mite" to this fund. As we do not all feel able to subscribe a large sum, let us give what we can, even if it is only 25 cts. This latter sum we are sure all can spare, and to know and see that we assisted in building this monument to the memory of the greatest of American ornithologists will more than amply repay us the amount we may see fit to subscribe. Do not delay in this matter, but attend to it at once.

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BARGAIN LOTS.

(Continued from page 168.)

173	4 Knives, 1 sml. do., 1 War Point, 1 pottery, 2 slightly imp. rare form arrow-heads	8 oz.65
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. 3lb.	1.25		
176	85 fair Arrow-heads, Tenn., 2 $\frac{3}{4}$ lb	2.00		
177	12 fair Spearheads, 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 scraper, 1 Hoe.	7 oz.	.....	1.50
183	30 rude implements from Southern Ind., used for War Club heads, Knives, Scrapers, &c. 4 $\frac{1}{2}$ lb	.....	2.00	
184	30 pcs. same as last Lot 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	
187	4 bunts and 4 com. Arrow-heads, 1 notched and 1 unnotched Scraper, 1 Knife, Ind., 6 oz.	.....	.75	
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 $\frac{3}{4}$ 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 $\frac{3}{4}$ lb	.....	1.50
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 $\frac{1}{2}$ 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
199	1 Crinoid Root and 1 Stem, 4 pcs. Fos. Shark teeth, 1 pol. Fossil Coral, Ia, 14 oz.	.....	.35

SECOND CLASS BIRD'S EGGS

Some of the spec. in the following lots are only slightly imp., while others are de-

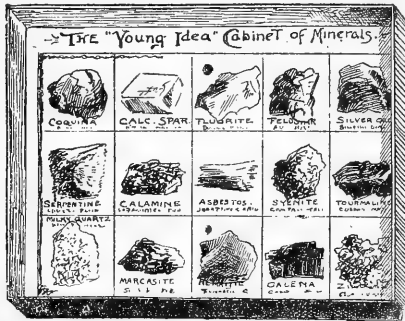
cidely so, but in either instance we guarantee them to be worth more than our prices, we have exercised care and have taken considerable pains in packing them and think they will go safely without breakage, but as we are clearing out our 2ds we will not duplicate broken specimens.

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.	....
202	20 Catbird, 20 Bluebird, 2 Purple Grackle, 2 O. Oriole, 1 Marsh Wren, 3 Cliff Swallow, 10 Robin, 1 Gt. tailed Grackle, 10oz.	60
203	40 Catbird, 10 Quail, 6 Blue Jay, 10 oz.	.....
204	1 Zenaida and 1 White fronted Dove, 1 Screech Owl, 3 Mourning Dove, 6 Quail, 9 Blue Jay, 10 Brown Thrasher, 11 Kingbird, 9 oz.	.....

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, 245, 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, 2 Laughing Gull, 5 Am. Flamingo, 5 Gannet, 4 $\frac{5}{8}$ 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

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Then write for full printed instructions and a pound of my celebrated compound, enough to prepare twenty birds, and send one dollar in stamps or cash, or write and tell what you have in specimens to exchange.

16 YEARS EXPERIENCE, 16

EMBALMING.

We formerly sold this process for three dollars, and we make the above reduction for **30 days only.**

Any one can learn in one lesson, and hundreds have learned in the U. S. within the last three years. The process is easy, durable, and cheap enough to satisfy anyone.

Address, always with stamp, mentioning this paper, for circular.

R. M. GIBBS,

418 John St.,

Kalamazoo, Mich.

The Best



WASHER

We will guarantee the "LOVELL" WASHER to do better work and do it easier and in less time than any other machine in the world. Warranted five years, and if it don't wash the clothes clean without rubbing, we will refund the money.

AGENTS WANTED in every county. We can show proof that agents are making from \$75 to \$150 per month. Farmers make \$200 to \$500 during the winter. Ladies have great success selling this Washer. Retail price, only \$5. Sample to those desiring an agency \$2. Also the Celebrated **KEYSTONE WRINGERS** at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars.

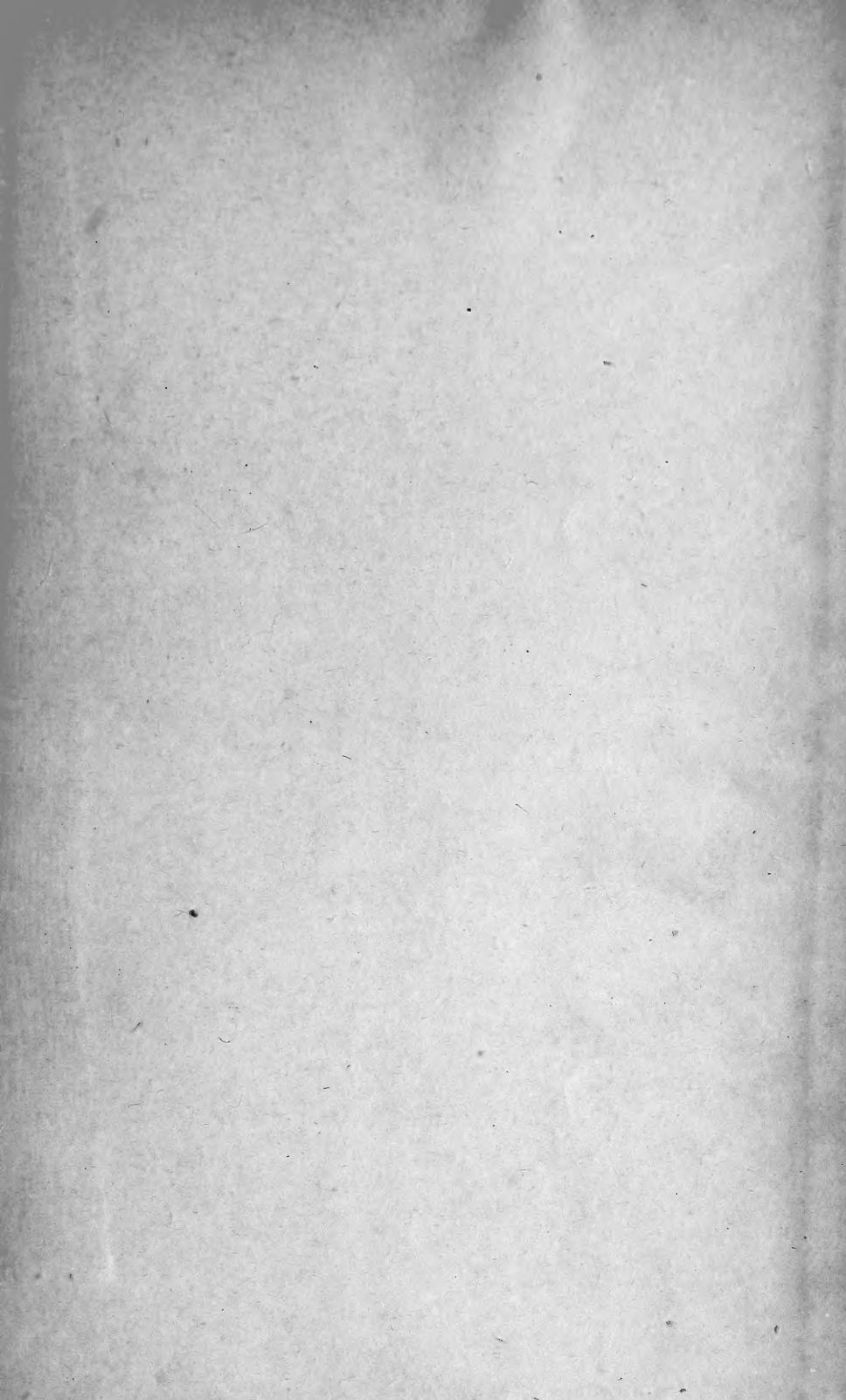
LOVELL WASHER CO., Erie, Pa.

INDIANA BICYCLE CO.,

116 N. Penn. St., Indianapolis, Ind., will take guns, pistols watches, type-writers, scrl-sawos, lathes, printing presses, amateur photo. outfits and 2d hand bicycles in part payment for New Columbia Bicycles and Tricycles or Buggies. We make cow horn handle bars and spade handles; do difficult repairing and nickeling. Send 2 cent stamp for



catalogue and circulars.







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