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BIRDS: THEIR NESTS AND EGGS.

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## The Parula Warbler—Its Nest and Eggs.

BY "J. M. W.," NORWICH, CONN.

There is no commoner Warbler in Southern New England during the Spring migration than the old "Blue Yellow-back." Then, for about two days, among the cloud of sparrows in our yards and gardens, we note his frieze jacket of dusty blue, and his scarlet waistcoat, when, "presto," he is off, you say, to his breeding grounds in the Maine wilderness, to Umbagog and beyond. But wait a few days, and we will show him to you housekeeping near at hand. As long ago as Brewster and Maynard's Umbagog trip, it was supposed that a few scattered pairs remained to breed, but that the bulk passed further north. Among my last letters from Dr. Brewer, was one containing a request for nests and eggs of this species for the Cambridge Museum and his own friends. Even then the eggs were regarded as *desiderata*, but it was beginning to be understood that the three Southern New England States were about the centre of its breeding range.

It is, then, because the older writers did not send a special reporter to call on the *P. americana* in his chosen haunts, that we now interview him at home in May, June and July, under his new A. O. U. *alias*. Come then with me on the twentieth of May, three miles from Norwich, across this vile morass and swamp, to the deciduous woods beyond. The young leaves are not so forward but that we can see how miasmatic mists, aided by east winds and fogs, have draped the outer fringe of trees with rank growths of light green moss.

This is the hanging-lichen or *usnea* of the botanists. Well, here is the true summer home of Parula, this the material his house is built of, and this its only *bric-a-brac*. But what is this fine buzzing sound around us like the droning of some great insect? Yes, it is like and yet un-

like the *cicada* of Autumn. It is the note of Parula at work, at rest, at play. A quick chromatic rise of one octave is all. It has all the *timbre* of the locust, and, like it, seems born of the burning sunshine, and part of it. Not like the matins and vespers of thrush and sparrow, but the livelong day, in the hottest of noonday heat, the constant iteration of it everywhere in this colony, makes a general all-pervading humming undertone, to which the songs of other birds are the occasional "obligatos." Like all small warblers, the activity of both sexes is incessant. This is realistic, if you can mark the flight of the three males which chase each other by us like a flannelled riband of blue; and see, one alights a single second on this limb in front of us with his blazing breast turned our way. Could ever lover come more gaily clad? Clearly, all are not paired at this early date. But by outlining each fringed limb in turn against the sky, we find many suspicious looking bunches, and note the incomplete nests. Unlike any other pensile bird-homes, these nests are already swung. The builder simply gathers together the lower strands of the *usnea*, felting it with the same material, and the nest is done. The limb above is the only dome, and one side aperture only is used; yet, at first sight, the nest might indicate a greater degree of skill than the little architect possesses. Sometimes, a tiny bit of wool is at the bottom of the basket, and it is common to see the big ends of two grass-stalks sticking out near the entrance like a pair of horns. No departures from this style of architecture are seen, and I do not think this warbler ever attached the upper part of the nest to limb or twig like the orioles and vireos. Never a nest without *usnea*, but there are many groves of lichened trees without Parula.

Probably in those mossy barrens no pair ever settled, as in others, and by family increase gradually colonized the whole grove. Isolated trees with moss in a wood often show a single

nest, but the tendency is to a good colony with this species. I know a swamp where may be found seventy-five pairs of these summer residents. The first time I visited the Preston colony on the 31st of May, I took eight sets of four. The first time I visited another large community in this county on June 5, on a point of land trending into salt water, I took eleven sets of four.

Four is the usual clutch. Five are now and then found. Dr. Brewer reported to me a set of six from Taunton. A still larger set will be referred to below. The eggs are especially fragile, and if incubated can hardly be blown without breaking. Added eggs may instantly be told by the added polish, and by the loss of the rosy suffusion.

The nests are built on dead or green trees, and on savins or deciduous trees, at varying heights. I took one from the single filament of moss caught on the green twig of a birch, within five inches of the ground, and others close to the trunks of great oaks fifty feet in the air. On the lower swamp, huckleberry brush in the littoral colony is a favorite site.

The Parula Warbler escapes the notice of the Cow Bunting. One added "lazy-bird's" egg I did come across, but the side of the nest was torn and Parula had deserted it. Many savins are scattered among the inland colony, and there the Blue Jay often destroys the clutch. But again, with the shore race, *Icterus spurius*, often breeds in the same tree, and in some instances on the same branch, in harmony.

A new nest will be built at once, if the first is destroyed, and three sets of eggs laid. If not disturbed, only an occasional second brood will be reared.

*Usnea* when detached is perishable. If kept in a cellar or damp place, disintegration sets in, and in a few seasons the nests fall to dust at a touch. Placed in dry air they lose color soon, and eventually their shape. But if taken *in situ*, with the surroundings of leaf, twig and moss, for a while some beautiful examples can be shown. Through the lace-work, the eggs can in most cases be seen above, and should be removed with a small spoon to preserve the entrance inviolate.

In June 10, 1886, I had been wading for hours about the swamp on Groton, Long Point, looking into nests of *I. spurius*, Veery and Parula with indifferent success, noting only pairs and trios, when in despair I crossed to an outstanding hornbeam, hoary with lichen. I saw no birds, heard no feeble "chit" of alarm, and after outlining the limbs in succession against the sky

without seeing the semblance of a nest, it occurred to me to rap on the tree. At the first vigorous pound, a Blue Yellow-back flew away like a shot from a solid bank of moss near the trunk some ten feet high. To scramble up and see the best hidden nest of my life was a moment's work. A glance inside sufficed to catch a glimpse of five eggs. So, carefully detaching the top fibres from the huge limb above, I bent the tips of the nest together, took them in my mouth, and descended carefully. It was not until I had placed the nest on the ground and spread the top wide open, that I realized I had taken the biggest clutch on record—seven fresh eggs. This set, with a good series, will be properly described by Mr. Norris.

But aside from them, I have examined a hundred sets of these eggs, and could take more of them than of all the other local warblers combined, if they were needed for science. I used to think, judging by the two series from communities twenty-four miles apart, that family differences could be traced, that the inland lot displayed inherited lilac and lavender markings, and the others only the simple reddish annulations which is the commoner type. But a few seasons work showed that the eggs were intergrading continually, and this year's observation clearly proves that no such distinction can be maintained.

But it is a fact, however, while the Preston race is in full breeding activity by May 31, June 4 is the time to look for full sets at the shore. For nine years, this difference in time was held good. Perhaps fogs and cold winds off the water delay oviposition, as they surely retard field and garden vegetation. When blown, the eggs are pure white. Six sets of fresh-blown Prairie Warbler's eggs, placed by the side of Parula sets, disclosed the fact that the eggs of *D. discolor* are tinged with green. They are given as white by writers, and could only be shown to be otherwise by comparison. The aggregation of markings of the Parula's eggs is at the larger end, and no egg displays the diffusion of spots over the entire surface like some examples of *D. ruficapilla*. On these delicate eggs, instances of heavy blotching are very rare, and the magnificently blotched set given to Mr. Norris by Mr. F. H. Carpenter, must be regarded as wholly exceptional.

[Few persons are aware, in all probability, of the variation in size, color and markings of the Blue Yellow-backed Warbler (*Parula americana*, or according to the nomenclature of the American Ornithologist's Union *Comp-*

*sothlypis americana*) when seen in a large series. They are small, delicately marked eggs, rarely presenting any brilliant colors, and they must be closely examined in a strong light to see all their beauties.

Having been exceptionally fortunate in forming an unusually fine series, for which I am almost wholly indebted to the famous collector and naturalist "J. M. W." (Mr. C. L. Rawson) of Norwich, Connecticut, it has occurred to me that some description of them might be welcome to the readers of THE ORNITHOLOGIST AND OOLOGIST. With the exception of those sets where it is especially noted to the contrary, they were all collected by "J. M. W.," and they were selected by him from a very large series, running through a number of years, with the object of showing all the variations to which the eggs of this species are subject.

Set I. June 12, 1881. New London County, Conn. Two eggs, incubated. Nest in low swamp oak, reached from the ground. Eggs very peculiar, being shaped like those of *Ortyx virginiana*. Creamy white, spotted and speckled with reddish brown and lilac, more heavily at the larger ends: .63 x .45; .63 x .45.

Set II. June 7, 1883. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest twenty feet from ground on hornbeam tree, in wet ground, but away from main swamp. Tree covered with lichens. Nest of *usnea*. Two straws at entrance. Female seen; many males in neighborhood. Nest with eggs in next tree, two rods away. Eggs very small. White, speckled (at large ends only) with reddish brown and faint lilac: .59 x .46; .60 x .46; .60 x .44; .60 x .45.

Set III. June 4, 1886. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest well up in large outstanding swamp oak, heavily draped with *usnea*. Small eggs, quite pointed. Glossy white, delicately speckled with lilac and dark reddish brown. The markings are almost wholly at the larger ends: .65 x .46; .67 x .48; .66 x .47; .65 x .47.

Set IV. June 4, 1881. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest in *usnea*-covered swamp, in a huckleberry bush, in a submerged bog. Female watched on nest. Eggs chalky white, delicately speckled with lilac and reddish brown: .65 x .47; .63 x .47; .64 x .48; .64 x .47.

Set V. June 12, 1881. Groton, Long Point, New London County, Conn. Four eggs, fresh. Nest well hidden in *usnea*, in swamp. On maple tree, at end of lowest limb. Last nest of

season. Female seen. Eggs white, wreathed around the larger ends with reddish brown and lilac specks: .67 x .48; .67 x .47; .69 x .49; .65 x .49.

Set VI. June 22, 1886. Side hill opposite Hell Gate, Preston, Conn. Three eggs. Nest in sayin. Last set of eggs of this species taken in 1886. Eggs white, with a slight gloss, speckled with dark reddish brown and lilac, chiefly at the larger ends, where the markings form indistinct wreaths: .70 x .48; .70 x .48; .67 x .46.

Set VII. May 28, 1886. Saybrook, Conn. Collected by Hon. John M. Clark. Four eggs, fresh. Light creamy white lightly speckled with reddish brown and lilac. In three of the eggs the markings form indistinct wreaths, but in the fourth they are wreathed around the smaller end: .67 x .49; .66 x .50; .67 x .50; .64 x .51.

Set VIII. June 4, 1881. Groton Long Point, New London County, Conn. Three eggs, fresh. Nest in lichen-draped young oak. Both parents observed. Eggs glossy white, delicately speckled with lilac and reddish brown. The markings are more numerous near the larger ends, where they form indistinct wreaths: .67 x .47; .66 x .46; .68 x .47.

Set IX. June 6, 1881. Groton Long Point, New London County, Conn. Four eggs, fresh. In a scrub oak, outside of swamp. The highest of twelve nests in this colony. Two pairs of birds crying, but the other nest was not found, owing to the thickness of the lichen. Eggs light creamy white, beautifully wreathed with light reddish brown and lilac. Quite pointed: .66 x .46; .67 x .45; .67 x .46; .67 x .45.

Set X. June 8, 1886. Hell Gate, Preston, New London County, Conn. Four eggs, fresh. Nest in sayin tree—a mass of hanging lichen, six feet from the ground. Eggs blunt and thick in contour. Creamy white, quite glossy. Spotted with light reddish brown and lilac. The markings are thicker near the larger ends: .63 x .48; .63 x .50; .64 x .51; .64 x .50.

Set XI. June 1, 1886. Long Society Swamp, Preston, Conn. Four eggs, fresh. Nest in large black birch. Female on eggs until the nest was touched. Eggs glossy white, speckled with dark reddish brown and lilac. The markings form wreaths around the larger ends and the remainder of the eggs are almost entirely unmarked: .63 x .49; .63 x .49; .60 x .46; .62 x .49.

Set XII. June 3, 1885. Old Saybrook, Conn. Collected by Hon. John N. Clark. Four eggs, fresh. Nest hanging from the branch of a small cedar tree about seven feet from the

ground in the woods. Eggs long, but not pointed. Glossy white, marked near the larger ends with dark reddish brown and lilac spots: .67 x .46; 70 x .46; .69 x .46; .71 x .48.

Set XIII. June 4, 1881. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest in large hornbeam tree in salt marsh. Thirty feet from the ground. No bird on eggs but heard. Nest unmistakable. Eggs creamy white, quite glossy. Marked with spots and specks of dark reddish brown and lilac. These are in the form of wreaths around the larger ends, but the remainder of the eggs are almost wholly unmarked: .65 x .48; .66 x .47; .67 x .48; .66 x .47.

Set XIV. June 5, 1885. Monroe County, Penn. Collected by Theodore Roth. Three eggs, fresh. Nest of hanging moss, on oak tree, about thirty feet from the ground. Eggs very small. White, quite heavily spotted with reddish brown and lilac: .61 x .45; .61 x .44; .60 x .42.

Set XV. May 29, 1886. Hell Gate, Preston, Conn. Four eggs, fresh. Nest in low dead savin, near path in deciduous woods. Female seen. Eggs white, quite heavily spotted with bright reddish brown and lilac. These are principally grouped around the larger ends: .64 x .47; .62 x .47; .61 x .47; .63 x .47.

Set XVI. June 12, 1881. Groton Long Point, New London County, Conn. Two eggs, fresh. Nest in low swamp oak, reached from ground. Eggs white, marked at large ends with bright reddish brown spots: .68 x .44; 64 x .45.

Set XVII. June 4, 1881. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest in swamp oak, near trunk, and seven feet from the ground. It was constructed of *usnea*. Female on eggs. Male near. Eggs white, spotted and speckled all over with bright reddish brown and a few lilac ones: .67 x .48; .66 x .46; .69 x .48; .67 x .47.

Set XVIII. June 4, 1881. Groton Long Point, Conn. Four eggs, fresh. Nest in swamp maple. Eggs light creamy white speckled with lilac and dark reddish brown. At the larger ends the specks form indistinct wreaths: .71 x .47; .68 x .45; .68 x .46; .71 x .45.

Set XIX. June 12, 1886. Groton Long Point, near Noank, Conn., on Long Island Sound. Seven eggs, incubation just begun, and equally in the whole clutch. Nest hidden in heavy growth of hanging lichen, about twelve feet from the ground, and near the trunk of outstanding oak. It was betrayed by the female, who was startled from the eggs by jarring the tree. No other nests or birds on tree. Eggs

glossy white speckled and spotted with lilac and bright reddish brown. The markings form indistinct wreaths near the larger ends; .68 x .50; .65 x .51; .66 x .49; .66 x .49; .66 x .50; .64 x .48; .66 x .51.

Set XX. May 11, 1887. Iredell County, North Carolina. Collected by R. B. McLaughlin. Five eggs, fresh. Nest made almost completely of long gray moss, woven together. Lined with a few feathers and soft materials. Female on nest. Eggs white, speckled and spotted, almost wholly at the larger ends, with lilac and bright reddish brown: .69 x .47; .70 x .47; .68 x .47; .69 x .48; .68 x .46.

Set XXI. June 3, 1883. Harvey's Swamp, Preston, New London County, Conn. Three eggs, fresh. Nest on dead limb of green white oak. All made of *usnea*, no lining. Two other nests building near by. Both male and female seen. Eggs light creamy white, quite blunt, and heavily wreathed with very dark reddish brown and lilac. They bear a remarkable resemblance to certain undoubted eggs of *Dendroica virens* before the writer: .66 x .50; .66 x .50; .66 x .49.

Set XXII. June 11, 1886. Groton Long Point, New London County, Conn. Three eggs. Nest in tall swamp—buckleberry bush—*usnea* over bush and neighboring trees. Birds seen. Eggs white, quite heavily spotted near the larger ends with reddish brown and lilac: .70 x .46; .68 x .47; .66 x .47.

Set XXIII. June 4, 1886. Groton Long Point, New London County, Conn. Three eggs, incubation begun. Nest on a large hornbeam tree, low down, and near the trunk. Eggs creamy white, and glossy, wreathed near the larger ends with light reddish brown and lilac: .68 x .48; .69 x .47; .66 x .47.

Set XXIV. June 11, 1886. Groton Long Point, New London County, Conn. Four eggs, fresh. Nest in oak tree, near trunk, twenty-five feet from ground. Eggs white, beautifully wreathed near the larger ends with bright reddish brown specks, and also a few lilac ones. The remainder of the surface is almost wholly unmarked: .67 x .51; .66 x .50; .66 x .48; .65 x .49.

Set XXV. June 8, 1886. Hell Gate, East Side, Preston, Conn. Four eggs. Nest on a long savin limb, with foliage. It hung conspicuously as there was no other bunch of moss on the tree. Four rods from the tree containing this nest, there were other nests of this species, containing eggs, both east and west. Eggs light creamy white, quite heavily wreathed near the larger ends with light reddish

brown and lilac. The remainder of the surface is almost wholly without markings. Very small: .60 x .47; .61 x .46; .62 x .47; .63 x .47.

Set XXXI. June 8, 1886. Hell Gate, East Side, New London County, Conn. Four eggs, fresh. Nest in green savin, *usnea* covered, low down. Other nests in near neighborhood. Many birds in colony. Eggs white and quite glossy. Heavily marked near the larger ends with large spots of bright reddish brown and a few lilac spots. The markings form wreaths, and the remainder of the eggs are immaculate: .65 x .47; .66 x .50; .67 x .47; .66 x .49.

Set XXVII. June 11, 1886. Groton, Long Point, Conn. Four eggs, fresh. Nest in swamp maple, eleven feet from the ground. Female covering eggs. Eggs light creamy white, spotted over most of their surface, but especially near the larger ends, with light reddish brown and lilac: .65 x .47; .67 x .47; .66 x .47; .66 x .47.

Set XXVIII. June 4, 1881. Groton Long Point, Conn. Four eggs. Nest in stunted maple on edge of wooded swamp. Birds near. Eggs glossy, creamy white, unmarked except at the larger ends, where they are beautifully wreathed with light reddish brown and lilac spots: .66 x .48; .64 x .47; .65 x .48; .65 x .47.

Set XXIX. May 25, 1881. Hell Gate, Preston, Conn. Three eggs, incubation begun. Nest in small dead savin, six feet from the ground. Eggs creamy white, heavily marked near the larger ends with very bright reddish brown and lilac spots: .68 x .49; .69 x .48; .68 x .46.

Set XXX. June 7, 1883. Long Point, Groton, on Fisher's Island Sound (Long Island Sound) Conn. Four eggs, fresh. Nest in large hornbeam tree, outside of swamp. Made of hanging lichen, on lowest limb. Female covering clutch until touched. Eggs glossy, creamy white, heavily marked over most of their surface with light reddish brown and lilac. The markings principally take the form of large spots, closer together near the larger ends in three of them, but in the fourth they are grouped around the smaller end. The markings are unusually heavy for this species: .63 x .48; .62 x .46; .61 x .47; .56 x .48.

Set XXXI. June 1, 1886. Long Society, Preston, Conn. Three eggs. Nest in green birch sprout, about three feet from ground. Female on. Eggs glossy, creamy white. Very heavily blotched with very bright reddish brown and lilac. The blotches are unusually large and confluent for this species, and are nearly all grouped around the larger end. Re-

markably showy eggs: .65 x .47; .67 x .48; .66 x .50.

Set XXXII. June 4, 1886. Rehoboth, Bristol County, Mass. Collected by Frederic H. Carpenter. Five eggs, incubation advanced. Nest the usual pendant structure of *usnea*; nearly globular, and placed on an old moss-covered apple tree, fifteen feet from the ground. Words fail to describe this exceedingly brilliantly colored set, which were generously presented to the writer by Mr. Carpenter. The ground color is pure white, unsullied by the slightest stain. The markings are chiefly confined to the larger ends, and consist of large spots of the most brilliant vermilion red. No coloration on any other eggs of this species ever seen by the writer approaches it in brightness, and the contrast of the very bright red with the pure white makes a very beautiful appearance: .65 x .46; .63 x .44; .66 x .47; .65 x .45; .67 x .46.

Set XXXIII. May 31, 1887. Hell Gate, Preston, Conn. Five eggs, fresh. Nest in only bunch of *usnea* on dead juniper, five feet from ground. Conspicuous from its position midway on long, clean horizontal branch. Female seen many times; both parents observed when set was taken. Eggs pure white, and very glossy for this species. Speckled and spotted with dark reddish brown and lilac. The markings form wreaths near the larger ends, and are not perceptible on any other parts of the eggs. One of them has the markings entirely of a light lavender wreath, composed of specks of that color: .61 x .49; .59 x .46; .59 x .48; .63 x .48.

Set XXXIV. June 1, 1884. Standish, Maine. Collected by L. C. Holmes. Five eggs, fresh. In low evergreen, nine feet from the ground. Eggs creamy white, quite glossy; speckled and spotted with dark reddish brown and lilac. The markings form indistinct wreaths near the larger ends; very long and pointed: .72 x .49; .71 x .48; .71 x .48; .69 x .47.—[J. P. N.]

### The Shore-bird Migration at Monomoy Island, Cape Cod, Mass., Fall of 1887.

BY JOHN C. CAHOON, TAUNTON, MASS.

(Report of the Cape Cod Migration Station of the Bristol Ornithological Club.)

Arrived on the Island Aug. 8th, but was so busy until Sept. 10th that my observations were not as full as I should desire at that period.

Aug. 8th, wind north-east, weather fair. Semipalmated Plover and Sandpipers (ad.) abundant. Terns of two species, Common and Roseate, abundant. Large Gulls, presumably the Herring, common. A few Black-bellied Plover and Robin Snipe seen in adult plumage. Heard several Greater Yellow-legs and saw three Piping Plover in young of year plumage.

Aug. 9th, wind south-west, weather fair. Birds same as previous day.

Aug. 10th, wind south-west, weather fair. New arrivals noted; two Hudsonian Curlew and several small flocks of adult Sanderlings.

Aug. 12th, wind south-west, weather fair. Birds same as two previous days. Saw gunners that had in their possession several Red-breasted Snipe, young plumage, one Greater Yellow-legs and several Piping Plover, young plumage. They informed me that they had shot a large Sandpiper with long legs, and from the description I decided it to be a Stilt Sandpiper.

Aug. 23rd, wind south-west to south-east, moderate with light fog. Several large flocks of Plover seen flying over the Island, one of Golden and the others Black-bellied. Saw quite a number of Red-breasted Snipe and Sanderlings, a small number of Greater Yellow-legs seen.

Aug. 24th, wind south-west and north-east to south-east, weather stormy. Large flocks of Plover, mostly Black-bellied, seen flying about the Island and a large number seen on the beach at high tide, one Carolina Rail seen on the meadow, two flocks, one of six Black Ducks and the other a small one of Scoters, flew over the house.

Aug. 25th, wind north-east to north-west, weather stormy. The stormy, foggy weather of yesterday and to-day increased the numbers of birds. Black-bellied Plover seen in large flocks passing over but only a few stopping. Semipalmated Sandpipers abundant, some dozen or more Black Tern (young) seen for the first time to-day.

Sept. 4th, wind north-east, fresh, weather fair. Increase noticed in Greater Yellow-legs, several Sheldrakes seen in the bay.

Sept. 5th, wind north-east to south, weather fair. No increase in shore birds. Sheldrakes and Scoters on the increase.

Sept. 6th, wind south-west, very fresh, weather fair. An adult Red-breasted Sandpiper or Robin Snipe seen; water fowl increasing.

Sept. 7th, wind west, very fresh, weather fair. A bunch of ten Yellow-legs seen on the mead-

ows and four shot by Mr. W. Several Hudsonian Curlew and Greater Yellow-legs came to-day.

Sept. 8th, wind north-west to north-east, moderate, weather fair. Mr. Whiting took several Hudsonian Curlews and Turnstones (adult) several of Greater Yellow-legs, Yellow-legs and Golden Plover noticed.

Sept. 9th, wind north-east to east, moderate, weather fair. Several large flocks of Black-bellied Plover arrived. Collected some fine specimens of Hudsonian Curlew and adult Turnstones.

Sept. 10th, wind south to south-west, stormy. Nine Hudsonian Curlews seen to-day. Mr. Whiting took a fine adult Eskimo Curlew. These birds are now scarce, where five years ago they were abundant. First Pectoral Sandpiper of the season taken to-day. I collected young Turnstone, Piping Plover, Sanderling and Semipalmated Plover. Sanderlings on the increase; Richardson's Jaeger common and on the increase.

Sept. 11th, wind north-east to east, moderate, weather fair. Several Red-breasted Snipe, (young) seen. Among birds shot to-day was a Black-bellied Plover in nearly adult plumage.

Sept. 12th, wind south-east, fresh, weather stormy. Two bunches of Eskimo Curlew, one of twenty and the other of fifteen seen. Sanderlings increasing; first Red-breasted Sandpipers seen and shot to-day.

Sept. 13th, wind east, weather fair. The heavy wind and storm of yesterday brought along a small flight of birds. Sanderlings (young) much increased; Black-bellied Plover increased, a large number seen on the flats. Several small bunches of Red-breasted Sandpipers (young) seen; four Golden Plover seen on the meadow by myself and afterwards seen by Mr. W., who shot one in young plumage. Greater Yellow-legs increased.

Sept. 14th, wind east to south-west, moderate, weather foggy. Pectoral Sandpipers increased and ten shot on salt meadows; no other increase noted.

Sept. 15th, wind north, very light, weather fair, birds about the same as previous day; slight increase in Red-breasted Sandpipers and Black-bellied Plover in plumage; Scoters abundant out in bay.

Sept. 16th, wind north, very fresh, weather fair; several large flocks of Black-breasts seen.

Sept. 17th, wind north, fresh, weather fair, Sanderlings increased. Out of thirty-five shot, all were in young plumage. A bunch of six Golden Plover still remain on the meadow. A

flight of land birds occurred. (O. & O., Nov. 1887, page 181).

Sept. 18, wind north to south-west, moderate, fresh, weather fair; greater Yellow-legs on the increase; other birds remain the same.

Sept. 19th, wind south-west, very fresh, weather fair; birds about the same; one Black Tern shot; very late migrant.

Sept. 20th, wind north to north-east, weather fair; noticeable decrease in birds; one decrease particularly noticed was Sanderlings; a flock of twenty (young males), Red-breasts seen. Semiplumated Plover and Sandpipers. One Pectoral shot on meadow; only one seen. Richardson's Jaegers, Common Terns on the decrease. Saw several large flocks of Night Herons flying South just at dark.

Sept. 21st, wind south-west, very fresh, weather a little foggy; birds remain the same. On high beach at high tide saw very few birds. On the flats just at dark, I saw several small flocks of Black-bellied Plover and Sanderlings.

Sept. 22nd, wind south-west, very fresh, weather light rains; birds remain the same.

Sept. 23rd, wind north-east, moderate, fresh; slight increase in Black-bellied Plover and Sanderlings.

Sept. 24th, wind north-east, very fresh, weather light rains; birds much decreased. One small bunch of Black-bellied Plover, one Sanderling, and one Red-breasted Sandpiper, are the birds that were seen on the flats to-day. Increase in large gulls. Several large flocks of Sheldrakes and three Black Ducks seen.

Sept. 26th, wind west to south-west, fresh, weather foggy; Red-backed Sandpipers arrived in small flocks. Two small flocks of Red-breasted Sandpipers were found on the flats.

Sept. 27th, wind north, moderate, weather fair; increase in Black-bellied Plover and Sanderlings. Bonaparte's Sandpipers noticed for the first time to-day, and some dozen or more seen in company with Sanderlings. Saw a flock of Six Golden Plover flying about, and I think they were the same that were seen a few days ago.

Sept. 28, wind southwest, moderate, weather fair; birds remain the same. Found a Duck Hawk on the high beach near the surf engaged in eating a Sanderling. Shot at it twice, and although badly wounded, it retained life enough to get out beyond the surf before falling.

Sept. 29th, wind south-west to south-east, moderate, weather foggy; Shore birds remain about the same. Large flock of Scoters seen out in the bay.

Sept. 30th, wind north-east to east, moderate, weather foggy; decrease in birds. Several Red-breasted Sandpipers taken on the high beach.

Oct. 1st, wind east, north-east and south-east, weather heavy rains. The number of Sanderlings and Red-backed Sandpipers much increased. All of Sanderlings and nearly all of Red-backed Sandpiper being in young plumage. A (young male) Duck Hawk shot while in the act of catching a Red-backed Sandpiper out of a large flock on the beach. Several others seen. Saw a Belted Kingfisher and Fish Hawk near the house.

Oct. 3rd, wind southwest to south, moderate, weather rainy; great increase in Sanderlings and Red-backed Sandpipers. Saw large flocks of both. No Roseate Terns seen for about a week, they having departed for the South. Other terns much decreased, and the remaining ones being young. Three Golden Plover found on the meadow and one (in yg. of year plumage) shot. Noticeable increase in large gulls. Several large flocks of Great Blue Herring seen. Red-headed Woodpecker (young male), shot flying over the island.

Oct. 4th, wind north-west in morning, light, changing with fog, to south-west, moderately fresh. Increase in Sanderlings and Red-backed Sandpipers. Decrease in terns. A Roseate Tern shot with a number of common Terns. A flock of twenty Great Blue Herons seen on the high beach at high tide. No Jaegers seen. Saw two Duck Hawks on the high beach at a cut through where the water on the east or ocean side of the island makes a break through the beach into the bay on the west side of the island. The hawk was after some sanderlings that congregate near the cut through at high tide, and although it made several dives into a flock that was following, I did not see it catch one, as I was on the opposite side of the cut through, and the tide ran so swiftly that I could not cross in my boat. I was obliged to let the hawk continue his raid. The second one I saw was trying to catch a sanderling that was running along on the beach, but the sanderling was quick enough to elude the swoops of the hawk, who at my approach flew away a short distance and alighted on the beach. Soon after I shot into a flock of sanderlings, and several fell out in the water about twenty-five yards from the shore. The hawk, which had started up at the report of my gun, saw the sanderlings drop and came flying over me and swooped down close to one of the sanderlings in the water. It seemed afraid to take the sanderling from the water, but would rise

up a short distance above the sanderling and make a dive down to within a few feet of it, and hang there for a minute or two. My shells were all loaded with fine shot, and I shot several times at the hawk before he would leave his prey. He flew quite a distance up the beach and alighted on the sand near the surf, but before I had got out of sight I saw him back where I had left the sanderling.

Oct. 6th, wind north-west to south-west, weather fair; small increase in Black-bellied Plover. Only a few terns seen. Small increase in Greater Yellow-legs. Shot Red-breasted Sandpiper in adult plumage out of a flock of Black-bellied Plover. Saw several large flocks of Night Herons just at dark. Bonaparte's Sandpipers seen in small numbers.

Oct. 7th, wind south-west, very fresh; small decrease in birds. Two small flocks of Black-bellied Plover seen. Collected one out of four Golden Plover found on the meadow; also a Semiplanned Sandpiper, which is very late for this last bird to be found about here. Titlarks come about the edges of the meadows. Belted Kingfisher seen on sand bluff.

Oct. 10th, wind south-east, light, weather fair; small decrease in birds. All of sanderlings collected in changing plumage. Saw several flocks of Black-bellied Plover.

Oct. 11th, wind north to north-east, very fresh, weather rainy. Increase of Greater Yellow-legs. Several flocks of Black Ducks flying about.

Oct. 12th, wind north-west, fresh, weather fair. Increase in Greater Yellow-legs. Two Carolina Rails shot on the meadows. A bunch of six tern seen out in the bay.

Oct 13th, wind north-west, very fresh, weather fair. Increase in Black Ducks. One Golden Plover taken on the meadow. Several small bunches of Black-bellied Plover and Greater Yellow-legs seen.

From Oct. 13th to Oct. 25th, I was away from the Island, and no notes were taken during that time.

Oct 25th, wind north-west to south-west, light. Water fowl much increased, and saw large flocks of scoters, sheldrake and ducks. Several small flocks of sanderlings and Black-bellied Plover remain. Greater Yellow-legs and Red-backed Sandpipers.

Oct. 25th, wind north-east to east, fresh, weather cloudy. Shore birds the same as previous day. Yellow-rumped Warblers and Black Snowbirds come. Saw a flock of seven Horned Grebe and two Long-tailed Ducks out in the bay.

Oct. 27th, wind north-east, fresh, weather cloudy. Small increase in Greater Yellow-legs. Saw several hundred of Bonaparte's Gulls on the bars. Three taken were in young plumage.

Oct. 28th, wind east, moderate, weather fair. Saw large numbers of Bonaparte's Gulls. Out of twenty taken, three were in adult plumage. Twelve or more Great Black-backed Gulls seen. Long-tailed Ducks, one Red-breasted Sandpiper and one Tern noticed.

Oct. 29th, wind south-east, light, weather fair. Shore Birds greatly decreased. Two Horned Grebe seen out in the bay.

Oct. 30th, wind north-east to north, weather fair and cold. Large numbers of Titlarks flying about. Five Pectoral Sandpipers and four Snow Buntings found on the meadows. One Ipswich Sparrow taken at the edge of the meadows.

Oct. 31st, wind north-east, moderate. Three flocks of Sanderlings and Red-backed Sandpipers seen, also several small bunches of Black-bellied Plover. A large flock of Bonaparte's Gulls on the bars. Out of twenty-two taken, six were in adult plumage. Three Pectoral Sandpipers still remain on the meadows.

Nov. 1st, wind north-east, blowing a gale, with rain, hail and snow. Large number of Black Duck seen. Found one Golden Plover and several Pectoral Sandpipers on the meadows, and shot the former. Other Shore Birds seen were six young Black-bellied Plover, two Greater Yellow-legs, several Sanderlings, and a small bunch of Red-backed Sandpipers. Several Shore Larks noticed.

On Nov. 2nd, wind north-east to north-west, fresh, weather fair. A few scattering Sanderlings seen on the beach at high tide. Bonaparte's Gull remains the same. Out of nineteen taken, about half were in adult plumage.

Nov. 3rd, wind north-east, light, weather fair. A bunch of twelve Black-bellied Plover and a few Sanderlings on the beach at high tide. Saw one Kittiwake Gull flying over.

Nov. 4th, wind south, very fresh, weather fair. Sanderlings seen on the flats at low tide. Two Black-bellied Plover seen on the meadow and one on the flats. One Greater Yellow-legs on meadow. Large flocks of Long-tailed Ducks flying about. Two flocks of Brant, one of twenty and the other of six, seen near the cut through in the shoal water on the flats. Shore larks common. Several Snow Buntings and a Robin seen near the house. Large flocks of scoters, large gulls, sheldrakes, and Eider duck seen on the water outside of the

surf. Saw a large seal swimming outside of the breakers.

Nov. 5th, wind northwest, very fresh, weather fair and cold. A walk out on the sand hills and meadows was taken in the forenoon. Found a large number of Shore Larks but no Titlarks. Meadow Larks abundant. Went over on to the beach at high tide in the afternoon. Shore Birds seen were four Black-bellied Plover, three Sanderlings, and fifteen Red-backed Sandpipers. One Red-poll Warbler taken in the bushes near this house.

Nov. 6th, wind west to southwest, very fresh, weather fair. Snow Buntings very common. Saw flocks of ten to forty flying about and several pairs feeding on the beach, on seeds washed ashore from the sage grass. Several Ipswich Sparrows and one Field Sparrow seen on the sand bluffs.

Nov. 7th, wind south-west, very fresh, weather fair. Shore birds remain the same. Large number of shore larks distributed over the island.

Nov. 8th, wind south-west, fresh, weather fair. A flock of sixty Brant seen on the flats, and a bunch of eight geese out in the bay. Several Horned Grebe seen near the Island.

Nov. 10th, wind south to south-east, moderate, fresh, weather fair. Three Black-bellied Plover the only shore birds seen to-day.

Nov. 11th, wind west, very fresh. Only birds noticed on the island were Shore Larks, Snow Buntings, and Meadow Larks. A flock of twenty geese flew over the house.

Nov. 12th, wind north-west, very fresh, weather fair. Saw one Greater Yellow-legs. A flock of Bull-headed Ducks seen and a few shot.

Nov. 13th, wind north, moderate, weather fair. No shore birds seen. Shore larks and water fowl flying about in large numbers.

Nov. 14th, wind south-west, moderate, weather fair. The wind being light and the weather pleasant, I improved the opportunity by cruising about in my boat nearly all day. Found a large flock of Bonaparte's Gulls in the bars. One Kittiwake Gull and a young of Wilson's Tern taken, and were the only ones seen. A flock of twenty Brant, and a bunch of four and six Eider Ducks, observed in the channels between the flats. On the beach at high tide found a flock of fifteen, and four Black-bellied Plover, and several small bunches of Red-backed Sandpipers and Sanderlings. Over one-half of Bonaparte's Gulls now seen in adult plumage.

Nov. 15th, wind south-east, very fresh,

weather rainy. Black Ducks seen in small numbers on the meadows which were overflowed, also started three geese off of the meadows. No shore birds seen.

Nov. 16th, wind north-west, weather fair. Large flocks of water fowl flying about. No shore birds seen.

In the Fall migration, shore birds have not been as plentiful as usual this season, and, in fact, several have been scarce. There were no flights of Pectoral Sandpipers that we have in September, and only a few Yellow-legs were seen. It may be that that these birds did not stop with us on account of the meadows not being mowed, so that they could not feed in those places. The Greater Yellow-legs were far short of their usual number. Terns did not stop as late as last season.

### Notes on Some Winter Birds of Milwaukee County, Wisconsin.

BY CHARLES A. KEELER, BERKLEY, CAL.

Milwaukee County lies in about the forty-third degree of latitude and borders Lake Michigan. On the west it is unprotected by hills or mountains and the cold winds from the north-west have an unobstructed path, making the winter climate cold and liable to sudden changes. Milwaukee Harbor is generally filled with ice fields, thus adding to the severity of the weather. For this reason the number and variety of our winter birds is small and we have hardly any which may be properly called residents. Most of the winter Avian life consists of "fair weather birds," who pay short visits but are ready to retreat as soon as the weather grows colder. In fact I think the only perfectly resident bird we have is the detestable English Sparrow. The White-bellied Nuthatch, for instance, breeds about here and in winter its note is frequently heard as it hops about the tree-trunks in quest of insects, yet the winter representatives are not the ones which breed with us. The latter left long before and these are their more hardy brethren from the north.

The following is a list of those birds which have been seen here between the months of November and February inclusive:

Red-throated Loon, *Urinator lumme*. During the winters of 1884-'85 Milwaukee Harbor was covered with ice for several months and the Loons were quite common. Many were shot by local sportsmen and a few were caught

alive. When alighted on the ice, as they frequently are, it appears very difficult for them to rise, probably owing to the position of their feet, and at such times may be caught with little difficulty. A number were caught by a hunter and in time became so tame that they would not leave, but when warm weather came they all died. The bird is not common as a rule, but during severe seasons usually visits us.

Iceland Gull, *Larus leucopterus*. Very rare. They are sometimes taken along the lake shore.

American Herring Gull, *Larus argentatus smithsonianus*. Common all winter. More numerous than any other water bird. Flocks of hundreds are often seen swimming about in the lake.

Ring-billed Gull, *Larus delawarensis*. Rare. They are occasionally taken in the harbor.

Bonaparte's Gull, *Larus philadelphia*. More common as a migrant than as a winter resident. Young birds are sometimes taken in November and I have seen them a month later.

Mallard, *Anas boscas*. A female was shot in December 1887 by W. B. Hull but they are quite uncommon until early spring.

Black Duck, *Anas obscura*. Less common than the preceding and often confounded with the female Mallard.

American Golden-eye, *Glauconetta clangula*. Common along the lake shore all winter. The snow and ice often become piled up on the shore and hunters take advantage of it for concealment. They anchor their decoys in the open water just beyond, and tying a white cloth over the head are very inconspicuous crouched behind the irregular mass of snow. Large bags of Golden-eye and Butter-ball are frequently made in this way.

Buffle-head, *Charitonetta albeola*. Common throughout the winter, the male being more numerous than the female. They are only found in the lake until April when they take to the river.

Old Squaw, *Clangula hyemalis*. Quite erratic in their visits. During severe seasons they are quite common. During the winter of 1884-'85, the markets were flooded with them, and as they are very poor eating they sold very cheaply. They appeared to be starved as they were very lean and thin.

White-winged Scoter, *Oidemia deglandi*. Large flocks are sometimes seen in the bay when the ice has drifted out.

Wilson's Snipe, *Gallinago delicata*. This is not properly a winter bird with us but has been recorded in exceptional cases. Last winter

(1886 and '7) they were taken by W. B. Hull as late as the middle of December. A warm artesian well flows into the Menomine River keeping it free from ice for a distance of several hundred feet. About this open spot the Snipe would always congregate and were quite common until a little before Christmas. This would seem to indicate that it is not so much the cold which drives them south as the freezing over of their feeding grounds.

Bob White, *Colinus virginianus*. The "Quail" has been nearly exterminated in this region, though a few years ago they were not uncommon. Those we now have are generally mere stragglers. Last winter a female was caught in the centre of the city. It had one leg broken and its plumage was very poor. After living nearly a month in seeming contentment it escaped from its cage and was killed in flying about the room.

Ruffed Grouse, *Bonasa umbellus*. The "Partridge" is still quite common with us, probably owing to the dense thickets in which it is found and the difficulty in hunting it. One day last winter I started up six in a small patch of second growth quite near the city.

Short-eared Owl, *Asio accipitrinus*. A moderately common winter bird, always found in the vicinity of farm houses. They seldom do any harm, a large portion of their food consisting of mice. They are, however, mercilessly shot by the farmer whenever the opportunity presents.

Barred Owl, *Syrnium nebulosum*. Quite rare. More common to the north and west of us. Two years ago (winter of 1885 and '6) one flew into a freight car near here and was caught. It never became reconciled to its captivity but died in less than a month.

Screech Owl, *Megascops asio*. Very common. It frequently comes into the city during cold weather, where it finds shelter among the ever-green trees.

Great-horned Owl, *Bubo virginianus*. Rare. I think the few individuals which have been shot in this neighborhood were merely accidental. In less settled districts it becomes more abundant.

Snowy Owl, *Nyctea nyctea*. Variable. Its abundance depends wholly upon the severity of the winter, and some seasons it is entirely wanting. Three were shot near here last winter.

Downy Woodpecker, *Dryobates pubescens*. This bird is one of our old residents and every winter brings forth a troop of them. They are common both in the city and in the woods and

continue the work of exterminating insects during the winter, when nearly all other insect eaters are away.

Red-headed Woodpecker, *Melanerpes erythrocephalus*. Not so common, yet I have seen his scarlet head gleaming through a snow storm. They are in the habit of placing acorns in fence posts and sometimes in tree trunks, as provision against future want. I have seen them eating acorns thus preserved when the weather was severe and other food difficult to obtain.

Horned Lark, *Otocoris alpestris*. Not seen until late in January or early February, but from the time of its first arrival it never leaves, no matter how severe the weather may become. Though it is commonly found in exposed fields and commons near the lake shore, I have seen large flocks five miles inland, feeding in an old wheat field.

Blue Jay, *Cyanocitta cristata*. Common all winter, sometimes associating in small bands. They have a bad habit when pressed with hunger of feeding on small birds. I have seen them with fresh birds in their bills and the natural supposition is that the Blue Jay is the murderer.

American Crow, *Corvus americana*. Abundant all winter, generally flying in flocks. If any animal is killed and its body undisturbed crows will come in large numbers to feed. At such times they are very tame, seeming to forget their natural cunning from their hunger.

Meadow Lark, *Sturnella magna*. I think only wounded birds who are unable to leave stay with us. Last winter Mr. Hull reported one which spent the entire winter near a spring in his vicinity, where it probably found some insect life to feed upon.

Evening Grosbeak, *Coccyzus vespertina*. A very erratic bird from the Northwest. For several years they will be wholly absent and the next winter perhaps will be very common. Last year they were here in full force. Mr. Hull reported them as very common in the south-western part of the county; one female was seen in the city and a large flock was reported about three miles west of Lake Michigan. They appeared to take the place of the Crossbills which were very scarce last winter.

American Pine Grosbeak, *Pinicola nuculeator*. Not so erratic as the preceding though quite scarce. A few visit us every winter but their stay is short.

American Crossbill, *Loxia curvirostra minor*. We can never be certain of seeing this bird, though sometimes it is extremely numerous all winter. Whether it breeds or not is uncertain,

though I think it probably does, as one winter when they had been unusually common (1885 and '6) flocks of young birds were seen in the neighborhood. During the winter they become very tame, and may be readily caught with a net or bottomless bird cage on a long pole. They make interesting pets but seldom live long in captivity. Their manners greatly resemble the parrots, as they climb about by the aid of the bill and use the feet in eating. The males are generally more numerous than females though both sexes are represented.

White-winged Crossbill, *Loxia leucoptera*. Very rare. They are sometimes found with the preceding species, but I think in about the proportion of one to one hundred.

Redpoll, *Acanthis linaria*. One of our common winter birds. They are quite evenly distributed over the country and the winter seldom passes without them.

American Goldfinch, *Spinus tristis*. Common, often associating in flocks. Though their dress changes, their manners are the same as in summer, and anyone who knows them in their summer dress cannot fail to recognize them.

European House Sparrow, *Passer domesticus*. Unfortunately they are very common and I doubt if all the cold of the North Pole could drive them off. People say "the sparrows must go," but the question is how to make them.

Snow Flake, *Plectrophenax nivalis*. Very common. Sometimes ventures into the outskirts of the city where it picks up a living in the streets. It is always found in flocks. The country people firmly believe that the birds always appear before a storm, though there is really no foundation for the supposition.

Lapland Longspur, *Calcarius lapponicus*. Not so common as preceding and never associating in flocks, though sometimes found in company with the Snow Flake.

Tree Sparrow, *Spizella monticola*. Common nearly all winter. They resort to retired swamps and lowlands during cold weather.

Slate-colored Junco, *Junco hyemalis*. Not as common as it is usually supposed to be. It is only found on warm days and then in some sheltered nook where the cold winds cannot reach it.

Bohemian Waxwing, *Amelisp garrulus*. Extremely erratic. For years it will be entirely absent, but during an unusually severe season will become exceedingly numerous. During the winter of 1879 and '80 it was remarkably common and again during the winter of 1881 and '5. They feed on the berries of the mou-

tain ash which remain on the trees all winter. They are very tame and their manner is very pleasing and graceful.

Cedar Waxwing, *Ampelis cedrorum*. Common every winter. Their manners are similar to those of the preceding species and they feed on the same fruit. Never found in severe weather, but very common during snow storms.

Northern Shrike, *Lanius borealis*. Quite common all winter. They come into the city and feed on Sparrows occasionally. Last winter I saw a Shrike kill one and fly off with it although the Sparrow's relatives tried to prevent the tragedy. The Shrikes are engaged in a good cause, only it is impossible for them to resist the temptation to destroy less harmful birds when they have the opportunity.

Winter Wren, *Troglodytes hoemalis*. Found only on "thawing days," when its delightful bubbling music may often be heard, though the agile songster eludes your sight in the dense thickets or underbrush to which it resorts.

White-breasted Nuthatch, *Sitta carolinensis*. Very common all winter. A few winters ago a pair remained in the neighborhood of a farmer's house for several months. The owner was in the habit of putting bread crumbs and oats in exposed situations for them. The bread crumbs were always eaten on the spot, but the oats were stored in nooks and crevices in the back of oak trees. I have also known this species to feed on frozen thorn apples, when other food was scarce, swallowing them entire.

Chickadee, *Parus atricapillus*. Common winter resident. Generally found in the vicinity of farm houses. They seem partial to evergreen trees, the dense branches of which afford them excellent shelter against the cold winds.

American Robin, *Merula migratoria*. Very rare. Two were seen last winter both near the city. One was in company with a flock of Cedarbirds, and feeding, like them, on the berries of the mountain ash. They appear to be growing more acclimated to our cold winters as the years go by. In a few years they may be ranked among our common winter birds.

### A Series of Eggs of *Polyborus cheriway*.

BY J. P. S.

The eggs of the Caracara Eagle (*Polyborus cheriway*) are noted for their beauty. They exhibit great variation in coloration and markings — no two of them being exactly alike.

Set I. April 26, 1887. Lee County, Texas. Collected by J. A. Singley. Two eggs, incubation advanced. No. 1: Light cinnamon red ground color, of different shades of intensity, speckled in a few places with dark reddish brown. The general appearance of the egg is that of a clouded pattern. 2.41 x 1.82. No. 2: Whitish ground color, thickly speckled all over with cinnamon and brownish red. At the smaller end there is a clouded effect produced by the cinnamon red markings becoming confluent. 2.38 x 1.37. This set bears a strong resemblance to certain sets of Gyrfalcons before the writer.

Set II. March 15, 1887. Comal County, Texas. Collected by J. A. F. Three eggs, fresh. No. 1: Bright cinnamon red ground color, almost entirely unmarked save for a few specks and spots of very dark reddish brown. In three or four places small patches of white occur, where there is no ground color, and these produce a very beautiful contrast with the bright cinnamon red. A few granulations are noticeable near the smaller end. 2.46 x 1.88. No. 2: Dull cinnamon red ground color, spotted and splashed with dark reddish brown. A few small patches of white are visible, as in egg No. 1 of this set. 2.44 x 1.84. No. 3: Bright cinnamon red ground color, splashed with rich reddish brown of varying degrees of intensity. There are a number of granulations on this egg, some of them quite large. 2.46 x 1.89.

Set III. March 31, 1885. Atascosa County, Texas. Collected by J. A. F. Three eggs, fresh. No. 1: Dull cinnamon red ground color, marked with a few specks and spots of dark reddish brown. There are several patches of white on this egg, one of them measuring .92 x .78. Some of the dark reddish brown markings occur on this white, making a very handsome effect. 2.36 x 1.79. No. 2: Dark cinnamon red ground color, beautifully clouded and splashed with dark reddish brown, and also some markings of claret brown. There are also a few spots of white. 2.34 x 1.82. No. 3: Dark cinnamon red ground color, heavily splashed with dark reddish and claret brown. 2.41 x 1.77.

Set IV. April 7, 1884. Comal County, Texas. Collected by G. B. Benners. Two eggs, incubation begun. No. 1: Light cinnamon brown ground color, speckled and spotted sparingly with dark reddish brown. Near the smaller end there are a number of spots of white, which run into each other. 2.44 x 1.90. No. 2: Light cinnamon brown ground color, heavily

splashed near the smaller end with dark claret brown. A few dots of white appear near the smaller end. 2.42 x 1.86.

Set V. April 12, 1885. Comal County, Texas. Collected by J. A. F. Two eggs, fresh. No. 1: Brownish white ground color, speckled and spotted with small spots of reddish brown. This is the appearance of the lower half of the egg, but the upper half, or larger end, is of a cinnamon red ground color, marked with large blotches and splashes of dark reddish brown. Over these appear a few white specks, the whole forming a strikingly handsome egg. 2.44 x 1.79. No. 2: Bright reddish brown ground color, heavily splashed and smeared with dark reddish brown. 2.34 x 1.86.

Set VI. March 5, 1883. Comal County, Texas. Collected by E. F. Two eggs, incubation begun. No. 1: Light brown cream color, very heavily splashed with dark brownish red markings. 2.41 x 1.84. No. 2: The ground color of the lower half of the egg is of a bright cinnamon red, clouded and spotted with dark reddish brown. The upper or larger end of the egg is creamy white speckled and spotted with lilac and reddish brown spots. The handsomest egg in the whole series. 2.47 x 1.83.

Set VII. April 12, 1885. Comal County, Texas. Collected by J. A. F. Two eggs, fresh. No. 1: Light cinnamon red ground color, spotted with two shades of reddish brown, one darker than the other. 2.33 x 1.89. No. 2: Light cinnamon red ground color, heavily spotted and splashed with dark and light reddish brown. A very brightly colored egg. 2.31 x 1.90.

Set VIII. March 28, 1886. Cameron County, Texas. Collected by V. C. Three eggs, fresh. No. 1: Light reddish brown ground color, clouded with darker reddish brown. 2.15 x 1.76. No. 2: Light yellowish white ground color, heavily clouded all over with light yellowish brown. 2.10 x 1.73. No. 3: Light yellowish brown ground color, clouded all over with yellowish brown. 2.18 x 1.76. The smallest set of the series.

Set IX. April 4, 1884. Comal County, Texas. Collected by C. R. F. Three eggs, fresh. No. 1: Light brown ground color, heavily splashed and blotched with dark reddish brown. 2.50 x 1.90. No. 2: Umber brown ground color, heavily splashed with dark chocolate brown. 2.26 x 1.80. No. 3: Light brown ground color, spotted and splashed with dark reddish brown. 2.69 x 1.80. The largest egg in the series, and quite abnormally long. There is an egg of this species, however, in the National Museum

at Washington, which is much larger. It is probably the largest egg of *Polyborus cheriway* in existence, and it has been selected, among others, for illustration in Captain Charles E. Bendire's great work on the Oölogy of North America, the publication of which, it is hoped, may soon be begun.

Set X. May 18th, 1884. Nueces County, Texas. Collected by G. B. Benners. Three eggs, incubation begun. The late date at which this set was found, coupled with the fact of the southern position of Nueces County, would lead to the supposition that it was a second laying. No. 1: Reddish brown ground color, splashed with darker reddish brown. 2.26 x 1.82. No. 2: Reddish brown ground color, splashed with darker brown. 2.35 x 1.83. No. 3: Reddish brown ground color, heavily splashed with darker brown. 2.52 x 1.80.

XI. May 30, 1885. Near Grigsby's Bluff, Texas. Collected by R. E. Ratchford. Two eggs, fresh. Very late date. Reddish brown ground color, spotted and clouded with very dark reddish brown. 2.30 x 1.77. No. 2: Dark reddish brown ground color, with a coppery tinge, marked with a few spots of very dark claret brown and a few traces of white. The shell is much granulated, and it is a most peculiar looking egg. 2.35 x 1.79.

Set XII. March 24, 1880. Comal County, Texas. Collected by G. F. Two eggs. No. 1: Light brown ground color, beautifully clouded and spotted with reddish brown. 2.51 x 1.88. No. 2: Light brown ground color, clouded and mottled with bright reddish brown. One or two specks of white are perceptible. 2.48 x 1.83.

Set XIII. March 18, 1886. Comal County, Texas. Collected by C. R. F. Three eggs, fresh. No. 1: Light cinnamon brown ground color, splashed and spotted with dark reddish brown. A few specks of white are apparent. No. 2: Light cinnamon brown ground color, spotted and clouded with dark reddish brown. Several spots of white are scattered over the egg. No. 3: Light cinnamon brown ground color, almost unmarked, save for a few specks of dark reddish brown, and a few spots of white. At the larger end of the egg there are several wavy lines of reddish brown about .07 wide and .60 long. They are very curious, and nothing like them is to be found on any of the other eggs in the series.

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A perfectly albino Tree Sparrow was shot on Cape Cod and brought to Mr. F. B. Webster, Nov. 18, 1887.

### Photographic Ornithology.

BY FREDERIC H. CARPENTER.

When the above title was forwarded me with the request that I append my experience with the camera thereto, I was aware of the extent of the subject which it outlines. Probably no amateur sport, if you choose to so term it, demands such skill and patience as photography, yet nothing is more simple in its rules, but they must be strictly adhered to in every minute detail, or failure is the result; while on the other hand there is no limit to the beautiful results which may be obtained by success, which is easily gained by the proper method of procedure.

It is not my purpose to give the directions as to focusing the camera, or developing the dry plate or printing the proof. As far as books can teach that process can be learned in the many instructive manuals to be obtained of the manufacturers. We will suppose the reader to be in possession of his camera and adjuncts, and further, to be posted as to the method of focusing the image on the ground glass and to expose the dry plate properly, to be able to develop the negative and print his proof, or at least to be aware of the *modus operandi*, of the process. Then nothing further can be done except to practice the art, and I trust I will not be deemed egotistical if I give the way in which I have followed the pastime in connection with ornithology. Do not let the pronoun seem expressive of bigotry, as the only experience of which I can speak is my own. It has been expensive for me to experiment, and the results as given may save time and money to another.

My camera is a 5x8, light and compact, and is a size I find best for general purposes. The lenses are of Waterbury make, such as came with the camera, but I have never regretted the twenty-five dollars which I spent for one of Darlot's of Paris. With a rubber focusing cloth and a folding tripod, I have a very light, portable outfit, complete with the exception of the plateholders. Of these I carry a half-dozen, filling them with dry plates in my dark room and carrying them in a knapsack, or in the large game pockets of my hunting coat. Of the different makes of dry plates I find Carbrett's to be the most satisfactory and the different brands are suited to all degrees and times of exposure. A careful use of the stops are necessary to good prints and as the majority of exposures are on objects at short range, plenty of light should be allowed,

always erring on the side of over-exposure.

After exposing the plate it should be kept from the light, and a memorandum of particulars should be preserved for reference. Then nothing remains but the developing of the plate, to which no set directions can be given, as each individual plate will need treatment according to its exposure, the needs of which will become apparent in the process of development. As that work is purely photographic, we will return to the field. The uses of the camera in relation with ornithology and oölogy are manifold, but in the study of nests and nesting sites it comes into most frequent use.

It is a simple matter to photograph a nest placed in or on the ground, or in a low bush, provided the day be clear, and it is not supposed that any attempts would be made in cloudy or stormy weather. To distinctly bring out in clear print the eggs as they lie in the nest is not difficult; simply allow the light to fall freely into the nest and a near stand-point with large stop will give all to be desired with a short exposure. The difficulty increases when the nest is placed at considerable height, and the only remedy is, if the nest be a small one, to take it with its contents to a favorable position; but in a few cases I have, by mounting a stone wall or fence, or climbing the tree, succeeded in obtaining a short exposure. In very large nests, such as hawks and eagles, a complete view of the tree and nest is the preferable focus and if an instantaneous exposure can be made when one of the birds is flying past so much the better. The writer has in one instance a well branched tree in which a nest of the Osprey was placed, and by aid of convenient limbs focussed the contents with very good results, and is of the opinion it would be feasible in many instances to pursue the same plan of operation.

To photograph a living bird sitting upon her nest, has been considered so difficult and ticklish an operation as to command utmost admiration for the skill of the photographer and wonder at the confidence of the bird. Vivid memories of unsuccessful attempts come before me as I write, which might have been the tale until the present, if a simple expedient had not been hit upon. It is self evident that no sitting bird can be photographed if on a nest higher than the camera unless some convenient mount is at hand. We therefore approach some nest on ground or low bush, and as to be expected, the occupant flies away in alarm. Just as well, we focus the nest carefully, put in the plateholder, one containing a "lightning" braud,

and setting the drop shutter we attach a long stout cord to it which we trail away for a hundred feet or perhaps more, and then we pursue our collecting proclivities for a brief period of time, then returning to the end of the cord, we use our field glass in the direction of the nest and chances are more than even that the bird is comfortably fixed in her home, a quick pull of the cord, and, well; don't use any bromide in your developer and send me a copy of the print if you don't want it yourself, which ten to one you will, and I will be well repaid for my time to tell this.

### Nesting of the Blue-winged Yellow Warbler in Pennsylvania.

BY ISAAC S. REIFF, PHILADELPHIA, PA.

The Blue-winged Yellow Warbler, (*Helminthophaga pinus*) cannot be called a rare species in South-eastern Pennsylvania as it seems to be pretty well distributed in Philadelphia County and those adjoining.

Wherever there is a suitable site for a breeding place, a pair of birds is found. The breeding habits of this species seem to be little known, even to many of the more advanced oölogists, and very little has ever been written on the subject.

This beautiful little Warbler is the most interesting representative of the family that remains with us to breed. It arrives here during the first week in May; and I think it is then already mated, having never found more than one pair in the same locality. Nest building with some begins as early as the 10th of May, as I have found the nest containing young birds as early as June 3rd. To the best of my knowledge it takes at least six days for the birds to complete a nest. On account of its retired habits during the breeding season this species is rarely met with by collectors, unless they are well acquainted with its song.

Early in the morning and during the latter part of the afternoon, the birds are very active hunting for food, but through the middle of the day, while the female is sitting, the male moves around very little, but takes his position on some tall tree situated near the nest, and at short intervals pours forth his little song, to cheer his partner while performing her laborious duties of incubation. I cannot state so positively, but I think that the male assists in incubation.

While the male is singing, there is no trouble

to locate the tree upon which he is perched, but on account of his small size and his habit of remaining on one twig a long time without moving, it is almost impossible to see him.

Many times have I stood under a tree, upon which a male was singing, and looked until my neck ached trying to see the little singer, but all in vain. I might almost as well have looked for a needle in a hay stack, and I was never successful until he made some movement, which only occurred at long intervals. The movements made while singing are so slight that they are hardly perceptible at a short distance, it being merely the throwing back of the head. The site selected for a breeding place in this locality is generally a clump of blackberry bushes, on the edge of a wood. They seem to prefer high ground only a short distance from water.

It has been the good fortune of the writer to find six nests of this Warbler; four containing eggs and two having young birds.

Nest No. 1 was found June 16, 1877, containing four fresh eggs. It was on the ground in a small meadow, about ten feet from a running stream, and about the same distance from a wood, placed between two blackberry bushes, nearly hidden by tall grass, and could only be seen when standing directly over it.

The female was flushed, and immediately disappeared in the thick bushes, where she was joined by the mate, both keeping up a continuous chirping, being careful to keep themselves well concealed. It was a short time before I could see either of them. I retired some distance, and waited until the female returned to the nest, when I approached it cautiously and was able to look down upon it. The female remained quiet, until I disturbed one of the bushes that held the nest in place, when she disappeared as before. The base and outer walls of the nest were composed of dry leaves, the nest proper of coarse strips of wild grape vine bark, becoming finer towards the inner part. The bottom was lined with very fine grass. Outside depth three inches, inside two inches, outside diameter two and a half inches, inside one and a half inches. This nest, to the best of my knowledge, was the first one that was discovered in this section of the country. The set of four eggs is now in the large collection of Mr. J. Parker Norris.

Nest No. 2 was found June 3rd, 1878, in the same meadow, occupying a similar position between three blackberry bushes. It contained five young birds about three days old. The material and construction are the same as in No. 1.

Nest No. 3 was found May 24th, 1885. It was just finished, and I took four fresh eggs from it on May 30th. The situation was on high ground, which had formerly been woodland. Most of the heavy timber had been removed, and from the stumps a thick growth of sprouts had sprung. The space between was grown up with vines of various kinds. The nest was placed on the ground in the thicket, fifteen feet from the outer edge, between three blackberry bushes, about one hundred and fifty feet from a running stream, and the same distance from a wood.

Nest No. 4 was found June 5th, 1887, in the same thicket as No. 3. It was placed in the centre of a cluster of small oak sprouts and was raised about two inches from the ground. It was completely hidden, and could only be seen by parting the sprouts. It contained two young birds and three eggs just on the point of hatching.

Nest No. 5 was found May 28th, 1887, in the same thicket as Nos. 3 and 4. The female was flushed from a thick cluster of poison ivy vines under which the nest was placed. It required a careful search before it was found, but a set of five fresh eggs was my reward.

Nest No. 6 was found May 29th, 1887, about two miles from the site of No. 5. It was placed on the ground, in a field on the edge of a thick wood, between three blackberry bushes. It contained four eggs of the Warbler and one of the Cowbird (*Molothrus ater*). Incubation was too far advanced to prepare the eggs, so I broke the Cowbird's egg to save the lives of the young Warblers.

The same materials were used in all these nests; the only difference being that some were more neatly and compactly built than others.

Nests Nos. 1 and 2 were found in Lower Merion Tp., Montgomery County. Nos. 3, 4, 5 and 6 in Upper Makefield Tp., Bucks County.

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### The Food of Some Raleigh Birds.

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BY C. S. BRIMLEY, RALEIGH, N. C.

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Mockingbird (*Mimus polyglotus*). Feeds chiefly on insects in the summer, and berries in the winter, sharing, however, the fondness of the Catbird for small fruits, though not to so great an extent.

Catbird (*Galuscoptes carolinensis*). Chiefly insects, but is a great nuisance to growers of

small fruit, being especially fond of strawberries.

Black and White Warbler (*Mniotilta varia*). Insects, about one-third of its food consists of green lepidopterous larvæ.

Yellow-throated Warbler (*Dendroica dominica*). Insects, only occasionally green worms.

Hooded Warbler (*Sylvania mitrata*). Insects, no green worms.

Yellow-throated Vireo (*Vireo flavifrons*). Insects, sometimes green worms.

Blue-headed Vireo (*Vireo solitarius*). Insects, about one-third being larvæ; no specimen contained a hairy caterpillar, which is worthy of note, as so few birds eat them. In the latter part of fall it often varies its diet with frost grapes.

Summer Tanager (*Piranga rubra*). Insects, two-thirds at least of those examined contained only different kinds of wasps.

Chipping Sparrow (*Spizella socialis*). Feeds almost entirely on insects in summer, and grass seeds in cooler weather.

Goldfinch (*Spinus tristis*). Its summer diet consists of mulberries, birch buds, thistle seeds, elm buds and sunflower seeds, as observed by us.

Indigo (*Passerina cyanea*). Small seeds and insects in equal proportions.

Blue Grosbeak (*Gauraca carula*). Chiefly corn, oats and seeds; about one-third of its diet only is insects.

Sparrowhawk (*Falco sparverius*). Nineteen specimens examined as follows: Birds, 4; shrew, 1; lizards, 1; insects (mostly grasshoppers), 13. On Nov. 25, I detected this bird in an act of rapacity, I didn't think it capable of. As I was approaching some pine woods, I heard the cries of what I supposed was an excited Pileated Woodpecker. On going to investigate, I flushed a small hawk just out of shot, bearing in his claws a good-sized bird, which was evidently too much for him to carry, as it pulled him to the ground again after he had flown a short distance. I followed the bird and flushed it twice more, both times out of range, but was able to identify it as a female Sparrowhawk; the second time it rose, it left its quarry, which proved to be a good specimen of Bob White. I had once shot a sharp-shinned hawk just as he captured a Yellowhammer, but a Sparrowhawk capturing a Quail was beyond all my expectations.

King Rail (*Rallus elegans*). Out of nine specimens taken this summer, four had gone without their dinner, while the remaining five had feasted on crawfish.

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No. 2.

### The Crows' Winter Roost at St. Louis.

BY OTTO WIDMANN.

St. Louis has many sights worth seeing, all more or less known and appreciated, but one of its greatest natural curiosities, the big roost of wintering crows on Arsenal Island, where thousands and perhaps a hundred of thousand crows congregate, is never mentioned.

The Crow is a common summer resident in this part of the country. Every grove has its pair nesting, and around their favorite feeding grounds a dozen crows may be seen together any day during the breeding season. To these places the young resort when able to fly, and parties of thirty or so are nothing unusual in summer, oftener or sooner heard than seen, especially when the presence of a hawk excites their hatred.

In the neighborhood of their winter roost, they are not seen in any unusual numbers before the middle of September. The river front of St. Louis is sixteen miles long. The centre of the city with the courthouse is about half way of this long line. Four miles south of the courthouse, down the river, is the head of an island, called Arsenal Island (formerly Smallpox Island, because during the civil war the smallpox hospital was situated on this island).

At that time the head of the island was opposite the St. Louis Arsenal, and for that reason the name of Arsenal Island was given. At the present day the island begins one mile south of the Arsenal, having been washed off continually at its head until about five years ago, when it was fixed by strong embankments erected by the government. At the same time, in order to force the current to the Missouri side, the island was connected with the Illinois shore by a dam which obstructed the flow of water so much that the old channel east of the island is nearly dry now in summer, and willows be-

gin to grow in many places. The island is therefore steadily growing; it is two miles long, one-fourth mile wide, mostly grown up with willows and cotton woods, from twenty-five years old at its present head, where the flora is already more varied by admixture of shrubs and climbers, to one year old and entirely new growth at its recent additions. The foot of the island is a sandbank, changeable in size according to the stage of water, at the present low water about half a mile long, and reaching to the Illinois shore in the vicinity of the Bessemer Steel Works.

The island is not inhabited except by a single old man, who keeps a few cows in summer and tries to raise a little corn for their feed. He does not molest any of its feathered visitors, but the island is a much frequented shooting ground for boy hunters who make it very unsafe on Sundays.

This island has been chosen by the crows for their winter roost, and during the fifteen years in which I lived in the neighborhood, I have seen them regularly every winter.

The reason why the crows selected this island seems to be the convenient position in regard to food supply coupled with comparative safety from nightly raids.

The food supply is twofold: On the land, the environs of a large city surrounded by gardens and dairies and pastures, etc.

On the water, the rich harvest provided by the dumping places of the city which throws its garbage into the river to carry it off.

The crow is the typical scavenger, and the choice of its winter roost proves it. If it could live on corn and mice, it would spend the winter hawk-fashion, in solitude around some out of the way corn field, or would scatter in small troops broadcast over the country.

It is no mice destroyer. Neither is it a grain eater. I have examined thousands of pellets (the indigestible parts of food thrown up), which are lying under the trees where they

roost and on the sand where they gather. These pellets show that very few mice enter the bill of fare of the Crow. But they also prove that the Crow has no stomach for grain. Large pieces of maize, and entire kernels of oats and wheat are thrown out indigested, and even the acorn, which must often appease their hunger, is found intact in the pellets.

The Crow eats anything and everything, when pressed by hunger, but it prefers animal matter, and it makes no difference whether it is fresh or old. It turns around the old droppings of the cattle to see if there is anything eatable underneath. It devours a rotten apple for a change of diet, and eats the chicken without asking how long it has been dead or with what disease it died.

When they are so lucky as to find the dead body of a horse, they return to it every day until the bones are perfectly clean. I have even heard of the remarkable sight, when the cadaver of a man was seen driving down on an ice field, surrounded and torn to pieces by hords of crows.

The Crow likes our climate, because we have as a rule very little snow. The snow which precedes our cold spells comes with a high wind, and is therefore drifted. Snow which falls heavily later in the season does not stay long. After a fresh snowfall, or during a sudden cold snap, the Crow's resource is the river. For miles and miles along its shores crows abound, watching at the water's edge, visiting the sandbars and hovering over the river, fishing from its surface choice morsels with which they make hastily for a safe place to eat in peace.

The most animated picture is to be had in times when the river is full of floating ice. At such times it is fairly alive with crows all day. Sitting on the edge of floating ice fields, they drift down for miles, watching the agitated waves until they bring to light the eagerly sought for dainty in the shape of a rosy lung or similar succulency. When such an article has been found, it is accompanied for many miles by troops of hungry crows, and the crowning event takes place when the Bald Eagle joins the revelers and gets the lion's share.

In former years, Herring gulls were not uncommon at such feasts, but of late they seem to get quite scarce around here.

In very hard winters, when the river remains solidly frozen for some time, the crows are very much less numerous, but as soon as the snow begins to go they return, and when the ice breaks up they are back in full force.

From the middle of September when they first appear at the roost, until the middle of October, the increase is slow. The last decade of October and the first of November is the time when the bulk of crows arrive at the roost.

Cool, still days, with gloomy skies and misty air, bring them from the North in loose, straggling flocks, from different directions, but falling into line north of the city, they pass around its western bounds near Shaw's garden, and thence in a straight line towards the foot of the Island where they arrive in a regular stream, which pours in some days from 1 or 2 p. m., until dark.

On arriving above the river the Crow ceases beating the air, and instead of flapping heavily along as usual, it spreads its wings and floats down majestically towards the Island where it first goes for water and then for a perch in the trees. This perch is often changed before the final selection is made. Cottonwoods and willows twenty to thirty feet high are chosen, and a dozen or more find a place in a single tree.

When the November sun has set, the trees on the lower part of the Island are black with crows, and the noise they make and which they keep up until quite dark is heard for miles around. Before the sun is up in the morning the crows leave the roost, but the noise may be heard long before daybreak, and does not cease until they have left. In open weather in fall, hardly any Crow is seen at the roost all the forenoon. The place looks deserted. The crows have gone, and the first rays of the sun find them scattered over hundreds of square miles. We may go out any direction within twenty miles of St. Louis, but we see crows winging their way to some distant feeding ground, scattering as they proceed, spreading over fields and woods, but enlivening the scenery wherever they appear.

They seem to do most of their feeding in the morning. In the early afternoon they begin to collect into flocks, and large congregations may be seen in many places, passing the time playfully until ready to go home, when flock joins flock, trying to keep track if wind and weather permit. On clear still days, they fly at great heights. A gale throws them far out of their beaten path and they fly as low as possible, seeking shelter from the wind behind woods and buildings, and following as much as possible the lowest depressions of the ground.

They first appear at the roost soon after mid-day, but the majority arrive within an hour before sunset; comparatively few come later.

It is not seldom to see them carry food in

their bill to the roost, and different kinds of nuts and acorns, pieces of meat and even bones may be found on the sandbank.

As long as the weather remains mild the Crow sleeps in these places, but when the sharp North winds strip the trees of their leaves, the trees lose much of their attraction for the crows, and they begin to spend the nights on the sand which girdles the island.

In November, comparatively few crows resort to the sand, but when in December a spell of zero sweeps over the island, most of them remain on the ground, covering the vast sandbar at the foot of the island with innumerable black dots, and as many more again stay on the large ice field which stretches now along the shallow eastern shore like a continuation of the sandbar.

Here they are on the bare ice from 4 p. m. till 7 a. m., fifteen long hours, with temperature near zero, exposed to the fierce wind without any shelter at all. How they can stand it, is more than I know, and although I have found frozen crows and crows with stumped toes as reminiscences of former experiences, I still believe, as a rule, they stand the rigors of our winter quite well. The first sunny mild day, and immediately after the coldest spells, the crow thinks of courting, and shows all signs of an amorous crow whose love is not by our temperatures refrigerated.

This courting is done openly, in broad daylight, socially, gracefully. The crows gather on a sunny hillside or some similarly favorable place, talk to each other in the softest crow language, one by one, flies straight up into the air, soars for a moment, floats gracefully down, cheered by the rest, amidst which it alights to see others do what he did.

As soon as the weather becomes mild and the ground free from snow and ice, the crows begin to disperse. This is generally not before February, and sometimes quite late in that month, but by the middle of March their ranks are thinned out very much, and few are left after the first of April. Generally, their departure is not particularly noticed, it being a continuation of their daily flight, failing to return to the roost in the evening.

But sometimes I have seen two birds flying together in a northerly direction, even in the afternoon, and right against the incoming stream of crows. These I take for absconders, ready to dispense with sociability, the two being enough company by themselves. With the beginning of the breeding season, the history of the common roost ends. We do not now fol-

low them into the sylvan retreats where they raise a big family. Let us hope that all will return to us in the fall, bringing with themselves a great army of jolly young crows. Interesting would it be to learn if other cities on the lower Missouri and Mississippi have similar roosts. Omaha, Kansas City, Cairo, Louisville, Memphis, are probably like favored.

### Nesting Habits of the Broad-winged Hawk.

BY J. W. PRESTON.

In hidden retreats, where the tangled wilderness of lakes and forests guards in lonely silence the streams which feed the Red River of the North in Minnesota, I found the Broad-winged Hawk (*Buteo pennsylvanicus*), breeding abundantly.

At home with the Barred Owl, and unmolested by stealthy tread of wild cat or lynx, he is in this region indeed a "bird of the wilderness."

He chooses the heavy, close woods about small lakes, where food is abundant and shelter near, and where he may hide himself. Here he may be seen hurrying to and fro over the water, or darting up along the shore, to glide as quickly out of sight in the woods. My opportunities for studying the habits of this interesting bird have been excellent during the past two seasons, while I was camping out in those unfrequented wilds; and from their inquisitive ways and lack of fear at human presence, I have come to admire them almost as much as any of their kind.

The Broad-wing, though capable of daring dashes of flight, is usually content to seek his food quietly under cover of the woods. Somewhat sluggish, he will permit a very close approach, and frequently I have passed directly beneath the branch on which one sat eyeing me curiously, much as the Barred Owl will do. One morning, while passing along a timber road, my attention was attracted by the cries of a pair of Red-eyed Vireos, and upon investigation, the cause of the difficulty proved to be a male Broad Wing, which had strayed too near their quarters, and now sat confused at their scolding. My approach was not noticed until I had come within ten paces of him.

Melanism in this species is rare. The one example taken by the writer on the shores of Crystal Lake, Northern Iowa, on May 3, 1886, is the only occurrence so far as known, save the two

specimens seen but not secured. See Proceedings U. S. Natural Museum, 1886, pp. 248-249.

One day, while stationed in a tall larch, watching a pair of Swallow-tailed Kites which were nesting not far away, a Broad-Wing seemed much disturbed at my presence. Perching himself on top of a dry larch, within easy gunshot of me, he kept up a continual cry, screaming forth his shrill *e-e-e*. Now and again he darted by me, so close as to fan me with his wings; then he resumed the same perch where he poured forth his doleful strain. This was the first attempt at resistance I had witnessed, as when frightened from the nest, the female will fly heavily away a little distance, and remain among the tree tops an anxious witness of the collector's depredations.

On warm summer days, this bird forsakes its ordinary flapping flight and the shadows of the woods, and indulges in a series of aerial performances befitting a bird of higher station. Suddenly, one will start up briskly from some dead tree in the forest, and begin its upward course in short circles, rising quickly and easily, by gradually widening spirals, assisting itself by vigorous flapping until well up, when the metallic scream ceases, and with full spread wings and tail it soars lightly back and forth, still tending upward until almost out of sight, and with arrowy swiftness the gay fellow descends with long sweeps and curves, closing the act with a horizontal dash far over the woods and marshes.

In migration, many pleasing freaks of flight may be seen, as individuals give chase to some neighbor, while the great company moves along in its onward way.

During the mating season (which begins about the first week in May), the clear, shrill scream constantly echoes in the dim woods, as one answers back to another from some chosen perch. This cry somewhat resembles the call of the Kildeer Plover, and is tolerably well represented by the syllables *chee-e-e-e*—sharp and piercing when the bird is angry, or drawled and pitifully when an intruder comes too near the nest. Frequently have I almost decided to leave the humble parent in possession of her treasures, so pleading was she, and her attitude so indicative of sorrow. Well does the experienced collector know the value of the alarm note which this species utters at the first approach of danger. Many a nest would be passed by unnoticed were it not for that metallic *e* which usually greets his approach, and is an almost certain indication that a nest is hidden somewhere near.

Their food consists of small squirrels, frogs, and, in fact, any small quarry easily captured. Never have I known them to molest the poultry.

A trio of fledgelings, which came into my possession, devoured almost anything offered to them, even cooked beef. It was really amusing to watch their antics. One, who was the strongest, asserted his powers by gathering everything to himself, at which he was kept very busy, as his weaker nestmates would slyly purloin a portion, even at the risk of a flap over the head. They were always quarrelsome and never satisfied.

The nest, which is invariably a new one, differs in appearance from that of the Cooper's Hawk. That species always uses sticks and twigs, which it breaks from trees and bushes, while the Broad-Wing contents itself with sticks gathered from the ground near by, out of which it constructs a heavy structure in an ample crotch of a small tree. But one exception to this rule was a nest found in the top of a very large post oak, which had been broken about thirty feet from the ground. The external dimensions of the nest are less than those of the Cooper's Hawk, while the internal construction is identical.

For lining, the bird uses a few tree bark chips, and later, some leafy twigs of the *Populus grandidentata*, or other tree. When incubation has well advanced, the small drawing feathers of the bird adhere all over the structure, and then it is time to secure the eggs if ever.

The following are a few instances which well illustrate the time and manner of nesting. The nests are from two seasons, 1886-1887, the dates for the two years being almost identical.

May 16th, a set of two eggs was taken from a nest in a crotch forty feet from the ground in a small bass wood tree; eggs slightly incubated.

May 17th, a set of three was found in the crotch of a small elm tree.

May 19th, a set of slightly incubated eggs was taken from the crotch of a small bass wood tree.

Also another set was secured, containing four very richly marked fresh eggs. This was the only instance in my experience where so large a number was found. The nest was placed thirty feet from the ground in the crotch of a small "sugar tree," *Acer saccharinum*, in open woods, forty rods back from the shore of a small lake.

May 20th, I took a set of three from a crotch twenty-five feet from the ground in a post oak.

May 21st, a set of three fresh eggs were found in a nest in a crotch of a bass wood.

Also sets of three well advanced in incubation on the 24th and 28th of May respectively.

A majority of sets taken in the spring of 1886 contained *three* eggs, while those of 1887 had with few exceptions, but *two* eggs, but in the two seasons, more sets of three than of any other number were taken.

*Two* is a good set, and frequently but *one* egg makes up the complement. The time to expect eggs in this region is during the latter half of May, when the leaves begin to thicken the tree tops.

One nest which I secured, and among the first, was especially interesting. After tramping through a tangle of tree tops and upturned roots, thickets and swamps, I came into the open woods along Pelican River, where its waters bound along over huge boulders, and under and among fallen tree trunks which lie across its narrow bed, and where the low bluffs, clad with giant trees, close in upon it, as it is hastening on its way to Floyd Lake. While eating my dinner, a nest of some species of hawk was seen not far away, which proved to belong to a pair of Broad-Wings. But they had chosen a romantic home and one hard to reach, and on the other side of the stream. An elm tree grew on the side of a steep bluff, and one of the branches drooped over the river, about thirty feet from the water. With little difficulty I crossed, on a fallen log, and made the ascent to the branch on which the nest was placed, and by hard climbing and at the risk of life and limb, secured the set of eggs, which, with the adventure, was at that time ample reward for a toilsome day's work.

As Mr. Norris has very accurately described the eggs of the present species in a former number of the *O. & O.*, there is no need to attempt it here. When the Broad-Wing takes his journey to the wilderness of the North, I may follow him again, or never, yet, many pleasing memories will remain of his familiar ways and modest habits.

[Of a series of seventeen sets of eggs of this species before the present writer, there are ten sets of two eggs, six of three, and one of four, the latter being the one referred to by Mr. Preston above. Nine sets came from Minnesota, three from Mississippi, four from Pennsylvania, and one from Massachusetts.

There are two types of coloration observable in this series. Of the forty-two eggs contained in the seventeen sets, twenty-four of them have markings of very subdued tints, ranging from pearl-gray, through lavender-gray and lilac-gray, to ecrû drab, on a faint yellowish, or

bluish-white ground color. These tints have, in many instances, the appearance of being under the shell, and are present in specks, spots and blotches. The remaining eighteen eggs are marked with spots and blotches of fawn color, russet, walnut brown, burnt umber and chestnut, also on a faint yellowish or bluish-white ground color. These latter ones are the brilliant specimens.

Both types are beautiful, and it is difficult to say which is the handsomer. And a set will not always contain all eggs of one type of coloration. On the contrary, the grays will generally be present on one of the eggs which belongs to a set of brilliantly marked ones.

As to size, I wish to reiterate what I said in *THE ORNITHOLOGIST AND OOLOGIST* for January, 1887 (vol. XII, p. 9). No work that I am acquainted with, (except Ridgway's new *Manual of North American Birds*), gives the correct size of the eggs of this species. The latter book states that the size is "1.93x1.56," and that is probably a fair average, although most of the sets in the series before me will measure even less. 1.90x1.54 would probably be nearer the size, and some of them are much smaller.

Mr. Preston is undoubtedly correct in what he says about the number of eggs this bird lays. Four is probably exceptional, and two or three is the full number.—J. P. N.]

### Nesting of the Brown-headed Nuthatch in South Carolina.

BY ARTHUR T. WAYNE, CHARLESTON, S. C.

This article is based on the observations upon this species at Yemassee, S. C., where it is one of the commonest birds that is found there. It is, of course, resident.

The Brown-headed Nuthatch (*Sitta pusilla*), pairs in the latter part of January, and they at once begin to excavate a hole in a dead stump or limb of a tree, usually not more than a few feet or inches from the ground, but again as high as forty or fifty feet. In all such positions I have found their nests. Both sexes help each other in preparing a hole for their nests, while one is hard at work, the other is near at hand urging the one at work with its sweet plaintive notes. When one gets tired, the other immediately takes its place. They are the most industrious little birds I can think of. I have seen them actually at work for three weeks, trying to excavate a hole in a half decayed pine

tree, and they only gave up when they found that they could make no headway.

The Brown-headed Nuthatch is a very fastidious little bird, as regards its nesting place, and they dig half a dozen holes before they are satisfied as to which one they will complete for their nests. The hole and the nest generally takes from four to five weeks to be ready for their eggs. The hole is first bored perfectly round, and then downward to the depth of eight or twelve inches. The nest, which is remarkable, is made of bits of cotton, wool, feathers from the parents, and almost wholly of the substance in which the seed of the pine is enclosed. This leaf-like substance is very light and warm, and the birds use immense quantities of it. I believe some nests must contain upwards of thousands of these little "pine seed leaves."

The eggs are from four to six, usually five, rarely six, and four are found as many times as six. They are white or whitish, speckled, spotted, and blotched with different shades of red and brown around the larger ends in the form of a wreath. They vary, however, to such an extent that eggs found in one nest may be all alike, or all different. They measure about .62 x .50.

I took a set of four eggs last spring which were different from any I had hitherto collected. The ground was pink, uniform, and one was scarcely marked, while the others were uniform pink, with darker, minute pinkish specks.

The earliest date I have taken full sets of fresh eggs was on March 12. Only one brood is raised, unless the eggs have been removed, when I have known a pair to lay three different times. Both sexes assist each other in incubation.

[Thinking that a description of a series of eggs of this species would be interesting, the following has been prepared:

Set I. April 3, 1886. Berkeley County, South Carolina. Collected by Arthur T. Wayne. Six eggs. White, speckled all over with dark reddish brown. Around the greater ends of the eggs the spots are larger and much closer together, in some cases becoming confluent. Their general appearance, however, is much more lightly marked (except at the larger ends), than is usual for this species. There are also a few lavender specks: .64 x .49; .63 x .47; .63 x .48; .66 x .49; .62 x .48; .61 x .49.

Set II. April 5, 1886. Berkeley County, South Carolina. Collected by Arthur T. Wayne. Six eggs. White, sprinkled over the surface with bright reddish brown specks. They are much

more evenly distributed than in Set I, and there is less confluence of the specks at the greater end than in that set: .59 x .47; .55 x .48; (a very round egg for this species); .59 x .46; .59 x .48; .58 x .47; .57 x .48.

Set III. April 29, 1887. Edgecomb County, North Carolina. Five eggs. White, speckled with bright reddish brown. The markings are closer together near the greater ends, and quite confluent: .60 x .47; .59 x .48; .60 x .47; .58 x .47; .59 x .47.

Set IV. April 4, 1887. Edgecomb County, North Carolina. Five eggs. Light creamy white, speckled and spotted quite heavily with bright reddish brown: .61 x .47; .63 x .49; .63 x .48; .64 x .48; .64 x .49.

Set V. April 13, 1887. Raleigh, North Carolina. Collected by Clement S. Brinley. Six Eggs. White, sprinkled with bright reddish brown. The markings are much heavier and closer near the greater ends, where they become confluent: .59 x .48; .58 x .46; .58 x .48; .57 x .46; .58 x .47; .58 x .48.

Set VI. March 12, 1887. Charleston, South Carolina. Collected by Arthur T. Wayne. Five eggs. White, speckled and spotted with bright reddish brown, very heavily near the larger ends. There are a few traces of lavender markings, and the reddish brown spots are larger and bolder than in any of the former sets: .64 x .46; .63 x .47; .61 x .47; .62 x .47; .61 x .47.

Set VII. April 30, 1887. Edgecomb County, North Carolina. Five eggs. Three of them have a clear white ground color, with bright, reddish brown specks and spots, becoming confluent near the larger ends. The other two eggs have a buffy white ground color, marked with bright, reddish brown specks and spots, which are heavier and confluent at the greater ends. These two also have traces of lavender markings: .63 x .46; .61 x .45; .61 x .45; .60 x .45; .62 x .46.

Set VIII. April 5, 1886. Berkeley County, South Carolina. Collected by Arthur T. Wayne. Five eggs. Dull whitish ground color, almost obscured with lavender markings. Over these are thickly sprinkled dull reddish brown specks and spots, which are larger and closer together near the greater ends: .60 x .49; .60 x .48; .59 x .47; .60 x .49; .61 x .49.

Set IX. April 4, 1887. Edgecomb County, North Carolina. Five eggs. Dull white, very thickly speckled all over with bright reddish brown. The markings are larger and closer together near the greater ends: .62 x .49; .59 x .47; .64 x .49; .64 x .49; .62 x .48.

Set X. April 12, 1887. Edgecomb County,

North Carolina. Five eggs. Light creamy white, speckled and spotted with bright reddish brown. The markings are much heavier and closer together near the greater ends: .57 x .47; .59 x .48; .48 x .59; .57 x .47; .57 x .48.

Set XI. March 30, 1887. Yemassee, South Carolina. Collected by Arthur T. Wayne. Six eggs. Two of them have a pure white ground color, and the other four a whitish ground. They are heavily speckled, and spotted with bright reddish brown. The markings are confluent near the larger ends, where they form indistinct wreaths. They are large eggs for this species, and a very handsome set: .68 x .48; .67 x .48; .64 x .47; .62 x .47; .61 x .48; .61 x .47.

Set XII. March 12, 1887. Charleston, South Carolina. Collected by Arthur T. Wayne. Five eggs. Light creamy white, heavily spotted with very bright reddish brown. The markings are brighter and heavier than any other set in the series, and they are exceedingly handsome: .58 x .48; .60 x .48; .58 x .46; .58 x .47; .57 x .46.

The above series would seem to show that four eggs is not as common a number for a set as Mr. Wayne states it to be.

They are beautiful eggs and exhibit great variation in coloration, which cannot well be described, but which is readily noticed on looking at them. They make a very handsome series, and are not equalled by any others of the American *Sittidae*.—J. P. N.]

### Nesting of the Black-billed Magpie.

BY FREDERICK M. DILLE, GREELEY, COLORADO.

The Black-billed Magpie (*Pica rustica hudsonica*), is a common bird in Colorado, where it is found in great numbers in the hills and mountains to an altitude of about eight thousand feet, as well as on the plains, confining itself, however, strictly to the heavy timber along the borders of the largest streams.

The handsome plumage of this bird makes it a conspicuous object, and they stay with us all the year round. As a rascal, a thief, and a rogue in general, he is a great success. They make great pets and are easily domesticated, but are more of a nuisance than a tame crow.

After the young are out of their nests, and for the balance of the year, these birds roam over the country in large flocks, and remind one of a band of pirates more than anything else.

Their habits are of great interest to the observer, and a series of their eggs shows great variation.

The nests are very large for the size of the bird, and are very conspicuous. They are often placed in the branches of a slender sapling, or in some very scrubby willow. In the mountains, the large black pine is a favorite tree with the Magpie, and I have seen as many as four nests in the same tree, and all occupied.

Their height from the ground varies from six to sixty feet. They are well built, and display the bird's cunning to great advantage, for to every nest in use there are generally four or five "dummies" in the immediate neighborhood.

They are made of sticks, cemented together, from top to bottom, with mud; and they measure from two to three feet high, though not more than from twelve to eighteen inches through their greatest diameter. The nest proper, where the eggs are deposited, is well shaped, and is composed of mud. It is at the bottom of the heap. This secures a good substantial roof overhead, and with the two doorways, on opposite sides, it makes the convenience complete, for our magpie, on account of his long tail, cannot go out of the same opening that he enters by. The fact of these two doorways to the nests has been disputed by some writers, but they exist nevertheless. They may not always be elaborately shaped, yet they are always to be found; and it is evident that such a convenience was arranged for when the nest was built. I do not think the female is as proud of her tail as the male, but the birds are to be seen with their long tails sticking through one of these holes while incubating.

As to the lining of the nests, it is either of the finest of grass roots, or black horse hair. Once I found an exception, where the birds had used a large piece of Canton flannel for this purpose; and another time the lining was wholly composed of pieces of string.

The eggs show great variation in size, color and markings. They are usually to be found on the plains about the first of May, and in the mountains about the twenty-fifth of that month. In number they vary from five to nine, but seven is a good set. I once found a set of eleven, in various stages of incubation, in the Foot Hills, on June 8, 1886.

After three seasons' collecting, I have in my cabinet three sets, which show the greatest extremes in size and coloration.

The first set is of five eggs, which are extremely short, and have a very light ground col-

or. The spots and blotches of light drab are of such a light tint as to be almost invisible, and the general effect of the eggs is that they are of one solid color. Minimum length: 1.18; maximum length: 1.33.

The second set, consisting of seven eggs, have a deep green ground color, finely spotted with dark brown. They are much larger than the first set, measuring from 1.57 to 1.52 in length.

The third set, containing nine eggs, are almost globular in shape, one end being about as large as the other, and the width being nearly equal to the length. In color they are of a rich brown, with but few coarse spots.

Eggs with a greenish ground color are not as common a type as those of other colors.

On the whole, the Magpie makes a very good citizen. He attends to his own business, and does not quarrel with the smaller birds. He is on good terms with all domestic animals, and rid our country of a great deal of decaying and refuse animal matter. Were he to leave us, and join his yellow-billed brother in California, we would miss him, yet, at the same time, we hope the Yellow-bill will not come here, as we are well supplied at present.

[A series of six sets of eggs of *Pica rustica hudsonica*, all collected by Mr. Dille, in Weld County, Colorado, may be thus described:

Set I. May 10, 1886. Six eggs. Very light, creamy white, spotted with drab and light lavender: 1.45 x .91; 1.35 x .89; 1.41 x .90; 1.40 x .93; 1.41 x .93; 1.44 x .92.

Set II. May 10, 1886. Eight eggs. Pearl gray, spotted with drab and olive buff: 1.26 x .89; 1.27 x .88; 1.23 x .88; 1.23 x .88; 1.29 x .61; 1.27 x .89; 1.24 x .91; 1.29 x .88.

Set III. May 14, 1886. Seven eggs. Pearl gray, spotted with drab and ceru drab: 1.40 x .90; 1.37 x .91; 1.39 x .92; 1.43 x .92; 1.35 x .88; 1.40 x .92; 1.37 x .91.

Set IV. May 7, 1886. Six eggs. Very light pea green, spotted with drab and olive buff: 1.52 x .95; 1.50 x .93; 1.51 x .93; 1.51 x .65; 1.56 x .95; 1.57 x .94. The largest set in the series.

Set V. May 8, 1886. Nine eggs. Three of the eggs have a ground color of ceru drab, and the other six are of a pearl gray. The markings vary from a drab to a wood brown: 1.34 x .94; 1.33 x .91; 1.27 x .92; 1.22 x .91; 1.29 x .92; 1.24 x .91; 1.28 x .92; 1.23 x .87; 1.21 x .89.

Set VI. May 10, 1886. Nine eggs. The ground color varies from an ceru drab to an olive buff. The markings vary from a drab to a wood brown: 1.22 x .93; 1.22 x .94; 1.19 x .96; 1.24 x .89; 1.27 x .94; 1.22 x .95; 1.28 x .94; 1.21 x .91; 1.31 x .92.

The markings of all the sets are small oblong spots running lengthwise with the eggs, and as a rule they cover the surface pretty evenly, although there is a tendency for them to become confluent near the larger ends. —J. P. N.]

## Birds and Their Relation to Agriculture.

BY J. A. SINGLEY, GIDDINGS, TEXAS.

I have been trying to convince some of my agricultural friends that many of the birds classed by them as "injurious" are really beneficial, and I send the O. & O. the results of some dissections made within a year, giving date and time of day when the specimen was taken:

No. 1. Swallow-tailed Kite (*Elanoides forficatus*). Adult male. Shot from a nest May 5, 1887, 11 a. m. Stomach contained *Coleoptera* and *Orthoptera*.

No. 2. Texan Screech Owl (*Scops asio macalli*). Adult female. Jan. 7, 1887, 8 a. m. Stomach contained *Coleoptera* and one *Mantis carolina*.

No. 3. Florida Barred Owl (*Strix nebulosa alleni*). Adult male. Dec. 2, 1887, 4 p. m. Stomach contained a few feathers and hard parts of *Coleoptera*.

No. 4. American Crow (*Corvus frugivorus*). Adult male. March 2, 1887, 10 a. m. Shot by my neighbor in his corn field; newly planted. Stomach contained two grains of corn, and a large number of cut worms.

No. 5. American Crow (*Corvus frugivorus*). Adult female. Nov. 15, 1887, 10 a. m. Stomach acorns and *Coleoptera*.

No. 6. Texan Screech Owl (*Scops asio macalli*). April 9, 1887, 3 p. m. Adult female. Shot from a nest of eggs. Stomach contained *Coleoptera*.

No. 7. Cooper's Hawk (*Accipiter cooperi*). Adult male. April 23, 1887, 11 a. m. Stomach contained an entire snake fifteen inches long. This hawk had formerly been wounded, a No. 3 shot being imbedded in the carpal joint, and several in the body. It could not fly, but was recovering from its wounds.

No. 8. Cooper's Hawk (*Accipiter cooperi*). Adult female. April 4, 1887, 9 a. m. Stomach contained remains of a small bird, a sparrow. Both the hawk and myself were after a covey of Texan Quail, and we "met by chance."

No. 9. Sparrow Hawk (*Tinnunculus sparverius*). Adult male. Jan. 15, 1887, 3 p. m. Stomach contained grasshoppers only.

No. 10. Great Horned Owl (*Bubo virginianus*). Adult Female. Feb. 28, 1887. Shot from a nest. Stomach contained remains of a large "wood rat" and feathers of a sparrow.

No. 11. Florida Barred Owl (*Strix nebulosa alleni*). Adult female. March 19, 1887, 2 p. m. Shot from nest. Stomach contained feathers and small bones. A dead Cardinal Grosbeak was lying in the cavity of the nest, close to the eggs.

No. 12. Mississippi Kite (*Ictinia subcaerulea*). Adult male. Sept. 3, 1887, 2 p. m. Stomach contained grasshoppers and beetles.

No. 13. Red-tailed Hawk (*Buteo borealis*). Adult Male. Dec. 2, 1886, 12 m. Stomach contained part of a fox squirrel.

No. 14. Red-bellied Hawk (*Buteo lineatus elegans*). Adult female. April 13, 1887, 9 a. m. Shot from nest. Stomach contained part of a bird (Texan Quail).

No. 15. Sharp-shinned Hawk (*Accipiter fuscus*). Adult female. Feb. 16, 1887, 10 a. m. I shot this specimen while feasting on a Towhee that it had just caught.

On January 22, 1887, a fusilade of small arms took me over to my neighbor's to ascertain the cause. I found that he had sowed forty acres in oats, and to use his expression, "the cussed field larks [Meadow Larks, *Sturnella magna*], were going to eat it all up." This Lark is common here during the winter in large flocks. There were several hundred of them in the oat field, and my friend and his two sons were patrolling the field. Three of the larks had been shot, and I dissected them all. Each of them had a few of the oats in the stomach, but the bulk of the contents was cut worms and root-feeding larva. My friend could see that these would have to feed on the crop if they had not been eaten by the larks, and he called off his army. The field yielded a good crop of oats, notwithstanding the larks had full sway during the rest of the season.

It will be seen that the food of all the birds examined consisted mainly of insects, and a majority of them presumably injurious, either in the perfect or larval state. A few of them had captured birds or eaten grain, but this is to be overlooked in comparison with the number of insects, etc., destroyed.

The Red-tailed Hawk picks up an occasional chicken, but not often. The only one that is really injurious is the Red-bellied Hawk. He is an unmitigated pest, as he will depopulate a farmer's poultry yard if not killed.

I had occasion this year to make some investigations about the killing of birds, and find that there is much more of it going on than is supposed.

The chief destroyer here is the Freedman. This important personage will always manage to get a gun of some kind, and as he won't work any more than is necessary to keep alive, he will be found in the woods with his gun very often, and he can always be tracked by the number of small birds that he kills from pure love of killing, letting them lie where shot.

Another source of wanton destruction is found in the (so-called) sportsmen of our little towns. These gentry only get out to our lakes three or four times a year, but when they do go they shoot everything that wears feathers. I came up with one of those sporting parties once and counted some seventy odd Herons, Coots, Grebes, and other birds (harmless and not fit for food), lying about the lake where they had been killed by these sportsmen(?) On asking why they killed what they could not use, I was informed that they did it to "keep in practice." Some of these people are horrified because I rob "birds' nests." The killing of a bird is justifiable if there is some use made of it afterwards, but is this wholesale killing "for practice" justifiable?

### Data Blanks.

BY A. M. INGERSOLL AND WALTER E. BRYANT.

Since the introduction and general adoption of useful data blanks for oölogists, the annoyances often attendant upon exchanges in this branch of natural history have been greatly diminished. The time which is saved by not having to copy the data from a note book on to a letter sheet as formerly, and from which it was often transferred to a register by the receiving party is considerable. The printed form which encourages the recording of copious notes is obviously in its favor, while its neatness, which is incomparably superior to the letter sheet, must recommend it to all.

The great diversity in size, shape, type and arrangement of the data blanks which are used, has probably been noticed by those who make exchanges, while the desirability of a standard size with the same *order* of entry which all the oölogists of this country would use, must be apparent to every one who will give the subject a little attention.

In looking over the numerous data received

by us during the last three years, no less than one hundred and twelve different styles were found. These varied in size from 5-8 x 1 3-4 inches to 5 5-8 x 7 inches; some were nearly square, others long and narrow, perforated and gummed like postage stamps. These various sizes cause considerable annoyance when the data are placed with each set in the cabinet, as is customary with many collectors; if kept loosely in a box it is difficult to find the small ones which are liable to be lost.

The paper used in the one hundred and twelve samples before us, range from fine linen (the best, on account of its lightness for mailing), to thin bristol board.

Memoranda have been received on the back of bill heads and upon irregular shaped scraps of paper, written with pencil, colored ink (which has since faded), and with a type-writer.

Some may argue that these all accomplish the same end, true, but they are so troublesome to fill and difficult to find the desired item upon, that they are mentioned with the hope that their use will be discontinued.

Another point upon which harmony is desirable is the order of recording the data. For instance, the "Set Mark" has been found in every conceivable place upon the blank, when it should follow close to "No." and "Species."

Let any one take his package of notes, and going rapidly over the different ones see how long it takes to find even this one item.

The data blank is undoubtedly the best and most accurate method of recording oölogical notes, and the use of those arranged in book form with stub attachment are highly recommended. Upon the stub may be entered, at the time of exchange, the main items of the data, which, in case of loss, can be duplicated, a very important consideration.

After a careful study of the different styles of blanks which are now in use, and from conversation and correspondence with many oölogists, a convenient data blank and stub, with neat and not too conspicuous type, medium size, which makes it suitable for mailing, light lines and convenient arrangement of essential items, has been designed by us and received the approval of oölogists.

It seems to require no explanation, being in part similar to some of those in use. The word "Identity" has been omitted, as it is regarded as superfluous. When no confidence is had in the collector, the mere additions of such words as are commonly used in filling this space, viz., *Correct, Certain, Sure, Positive,*

*Good, Perfect, Known, O. K., A. I., Bird heard, Bird seen, Bird flushed, Bird shot, Bird on nest, and By comparison,* do not enhance the value of the specimens. We have yet to receive a memoranda where the identification is given as *Poor, None,* etc. Such information as *Male bird sitting, Bird taken* (especially if it is preserved and numbered), is of interest, and may be included under *Remarks.*

Various terms have been used to describe the stages of incubation, among which we notice, *Well along, Sat upon, Feathers on embryo,* etc., terms that are very vague in their signification. The following, with their abbreviations, we have used, and in nearly every case they have been found to answer all purposes, viz., *Fresh, Commenced (Com.), Small embryos (Sm. embs.), Large embryos (Lg. embs.)*

It has been customary in making exchanges to indicate the number of sets offered by the numerator of a fraction and the number of eggs in the set by the denominator, as 1-5, signifying one set of five eggs; 4-5, meaning four sets of five. A single set of five with nest would be expressed in n-5; four sets of five with nests would be written n 4-5.

In filling out the blank opposite "No. of Eggs," a single number is sufficient when a complete set is recorded, but it sometimes happens that one or more eggs has been broken, then a fraction should be used, the numerator always showing the number of eggs remaining, and the denominator the number in original set. For example, we were sent a set of five Says' Phoebe, one of which was broken, the entry in this case would be 4-5, that is, *four-fifths of a set.* The full set, if perfect, would have been entered as 5-5 (or 5).

It must be apparent that if but two fresh eggs are found and taken from the nest of a species whose complement is known or reasonably supposed to be larger, that the set is incomplete, and as the exact number which would have constituted the set is unknown, they would be expressed thus: 2.

Of course, these fractions used on data blanks do not conflict with the fractions used in offers of exchange, as it is generally understood that no one will offer incomplete sets without special mention.

The word *Remarks* has been substituted for *Nest*, for the reason that sets are often received without any accompanying description of the nest or its site, and that other items can more properly be here enumerated.

We may add that it is best to use a separate blank for each set, and to make the entries with

black ink, also to use the stub-book for recording every set taken, whether it be a duplicate one or not, thereby preserving a concise record of oölogical field work.

The need of a convenient arrangement whereby the memoranda received in exchange can be filed so as to be easily accessible, has suggested the use of a blank book in which they may be attached with narrow hinges (like postage stamps in an album), in the order in which they are received. The hinge will admit of their being removed without damage, which could not be done if they were pasted down like scrap-book clippings.

When removed, any items concerning the set or exchange can be written upon the space occupied. The space not to be again used for other data.

### Deer Hunters' Assistants.

BY WALTER HOXIE, FROGMORE, S. C.

For some time past my only days afield have been devoted to deer hunting. My somewhat phenomenal success has been due entirely to my past years of ornithological work, and the following notes on the subject seem peculiarly appropriate for the pages of the *O. & O.*

The common Crow is somewhat noticed as a talker. His distinct voice in the woods on a windy day occasionally bears a slight resemblance to the questing notes of a young hound. But the warning cry to his companions is an unmistakable sign that the deer has passed under his lofty perch. If a man is the cause of his alarm, he flies off at right angles with the intruder's course, and his warning is only echoed by his companions as they also take wing from impending danger. But above the fleeing buck he pauses for an instant with excited notes; his comrades start towards him with similar cries, and as they course over the tree tops the story is told. A few silent, rapid steps, disappointment is avoided and the tragedy occurs. Without the assistance of the crows, the deer would have passed on the other side of the ridge and been off and away to the next island.

But the Crow is by no means the hunter's only feathered assistant I know. I have in mind one stand now. (Deer are always shot from a stand on these islands and with buckshot, being first roused by dogs. The cover is too thick for the rifle, and the shots that are got at them are more like woodcock shooting than anything else in my experience). This stand

is known by a name which benignly translated into the polite vernacular means, "a suitable place for profane ejaculations." The deer seldom comes out home with a rush, but sneaks past one or the other of four little open strips in the woods. Upon the numerous dead trees round about, the woodpecker keeps up a steady tattoo. When stationed here, I keep my ears at their widest stretch for any cessation of work among the little carpenters. If detected, his silence is to me at once more elegant than words. I raise my gun along the little sun-lit alley that he has indicated, the sparrows scatter to the right and left, and—well, I came very near shooting a man there one day. I saw his axe in time though, and sank back in a cold sweat. But a buck came through that same afternoon and met his fate.

One of my favorite stands is close by the sea, at the end of a narrow strip of high grass. The waves keep up such a steady roar that no other sounds except the loudest are audible. This is a spot that the deer always approaches with extreme caution, for this objective point when getting the crow is a mile of clear, open sand beach, and at the end of it a long swim in rough water. So he comes through the grass and scrub palmetto, gliding low and noiselessly as a coon. But all winter, this thick, warm covert is the chosen feeding ground of innumerable towhees, song sparrows, wrens and other close-ground frequenting birds. Their flight, radiating upward to higher twigs and bushes, gives me my clew, and the murder is oftenest done at about twenty paces.

In closing, I cannot forbear a remark which to the thoughtless will sound puerile, but with the true love of nature will carry its due weight. I always feel a regret at killing a deer, but I feel still more regret at missing him. Its because they are so beautiful.

### Notes on Some Minnesota Winter Birds.

BY GEO. G. CANTWELL, MINNEAPOLIS, MINN.

The following birds have come under my notice within the last five years during the winter months, in this northern locality:

1. Bob White. Very scarce in this locality, but are occasionally seen.
2. Ruffed Grouse. Common in all hard wood timber.
3. Prairie Hen. A few flocks are to be found in large fields wherever there is a tall growth of

weeds, shrubs, etc., but are exceedingly wary.

4. Cooper's Hawk. Occasionally seen.
5. American Goshawk. One of these fine birds was brought to me by a farmer in November, 1887. It was an old male with the eyes quite red.
6. Long-eared Owl. The commonest of all the owls in this locality.
7. Barred Owl. Very few are seen.
8. Screech Owl. Killed one in the red plumage in December, 1887.
9. Great-horned Owl. Quite frequently seen in deep woods.
10. Snowy Owl. Quite a number are killed every winter.
11. Hairy Woodpecker. Quite common.
12. Downy Woodpecker. Also common, but more confined to the city than the Hairy.
13. Red-headed Woodpecker. I collected two in the middle of the winter last year in poor condition, and with empty crops.
14. Flicker. One individual seen last winter.
15. Blue Jay. Always present at roll call.
16. American Crow. A few remain in tamarac swamps throughout the winter.
17. Bronzed Grackle. This bird should hardly be listed, as the only instance of its occurrence was on December 3, 1887, when I killed a female, with most of the quills of one wing missing, probably not being able to make the journey south.
18. Common Redpoll. Common, feeding on certain weeds in field. Last February, I collected one of these birds having the crown and rump bright gold color instead of crimson, quite a curiosity.
19. American Goldfinch. Flocks of ten to twenty are occasionally met with.
20. Snow Bunting. Very common along the railroad track where they feed on wheat.
21. Lapland Longspur. A flock of these birds is occasionally seen, but by no means common.
21. Chestnut-collared Longspur. A few are seen, but very seldom.
23. Slate-colored Junco. A single specimen was seen last winter in a lumber pile.
24. Pine Grosbeak. Common on the outskirts of the city; mostly in the gray plumage; I have seen but one in the red.
25. Evening Grosbeak. Very common in the city, where they feed on the seeds of the maple and ash; they are very tame, allowing a person to pass within a few feet of a whole flock; they generally arrive about the first of December, but at present (Jan. 6), they have not yet put in appearance, with the exception of a single one seen December 2.

26. American Crossbill. An occasional flock pay us a visit.

27. Bohemian Waxwing. On the coldest days these birds appear in large numbers, but leave as soon as it grows warmer.

28. Northern Shrike. Solitary individuals may be seen sitting on fence posts and telegraph wires. They are very shy and hard to approach.

29. Winter Wren. Several [seen around sheds, lumber piles, etc.]

30. Brown Creeper. Seen quite often on warm, sunny days; they make a noise almost exactly like the Bohemian Waxwings.

31. White-breasted Nuthatch. About as common as the creepers, but generally found in pairs.

32. Chickadee. Confined to oak woods, where they may be found in troops of five to ten.

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### The Rough-winged Swallow.

BY W. E. SAUNDERS.

For a bird of its comparative abundance there is probably none so little known and studied as the Rough-winged Swallow. In this portion of Ontario it is quite common and is generally found near water; frequently in company with the Bank Swallow. In appearance, flight and general habits it resembles that species very much and the two are often confounded. It may, however, be easily recognized when in the hand by the roughness of the edge of the first primary, or by the breast which is ashy from the chin to the belly, contrasting with the white under parts of the throat, across which is the well-known dark belt. It may generally be recognized on the wing by the same means and assistance may be received from the brighter, more metallic brown of the back, the slightly wider wings and slightly larger size, though until one is tolerably familiar with it the only reliable means of identification while on the wing is the breast coloration. Probably half of the ornithologists in Ontario and the eastern and middle states who are unacquainted with this bird have seen it dozens of times, but have supposed it to be the Bank Swallow.

As above stated the habits of the two are very similar, and they often breed near together, though not more than one or two pairs of Rough-wings will be found with the Banks. The holes of the Rough-wings are always much larger and deeper than those of the other much resembling a short Kingfisher's hole.

The nest is built of straws, generally finer than those in the Bank Swallow's nest; which is accounted for by the fact that the Rough-wings never in my experience use feathers as a lining, while the Bank Swallows always do.

There is about as much difference in the size of the eggs as of the birds, those of the Rough-wings being slightly larger both in length and breadth. In the number of eggs in a set, however, there is a marked difference. The average number of eggs in a set of Bank Swallow is four, seldom three and often five, while five is a small set of Rough-wings and six or seven is the usual number, probably eight are sometimes taken.

I have paid some attention to these birds to try and discern some difference in the voice but have so far been unable to do so though opportunity has been ample. While the nesting habits as described above have been my invariable experience, I am well aware that in other parts of the country habits differ and cavities in rocks and holes in abutments of bridges are the chosen nesting place, and it would be interesting to discover where this bird uses rock, and where sand and if possible why its tastes vary in different localities, and to this end I would be glad to receive information from all parts of the habitat of this species, stating the breeding places, whether in sand or rock and whether in the locality named both places are attainable; the average set taken, the material used in the nest, the approximate length and width of the hole and the reasons which may occur to anyone as to why its habits are as stated. A postal card bearing even on one point only will often be valuable evidence and the result will be furnished to the O. AND O. for publication as soon as practicable.

### Queer Actions of a Song Sparrow.

BY C. C. MANFIELD, WILLARD, N. Y.

During the early summer of the year 1885, while cultivating potatoes, I nearly filled a Song Sparrow's (*Melospiza melodia*) nest with loose earth thrown up by my cultivator. The nest was built near a tuft of a plant, called sheep sorrel by farmers, and was nearly concealed. I had no idea of there being a nest near me until I saw the female pass almost directly between the teeth of the cultivator. I then stopped work and began looking around. The nest, which I soon found, had passed, together with the tuft of sorrel, between the two

outer teeth of the machine, but neither had been injured. As I stooped down near the nest the old bird flew from the fence a couple of rods away and alighted on the ground near me, fluttering up with a great show of feathers, very much as the old bird usually does when she is disturbed upon her nest, until she was quite near my hand which I had extended towards the nest. She would rise and fly at my hand, seeming to believe that it was the only thing that would harm herself or nest. In flying around she actually passed between my feet several times as I was seated on the ground beside the nest. I waited by the side of the nest fully twenty minutes but the bird did not offer to leave, but was, nearly the whole time, within two or three feet of me. I touched her several times with the index finger of my hand by moving it slowly to her, but she would only turn and strike at it and slowly back out of reach.

I visited the nest several times during the next two or three hours, but she was always there and would not leave the nest until I had placed my finger under her and raised her from it.

Each morning afterwards, for a week or more, I visited the nest regularly. She would nearly always be sitting upon it and would not leave until I had pushed her from it, and on one occasion she, instead of being pushed off to the ground, placed her feet upon my finger and pecked at it while standing upon it. Then I pointed one of the fingers of my other hand at her and she turned upon it, much resembling an enraged canary. In a short time I accidentally moved the hand she was perched upon and she jumped to the ground. Never after this did she venture to sit upon my hand. I watched her for some time with the same results, but finally left her to her family.

The nest was built of the usual straw and hay outside and lined with fine roots, as I have nearly always found to be the case where the nests of this species is placed upon cultivated ground.

At the time I first saw her, the nest contained four eggs. They were rather dark, but I think they were about the usual dimensions of this species' eggs. I did not disturb the bird or nest on account of the strange actions noticed, but in a few days I found young birds in the nest.

Has anyone noted any similar experience with any bird of this species? As for myself, I am totally unable to account for the actions of this one.

### Notes on the California Condor.

BY CLARK P. STREATOR.

While engaged in studying the birds of California for the past four years, I have taken an interest in the study of the California Condor. Only a few years past it was found common, but now nearly extinct.

During my travels through all parts of the state only three living specimens ever came under my observation. They now rarely descend from their mountain home, which is chiefly in the more rugged peaks of the coast range.

Their habits seem to differ but little from that smaller member of the family, the Turkey Buzzard, and with these birds I have in every instance seen them associated. When once ascending a steep canon of the Santa Ynez mountains and coming in view of their lofty summits, I saw a Condor on the wing circling in the air high above my head. Below him were a multitude of Turkey Buzzards with wide spread wings. They were sailing around appearing to have scented a carcass of some dead animal that might have been lying on the plain. As I drew nearer the sight became a grander one. High above me, almost to the clouds, the great bird was soaring, now descending, then rising without any apparent movement of its mighty wings. He seemed to glide with the ease of a falcon. I watched him for fully twenty minutes, until he finally disappeared behind the mountain tops far beyond. Such sights are few to a naturalist of our country, and I recorded it as one of the most wonderful sights I have ever witnessed. In Brewer, Baird and Ridgway's work on North American Birds, "The California Condor is given as found in the least amount of territory of any of the large raptorial birds of the world." Only a few years since it was found as far north as the Columbia river. I have only found them in two of the counties of Southern California and from making many enquiries from practical observers I cannot believe at the present time that the bird can be found only inside of a territory of about two hundred miles square and that this limit is gradually diminishing.

Now the question arises, why has the bird decreased in numbers so rapidly?

The only reason that I can assign is that while the stock grower on the ranges has suffered from the ravages of bears and California lions that it was a custom of the herders to

carry a bottle of poison with them and make use of it on every carcass of a dead animal found. The almost harmless Condor was usually the first to suffer. Whole flocks of these birds may have perished from this cause, and thus in a few years one of the largest birds of flight of the world will be exterminated if some measures are not taken for its preservation.

### A Few Days' Outing.

BY ELWIN A. CAPEX.

Last May while visiting my friend, Mr. F. H. Carpenter, at Rehoboth, Mass., we took a few days to ramble through the woods and fields, collecting what birds and eggs we came across that we cared for.

On the 17th we arose early and had wandered leisurely along, securing a few small birds, until about ten o'clock when we came upon an old mossy orchard of which many of the trees had decayed and fallen or had been toppled over by the winds. Here we found the Parula Warbler (*Compsothlypis americana*) in abundance, singing and flitting about from limb to limb and tree to tree in great merriment. As I stood gazing up among the mossy branches I saw what proved to be a beautiful and well concealed globular nest composed of *usnea* moss, with which the tree was literally covered. It was hanging about nine feet above the ground, lined with a few horsehairs and bits of down, and contained two newly laid eggs. We also found many other nests in different stages of completion. On the 21st I found another nest of this species containing a set of four eggs, attached to the twigs of a small alder bush two feet above the ground over a pool of water about a foot in depth. These are the first instances that I have known of this bird's breeding so early in the season in Massachusetts, never before having found a full set before the first of June.

The following day, May 18th, we visited the colony of Fish Hawks (*Pandion haliaetus carolinensis*), already made famous in the pages of the O. AND O. and although, as we could plainly see that someone had preceded us a few days, we took four sets of three, two of two, one of four and one containing but a single egg. The set of four is of extremely rare occurrence.

On the 19th while going through a hard wood tract I saw a Hairy Woodpecker (*Dryobates villosus*) fly past me and alight on a wild apple tree within a few yards. Judging there

was a nest near by, we at once began a search, and after straining our eyes for some little time we were about to give it up, when within a few feet of us in a live maple about ten feet from the ground, I saw the head of the female peeping out of the hole. She immediately dropped back out of sight and it was with considerable pounding and rapping with our hands and a club that we could induce her to leave the nest. Obtaining a hatchet at a house near by we soon exposed four pure white eggs about fifteen inches below the entrance of the excavation. This I believe is the second record of the breeding of this species in Bristol County.

### The Shrike and his Prey.

BY S. W. DENTON.

An amusing incident occurred yesterday, Nov. 27th, that perhaps is worth relating. It being an unusually warm, sunny day for this time of year, I thought to take a walk through the fields and woods along familiar paths where in seasons gone by I had found many a nest, and during the heat of day in summer had sat under cool, shady trees to watch and study the birds.

In my walk I saw a number of Snow Birds (*Junco hiemalis*), Chickadee (*Parus atricapillus*), Blue Jays (*Cyanocitta cristata*), a few Tree Sparrows (*Spizella monticola*) and a Brown Creeper (*Certhia familiaris cufa*). While watching the latter as he pried around under pieces of bark on an oak tree, I suddenly caught sight of a Butcher Bird, (*Lanius borealis*) in pursuit of a sparrow who dove into the thickest part of an old apple tree quite near me to escape his pursuer, who immediately followed the fugitive, both coming out on the opposite side. I thought it was all "up" with the Sparrow but what was my surprise to see him again return to the tree and disappear in a hole in a decayed limb. For a moment the "Butcher" seemed nonplused so great was his surprise, and then as though a happy thought had struck him, he started in head first after his dinner, but alas, the hole was too small; in vain he made repeated attempts but it was "no go." Not discouraged, though apparently disappointed, he took a commanding position on a branch overlooking the hole to wait for his intended victim to show himself. But no sir, Mr. Sparrow knew better than to do this, and though I watched the tree with *Lanius* a full half-hour Mr. Sparrow did not show his head. At last while endeavoring to approach nearer to the

tree the "Butcher" took fright and departed.

I regret much at not being able to assert positively what kind of a sparrow it was, but as the tree was a rather awkward one to climb and throwing a stick against the dead limb did not dislodge the little fellow I left the spot, but think the bird was a Tree Sparrow (*Spizella monticola*).

### Sale of an Egg of the Great Auk in London.

The following is taken from the *Pall Mall Gazette* of Dec. 14, 1887. The sale was held on Dec. 13th:

"An egg sold for 160 guineas.—At Mr. J. C. Stevens' auction rooms in King street, Covent Garden, this week, a large number of ornithologists assembled to witness the sale of an egg of the Great Auk. Before offering the lot, Mr. Stevens remarked that, in 1880, two eggs of this bird, both of which had been broken, were sold by him, and that they fetched 100 and 102 guineas respectively. Of the recorded eggs, twenty-five were in eighteen museums, and forty-one in nineteen private collections, forty-three out of the sixty-six being in Great Britain. The first bid of fifty guineas was made by a well-known ornithologist, and this was followed by sixty guineas from Mr. L. Field, to whom the egg was eventually knocked down at 160 guineas."

### Naphthaline.

In a previous issue of O. AND O., I had a note on Naphthaline, advising its trial as an insect prevention. Since then I have used it faithfully, putting some in my arsenic, and pouring a little into each skin before serving up, and I am more than pleased with the results. In my cabinet of about 1200 skins, I have hardly noticed a moth all summer, and have not yet found traces of the ravages of either moth or beetle this year, while before, I was much troubled with them. I would strongly advise every one to use it as it is much preferable to camphor, and I believe destroys the necessity for corrosive sublimate solution on the bill and feet. For those who object to the smell of Naphthaline, a little pure oil of cedar exposed in the room will answer the purpose fully as well and will alter the character of the smell considerably and the oil itself is useful as well as the naphthaline.

W. E. SAUNDERS.

### Albino Winter Wrens.

BY C. S. BRINLEY.

On Nov. 11, while out collecting, my brother killed a Winter Wren which had the whole plumage, white or whitish. Next day, while collecting within a few yards of the same place, he took another Wren with white at the base of the wing quills. The query naturally suggests itself as to whether they did not belong to the same brood, and this is the more probable, as in the second one there was precisely the same amount of white on each wing. I append descriptions as of some interest: Winter Wren, female, whole plumage more or less white or whitish, nuder parts unmarked, markings showing faintly on wing and tail, upper parts with a wash of brownish, top of head darkest; taken Nov. 15, (L. 3 7-8, W. 1 3-4, J. 1 3-16, E. 5 5-8.) Winter Wren, male, partial albino, the basal three-fourths of the primaries and secondaries pure white, a few white spots on wing coverts, the white markings on wing exactly similar; taken Nov. 15, (L. 4 3-16, W. 1 15-16, T. 1 5-16, E. 6 1-8).

### CORRESPONDENCE.

#### Do Birds Change Their Habits.

BY HARRY R. TAYLOR, ALAMEDA, CAL.

EDITOR O. & O.:

Dear Sir:—Early in the month of December, when the sunsets were still beautiful and tarrying winter had only begun to announce his arrival, I strolled one sunny afternoon to the bay shore to see which of the waders were exhibiting their manoeuvres to the children that play on the sands, and how the ducks, lately come from the North, were managing to elude the merciless guns of the hunters.

I found the tide quite high, and my web-footed friends far out in the stream, while the only *grallatores* visible were a few small flocks of Least Sandpipers (*Tringa minutilla*), of whom I venture not to inquire as to the whereabouts of their numerous relatives of the water bird tribe, probably at that time off in the marshes searching industriously for food.

While noting the absence of shore birds, I saw a bird, not much larger than the little Sandpiper, trotting along by the waves and picking up its dinner like a veritable snipe. Soon I saw

others similarly employed, and further on, a large flock gaily deporting themselves on the beach. The birds were American Titlarks, which are very common here in the winter.

We have several marsh sparrows that make their habitual abode within the province of the water birds, but the sight of the Titlark, which we have become accustomed to think of only in connection with birds of the field, associating in an entirely reckless manner with common sandpipers close by the fishy sea, seemed to me strikingly singular.

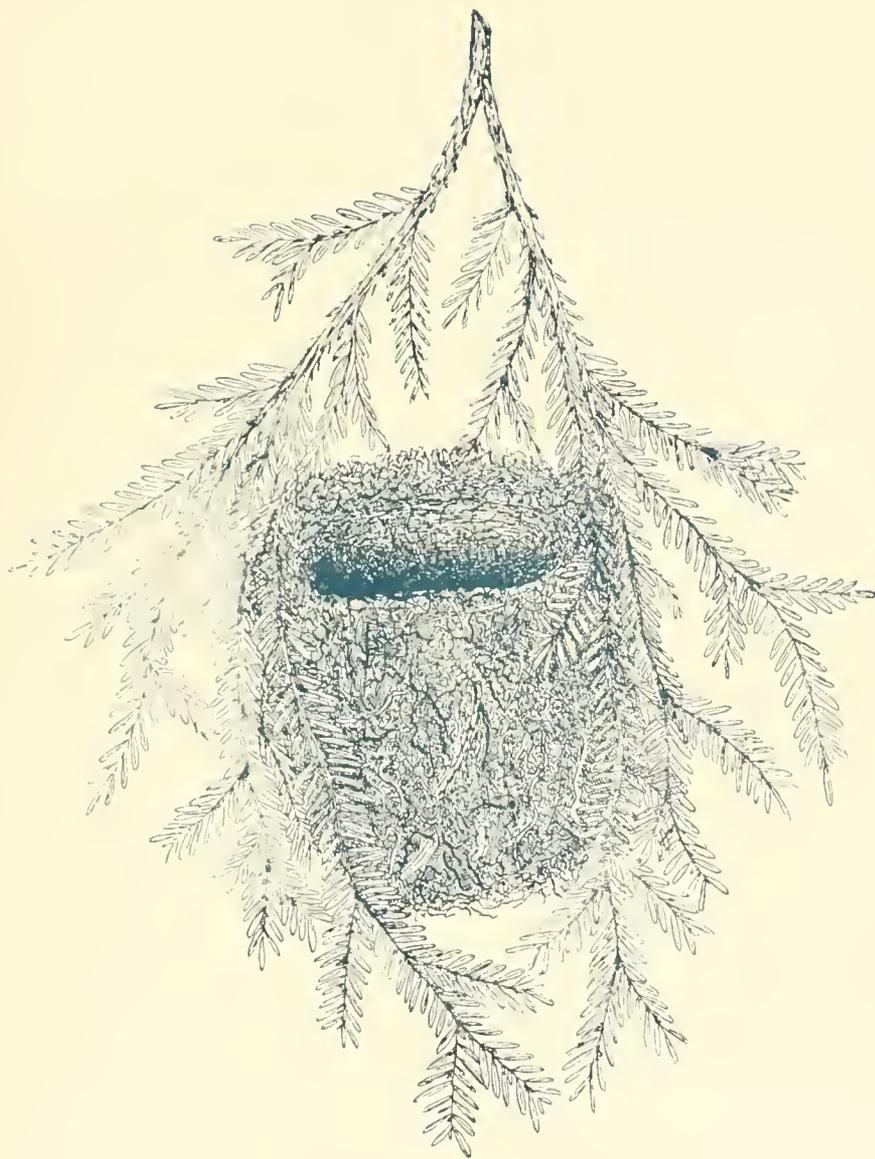
While walking along the shore of Monterey Bay, I have seen the common Blackbird (*Scolecophagus cyanocephalus*), fly from rock to rock, regardless of the near proximity of the waves, while near by on the beach, the familiar Black Pewee, which ecologists naturally associate with roadway bridges and barn yards, was flitting about from sand to rock and back again, and occasionally feeding on pieces of tender kelp.

The fact that birds do, and have changed their habits, very materially in some instances, is well known to science. Who can say what will be the habits of the birds of the future? How many centuries must elapse before the evolution of one of the *Passeres* into a member of the order *Grallatores*, or *vice versa*? There is room for no end of speculation here. We have several species of duck which deposit their eggs in holes in trees, and well authenticated stories are current of ambitious gulls nesting after the manner of hawks, far above the ground.

There may have been a time when the Wood Duck (*Aix sponsa*), built its nest with its congeners among the grass and reeds of the swamp, but for some strange reason, away back before the discovery of America, its ancestors began to ape the fashion of the woodpeckers, and so far revolutionized the old idea of the species, that ever since they have laid their eggs in holes in trees. Just when their habits of domestic life were changed we know not, but certainly the birds of to-day are not the same as their species of a century ago. The world is every day learning something new. Why not the birds also?

May not the ornithological crack shots of the United Kingdom of America, in the year 2100, write to the daily papers on bird lore, accounts of their exploits in shooting aquatic humming birds with electric rifles?

We have received from Mr. M. Chamberlain, St. John, N. B., his new Catalogue of Canadian Birds, which will be noticed in our next issue.



AN UNUSUAL NEST OF THE PARULA WARBLER.

ORNITHOLOGIST AND OÖLOGIST. - MARCH, 1888.



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## Notes on the Range of the Prothonotary Warbler in Indiana.

BY AMOS W. BUTLER, BROOKVILLE, IND.

Naturally one's attention is first directed to the knowledge at hand when he begins his investigation, such has been the writer's course, and with some general remarks concerning our knowledge heretofore of the distribution of *Protonotaria citrea*, this short article should begin. With all the attention that has been paid in recent years to this brilliantly plumaged species, comparatively little has been written concerning its northward range; in fact, except in a general way, not much is known of its distribution.

Professor Baird in Vol. IX., Pacific Railroad Reports, says of its range: "South Atlantic and Gulf States to mouth of Ohio north." He mentions three specimens in the Smithsonian collection from Southern Illinois. Coues' Key, edition of 1872, gives the same southern boundaries, but says: "Straying, however, to Ohio, Missouri, and even Maine." Mr. Ridgway's Manual gives it as occurring in: "Willow swamps and borders of ponds and streams in bottom lands of the Mississippi Valley and Gulf States, north regularly to Iowa, Illinois, Indiana, etc." So far, in the standard works, its northern range has not been approximated within perhaps two hundred miles. The works which treat of local or state bird fauna, give one somewhat more satisfactory answers to his inquiries. Mr. Nelson, in his "Birds of Southern Illinois," gives it as common in that part of the State; and, in his later work on "Birds of Northeastern Illinois," gives it as a "rare summer resident" in the district treated. Dr. Ridgway, in "Birds of Illinois," 1881, says: "Abundant in Southern counties, rare northward." Dr. Wheaton, in his "Report on the Birds of Ohio," Vol. IV., of the geological survey of that State, says: "Only known in this

State as a summer resident in Western Ohio, especially in the vicinity of St. Mary's Reservoir." Dr. Langdon, in his "Birds of the vicinity of Cincinnati," 1877, and in his "revised list," 1879, does not include the Prothonotary Warbler as having been taken in Southwestern Ohio, but, on account of its having been taken taken at St. Mary's Reservoir, indicates the probable occurrence of the species.

Until within the past few years, so far as the public is informed, this species had not been taken in Indiana. Dr. Haymond did not include it in his list of Southeastern Indiana Birds in the Proceedings of the Philadelphia Academy for 1856, nor in his Birds of Franklin County, published in the State Geological Report for 1869. Doubtless some of the collectors in the lower Wabash Valley may not have noticed this conspicuous bird, but the Bulletin of the Nuttall Ornithological Club for October, 1878, contains a paper by William Brewster on "The Prothonotary Warbler," which is the first notice I have of its occurrence within this State. This is supplemented by Mr. Ridgway's paper in the same magazine for January, 1882, which treats of the birds observed in Knox County, Indiana. Both of these papers refer to the southwestern part of the State. Nothing was known of its extension further to the northward until 1884. May 11, of that year, Mr. H. K. Coale, of Chicago, Ill., found the Prothonotaries very abundant in Starke County, in the northwestern part of the State. Several other times that month and next he visited the same locality, and always found them numerous. On one occasion, he notes, "at least fifty pairs are nesting within less than a mile." In February, 1885, Mr. B. W. Evermann supplied me with a manuscript list of the birds he had observed in Carroll County—which is probably forty miles south of the locality referred to by Mr. Coale—and therein notes the species under consideration as a "rare summer resident." In a memorandum of observations

made by him in Carroll County in 1885, he notices the occurrence of a male at Camden and says: "The only one I have ever seen except in Maple swamp in the south part of the County." This is presumably the locality referred to in his list.

For several years, since making the acquaintance of this attractive bird, Mr. Coale has visited the Kankakee swamps in Starke County. Each year the warblers appear to be as common and as ready to be studied as when he first saw them. The northward range of this species, however, is not stopped here. Mr. Coale, in his persistent searchings, has traced it to the shores of Lake Michigan, along which he has occasionally taken it both in Indiana and in Illinois. Such is a sketch of its present known distribution in Indiana. Its range both in that State and Ohio is peculiar. It has never been reported from the southeastern half of Indiana nor from any part of Ohio, except that in the vicinity of St. Mary's Reservoir, which is in the northwestern part of that State.

The Prothonotary Warbler is pre-eminently a bird of the moist and swampy river lowlands, and along the river valleys lie its paths of migration. The borders of the Mississippi River are its great highway, whence a large number of individuals turn to the right at the Ohio's mouth, passing up that stream until they find, entering it from the North, the Wabash, the sloughs and bayous, marshes and lagoons of which, bordered by rank vegetation, make this a spot of unusual attractiveness to them. Here they turn, the greater number to find summer homes along the lower course of that interesting stream. Perhaps in no place are these birds so abundant in summer as in the lower Wabash valley. The peculiar attractions there are so great compared with what the Ohio has to offer, that few, if any, pass farther up that stream. If we may conclude that the Prothonotary's course of migration is along the smaller streams as along the Mississippi, it seems probable we may account for its peculiar distribution. It could extend up the Wabash River to Carroll County, and farther along its course into Ohio, to St. Mary's Reservoir, near which the stream heads. Whether these birds pass the narrow and almost imperceptible division between the drainage of the Wabash and the Kankakee, or also extend their semi-annual pilgrimages along the latter stream remains to be determined. It seems certain, however, that they must pass over the indistinguishable water shed between Kankakee Valley and the Lake Basin, the waters of which, at certain

seasons of the year, find common feeders in many swamps and lakes in northwestern Indiana. No barriers of any consequence being present, it seems probable that the Wabash Valley is the route by which this species is distributed over the region considered.

### A Series of Eggs of *Accipiter fuscus*.

BY J. P. N.

The eggs of the Sharp-shinned Hawk (*Accipiter fuscus*, or, according to the A. O. U nomenclature *A. velox*,) are among the most beautiful of any of the *Raptores*. They are subject to great variation in markings, and yet, as a rule, they can be identified at a glance. With the exception of the eggs of the Sparrow Hawk (*Tinnunculus sparverius*) they are the smallest laid by any of the Hawks found in North America.

In the following series it will be noticed that many of the finest sets were collected by the well-known "J. M. W." (Mr. C. L. Rawson), of Norwich, Connecticut, to whom I am under great obligations for all of his fine clutches of this species, as well as for the permission to use his valuable field notes.

Set I. May 13, 1883. Blue Mountains, Northampton County, Penn. Four eggs, very light bluish white ground color; almost globular. No. 1. Unmarked, except with a very few small spots of burnt umber, which are so scattered and far apart that the general effect is that of an unspotted egg: 1.36 x 1.37. No. 2. Spotted and blotched at the larger end only with dark chestnut: 1.34 x 1.19. No. 3. Faintly clouded and spotted with fawn color. One or two spots are burnt umber: 1.32 x 1.14. No. 4. Lightly and sparingly spotted at the smaller end with burnt umber: 1.34 x 1.16.

Set II. May 30, 1879. Blue Mountains, Northampton County, Penn. Four eggs, ground color faint bluish white. No. 1. Quite pointed; marbled, clouded and spotted with light fawn color. The markings form an indistinct band around the centre of the egg: 1.53 x 1.19. No. 2. Marbled, clouded and spotted with light fawn color: 1.54 x 1.19. No. 3. Marbled, clouded and spotted with light fawn color. The markings are principally grouped around the smaller end: 1.52 x 1.18. No. 4. Marbled and spotted with light fawn color and a few spots of burnt umber; 1.51 x 1.16. The colors on this set are very unusual for this species.

Set III. May 3, 1885. East Templeton, Mass.

Collected by John B. Wheeler. Female taken. Nest situated in hemlock tree, about forty feet from the ground, in a deep wooded ravine. Three eggs, fresh; light grayish white ground color. No. 1. Marked all over the surface with light pearl gray spots, more or less distinct. Near the larger end there are a few spots of ceru drab, but the general effect of the egg at a short distance is that it is entirely unmarked; 1.49 x 1.17. No. 2. Spotted and blotched all over the surface with russet and lavender-gray; 1.21 x 1.16. No. 3. Spotted and blotched with chestnut and russet. The markings are much heavier at the larger end, where they become confluent. There are also a few light pearl gray spots; 1.47 x 1.14.

Set IV. May 22, 1882. Preston, Conn. Collected by "J. M. W." Nest an old one, in tall pine, in heavy pine grove. Small female, very wild. Thirty other trees with old nests examined later but no second clutch found. Four eggs, fresh; very light bluish white ground color. No. 1. The ground color of this egg has more of a bluish tinge than any of the others. Entirely unmarked save for a very few and indistinct fawn colored spots near the smaller end; 1.59 x 1.16. No. 2. Spotted very indistinctly with russet near the smaller end. The remainder of the surface is entirely unmarked; 1.44 x 1.15. No. 3. Spotted and blotched with burnt umber and fawn color. The markings form an indistinct band around the egg at its greatest circumference, but there are also a few near the smaller end. No. 4. Spotted and blotched with chestnut. The markings are much heavier near the larger end, where they become confluent and almost cover the surface; 1.45 x 1.18.

Set V. June 2, 1880. Northampton County, Penn. Collected by Theodore Roth. Four eggs, incubation begun; light bluish white ground color. No. 1. Marbled and spotted, principally at the larger end, with burnt umber; 1.47 x 1.16. No. 2. Spotted and blotched with burnt umber, more heavily at the smaller end; 1.46 x 1.17. No. 3. Blotched with burnt umber; 1.43 x 1.20. No. 4. Spotted and blotched with burnt umber; 1.50 x 1.20.

Set VI. June 6, 1881. Ledyard, New London County, Conn. Collected by "J. M. W." Old nest, re-touched in hemlock, in grove of pines and hemlocks. Both parents shot at nest. Female as large as *Accipiter cooperi*. Five eggs, incubation begun; dull grayish white ground color. No. 1. Spotted and blotched, principally at the larger end, with burnt umber; 1.58 x 1.23. No. 2. Spotted with burnt umber and fawn col-

or, over most of the surface; 1.56 x 1.25. No. 3. Spotted and blotched with burnt umber and fawn color. The markings are heavier near the smaller end; 1.58 x 1.22. No. 4. Streaked and spotted, more heavily at the smaller end, with burnt umber and traces of pearl-gray; 1.55 x 1.20. No. 5. Spotted and blotched with burnt umber. The markings are much heavier near the smaller end, where they form an indistinct wreath; 1.53 x 1.23. This set has all the eggs of an unusually large size for this species.

Set VII. April 11, 1879. Knox County, Ohio. Collected by A. G. Nest in a hemlock about twenty-five feet from the ground. Bird seen to fly from nest. Five eggs, fresh; grayish white ground color. No. 1. Spotted and blotched with burnt umber, forming an indistinct band around the centre of the egg; 1.64 x 1.25. No. 2. Spotted and blotched with burnt umber and cinnamon. The markings are much heavier near the centre of the egg; 1.64 x 1.24. No. 3. Spotted and blotched with burnt umber. One of the blotches is very large, and is near the centre of the egg; 1.55 x 1.25. No. 4. Blotched with burnt umber, heavier and closer together near the centre of the egg; 1.60 x 1.25. Remarkably large eggs for this species. In fact both this set and set VI must be regarded as quite phenomenal in size.

Set VIII. June 1, 1881. Preston, New London County, Conn. Collected by "J. M. W." Small nest, only ten feet from the ground, in a low pine tree. Seven eggs, fresh. Nest discovered with one egg on May 20th. Not visited again until June 1st, when the female was found covering this large clutch. Grayish white ground color. No. 1. Beautifully blotched, almost wholly at the larger end, with chestnut. The markings are confluent and almost entirely cover the larger end of the egg; 1.48 x 1.27. No. 2. Clouded and blotched with chestnut, almost entirely over the whole surface; 1.44 x 1.15. No. 3. Almost spherical, clouded and blotched with chestnut; 1.35 x 1.22. No. 4. Beautifully blotched and clouded with chestnut, over the whole surface, more or less; 1.44 x 1.20. No. 5. Clouded, blotched and speckled with chestnut, more heavily near the smaller end; 1.45 x 1.15. No. 6. Clouded and blotched with chestnut. The markings become confluent near the smaller end; 1.48 x 1.18. No. 7. Blotched and clouded with chestnut, more heavily near the smaller end; 1.19 x 1.16.

Set IX. May 17, 1883. Blue Mountains, Northampton County, Penn. Collected by Shriner. Nest in fork of white pine tree, about thirty-six feet from the ground. Four eggs,

fresh; very light bluish white ground color. No. 1. Heavily blotched with dark chocolate brown. The markings are principally confined to the centre of the egg, where they are confluent and form a band: 1.39 x 1.16. No. 2. Blotched at the larger end with dark chocolate brown. The markings are confluent and obscure the larger end almost entirely: 1.37 x 1.16. No. 3. Blotched and streaked with dark chocolate brown: 1.39 x 1.16. No. 4. Blotched with dark chocolate brown. The markings form an indistinct band around the centre of the egg: 1.46 x 1.16. The coloration is darker and more sharply defined on this set than on any others in the series, and the contrast between the dark chocolate brown markings and the light bluish white ground color makes a very striking appearance.

Set X. May 17, 1884. Northampton County, Penn. Collected by E. M. Nest on chestnut tree about thirty-five or forty feet from the ground. Four eggs, fresh; ground color light bluish white. No. 1. Streaked and blotched with chestnut and hazel. The markings are heavier near the centre of the egg, and run diagonally across it: 1.47 x 1.19. No. 2. Blotched and clouded with cinnamon and chestnut. The markings are largely confluent and much heavier at the smaller end: 1.48 x 1.19. No. 3. Clouded with fawn color, and a few spots of chestnut are scattered over the surface. The markings are principally diagonally placed around the centre of the egg: 1.48 x 1.20. No. 4. Clouded with fawn color and cinnamon. The markings are confluent and cover the whole surface except the larger end: 1.48 x 1.22.

Set XI. May 20, 1881. Blue Mountains, Northampton County, Penn. Collected by Shriner. Nest in an oak tree, about forty feet from the ground. Five eggs, incubation begun; ground color very light bluish white. No. 1. Spotted and blotched, principally around the centre of the egg, with russet and burnt umber. 1.42 x 1.17. No. 2. Clouded and spotted with cinnamon. The markings are confluent near the centre of the egg, where they form a band: 1.39 x 1.16. No. 3. Clouded and blotched with fawn color and chestnut, more or less over the whole surface: 1.35 x 1.16. No. 4. Clouded and blotched with cinnamon. The markings are heavier at the centre of the egg, where they form a band: 1.44 x 1.20. No. 5. Clouded and blotched around the centre of the egg with cinnamon and also a few spots of chestnut: 1.45 x 1.20.

Set XII. June 13, 1876. Norwich, Conn. Collected by "J. M. W." Large nest in tall

hemlock, in hemlock grove, opposite N. Y. and N. E. R. R. Station, within a quarter of a mile of the city limits. Birds social, but "common scolds." Four eggs, fresh; bluish white ground color. No. 1. Heavily blotched at the larger end with bright chestnut and russet. The remainder of the egg is almost entirely unmarked. The chestnut markings are very glossy and the contrast between them and the clear bluish white ground color makes a strikingly handsome egg: 1.50 x 1.20. No. 2. Clouded, spotted and blotched with cinnamon and lavender-gray over the whole surface: 1.50 x 1.17. No. 3. Clouded and spotted with russet. The markings are confluent near the greater end: 1.45 x 1.19. No. 4. Clouded and spotted with liver brown, vinaceous and chestnut. There are also traces of lavender-gray. The markings are heaviest at the larger end. A most beautiful egg, but one which it is impossible to describe: 1.56 x 1.19.

Set XIII. May 21, 1881. Blue Mountains, Northampton County, Penn. Collected by Shriner. Nest on an oak tree, thirty feet from ground. Four eggs, fresh; ground color light bluish white. No. 1. Spotted and blotched with burnt umber. The markings are heaviest near the centre of the egg: 1.51 x 1.19. No. 2. Clouded and blotched with burnt umber and russet, more heavily near the centre of the egg: 1.47 x 1.21. No. 3. Clouded and spotted with chestnut and russet. The markings are larger and heavier near the larger end: 1.49 x 1.22. No. 4. Heavily blotched in a wreath near the larger end with chestnut: 1.49 x 1.19.

Set XIV. June 26, 1883. Preston, New London County, Conn. Collected by "J. M. W." New and bulky nest, in scrubby maple, in thick wet maple swamp. Clutch left one week in vain for additions—probably complete. Female shy and noisy. Three eggs, fresh; ground color pale bluish white. No. 1. Heavily blotched with burnt umber. The markings are confluent and form a band around the centre of the egg: 1.46 x 1.15. No. 2. Spotted all over the surface with burnt umber; 1.45 x 1.16. No. 3. Heavily blotched all over the egg with burnt umber: 1.49 x 1.18.

Set XV. June 7, 1884. Preston, New London County, Conn. Collected by "J. M. W." Nest in tall hemlock in hemlock grove. Female shot. Three eggs, fresh; ground color grayish white. No. 1. A very long pointed egg for this species, beautifully spotted and clouded with russet and chestnut. The markings are confluent at the larger end, where they obscure the ground color: 1.58 x 1.16. No. 2. Hand-

somely spotted and clouded with russet and chestnut. The larger end is entirely obscured by them: 1.40 x 1.13. No. 3. Delicately clouded and spotted with russet and chestnut. The markings entirely cover the ground color at the smaller end: 1.44 x 1.13.

Set XVI. June 13, 1877. Blue Mountains, Northampton County, Penn. Collected by Shriner. Nest on a chestnut tree about thirty feet from the ground. Four eggs, incubation very far advanced; dull grayish white ground color. No. 1. Heavily blotched and spotted with burnt umber, the markings forming a partial band around the centre of the egg: 1.50 x 1.24. No. 2. Speckled and spotted with burnt umber. At the larger end there are very heavy blotches of the same color: 1.54 x 1.24. No. 3. Speckled, spotted and blotched very heavily with burnt umber: 1.51 x 1.24. No. 4. Heavily blotched and clouded with burnt umber and raw umber. The markings are much heavier at the larger end: 1.52 x 1.26.

Set XVII. May 19, 1885. Near the Blue Mountains, Northampton County, Penn. Collected by Shriner. Nest on a white pine tree. Four eggs, incubation commenced; ground color grayish white. No. 1. Heavily blotched near the larger end with very dark chocolate and cinnamon: 1.53 x 1.23. No. 2. Heavily blotched at the larger end with dark chocolate brown and cinnamon: 1.51 x 1.23. No. 3. Heavily blotched with dark chocolate and cinnamon. The markings form an indistinct band near the larger end: 1.48 x 1.21. No. 4. Very heavily blotched with dark chocolate brown: 1.52 x 1.23.

And now there remains to be described seventeen eggs of this species, which are not one set, but which were all laid by one bird. On May 23, 1880, "J. M. W." found a nest in a pine grove near Norwich, Conn. Mr. Rawson describes the male as being "ridiculously small, and of Jay size. The female was normal, with a peculiar break in her quaverings of alarm, marking her identity anywhere." Mr. Rawson continues: "From nest in pine but thirty feet south of road, May 23, took one broken and three fresh eggs. Same Sunday, p. m. nest torn down by Crow hunters. Entire new nest then built the next day in pine, one hundred feet north of road. Take three eggs May 30, leaving none. June 1, note one egg, but leave it. June 2, take two eggs leaving none. June 5, note one egg. June 6, two eggs in nest, take one. June 9, take two eggs substituting pigeon's. Mawk on side of nest — not covering eggs. Clutch not laid. June 11, one egg.

June 13, one egg. June 17, one egg. June 19, one egg. June 21, one good egg. June 23, nest egg cold. Male and female not seen. June 25, take last egg — under-sized."

These seventeen eggs are now before me, and they are particularly interesting as showing two points: (1) the general resemblance in markings of the majority of them, and (2) the gradual exhaustion of coloring matter owing to the great number laid in quick succession by this one female. The ground color of all is of a bluish white, and they are blotched, clouded and spotted with burnt umber, chestnut, cinnamon, drab-gray, and lighter tints of the same colors. They present a great uniformity in size also, except the last laid egg, which is smaller. The others all average about 1.40 to 1.45 in length, by 1.17 to 1.19 in breadth.

The persistency with which this bird laid is truly remarkable.

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### Nesting of the Barred Owl.

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BY "J. M. W.," NORWICH, CONN.

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During the last ten days in January, 1888, the Barred Owl was heard calling nightly, with the mercury steadfastly at zero. The nights were wonderfully clear and woe befell vermin or rodent that crossed the moonlighted spaces in the woods on the snow-covered earth. But it was not alone for his early breakfast that *Syrnium* lets us know he is afield so soon this season. Notwithstanding the intense cold, he knows it is time to look up his mate, and all through February he grows noisier in his addresses, and his serenades are not hushed until the eggs are laid, when he is under the spell of the same instinct which makes the Buteos silent during incubation.

During the open Februaries, several years ago, Mr. Brand and myself took eggs in winter, but of late the last of March sees full clutches of this bird. I have seen eggs on a solid cake of ice in a hole and in open nests with a foot of snow in the woods. On March 13, 1887, Mr. Wm. Ely of this place, took a set of four fresh eggs from an open nest almost in the city limits. Sets of four are extremes and are far from common. Three eggs is the rule for young birds and two eggs for old owls.

Though *Syrnium* dearly loves a hole or crevice in a tree and will cling to a suitable hole for years though often harried, yet any old open nest will be made to answer the two month's

lease. If in a small make-shift nest, the fluffy form of the sitting female can generally be seen, but if a recent well-preserved nest is chosen she throws out all superfluous lining and nestles down into the hollow so that not even the tip of her tail is visible. But, as incubation progresses, the flying feathers betray her hidden home, and sharp raps on the tree will suffice to drive her out.

If found flying about or breeding in an open nest, this owl's sight appears to be perfect by day, but when suddenly driven from a dark cavity the course of flight is erratic for a few seconds till the dilated pupils are adjusted. I have seen them mousing at 9 a. m. and noted a handsome individual picking young red squirrels from a nest in the top of a white birch in the full blaze of a noonday sun.

The Barred Owl is commonly called the Cat Owl by our local farmers, and *Bubo* is known as "one of them 'ere great Hoot Owls." The snapping of the bill when angry is curious, but when ousted from the nest another habit of the female is more funny. It is like a military manoeuvre on dress parade. She will fly straight from her nest to some limb of a tree and alight with her back towards the robber. Then, as if in obedience to a sudden order, she gives a quick "right-about-face" on the limb and faces you erect and "at attention" like a grenadier.

Though not usually a lofty flyer, on two occasions Mr. Brand and myself, when at the nest, have seen the pair soaring in circles far overhead exactly like the *Buteos*.

This species is much more common in New London County than the Great Horned Owl, (*Bubo virginianus*) which is oftener trapped, and more relentlessly shot by both farmer and sportsman.

[When Dr. Brewer published his *North American Oölogy* in 1857, the only egg of the Barred Owl that he could procure to figure in his work was one which had never been laid by the bird, but which had been taken from the oviduct before it had gone through this process. And yet he had the cabinets of the Smithsonian Institution and the Philadelphia Academy of Natural Sciences at his disposal, and they were then, taken together with Dr. Brewer's private collection, the most complete then in existence. Now the eggs of *Strix nebulosa* are not considered rare by any means, and the writer is enabled to present a description of twenty-three sets, which, it is believed, represent every variation to which the eggs of this bird are liable.

Six of the sets were collected in Black Hawk

County, Iowa, by G. P., and the remaining seventeen sets by "J. M. W." (C. L. Rawson) in the vicinity of Norwich, Connecticut. Mr. Rawson has also permitted the writer to use his valuable field notes, which exhibit his wonderful familiarity with these birds. They were his friends, and every year he loved to visit them and note their little peculiarities. And these birds certainly do have peculiarities in their nesting habits. They return year after year to the same hollow cavity in the same tree, and Mr. Rawson has fully established the fact that the same pair of birds are nearly always to be found breeding in the identical tree used by them in preceding years.

Some of the birds allowed him to handle them while on their eggs, while others resented any such familiarity. Others had their different little traits, which he has fully set down in his elaborate notes, and which will be found condensed below.

The eggs of this species are two or three in number, quite globular, and pure white. The shell is often granulated, as in eggs of *Bubo virginianus*. They are also subject to much variation in size, and large specimens of *Strix nebulosa* could be easily mistaken for small-sized eggs of *Bubo virginianus*.

No nest proper is built, but the eggs are simply deposited in hollows of trees or old open nests of hawks and crows, and no material is ever taken in by the bird.

#### SETS COLLECTED IN IOWA.

Set I. April 2, 1883. Black Hawk County, Iowa. Collected by G. P. two eggs, incubation commenced: 2.04 x 1.71; 2.02 x 1.74.

Set II. March 15, 1886. Black Hawk County, Iowa. Collected by G. P. three eggs, incubation commenced: 1.94 x 1.67; 2.04 x 1.74; 1.93 x 1.68.

Set III. April 2, 1886. Black Hawk County, Iowa. Collected by G. P. three eggs, incubation commenced: 1.99 x 1.69; 1.94 x 1.68; 1.96 x 1.66.

Set IV. March 18, 1887. Black Hawk County, Iowa. Collected by G. P. Nest in hollow of a tree. Three eggs, fresh: 2.11 x 1.73; 2.10 x 1.74; 2.11 x 1.75. Very large.

Set V. March 18, 1887. Black Hawk County, Iowa. Collected by G. P. Nest in hollow tree. Three eggs, incubation begun: 2.04 x 1.72; 1.97 x 1.69; 2.04 x 1.71.

Set VI. April 5, 1887. Black Hawk County, Iowa. Collected by G. P. Nest in hollow tree. Two eggs, fresh: 2.08 x 1.69; 2.19 x 1.73. The latter egg is unusually large for this species.

## SETS COLLECTED IN CONNECTICUT.

Set VII. March 29, 1878. Norwich, Conn. Collected by "J. M. W." Nest in lateral fissure, forty feet up, in immemorial chestnut. Female visible from ground when she is sitting. These birds bred in this tree for over twenty years. Three eggs, fresh: 1.82 x 1.67; 1.89 x 1.67; 1.89 x 1.66.

Set VIII. March 29, 1878. Preston, Conn. Collected by "J. M. W." Nest a hollow four feet deep in immense chestnut stub, twelve feet high, overhanging a ravine. Mr. Rawson looked down on owl snapping her bill, then pulled her out with long crook, held her awhile, and finally launched her into mid-air. This hole was first found, with eggs, on April 22, 1877, and they were observed there every succeeding year until 1887, when it was empty. Three eggs, fresh: 1.96 x 1.64; 1.98 x 1.62; 1.96 x 1.64.

Set IX. April 17, 1878. Norwich, Conn. Collected by "J. M. W." Slight old open nest in low fork of chestnut, ten feet from ground. Owl on eggs until poked with a stick. Very large female. Two eggs, fresh: 2.01 x 1.61; 1.95 x 1.62.

Set X. March 29, 1879. Preston, Conn. Collected by "J. M. W." Nest in open shallow fissure in beech tree. Nothing but contact feathers added to sticks placed in hole by squirrels. Three eggs, fresh: 1.96 x 1.66; 1.93 x 1.65; 1.98 x 1.67.

Set XI. April 17, 1879. Preston, Conn. Collected by "J. M. W." Nest in immemorial chestnut stub, within four rods of beech tree where Set X was found. No material whatever taken into the great hole. Laid by the same bird as Set X. First egg of this second clutch laid April 12. Second egg seen on April 15th. Clutch taken on April 17th. Three eggs, fresh: 1.78 x 1.61; 1.87 x 1.65; 1.89 x 1.69.

Set XII. May 10, 1879. Preston, Conn. Collected by "J. M. W." From same chestnut stub as Set XI. Laid by same bird as Sets X. and XI, and being the third clutch laid by the same female that season. Male bird alighted near by and snapped his bill. Two eggs, fresh: 1.77 x 1.61; 1.91 x 1.65.

Set XIII. March 22, 1879. Norwich, Conn. Collected by "J. M. W." Nest in fissure of butternut tree, thirty-five feet high. On March 16th a broken egg was noticed by Mr. Rawson, and the male bird was shot. On March 19th there was one egg in the nest, on the 22nd clutch was taken. (Fresh eggs from this nest were sent by Mr. Rawson, in 1880, to Dr. Wood for incubation under a hen, and they

were hatched in thirty days). Two eggs, fresh: 1.91 x 1.68; 1.90 x 1.65.

Set XIV. March 30, 1870. Norwich, Conn. Collected by "J. M. W." From old, time-worn hole in side of big chestnut. (Set VIII was from the same nest in 1878). The female flew off as Mr. Rawson got in sight of the tree. No material ever in this aperture. (First set of two eggs taken March 19th). Two eggs, fresh: 1.95 x 1.64; 1.97 x 1.63.

Set XV. April 31, 1881. Norwich, Conn. Collected by "J. M. W." In first crotch of a sturdy young chestnut. Eggs left ten days after being found, on account of their very small size. Female, undeniably *S. nebulosa*, clung closely to the eggs when Mr. Rawson removed them. On blowing they proved to be addled and infertile. Two eggs: 1.69 x 1.50; 1.67 x 1.48. These eggs are veritable runts.

Set XVI. April 24, 1881. Preston, Conn. Collected by "J. M. W." Nest in old chestnut stub. (This is a second clutch, as the first set was taken April 1st). Two eggs, fresh: 1.91 x 1.65; 1.87 x 1.60.

Set XVII. April 1, 1881. Preston, Conn. Collected by "J. M. W." Nest in old chestnut stub. (Set XVI was the second laid by same bird). Male bird near and snapped his beak. Female flew out of hole, then across the ravine, where she alighted and commenced hooting. Two eggs, fresh: 1.97 x 1.65; 1.90 x 1.65.

Set XVIII. April 23, 1882. Ledyard, Conn. Collected by "J. M. W." In an immense hollow of a chestnut tree, where the climber was lost to sight. Eggs resting on bare punk as usual. The first set of two fresh eggs of this bird were taken by J. A. Brand on March 19th, and the male shot. The female must have mated again at once. She was very shy. Three eggs, fresh: 2.00 x 1.71; 1.95 x 1.65; 1.91 x 1.66.

Set XIX. April 10, 1883. Preston, Conn. Collected by "J. M. W." From old chestnut stub. The first egg was laid April 3rd. Mr. Rawson says: "Old male probably dead. This female has got a new mate—a young handsome fellow. Both birds bold, alighting within pistol shot." Two eggs, fresh: 1.87 x 1.65; 1.92 x 1.65.

Set XX. April 5, 1884. Preston, Conn. Collected by "J. M. W." From old, hollow chestnut stub. (A second set of two eggs was taken May 9th, 1884). Mr. Rawson writes: "This owl is growing old; she used to lay trios, now only pairs. This is the eighth successive year of eggs, same place, same bird." Two eggs, fresh: 1.92 x 1.64; 1.90 x 1.69.

Set XXI. March 26, 1885. Preston, Conn.

From old, hollow chestnut stub. Mr. Rawson says: "Drove female out as usual. Ninth year from this bird. Only one set of two in 1885. A set of two March 18, 1886; tenth year and forty eggs in all from this one female. Not seen in 1887." Two eggs, fresh: 1.92 x 1.67; 1.92 x 1.66.

Set XXII. April 18, 1885. Preston, Conn. Collected by "J. M. W." Nest in large chestnut stub. This is a second set, as first set was found March 26, 1885. A third set was found May 9th. This owl formerly allowed Mr. Rawson to handle her while sitting, but she afterwards became more timid, and flew out when disturbed. Three eggs, fresh: 1.88 x 1.67; 1.91 x 1.69; 1.98 x 1.66.

Set XXIII. March 28, 1886. Norwich, Conn. Collected by "J. M. W." Heavily feathered old nest in chestnut. In trying to secure the bright young male, Mr. Rawson shot the female, which looked as if it was moulting. No more eggs were found in the oviduct ready for extrusion. Two eggs, fresh: 1.96 x 1.61; 1.96 x 1.62.—J. P. N.]

### Following the Logcock.

BY R. B. McLAUGHLIN, STATESVILLE, N. C.

I had hoped to secure some additional sets of eggs of the Pileated Woodpecker or Logcock (*Hylotomus pileatus*), during the season of 1877, but I was disappointed. The nest is most easily found while it is being excavated, so I determined on April 9th as an opportune time to explore the woods. Leaving at or about 6.30 a. m., I had gone scarcely a half mile into the nearest wood when I heard the noisy notes of *H. pileatus*, and had no difficulty in following them up. I had passed through some rather dense undergrowth and stepped into a road, when, quite unexpectedly, I flushed two pairs of the birds but a few rods apart, and had got within easy gunshot of them.

As they chose different directions, my search was restricted to a single pair. Now, when I am following a bird for the purpose of seeing it go to the nest, I cannot say that I approve of the bird's wanting to follow me about; but the Logcock does not follow the collector, nor does he care to have the collector following him. Owing to the previous surprise, however, this pair was so unusually hard to approach that I was encouraged and indeed grateful if I got in sight of them in time to see them fly. Having to do so mainly by ear, however, I concluded

that better luck could be had if I went after the other pair, so I abandoned the pursuit, and, retracing my steps, followed the course in which the others had flown. They had not gone far, and when the bird called his mate, he perhaps noted with some spleen that I answered. These, too, were sufficiently wary. Lured on by my zeal, however, I followed the birds the greater part of the forenoon, but with no success.

On April 16th, having occasion to be in the same piece of woodland, I heard a Logcock braying—for surely he could not have been singing—as though that were his only mission here, but when I appeared on the scene he was conspicuous for his noise in a neighboring woods.

Now another had joined him, and the two made the woods reverberate with some of the noisest notes of the woodpecker dialect. As I approached, however, they abruptly stopped and all was still. On entering the woods, I saw a Logcock leave a tree, and, perfectly mute, disappear. Seating myself on the bank of a brook and waiting for a time, I saw another light upon a tree some distance away. Seeing nothing more I concluded the bird was at home, and I started after it. On climbing the hill, I saw some bits of wood scattered on the ground, which told the tale. I looked for a dead tree but in vain. I saw a round, smoothly-cut hole in the body of a Spanish Oak, yet the tree was turning out full foliage, and had not a dead branch. Needless to say I rapped on the trunk, and anxiously watched for the appearance of the bird's head at the hole above. I was not disappointed, however I beckoned the lady to climb out of her domicile, in lieu of which, she—wondrous tame now—returned the affront by utterly ignoring the signal, and eyeing me in a way that seemed to question my honesty and dispute my right of invasion. I then tapped on the tree with a club and she came out. An examination of the wood particles thrown out showed that they had not been exposed to the weather, which convinced me that the cavity was yet unfinished. Returning on the 21st, I found the bird in. Apprehensive of incubated eggs, I immediately started back for my climbers, a small saw, and a hand-axe.

On my return the bird was again in. I tied a string to the saw and axe, threw it around my neck, allowing them to rest on my back, buckled on my climbers, and climbed up.

The nest was about sixty feet up, and the trees fairly well limbed, after the first twenty feet. I got my arm partially in the hole, but could not adapt it to the winding direction it

took. Finding the use of the saw also imperative, I took the axe and set in. The nest contained two eggs, quite fresh; so the set was incomplete. After the birds had bored through two inches of solid live wood, they found the interior white and soft. How did they know the trees were decomposing? I should say by the sound produced when they rapped on it with their bills.

In April 1886, while walking through a piece of woodland, I saw a Logcock light upon a dead oak, and hopping up nearly to the top, he gave a sharp rap. His mate came out of a hole a little above, and flew away; then he went in, but whether he intended to work or was only curious to know what his wife had been doing, I do not know. It is probable, however, that he assists her.

Not having the time to while away, it was a week later and growing dark when I returned, so I felt sure if the bird had completed the set she would then be in. She was. I called the following day and found her at home. The nest was about forty-five feet high, and the sight of the tree made me rather nervous. It was nearly three feet in diameter and had but one limb, which being "shaky," contributed much by way of picturesque effect, but very little to my support. However, a laborious climb brought me, with bleeding wrists, to the Woodpecker's door, and confident the full number had been laid, I cut through the well-decayed wood. Well, as hard luck would have it, not a single egg had been deposited. I have since frightened the Downy Woodpecker out of her nest after sunset, and cut in to find no eggs; so it would seem the habit of remaining over night in the unfinished cavity is common with the *Picida*.

Farmers have told me of nests of this bird within ten feet from the ground, but I have never found them near so low. The remaining nests found by me are represented below:

No. 1. About seventy-five feet high in an oak. Saw parent feeding young.

No. 2. In oak forty-five or fifty feet up. Took set of five eggs.

No. 3. In maple thirty-five feet up. A fair tree to climb but quite a distance from home, and the nest not finished. Did not return.

No. 4. About forty-five feet up in ash, without bark or limbs; and weather-bleached. Walked around it a great deal but never climbed up.

No. 5. About eighty feet high, in a frightful oak. Did not disturb it.

The shell of the egg is clear in the first state

of incubation, and the blood in the embryo veins within is clearly visible. It retains its semi-transparency for some hours after being blown, and then gradually dons the white polish of the cabinet specimen. The complement ranges from four to six. No nest, properly speaking, is made, but some fine chips are left at the bottom of the excavation, on which the eggs are deposited.

The Logcock is a strikingly handsome bird, and his lord-like demeanor would indicate he is fully conscious of it. When flying, the white on his wings is shown in pleasing contrast to his otherwise dark plumage. His large head is attached to his body by an almost thread-like neck, but it has no comic effect. He has several ways of winding his horn, all producing a respectable racket. His rapidly reiterated *put! put! put-it! put-it! put-it!* may be heard throughout the year. Mrs. Logcock, too, can "make the welkin ring" when disposed.

One who has only seen the stuffed bird in the museum has but a vague conception of the force of his stroke. When seen in his native haunts, throwing bark from a dead tree, or hammering on a live one, it truly seems a case of "Woodman spare that tree." Yet it is for the good of the forest, not the wanton exercise of a destructive tool. He will go as the forest goes, and the scientist may impose what he will on the taxidermist, but as nature deprives a bird of its office, she will deprive us of our bird.

Ever on the alert, the Logcock is hard to shoot, and unless ambushed or shot at first sight, it is well to make a list of him with your game for another day, for if once chased or frightened, he must have a good night's repose to efface the recollection of it.

This woodpecker seems to be better prepared for continued flight than the smaller ones, while the characteristic woodpecker flap and dip is recognizable. That decided and apparently fatiguing way of jumping through the air, so conspicuously noticeable in the flight of *Picus pubescens* and other diminutive species of the genus, appears to be wanting in the flight of this bird. It is generally seen in couples, at all seasons, and perhaps pairs for life. Once common in our county, it will soon be listed with the rare species; nor does it occasion surprise that such should be the case when one is apprised of the strange ways in which the bird is sometimes abused. I believe no one has killed it in order to obtain its legs for pipe stems, as it is alleged the mariners did the Dodo, but I am told by old sportsmen that it was a once not

uncommon practice to cut off the bird's head and use its bill as a stopper to their powder-horns. Nor are we confined to tradition for equally tough examples. It is a melancholy truth that I once saw a student at a country academy who scalped one, doubtless victimized by stratagem, and was using its handsome crest for a purpose no less base than that of a book-mark. Not caring to see my old friend's scalp under a profane thumb, I bought it.

I once interviewed an aged negro regarding his knowledge of the esculent qualities of the bird. He was reticent at first, but finally confessed having to eat the "Pickerwood big-as-a-crow." After prefacing his answers by telling me what others did, he also admitted that he ate hawks and owls, but promptly denied, without any circumlocution, that the meat of the crow ever entered his œsophagus. However, of his replies to my questions touching the Logcock, I can offer the following summary:

"Hit builds a nest in a tree like other pickerwoods. Hit's skerry, and sets on t'other side of the tree fun yer. Some eats 'em. I *lee* et 'em. Why, hit don't eat nothing bad. Hit tastes about like chicken."

The last is an index to the whole, for no deep serenity is made into the bill of fare of the unfortunate bird that tastes, or is supposed to taste like chicken, to ascertain whether it does, or does not eat anything bad; and the Pileated Woodpecker has too much meat on him to be allowed to waste when it will help to keep the wolf away. And, now, I have followed the Logcock much longer than I intended.

### A List of Birds Known to Breed at Raleigh, N. C.

BY C. S. BRIMLEY, RALEIGH, N. C.

Green Heron (*Ardea virescens*). I have not found many nests of this bird although it is a common summer visitor. May 15, 1886, and May 30, 1887, are the dates of the only nests found in the last two years.

King Rail (*Rallus elegans*). Two nests were found here in June 1885, and on June, 22, 1887. We took two young birds in the down not more than a day or two from the nest.

Woodcock (*Philohela minor*). A rare breeder with us, and I have never found the nest; but on two occasions (in May, 1884, and April, 1885), the old bird has endeavored to decoy me from her nest and young.

Killdeer (*Agialites vociferus*). A nest found May 19, 1886, with four hard set eggs is my only record.

Morning Dove (*Zenaidura carolinensis*). Common. Nests from April 21 to June 17, usually in small saplings. Eggs two.

Bob White (*Ortyx virginianus*). Protected as this bird and its eggs are, both by law and public opinion. I never take its egg, and seldom look for them. It nests quite late in June and July; in fact, on September 7th, I came on a brood of young which could not have been hatched more than a week.

Turkey Vulture (*Cathartes aura*). May 20, 1887, two eggs.

Barred Owl (*Strix nebulosum*). A half grown young bird taken from the nest on April 21, 1887, is my only record; but it is probably a tolerably common breeder here.

Screech Owl (*Scops asio*). Common. April 27, 1885, three hard set eggs. May 5, 1885, two half grown young. The former nest was in a hollow stump, the bottom of the hollow where the nest was being on a level with the ground.

Red-shouldered Hawk (*Buteo lineatus*). April 7 to May 28. The only hawk I know to nest here. Usually builds in fair-sized trees near a stream.

Black-billed Cuckoo (*Coccyzus erythrophthalmus*). Quite a rare bird here. I only know of five specimens having been taken. One, a female, was taken on July 15, 1886, and contained eggs ready for laying.

Yellow-billed Cuckoo (*Coccyzus americanus*). July 27 and August 19, 1887.

Downy Woodpecker (*Picus pubescens*). A nest with young found in 1885.

Flicker (*Colaptes auratus*). Rare in summer. An old bird feeding young in a hole in a dead stub on June 5, 1886.

Swift (*Chaetura pelagica*). Breeds abundantly in chimneys.

Ruby-throated Hummer (*Trochilus colubris*). Common. Nests May 20 to 30. At the end of limbs from eight to forty feet from the ground. Two eggs.

Whippoorwill (*Antrostomus vociferus*). May 5, 1887, two hard set eggs. May 18, nest with one egg hatching, and one young bird just hatched. May 27, a female containing two eggs just ready for laying killed.

Crow (*Corvus frugivorus*). Not an uncommon breeder here. Shot a young bird just able to fly on May 8, 1886.

Kingbird (*Tyrannus carolinensis*). Nests commonly here.

Great-crested Flycatcher (*Myiarchus crin-*

*itis*). Tolerably common. May 24 to June 15. Eggs four to six in number.

Wood Pewee (*Contopus virens*). Nests everywhere in good-sized trees, but seems most partial to pine woods. Nests May 17 to June 21.

Acadian Flycatcher (*Empidonax acadicus*). Nest with half grown young, in a dogwood tree some nine feet from the ground, found on June 11, 1887.

Red-winged Blackbird (*Agelaius phoeniceus*). Nests May 16 to June 5. Nest from eggs four, occasionally only three, but I have only found one set of five.

Orchard Oriole (*Icterus spurius*). Nests commonly. Eggs five. June 8.

Chipping Sparrow (*Spizella domestica*). Nests April 25 to July 21, so I suppose three broods are raised here. Eggs usually four, sometimes three.

Field Sparrow (*Spizella pusilla*). May 5 to July 23. Three broods are probably raised. Eggs three or four. This species and the preceding are (with the exception of the Catbird), our most common summer birds, and both breed abundantly.

Cardinal (*Cardinalis virginianus*). May 2 to July 9. Eggs almost invariably three.

Blue Grosbeak (*Guiraca caerulea*). June 3 to June 19. Eggs four.

Indigo Bird (*Passerina cyanea*). June 1 to July 24. Eggs two to four in number.

Purple Martin (*Progne subis*). Nests sparingly in martin boxes.

Rough-winged Swallow (*Stelgidopteryx serripennis*). Breeds abundantly. May 15, 1886.

Red-eyed Vireo (*Vireo olivaceus*). Common, but nest seems hard to find, and birds generally desert it if too closely scrutinized. Eggs four. May 14.

White-eyed Vireo (*Vireo noveboracensis*). May 7 to June 1. Nest four to eight feet high in bushes near water. Eggs three or four.

Black and White Warbler (*Mniotilta varia*). Have never taken the eggs, but have frequently seen old birds feeding young scarcely able to fly. The young appear during the first week in June.

Parula Warbler (*Parula americana*). The same remarks apply to this species also.

Yellow Warbler (*Dendroica aestiva*). May 24 to June 2. Eggs four or five.

Yellow-throated Warbler (*Dendroica dominica*). The young appear about the middle or end of June. Frequents pine trees to a greater extent than the Pine Warbler itself.

Pine Warbler (*Dendroica pinus*). Breeds

abundantly in early April. Nest with half grown young found April 26, 1887.

Prairie Warbler (*Dendroica discolor*). A nest with two incubated eggs found in June, 1885.

Large-billed Water Thrush (*Sialurus naotacilla*). Breeds sparingly here. On April 17, 1886, I killed a female which would have laid within two days. The young appear early in June.

Maryland Yellowthroat (*Geothlypis trichas*). Breeds commonly here.

Yellow-breasted Chat (*Icteria virens*). May 20 to July 2. Eggs three or four. I think this species raises two broods here.

Redstart (*Setophaga ruticilla*). Fairly common. A nest found May 17, 1886, contained three fresh eggs; in this instance both birds were in the female plumage.

Mocking Bird (*Mimus polyglottus*). May 4 to July 30. Breeds commonly. Eggs four or five, occasionally only three.

Catbird (*Galeoscoptes carolinensis*). May 12 to June 19. Eggs three or four.

Brown Thrasher (*Harpophycus rufus*). April 26 to July 6. Not at all a common breeder here.

Great Carolina Wren (*Thryothorus ludovicianus*). April 17 to July 2.

White-bellied Nuthatch (*Sitta carolinensis*). During the summer of 1885, I observed a brood of these birds, apparently not more than a week from the nests. Shot one to satisfy my curiosity. It is probably a rare breeder here.

Brown-headed Nuthatch (*Sitta pusilla*). April 13, 1887, six fresh eggs. April 26 (young), and April 29 (young).

Tufted Tit (*Lophophanes bicolor*). Common. Nests later than the next species. In 1885, I observed a pair of these birds carry building materials into a hole up an oak, some fifty feet high, but I never investigated. I also found a nest with young like this last summer.

Carolina Tit (*Parus carolinensis*). April 14 to May 4.

Blue-gray Gnatcatcher (*Poliptila caerulea*). May 5, Eggs four.

Wood Thrush (*Hylocichla ustulatus*). May 7 to June 16. Eggs three or four.

Bluebird (*Sialia sialis*). April 11 to June 26. Eggs four or five. White eggs of this species do not seem uncommon here.

The above list includes all species which breed, to my certain knowledge in this vicinity, but probably quite a number of species, not included, also breed here, as for instance, the Summer Tanager and American Goldfinch, both common summer birds here, but not included in the list, as I have never taken eggs or young of either.

### Iowa Greenlets.

BY C. R. KEYES, DES MOINES, IOWA.

This group of charming little songsters is represented in Iowa by seven species; two as transient visitors, and five as summer residents. The two former, the Philadelphia and Blue-headed Vireos, occur abundantly during both the vernal and autumnal migratory period. *Vireo philadelphiu* arrives about the 10th of May and returns the last of August. It appears in scattered companies, moving in leisurely flights through the trees bordering the water-courses, and associating with various species of *Dendroica*. It apparently seeks the tops of the trees, where hidden from view by the young foliage, it might easily be passed unnoticed; and this fact may in part at least, account for the attributed variety of this species as reported by observers in some localities in the upper Mississippi valley. In Iowa, generally, from the 10th to the 25th of May, a brief search of a few minutes seldom fails to disclose a score or more of these modest little vireos, busily engaged in the pursuit of insects in the tree-tops—the tall willow thickets of the swamps affording especially favorable situations for this species.

In company with this species appears its blue-headed congener, *V. solitarius*, but the latter's sojourn is usually shorter, and apparently is not so exclusively confined to the swamps as in the case of the former. The Blue-headed Vireo is perhaps more abundant in this region than any other species of the *Vireonidae* occurring here. Everywhere through woodland during the middle of May and the first of September its presence is noted.

*Vireo noveboracensis* is of rare occurrence in Iowa, especially in the central portions of the state, and little seems to be known relative to it, though it has been reported as breeding in some of the more southern of the central counties.

*Vireo olivaceus* arrives the first week in May and remains until September, though locally not as abundant as two other congeneric species breeding here, it occurs more commonly than is at first apparent from casual observation. Nidification begins early in June. Its beautiful pensile nest is attached to the fork of some small branch of a forest tree, most commonly species of *Coryna*, and in one which the Cow-bird especially selects as a repository for her parasitic eggs.

*Vireo gilvus* is abundant both as a migrant

and summer resident, arriving the first of May and departing early in September. Among the trees by the wayside, along the country roads and the streets of the village, in the orchard and the open woodland, through all the busy summer day it joyously warbles its low carol, gentle and melodious, while near by its familiar pendulous nest swings from the slender branchlet of perhaps a maple or some cottonwood.

*Vireo flavifrons*, though abundant during the migratory period, as a summer resident is apparently not common, particularly in the central portions of the state. It arrives the first of May and returns the first of September. On June 25th, 1881, a nest of this species was found near Des Moines, and notwithstanding a diligent search every season since in Polk and the adjoining counties, not a single additional instance of its occurrence as a summer resident was discovered.

The sprightly little *Vireo belli* is perhaps the most common summer resident of the group. No other woodland bird seems to be so completely satisfied with so narrowly restricted a vertical range as this retiring and unobtrusive little greenlet. Though for the most part unseen, its voluble little melody, earnest and plaintive, ever betrays its presence in every hazel copse and garden. Its neat pensile nest is suspended from the branchlet of some low bush, and here its eggs, four or five in number, are deposited the last week in May. One nest containing four eggs was found in a small bush situated within eight feet of a railroad track over which trains were continually passing, and notwithstanding the violent swaying of the bush caused by the strong currents of air created by each rapidly moving train, the young birds were successfully reared.

### Breeding Dates of Birds in Kings County, Nova Scotia.

BY WATSON L. BISHOP.

The following dates are taken from the collection of Mr. John Wood and Mr. Walter Ryan of Kentville, and also from my own collection. Nearly all these eggs were found in Kings County, N. S.:

Great Black-backed Gull (*Larus marinus*). May 22, four sets were taken, May 25, three sets. These were collected on rocks and small islands in the Gaspereaux Lake, where quite a number of these birds breed every year. It is

about eighteen miles from the salt water. (Minas Basin). I don't remember ever having seen a Herring Gull on these lakes.

Herring Gull (*Larus argentatus smithsonianus*). May 27, 28, June 2, July 5.

Dusky Duck, May 25, 26, 28. These were also found on the Gaspereaux Lakes.

American Merganser (*Mergus merganser americanus*). May 23, 30. Found on islands in Gaspereaux Lakes. First set (taken May 23), was found in a large old stub, about twelve feet high, in a hole in the top. This hole reached down about twenty inches, where the nest was composed of old rotten wood, a little dog grass, and was lined with feathers. The parent bird was caught on the nest, and the eggs (eleven in number), were perfectly fresh and very uniform in shape. The next set taken May 30 (also eleven in number), was situated much the same as the one above described, and incubation was about a week advanced.

Great Northern Diver (*Colymbus torquatus*). June 5. Nest, a depression in the sand, a few feet from the water's edge, without lining of any kind. Eggs, two in number, measuring 3.62 x 2.44, and 3.60 x 2.43.

Black Guillemot. July 3.

Kingfisher (*Ceryle alcyon*). May 28, 28, June 14, July 7.

Great Blue Heron (*Ardea herodias*). May 10, twelve sets taken, numbering respectively, four, five, and six eggs. Five was the usual number, however. The sets seemed to be complete with but few exceptions, and were fresh or slightly incubated.

Great Horned Owl (*Bubo virginianus*). March 25, 28, fresh.

American Goshawk (*Astur atricapillus*).

Marsh Hawk (*Circus hudsonicus*). June 8.

Sparrow Hawk (*Tinnunculus spawerius*). May 20, 24.

Canada Jay (*Perisoreus canadensis*). May 16, well incubated.

Crow (*Corvus frugivorus*). May 6, 7, 9, 13, 13, 26.

Yellow-bellied Woodpecker (*Sphyrapicus varius*). June 2.

Flicker (*Colaptes auratus*). June 1, 2, 2, 6, 7, 18.

Canada Grouse (*Canace canadensis*). May 25, 28.

Ruffed Grouse (*Bonasa umbellus*). May 15, 18, 10. June 6.

Black Snowbird (*Junco hyemalis*). May 13, 16, 20, 21, 26, 29. June 1, 4, 22, 23, 29.

Chipping Sparrow (*Spizella domestica*). May 25, 28. June 2, 4, 10, 18, 28.

Song Sparrow (*Melospiza fasciata*). May 26, 29, 30.

Savanna Sparrow (*Passerculus sandwichensis savanna*). May 21, 25, 26, 27.

Grass Finch (*Poocetes gramineus*). May 20, 27. June 4.

Swamp Sparrow (*Melospiza palustris*). May 27.

Hermit Thrush (*Hylocichla ustulata pallasi*). June 20.

Robin (*Merula migratoria*). May 18, 27, 29.

Kingbird (*Tyrannus carolinensis*). June 15, 18, 19, 20.

Red-eyed Vireo (*Vireosylva olivacea*). June 21, 28.

Blue-headed Vireo (*Vireo solitarius*). June 8.

Yellow Warbler (*Dendroica aestiva*). June 5, 7, 10, 11.

Night Hawk (*Chordeiles popetue*). June 6, 21.

Cliff Swallow (*Petrochelidon lunifrons*). June 10, 20. July 7.

White-bellied Swallow (*Tachycineta bicolor*). May 27, 29, 29, fresh.

Black-capped Chickadee (*Parus atricapillus*). June 4, well incubated.

Rusty Grackle (*Scolecophagus ferrugineus*). June 3, 11, well incubated.

Catbird (*Galcoscoptes carolinensis*). July 21, 23, 25.

Cedarbird (*Ampelis cedrorum*). June 20. July 3, 4.

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### The Corn Crake in Connecticut.

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BY HON. JOHN N. CLARK, SAYBROOK, CONN.

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In looking over a Check List made from the A. O. U. Code I find the names of fifty-one species or varieties of birds enclosed in brackets, and upon investigation discovered by Rule 3 "that stragglers or accidental visitors not regarded as components of the North American fauna were to be distinguished by having their respective numbers in brackets," so that these fifty-one species are regarded as stragglers or accidental visitors, and every capture of one of them by an ornithologist is regarded as an interesting event to be triumphantly recorded for publication.

But how few such triumphs are there in the records! Probably but a small portion of such captures fall to the lot of the ornithological student. Seventy-five in a hundred of the sportsmen would dress the rare bird for the

pot, with the common ones, and discuss its flesh instead of its plumage.

Yet such a triumph has been mine; the first specimen of all that list of stragglers fell into my hands on the 20th of October last—a Corn Crane (*Crex crex*), a bird about the size and appearance (if not examined too closely) of a Woodcock, aside from the beak, which latter more nearly resembles that of the domestic fowl. Reddish tints predominate, especially on the wings, and a more critical examination reveals the somewhat flattened form peculiar to the *Rallidae*. It was a male, apparently fully mature in size and plumage, and was found in such a place as one would be likely to look at that season for Woodcock—a swampy thicket at the head of a marsh, the source of a small stream winding some two miles through salt meadows to its outlet into Long Island Sound. Whence came this bird, and whither was it going? Are there others and have they a breeding ground in our county? Questions without solution are only conjecture. It would be interesting to me if someone acquainted with the habits of the species would present them at length. All the information I have been able to gather is comprehended in the brief "accidental on our coast." If a single specimen establishes the status of a species then the List of the fauna of Connecticut is increased by one.

[The Corn Crane (*Crex pratensis* until lately, when Linnaeus's name has been adopted by the A. O. U. nomenclature, and we now have *Crex crex*), is quite a common bird in England, where it is found in the meadows and low lands where there is water. It is migratory, and arrives there from the European Continent about April or May.

It is of a shy and retiring disposition, and will not fly unless compelled to do so. The nest is constructed of dry grasses, on the ground, in meadows, and from seven to ten eggs are laid. Their ground color varies from ceru drab to fawn, and they are spotted and blotched quite heavily with cinnamon and russet. There are also a few spots of purplish-gray. They measure 1.41 x 1.07 and larger, and the spots have a tendency to run lengthwise on the eggs.

Specimens of this bird have been taken in Greenland, Long Island, New Jersey, and the Bermudas, and now Judge Clark has added Connecticut to these localities. It therefore has a far better claim to be included in our North American fauna than many other birds who have been admitted on the strength of a single specimen having been taken here.—J. P. N.]

## An Unusual Nest of the Parula Warbler.

BY WILLIAM BREWSTER.

In the interesting article on "The Parula Warbler, Its Nest and Eggs," in January O. & O., "J. M. W." says: "I do not think this warbler ever attached the upper part of the nest to limb or twig like the orioles and vireos." It is natural that this keen observer and charming writer should feel sure of his ground in dealing with a species which he knows so well, but, nevertheless, he is mistaken in the opinion just quoted.

I have a nest of the Parula Warbler taken with a set of three eggs at Stoneham, Mass., June 24, 1867, which in shape and general style of construction closely resembles a wide-mouthed nest of the Baltimore Oriole, excepting, of course, that it is much smaller. There is no hole in the side, and the bird entered at the top as this Oriole does. The upper edges and sides were securely fastened to the fine terminal twigs of the drooping bough of a vigorous live hemlock, where the nest was prettily concealed among its foliage, and hung suspended precisely as the Oriole's hammock hangs in the drooping spray of an elm.

This nest is composed entirely of *usnea*, loosely woven or perhaps merely felted together. It had a scanty lining of fine grasses and pine needles, which the birds must have been at some pains to collect, for the closest scrutiny, on the part of a friend and myself, of all the trees in the surrounding grove, failed to show more than a few scattered tufts, the largest not larger than an English walnut.

This fact doubtless explains the unusual character of the nest just described. Its builders having chosen to ignore one of the most firmly grounded traditions of their race, by settling in a spot where *usnea* was too scanty to be used in the ordinary way, were obliged to depart still further from established precedent and construct a finished nest. As it is, the case affords an interesting example of evolution in nest building. Another step in the same direction would give us a nest composed of twine, bark, or what not. Who can say that a Parula will not yet build such a house?

In Northern New England, where the *usnea* is found in almost every tree, the Parula Warbler, as far as I have observed, never breeds in colonies such as "J. M. W." describes, but, on the contrary, is quite as evenly and generally

distributed as any of the other warblers. The same is true of the South, where (in South Carolina and Georgia), I have found it breeding in great abundance, placing its nest in the long streamers of *Tillandsia* that drape the forest trees.

### Nesting of the Blue-headed Vireo.

BY H. W. FLINT, NEW HAVEN, CONN.

In the summer of 1884, while visiting a friend at East Douglass, Mass., (on the line of the New England Railroad, and a few miles from the Connecticut line) I had the good fortune to find the nest and eggs of this bird (*Vireo solitarius*). I had been in search of young wintergreen in a rather wet piece of woodland, and while engaged in picking a bunch of the same was electrified by the note of a bird new to me proceeding from a point not ten feet distant. I recognized the bird in a moment and laying aside my wintergreen commenced a diligent search for the nest, knowing that at this season of the year (June 23rd) it must be nesting, but though the male continued in uninterrupted song in the vicinity for an hour or more, I was unable to find the nest. This was somewhat disheartening as I was obliged to leave town on the following day and that evening I spent a considerable portion of the time in thinking about my unfound prize.

The next morning, while on my way to the depot I was obliged to pass near the scene of the previous day's search, and as I had nearly an hour before train time I sat down my valise and determined to try again. Entering a small clump of pines a short distance from where I saw the bird the day before, I had hardly proceeded twenty feet before I was again saluted with the ringing notes of my looked for specimen and in a moment more had fastened my eyes on the nest in a birch sapling about ten feet up, upon which was sitting Mrs. *V. solitarius* composedly eyeing me with her bright little brown eyes. Taking hold of a branch within reach I pulled that upon which the nest was suspended down until I could touch the bird and actually did so before she left the nest. In fact, I never met with so close a sitter before or since.

The nest is very neat and pretty, rather shallow, composed mostly of fine yellow bark strips mixed with pieces of *lecropia* cocoons, one dry leaf, pieces of rotten wood, etc., covered outside more or less evenly with caterpillar's silk and

lined with pine needles and a few fine strips of grape vine bark.

The eggs, four in number, were of a delicate pinkish white ground color, sprinkled chiefly about the greater end with fine reddish dots, and entirely unlike any vireo's eggs I have ever seen.

### New Haven Ornithological Club.

An Ornithological Society has been formed at New Haven, Conn., known as the New Haven Ornithological Club, which cordially invites correspondence with all who are interested in the subject.

Its membership consists of seven active, one honorary and two corresponding members, with Mr. L. C. Bishop as President, H. W. Flint, Vice-President, C. C. Trowbridge, Treasurer, and Robert D. Camp, Secretary. Meetings are held once a month on the first Thursday, at which papers are read, notes on migration condensed, and the subjects bearing on the study discussed.

The club is at present in a flourishing condition, and the members are striving hard to maintain it.

The address of the Secretary is P. O. Box 726, Stamford, Conn.

### The Red-tail Hawk Repairing Nest in the Fall.

BY DR. W. S. STRODE, BERNADOTTE, ILL.

About Nov. 4th this vicinity was visited by a strong gale of wind, lasting about twenty-four hours and blowing old trees, haystacks, fences etc. down in great shape. And among other things that was entirely or partly blown down, was the old nests of the Red-tailed Hawk (*Buteo borealis*). A few days after, the weather warm and pleasant, I found a pair of them carrying sticks and repairing a nest that had been nearly all blown away. This they continued to do until the sides were again well built up, after which they soon disappeared and I have not noticed them since.

That the Osprey strengthens and repairs its nest in the fall, that it may withstand the storms of winter, is well-known, but this is the first instance that I have ever met with in which the Red-tail did so. What has been the observation of others?

## An Addition to the Fauna of Bristol County, Mass.

*The Arctic Three-toed Woodpecker.*

BY F. H. CARPENTER.

It is with pleasure I am able to record an authentic capture of the Arctic Three-toed Woodpecker (*Cicoides arcticus*) at Attleboro, Bristol County, Mass., on January 2nd, 1888, by Fredric M. Merck, Esq., of that town. This is I believe, the first observation of this species within the county limits.

### Publications Received.

CATALOGUE OF CANADIAN BIRDS is the title of a volume of 143 pages, handsomely bound in cloth and published by J. & A. McMillan, of St. John, N. B.

The ornithology of the dominion of Canada has never received an adequate representation in any hitherto published treatise. Presenting as it does a vast field for research, with but limited corps of observers, the knowledge of its avi-fauna is limited, and in this, Mr. Chamberlain's *Catalogue of Canadian Birds*, we recognize a very successful effort to systemize a complete list of the birds of Canada, as far as faithful work on the part of the author, assisted by numerous observers, can accomplish. Mr. Chamberlain has made his catalogue very brief, omitting all synonyms, and avoiding the usual technical expressions, and in this volume we find an example of what its author once advocated in the pages of the magazine, "*Plain English*." For personal convenience, if not for other reasons, we wish that Mr. Chamberlain had consecutively numbered the species, but careful counting gives a total of 545 as catalogued, with an appendix in which eleven species, are either re-catalogued, as by latest nomenclature, or given as of probable occurrence.

The annotations given to each species are brief but embodying all necessary references and statements of distribution. A very complete index gives ready reference to any portion of the catalogue, and Mr. Chamberlain deserves appreciation for this, an initial work, which should not halt at this stage of incompleteness, in the task of defining Canadian ornithology.

BIRDS AND EGGS FROM THE FARRALLON ISLAND is the title of a very interesting paper by Mr. Walter E. Bryant, and read before the

California Academy of Sciences. The paper is based on the notes of Mr. W. Otto Emerson and gives a very substantial amount of information regarding the ornithology and oölogy of that island. It gives annotations on 81 species, and contains a map of Farrallon Island by Mr. Emerson.

Brewster, William—Three new forms of North American Birds from *The Auk* Vol. IV No. 1, April, 1887.

Descriptions of Supposed New Birds from Lower California, Sonora and Chihuahua, Mexico and the Bahamas from *The Auk*, Vol. V, No. 1, Jan. 1888.

On three apparently new Sub-species of Mexican Birds (Author's Edition) advance sheets, *Auk*, Vol. V, No. 2, April 1888.

American Naturalist.

American Journal of Psychology.

Collector's Magazine.

Common Sense.

Canadian Entomologist.

Forest and Stream.

Ottawa Naturalist.

The Auk.

Transactions of N. Y. Academy of Science.

West American Scientist.

### Corrections.

In the January O. AND O., in the notes of "The Shore-bird Migration at Monomoy Island, Cape Cod, Fall of 1877," I notice several slight errors and omissions that I should like to correct.

On page 6, second column, in the notes of Sept. 12, "Red-breasted Sandpipers" should be "Red-backed Sandpipers."

In notes of Sept. 15th, there is an omission of "young," from before "plumage."

Page 7, first column, in notes of Sept. 20, "Semipalmated Plover and Sandpipers," should have "tolerably common" added, which is omitted.

Page 8, first column, the bottom notes should be dated, "Oct. 27," in place of "Oct. 26."

Page 9, first column, Nov. 14 notes, in fifth line, "in" should be changed to "on."

J. C. CAHOON.

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No. 4.

## Notes on Nebraska Birds.

BY W. EDGAR TAYLOR AND A. H. VAN VLEET,  
PERU, NEBRASKA.

With this number of the O. & O. we begin a series of articles, "Notes on Nebraska Birds."

The only published records made on the birds of Nebraska are found in "Birds of North America," Vol. I, 1856, by Baird, Cassin and Lawrence; also in Annual Report of United States Entomological Commission, 1877, is an article by Dr. Samuel Aughey, entitled, "Aughey on Locust Feeding Birds." These records are very unsatisfactory and incomplete, as well as somewhat out of date, being classified under the old nomenclature. In the articles now published, we have endeavored, by freely using information from every source, to bring up the past records, as well as add additional notes made by ourselves or reliable parties. When a species is well known and generally distributed, no mention is made of the various references, but when the species is thought to be rare, or only mentioned by one or two, the authorities are quoted.

Acknowledgements are due the Normal Science Society for the use of their records and collections; also Dr. L. E. Hicks, State University, for special favors, and to others whose names are given in the proper places.

The numbers in parentheses refer to corresponding numbers and names in the check list of the American Ornithological Union, 1886.

We should be pleased to receive information of any kind and from any source, with reference to Nebraska birds, from those reading these articles.

3. *Colymbus auritus* (Linn). Horned Grebe. Not reported as found in Nebraska, but as it is a widely distributed species and is found in all surrounding territory, doubtless exists in the State. Rare and perhaps migratory.

4. *C. nigricollis californicus* (Heerm). American Eared Grebe. Rather abundant, especially on the Platte and Missouri. (Aughey). Collected on Snake River and at Ft. Berthold. (Baird). Arrive in May and September. May breed in Western Nebraska.

6. *Podilymbus podiceps* (Linn). Pied-billed Grebe. This bird seems to be rare in Nebraska. It is not reported by either Aughey or Baird, and is scarcely seen by any one. It is found in Iowa, breeds in Kansas, where Goss mentions it as abundant in migration. McChesney says "it is common in all the small lakes of Dakota, and breeds in the tall grass." Arrives in Kansas last of April to the first of May; in Dakota about May first and leaves the last of October.

7. *Urinator imber* (Gunn). Loon. Common early in the spring for about a month. Arrive about the time the ice breaks on the streams, usually by the first of April. Not seen again till September or October.

36. *Stercorarius pomarinus* (Temm). Pomarine Jaeger. Dr. Aughey mentions seeing this bird in Dakota County in May, 1869, also in May 1873. Very rare, at present, if found within the State.

47. *Larus marinus* (Linn). Great Black-backed Gull. Dr. Aughey mentions one specimen shot on the Missouri in May, 1871.

51. *L. argentatus smithsonianus* (Coues). American Herring Gull. Common during spring migration. Arrive about the first of May, and sometimes stay till first of July.

54. *L. delawarensis* (Ord). Ring-billed Gull. Common from the first of May till June and July. Seen in flocks. Baird mentions two specimens as collected on the Laramie, July 23, 1857.

59. *L. franklinii* (Sw. & Rich). Franklin's Gull. Very abundant during migrations. Arrive the first of April, some remaining as late as July. Return in September and October. The records of the Normal Science Society show this gull to be most plentiful in May. Baird

mentions one specimen collected on the Platte in 1856, as late as July 14.

The gulls are very abundant during wet springs and falls; high waters. The people foretell a rise in the larger streams by the large number of gulls flying up stream in order to collect insects from the fresh waves. Franklin's Gull and the Ring-billed Gull are sometimes seen in small flocks. Parties making collections in the State claim that other species of Gull are found, but we have obtained no authentic record of the species. Also Aughey speaks of some members of this family which he failed to identify. One specimen in the State Normal Museum has not been fully identified.

69. *Sterna forsteri* (Nutt). Forster's Tern. A few during migration. Arrive about the first of May.

70. *S. hirundo* (Linn). Common Tern. Not common. Arrive about the first of May.

71. *S. paradisica* (Brunn). Arctic Tern. Dr. Aughey mentions seeing a few of these Terns in Dixon County in May 1866.

74. *S. antillarum* (Less). Least Tern. Abundant in June, July and August. Breeding in the State. Arrive about the first of May.

77. *Hydrochelidon nigra surinamensis* (Gmel.) Black Tern. Quite common during migrations. Some few breed in the State. Arrive about the first of May and October.

120. *Phalacrocorax dilophus* (Sw. & Rich). Double-crested Cormorant. Not on record as a Nebraska bird, but found in Kansas, Iowa and Dakota. Breeds in Dakota. Perhaps migratory in Nebraska, passing through in April and November.

125. *Pelecanus erythrorhynchos* (Gmel.) American White Pelican. Seen on the Platte, Missouri and other streams in large flocks during migrations. Mr. George Colman, October 20, 1886, counted forty in one flock on the Missouri. Arrive in April, May, and in October and November. Dr. Aughey says: "This and other species exist in the State."

129. *Merganser americanus* (Cass). American Merganser. Not common. Arrives about the last of April or first of May. Hunters claim that this duck remains on the Missouri all summer.

130. *M. serrator* (Linn). Red-breasted Merganser. Not seen except during the winter. Not common.

131. *Lophodytes cucullatus* (Linn). Hooded Merganser. Somewhat common in winter in parts of the State. A few spend the summer in Nebraska.

132. *Anas boschas* (Linn). Mallard. Very abundant during migrations. Not an uncommon resident. More abundant at some seasons than others.

133. *A. obscura* (Gmel.) Black Duck. Sometimes common during migration. Arrive the last of March or first of April.

135. *A. strepera* (Linn). Gadwall. Sometimes common during migration. As it breeds in Kansas and Dakota, it doubtless breeds in Nebraska.

137. *A. americana* (Gmel.) Baldpate. Common in migration. Come the last of March or first of April, and sometimes stay as late as June.

139. *A. carolinensis* (Gmel.) Green-winged Teal. Abundant during migration. Arrive the first of April and stay till June. Return about the first of September, and stay till the last of December.

140. *A. discors* (Linn). Blue-winged Teal. Very plentiful during migration, from the first of May till June, and in the fall. A few breed in the State. Mr. C. J. Pierson, in the records of the Normal Science Society, says: "This bird when I came upon it, did not fly, but crept very close along the opposite side of the river. Often it would hide under cover of a log or brush that projected into the water."

141. *A. cyanoptera* (Viell). Cinnamon Teal. This bird is not on record as a Nebraska bird, neither has it come under my observation. Several parties claim that, at times, it is plentiful in central and western Nebraska. Goss says: "Not uncommon in middle and western Kansas."

142. *Spatula clypeata* (Linn). Shoveller. Sometimes common on the Missouri during spring and fall migrations. Somewhat rare in other parts of the State. Arrive about the first of April, and sometimes stay till June or July, some few probably breeding in this State.

143. *Dafila acuta* (Linn). Pintail. Very plentiful on the Missouri during migrations, and somewhat common over the State. Arrive in March and first of April; leave about the first of May.

144. *Aix sponsa* (Linn). Wood Duck. A very common summer resident; perhaps the most plentiful duck on the Missouri. Arrive the first of April and stay till September or October.

146. *Aythya americana* (Eyt). Redhead. Numerous from the first of April, till sometimes the first of June. Again seen in October and November.

147. *A. vallisneria* (Will). Canvas-back. Reported by Mr. E. P. Boggs as "very plentiful

in Platte county," and by Dr. Aughey as "rather frequently seen in Nebraska." Mr. Allen Prime mounted one November, '87, captured on the Missouri, where they are common during migrations.

148. *A. marilla nearectica* (Stejn). American Scaup Duck. Not known to have been found in Nebraska, but is found in Kansas and Dakota, and probably exists in the State as a rare species.

149. *A. affinis* (Eyt). Lesser Scaup Duck. Very plentiful during spring migration. Arrive from the first to the last of April.

150. *A. collaris* (Donov). Ring-necked Duck. This duck is not on record as found in the State, but is given a place from its well-known distribution, and well known habitat in adjoining states.

151. *Glacionetta clangula americana* (Bonap). American Golden-eye. Common from the first of April till as late as the middle of May. Seldom seen in the fall.

152. *Charitonetta albeola* (Linn). Buffle-head. Quite common during migration.

167. *Erismatura rubida* (Wills). Ruddy Duck. Given by Aughey as quite common on the Missouri and its tributaries. Baird mentions three specimens; one collected on White River in May, and two on the Platte in October.

(To be Continued.)

### A Series of Eggs of Accipiter cooperi.

BY J. P. N.

The eggs of Cooper's Hawk (*Accipiter cooperi*), are usually referred to as being unmarked, and so the majority of sets are, but well defined spots are not uncommon, and two sets with bold and heavy markings will be referred to below.

The writer is indebted to the well-known collector and naturalist, "J. M. W." (Mr. C. L. Rawson), for all the finest sets in the following series, and the acknowledgment is cheerfully made. Without his help the series would have been far less complete.

Set I. May 5, 1886. Black Hawk County, Iowa. Collected by G. P. Four eggs, fresh. Bluish-white. Three of them are entirely unmarked, but the fourth has a few specks of fawn color: 1.76 x 1.44; 1.81 x 1.44; 1.88 x 1.43; 1.81 x 1.41.

Set II. May 20, 1881. Black Hawk County, Iowa. Five eggs, incubation commenced. Light bluish-white, unmarked, but nest stained:

1.96 x 1.53; 1.93 x 1.49; 1.91 x 1.53; 1.96 x 1.50; 2.06 x 1.47. One of the eggs is granulated at the larger end.

Set III. May 10, 1881. Gildersleeve, Conn. Collected by James W. Lord. Four eggs, fresh. Light grayish-white, unmarked: 1.91 x 1.51; 1.87 x 1.55; 1.98 x 1.51; 1.88 x 1.55.

Set IV. May 20, 1879. Black Hawk County, Iowa. Collected by G. P. Four eggs, incubation advanced. Grayish-white, unmarked, but nest stained: 1.84 x 1.48; 1.89 x 1.50; 1.91 x 1.49; 1.95 x 1.52.

Set V. May 25, 1885. Black Hawk County, Iowa. Collected by H. P. Four eggs, fresh. Grayish-white, unmarked, but nest stained: 1.89 x 1.51; 1.90 x 1.59; 1.91 x 1.53; 1.92 x 1.53.

Set VI. May 11, 1879. Preston, New London County, Conn. Collected by "J. M. W." (C. L. Rawson). Six eggs, grayish-white, immaculate. Mr. Rawson writes in regard to this large and beautiful set: "I never saw a cleaner nor so large a set as this one. Wild Cooper seen leaving small nest well out on limb of tall chestnut. With rope and irons, send climber up, and out on dizzy perch, to find this big clutch in little old nest, partly lined with chips of hickory bark." 1.87 x 1.51; 1.88 x 1.48; 1.98 x 1.47; 1.83 x 1.47; 1.89 x 1.47; 1.87 x 1.48.

Set VII. May 20, 1883. Near Preston, Conn. Collected by "J. M. W." (C. L. Rawson). Four eggs, fresh. Grayish-white, unmarked. Mr. Rawson writes: "First egg seen May 13. On straight chestnut tree. Nest measured by tape-line and found to be sixty-nine feet from ground. Birds shot at and shy." 1.98 x 1.56; 2.01 x 1.56; 2.01 x 1.52.

Set VIII. May 24, 1885. Preston, Conn. Collected by "J. M. W." (C. L. Rawson). Four eggs, fresh. Light bluish-white, unmarked. Mr. Rawson writes: "Well repaired nest, in tall many limbed chestnut, in heavy growth. Low land. Bird flushed many times." One of the eggs has a more decided bluish tint than the others: 1.94 x 1.47; 2.01 x 1.51; 1.97 x 1.41; 1.99 x 1.48. Slightly granulated near the larger ends.

Set IX. May 10, 1881. Blue Mountains, Northampton County, Penn. Collected by Shriner. Four eggs, fresh. Very light bluish-white, unmarked: 2.03 x 1.43; 1.99 x 1.48; 1.96 x 1.51; 1.88 x 1.51.

Set X. May 20, 1881. Black Hawk County, Iowa. Collected by J. D. P. Four eggs, incubation commenced. Grayish-white, unmarked, but nest stained: 1.83 x 1.48; 1.90 x 1.48; 1.97 x 1.50; 1.82 x 1.50.

Set XI. May 1, 1871. Hartford County,

Maryland. Collected by Thomas H. Jackson. Four eggs. Light yellowish-white. Two of the eggs have a few small spots of russet near the smaller ends; the other two are unmarked: 1.93 x 1.54; 1.94 x 1.53; 1.92 x 1.55; 1.94 x 1.54.

Set XII. May 7, 1884. Clifton, Virginia. Collected by H. K. Jamison. Three eggs, incubation begun. Very light bluish-white. One egg unmarked. The other two spotted and speckled with chestnut. Some of the spots measure .25 x .10, but most of them are smaller. One of the eggs is much more heavily marked than the other: 1.90 x 1.50; 1.91 x 1.50; 1.90 x 1.46.

Set XIII. May 9, 1885. Preston, Conn. Collected by "J. M. W." (C. L. Rawson). Four eggs, fresh. Concerning this most peculiar set, Mr. Rawson writes: "Old nest, raised up high in oak. Male killed." They are light bluish white. One is unmarked, the other three spotted with fawn color and russet. The spots average about .10 x .15. The peculiarity of this set consists in the great number of large granulations and corrugations which are found on three of the eggs. The bird's oviduct must certainly have been diseased, as the present writer has never seen another set of eggs with the like peculiarity: 1.97 x 1.52; 1.92 x 1.54; 1.90 x 1.57; 1.96 x 1.50.

Set XIV. May 20, 1886. Lafayette County, Miss. Collected by J. T. M. Two eggs, fresh. Light bluish-white. One of them is marked with a few faint specks of russet: 1.85 x 1.46; 1.81 x 1.43.

Set XV. May 17, 1883. Blue Mountains, Northampton County, Penn. Collected by Shriner. Two eggs. Grayish-white, one of them unmarked, the other spotted with russet, principally at the smaller end: 1.90 x 1.33; 1.89 x 1.32.

Set XVI. May 4, 1885. Kingston, New Mexico. Collected by F. W. Four eggs, fresh. Bluish-white. Two of the eggs are unmarked, but the other two are quite heavily spotted with russet: 1.90 x 1.43; 1.94 x 1.45; 1.99 x 1.44; 2.02 x 1.45.

Set XVII. May 14, 1882. Ledyard, New London County, Conn. Collected by "J. M. W." (C. L. Rawson). Five eggs, fresh. Light bluish-white, two of them unmarked. The other three are very heavily marked for this species. The spots and blotches are of russet and chestnut, and some of them measure .25 x .35. One egg is especially brilliant, and the markings are as heavy as on the average specimens of *Buteo lineatus*. Concerning this beautiful set, Mr. Rawson writes: "Little old nest

in chestnut. Male and female both in attendance, chattering loudly." 1.88 x 1.49; 1.87 x 1.46; 1.86 x 1.48; 1.90 x 1.47; 1.84 x 1.45.

Set XVIII. May 11, 1884. Ledyard, New London County, Conn. Collected by "J. M. W." (C. L. Rawson). Five eggs, fresh. Bluish-white. One of them is unmarked, but the other four are brilliantly and heavily spotted and blotched with burnt umber. The markings are heaviest at the larger ends, and one of the blotches measures .45 x .25. The dark color of the markings, and their great number, renders this set quite phenomenal in appearance, and were it not for their smaller size, they would readily pass for eggs of *Buteo lineatus*. Mr. Rawson writes concerning them: "A fragment of old nest in top of straight tree was examined, and with the glass showed feathers. Climber sent up, and got this fine set. Hawks came near, and chattered as the ascent was made. I have always considered these two brightly marked sets of Cooper's [Sets XVII and XVIII above], were from the same bird. The nests were about a mile apart, as the Crow flies. In the first instance, I only kept my climber from shooting the female by threatening to shoot him. From her perching, flying, and more particularly her chattering, scolding voice, I can pronounce her undeniably *Accipiter cooperi*, but very large and very handsome."

### Notes on the Birds of the Santa Barbara Islands.

BY CLARK P. STREATOR.

Off the coast of Southern California, between 32 and 34 degrees north latitude, extend the Santa Barbara Islands. There being no other Islands nearer than two hundred and fifty miles, they attract a large number of Sea Birds to their rough and rocky shores in the breeding season.

In the year of 1886, I succeeded in making three visits to three of the Islands; first, to Santa Barbara; second, to San Miguel; and third, to San Nicholas. The number of species of land birds on San Miguel and San Nicholas is rather limited, there being no trees on these Islands, and everything being very limited on Santa Cruz, the collections of land birds were not very complete, but of the Water Birds that breed I believe that few escaped my notice.

On the morning of March 15, in company with two friends, we left Santa Barbara on a sealing schooner for the west end of Santa Cruz.

The day proved to be a very bad one, for about the time we reached the middle of the Santa Barbara Channel, a gale sprung up and we were obliged to return and wait for about two days until the storm was over. This time we had a very fine trip. We arrived at the north end of the Island and anchored in a little harbor just after the sun had passed out of sight beneath the ocean.

Few birds had been seen during the trip, only a few Gulls and Cormorants, and they were flying in the distance.

No sooner had the dawn of day appeared, than I began to hear the sweet warbling notes of the House Finch (*Corpodacus mexicanus frontalis*), but as it became daylight, it could be seen that their habits differed from those found on the main land. At home they were always seen hopping about the fruit trees and on the ground, acting like our most noted pest, the English Sparrow. But here they were hopping about the cactus that found footing on the sides of the steep cliffs.

We lowered our row boat and went ashore, and followed up a steep, narrow canon at the head of the bay. As we were hauling our boat above high tide mark, a Western Gull came flying over, and a shot from the gun dropped him to the earth. I laid him near the boat. We then advanced about twenty yards further, when a Northwest Crow alighted upon the Gull and started in to make his breakfast. The result was, that the Crow managed to fly away, but carried off a good many shot.

Passing up the canon, specimens of the Santa Cruz Jay (*Aphelecoma insularis*), and a Red-shafted Flicker (*Colaptes cafer*), made their appearance. We then retraced our steps to the boat, put it afloat, and rowed down to the side of the Island, within gunshot of the cliffs. We soon got within range of a pair of American Eared Grebes and secured them both at a single shot. The cliffs at this point are made up of volcanic rock and contain many large caves, and are largely inhabited by the Sea Birds. In these places they are free from their worst enemy, which is that of a small fox that abounds on all of the larger islands.

I saw more specimens of the Belted Kingfisher (*Ceryle alcyon*), flying from cave to cave, than I have ever seen at any other locality. Fish of all size, plenty, and the rock bottom could be seen with ease at a depth of forty feet or more. We then followed down until we came to another inlet with a canon at the head. We again went ashore and I collected a specimen of the Lutescent Warbler (*H. celta lutescens*), also

a specimen of Townsend's Sparrow (*P. iliaca unalaschensis*). The following specimens were identified for the balance of the day and the morning of the next:

Bald Eagle (*Haliaeetus leucocephalus*), Fish Hawk (*Pandion haliaeetus carolinensis*), Western Gull (*Larus occidentalis*), Black Turnstone (*Arenaria melanocephala*), Greater Yellow Legs (*Totanus melanoleucus*), Solitary Sandpiper (*Totanus solitarius*), Pigeon Guillemot (*Cephus columba*), Black Oyster-catcher (*Icthyophaga bicknelli*).

Several specimens of the two latter species were taken. This was the end of collecting on Santa Cruz, as the wind blew a terrible gale for the next two days, and it was with the greatest difficulty that the schooner was kept adrift.

The next trip made was a much more successful and enjoyable one. It last twenty-five days and was made upon San Miguel Island. This island is situated at the western entrance of the Santa Barbara Channel. It is comprised of about thirteen thousand acres, and the greater part is covered with drifting sand. The balance is covered with tall grass, which forms a hiding place for a good many small species of birds.

Outside of the main island, distant about a mile, lie two islands. They rise above the sea about two hundred feet, and each contain about ten acres of land or more, probably rock. The seal hunters have given the name of Gull and Flee Islands to these small islets on the latter island.

I was first conveyed with a party of seal hunters. Upon approaching, several acres appeared one mass of living Gulls and Cormorants. They were from all stages and sizes, and the noise they made was beyond comparison. On examining the higher portion of the Island, it was found to be the home of the Tufted Puffin (*Lunda cerrhata*). Dozens of these peculiar birds sat out upon the ledges of the rocks, while others were flying about in all directions, and crevices in the rocks were filled with eggs, but they were inaccessible, as they were in the sides of the cliffs, and I was obliged to leave for the main Island after I had only collected one egg. Where there was any soil, it was full of burrows in every direction, made by Cassin's Auklet, and upon excavating a few feet in several of these places, I was rewarded by finding three old birds, and with each a single egg. On this main island, the following land birds were noted:

Bald Eagle (*Haliaeetus leucocephalus*), Prairie, Falcon (*Falco mexicanus*), Western Meadow

Lark (*Sturnella magna neglecta*), Ruddy-horned Lark (*O. alpestris rubea*), Mexican Raven (*Corvus corax sinuatus*), Rock Wren (*Salpinctes obsoletus*), Bank Swallow (*Clivicola riparia*).

Other species were seen but not identified. We visited Gull Island twice. The birds were so numerous here, that after I had began to fire my gun they flew into the air so thick as to nearly obscure the sun from view. The Water Birds named below were all found in breeding season on this Island.

Black Oyster-catcher (*Heumatopus bachmani*), Western Gull (*Larus occidentalis*), Heerman's Gull (*Larus heermanni*), Brandt's Cormorant (*Phalacrocorax penicillatus*) Farallone Cormorant (*Phalacrocorax dilophus alborilutatus*), Baird's Cormorant (*Phalacrocorax pelagicus resplendens*), Tufted Puffin (*Lunda cirrhata*), Pigeon Guillemot (*Cephus columba*), Cassin's Auklet, (*Ptychoramphus aleuticus*), Black Turnstone (*Arenaria melanocephala*), Surf Scoter (*Oidemia perspicillata*), California Pelican (*Pelicanus californicus*).

I collected a large number of skins from this Island but very few eggs, as it was late in July and the season had nearly closed.

The last visit made was on San Nicholas Island. The appearance of this Island was very near the same as San Miguel, only it contained about twenty-three thousand acres. The visit was made in the middle of autumn and lasted for about fifteen days. The Island is situated nearly one hundred miles from shore, and is probably less frequented by the land birds, except those which are residents.

The number of species seen were limited in number. The Mexican Raven (*Corvus corax sinuatus*), was very common and tame, a large number of them feeding upon the carcasses of seals that I shot while there. The sheep owners on the Island complain a great deal about them. They say the Ravens pick the eyes out of the young lambs, then wait until they die and afterwards eat them.

I can not say as to the truth in this matter, but no case of the kind ever came to my notice while on the islands. The following is a species of birds seen on this Island:

Bald Eagle (*Haliaeetus leucocephalus*), Burrowing Owl (*S. cucularia hypogaea*), Brewer's Blackbird (*Scolecophagus cyanocephalus*), Black Flycatcher (*Sayornis nigricans*), Rock Wren (*Salpinctes obsoletus*), Solitary Sandpiper (*Totanus solitarius*), Black Turnstone (*Arenaria melanocephala*), Brant's Cormorant (*Phalacrocorax penicillatus*), Royal Tern (*Sterna maxima*), Western Willet (*Symphemia semipal-*

*ata inornata*), California Pelican (*Pelicanus californicus*), Western Gull (*Larus occidentalis*).

The Black Turnstone was found very common on San Nicholas. In some cases, I saw over a hundred in a single flock. They were very tame and shot with little trouble. On our return trip, I saw quite a number of the Short-tailed Albatross (*Diomedea albatros*). One followed our boat for some distance, but we were unable to secure him.

Numbers of the Red Phalarope (*Crymophilus fulvicaeus*), were also seen standing on floating pieces of kelp. I expect to return to California, and visit the Santa Barbara Islands again the latter part of the present year, so I hope I will be able to furnish the readers of the O. & O. with some descriptive notes of some of the species.

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### On Making Exchanges.

BY WALTER HOXIE.

No doubt many collectors have had the same aversion to making exchanges that I had until quite lately. I always like to look upon my collection as the result of my own labor, and to the yawning gaps in a series of specimens I was utterly oblivious. These gaps are of two kinds, and the only way a collector who is rooted to one spot can fill them is by exchange or purchase. Now among my finches when I come to study them over, I find that I possessed comparatively few in perfect plumage, for many of them are only winter visitors in this locality. Field, Chipping, White-Throated and Swamp Sparrows were all in winter dress. So of the Goldfinch and many others. After supplying these, I find there were still gaps to fill before I could get a good study collection of this family. Of all the brilliantly colored little buntings, I possessed only the Nonpareil. And, of course, those species of a strictly northern and western habitat, I could only hope to obtain through my correspondents. Now that the various little groups begin to enlarge themselves, I find that my own specimens possess an additional value to me. Something in the same way that we take a grain more of pleasure in an uncultivated country acquaintance after he has been out a little in good society and becomes polished up a bit. And what I say here of the Finches is yet more true of the Warblers. Some of my own little dull colored fellows look quite cosey and sociable when they take their place among the circle of their bright

little cousins and brothers that arrived by mail today. I am surprised to find myself such a ready convert to the exchange system.

Still, I know there are dangers in it, and being an old fellow I take the liberty to preach a little. Don't go in for numbers of specimens merely. A family or genus well filled out, representing a good series of plumages, and foreign as well as native members of the group, is of more value to you and I and all of us, than a heterogeneous mass of skins, which represent no well developed group or sequence. It is a good plan, too, if the strictly local collection can be kept a little apart from the rest. My arrangement is to place my own at the foot of the drawer or tray, Eastern specimens to the right, Northern above, and Western to the left of these. Of course, there are many other ways of doing the same thing, but this was the first that suggested itself to me, and it seems to answer remarkably well.

But the greatest danger of all perhaps, is that exchanging may come to savor too much of mercantile affairs. At this point, it is very little more meritorious than the millinery business. Not that I mean to say that I consider the latter an illegitimate occupation in any sense.

Invading a beautiful woody hillside and imprisoning its jolly little rivulet to turn a great buzz-saw, must be looked upon as an act of vandalism before the hard-working bird trader is to be pilloried. But I am digressing. Another thing we can learn by exchanging is to compare our own work with that of others. We can thus get points of benefit to ourselves, and sometimes give our correspondents hints that are of value to them. But there is a still something more, and to me a sweeter pleasure in looking over my exchanges. Some of us old fellows have been quite erratic wanderers in our younger days, and here and there a little bird calls up old memories of by-gone days.

Here is a little Black Poll Warbler, and as I hold it up a little sideways in my hand, an almost forgotten picture comes back of the spot where I first made his acquaintance. The little Hermit lakes skimmed over with ice, the curling smoke of our camp fire rising through the trees, and the blush of morning tinging the steep walls of Tuckerman's Ravine. The Lincoln's Finch has a background of old pasture lands, with big rocks sprinkled about and patches of savin and huckleberry bushes. And, wandering in the distance, the silver thread shows where the big broad river flows by the first place I ever called home.

## Nesting of the Swamp Sparrow.

BY ISAAC S. REIFF, PHILADELPHIA, PENN.

The Swamp Sparrow (*Melospiza palustris*) is the most plentiful species of the family found in the eastern part of Philadelphia and Delaware Counties, if we exclude the least useful representative *Passer domesticus*. It arrives in this neighborhood about the last week in April, and is found in great numbers on the low meadow lands that border on the Delaware and Schuylkill River, where it makes its summer home.

Nest building begins about the twentieth of May, and in some cases as early as the fifteenth of that month. The number of eggs found in a nest varies from four to five, and more often the former than the latter number is found. The collector who is not well acquainted with the habits of this species would be somewhat surprised, on entering a meadow during the breeding season, to see a number of these birds, and after tramping several hours through tall tangled grass, mud, water and bunches of tussocks, upon counting up the result of his tiresome hunt to find that the nests discovered will not average more than one to every ten pairs of birds seen.

Some years ago before the lower portion of Philadelphia was so thickly settled, and the relentless small boy became so numerous, the favored site for a nest was the centre of a large tussock of grass, but now the greater number of nests found are placed on the ground, or in a bunch of sedge grass. When it is placed in the latter, or in a tussock, it is composed entirely of fine yellow grass stems, and is neat and compactly built. When placed on the ground, however, the outside is composed of coarse plant stems, and the inside is thickly lined with fine yellow grass, and it is much larger than when in the former position.

This is the jolliest little sparrow that I have ever met, and while the breeding season lasts it seems as if he could not express his joy forcibly enough to his partner.

While the female is performing her laborious duties, the male, (when not hunting for food) will take his position on a weed stalk, or small bush, and pour forth his song; and in his ecstasy he will rise in the air to the height of fifteen or twenty feet, and then let himself slowly descend to the ground, all the while keeping up his song. I have counted as many as twelve birds singing in the air at one time within a radius of one hundred and fifty yards.

A large series of eggs of this species show many styles of markings, of various shades of brown, on ground colors varying from a delicate shade of greenish white to a medium green.

[Six selected sets now before me may be thus described:

Set I. May 19, 1886. Canada. Collected by J. E. Wagner. Four eggs, light pea green, marked with spots and cloudings of drab and vandyke brown. In three of the eggs these markings form indistinct wreaths near the greater ends, and there are also a few lavender spots. In the other one the markings are more evenly distributed all over the surface of the egg: .80 x .56; .81 x .56; .80 x .57; .80 x .57.

Set II. June 3, 1886, Philadelphia County, Pennsylvania. Collected by Isaac S. Reiff. Four eggs, bright pea green, heavily marked with spots and blotches of sepia and bistre. The markings are confluent at the greater ends, where they entirely obscure the ground color, leaving the remainder of the surface comparatively unmarked. They also have some cloudings of drab: .76 x .59; .79 x .59; .79 x .59; .74 x .60.

Set III. June 8, 1884, Philadelphia County, Pennsylvania. Collected by Isaac S. Reiff. Five eggs, dull pea green, clouded with drab, and with a few spots of vandyke brown: .84 x .55; (an unusually large egg for this species) .75 x .58; .79 x .57; .76 x .58; .76 x .58.

Set IV. May 30, 1882. Philadelphia County, Pennsylvania. Collected by Isaac S. Reiff. Four eggs, light pea green, spotted with raw umber, and clouded with drab. The markings extend all over the surface of the eggs, but are heavier at the greater ends: .81 x .55; .80 x .50; .80 x .56; .81 x .55.

Set V. May 28, 1886. Philadelphia County, Pennsylvania. Collected by Isaac S. Reiff. Five eggs, dull pea green clouded and spotted with drab and drab-gray. Also a few markings of bistre: .72 x .58; .74 x .59; .71 x .57; .73 x .58; .74 x .56.

Set VI. May 28, 1886. Philadelphia County, Pennsylvania. Collected by Isaac S. Reiff. Four eggs, dull pea green, clouded and spotted over the whole surface with drab: .77 x .59; .77 x .59; .78 x .58; .76 x .59.

The eggs of this species can be distinguished at a glance from those of the Song Sparrow (*Melospiza fasciata*) by the peculiar clouded and indistinct appearance of the markings of the former. The eggs of *M. fasciata*, on the contrary, as a rule have smaller markings and much more distinct ones, while the clouded effect of those of *M. palustris* is entirely wanting.—J. P. N.]

## A Few Bird Notes.

BY HENRY HALES, RIDGEWOOD, N. J.

While visiting a friend at Guilford, Conn., last winter, I called on Capt. O. N. Brooks, the veteran of Faulkner's Island Lighthouse, and an Ornithologist, who showed me a singularly colored Crow that was shot a few miles east of that place.

I do think it can be called an albino, as it had not a particle of white, or even black in its plumage; the bill and legs were black. The color of its whole body was a rich drab, with pinkish or purplish tinge, lighter on breast, the deepest shades on upper back and shoulders were slightly more slaty. There were two of these crows seen together in company with other crows all through the fall, but could not be approached within gunshot till hard weather set in, when one was procured; the other was watched for a long time after, but could not be reached.

In June, 1886, in Northern New Jersey, I saw a Purple Finch (*Carpodacus purpureus*), under a church horse-shed, he was on the beams apparently to enjoy the shade. I thought I must have been mistaken, but a neighbor who had shot me some during the early part of last spring, told me he had seen a pair about his house early last June. He killed the male bird and brought it to me, which I have no doubt was breeding in this locality. This is the first instance I have known of the Purple Finch breeding in New Jersey.

An Olive-backed Thrush was picked up in 36th Street, near Madison avenue, New York, early one morning in the beginning of October, without having an appearance of being hurt, yet from his manner he was not a cage bird. After being well fed a few days, he was released in Central Park, which he evidently appreciated.

The same friend who cared for the Olive Back, had a Brown Thrasher roost at night for three weeks late in September, and the beginning of October, in a honeysuckle on the end of his rear stoop, 36th Street, near Fifth avenue. The back yard has a flower bed all around, and a good smooth cut grass plot in the centre, which was very full of worms. The bird stayed and took a good breakfast of worms every morning early, then disappeared till evening; every day most likely he was off to the Central Park. The yards between the rows of houses here are very small, which adds to the singularity of the bird's choice, but the one he

chore was in a much finer condition than any neighboring ones. I never heard of a Brown Thrasher in such a densely populated locality.

### The White-breasted Nuthatch.

*Sitta carolinensis.*

BY C. M. JONES, EASTFORD, CONN.

The Nuthatch is so retiring in its habits that it fails to secure the attention to which its character entitles it, for it has a character of its own, and is really a very interesting bird. Occasionally, either in summer or winter, it makes us a short call, and runs nimbly up and down the shade trees about our dwellings, uttering its unmusical but cheerful "hwank." But it is really a bird of the woods, where it roams at will in the highest tree tops or down to a rotten or a decaying log, and rarely hops along on the ground. The trunks and larger branches of the trees, however, are its principal foraging grounds. At all times, it seems to be burdened with the conviction that the chief end of Nuthatchers is to work. It is seldom seen at rest, though I remember, on one occasion, watching one for a considerable time, as it hung head downward, on the side of a tree, apparently asleep.

These birds commonly go in pairs the year round, and probably remain paired for life. When one is seen, it is quite certain that the other is not far off, and by listening a few minutes it may usually be discovered. Much of the time they keep pretty near together, frequently in the same tree, and when one leads off to another place the other will soon follow. While engaged in this work, they may frequently be heard chattering in a low, conversational manner, apparently very edifying to themselves but not intended for other ears, since the notes can be heard at only a short distance. But when the winter is over and gone, and the milder weather begins to loosen the lee King, the Nuthatches are quick to feel the change. And though the winds may be high and the atmosphere chilly, their loud notes can be heard ringing through the woods, often the only notes to be distinguished above the roaring of the winds.

In the latter part of April, household matters begin to occupy much of their time. As to the locality of their home they are not very particular. It is usually in the woods, sometimes in more open land; always in a cavity in a tree, and almost invariably in a live tree, where a

dead limb has rotted out. Once I found the bird nesting in a dead stub, in what looked like an old woodpecker's nest, the only departure from the general rule that I have seen. They are quite indifferent as to attitude; anywhere from six to sixty feet, or even more, from the ground. Sometimes the entrance is barely large enough to admit the bird; at others, so large as to allow a person to insert his hand. Some of their nesting sites are so situated, the entrance being at the under side of a limb or leaning tree, as to entirely protect them from storms; and yet the birds do not seem to take this into consideration at all in selecting a nesting place, for I have seen nests so exposed that the rain could readily beat into them, and I remember one in particular placed down in the crotch of a tree in such a situation that not only could it rain into the nest, but more or less of the water running down the two upright stems would fall into the cavity.

The nest itself is a mass of fine material, such as hair, rabbit's fur, and the inner bark from dead trees, the whole forming a soft, but rather inartistic bed for the young. In this are deposited the eggs, from six to eight in number, seven being the more common. Different clutches vary somewhat in size, owing doubtless to the age of the bird, and some are more highly marked than others. Fresh, unblown eggs have a beautiful pinkish tint which entirely disappears when the contents are removed. Usually in this latitude the eggs are deposited, and incubation begins by the eighth of May, but I have known a cold, backward season to cause a delay of ten days.

At the season of nest building, I have often seen the birds busily engaged in picking off small pieces of bark from trees and carrying them into holes, as if they were engaged in building a nest. At first I supposed they were using this material as a foundation, but in no instance has this proved true, for I have invariably failed afterwards to find a nest or any proper nesting material in these places. What object they can have in such work I do not understand.

Some years ago I witnessed a very odd performance by one of these birds. It was in the latter part of April. I was sitting down in a piece of heavy timber and watching a pair of Red-tailed Hawks which had a nest there, when a Nuthatch flew into a very large chestnut tree near by, and immediately ran into a small hole about a dozen feet from the ground. I had not much more than time to wonder why she had chosen that for a nesting place, when

she reappeared and began to wipe her bill on the tree, as a hen will do after eating dough, only in the most rapid and vigorous manner, as if her very life depended. While thus engaged she kept circling around the hole, but never more than eight or ten inches from it. Occasionally she would stop and run into the hole, only to reappear again and renew operations. I watched her at least ten minutes, till to me it began to grow decidedly irksome. It was too much of a curiosity, and as she showed no signs of giving out I decided to go on. About ten days afterwards I visited the place again, but she had stopped work and flown away. I rapped on the tree but could not start her, and was satisfied that she was not nesting there. Since then I have seen another performance of the same kind in a different locality, and, of course, by another bird.

This bird is brave in defending her nest, as I once saw abundant proof. I was standing not far from a tree in which a Nuthatch had a nest, observing the movements of a pair of Red-shouldered Hawks whose nest was near by, when a gray squirrel ran past and started up the tree in which the Nuthatch was. He had gone up only a short distance when the Nuthatch came out from her nest, and running down a foot or more from the hole, stopped and began to swing herself back and forth, as she clung by her foot like a pendulum. The nest was at least sixty feet from the ground, and the squirrel did not notice the bird till he came within ten or twelve feet of her, when he made a sudden stop. The steady, swinging motion continued as the poor bird bravely faced the foe, while he stood motionless and evidently puzzled. For a while I was uncertain what the next move would be, but I brought my gun to my shoulder ready to strike quick should the squirrel show any hostile intention. Although the fellow quailed before the defiant look of the brave bird, and darting around the tree, ran up some distance above the nest and seated himself on a limb. In a short time the bird returned to her nest.

I do not understand what becomes of all the Nuthatches that are reared from year to year. For more than a dozen years I have known just where to look for the different pairs of birds in this vicinity. In each tract of woods, a single pair, and no more, have made their home, and probably all the different pairs have raised a brood of young. But I have not been able to discover any increase in the number of birds, except that after the young were fledged I have seen a family strolling together. But

during the winter and following spring, each tract contains its single pair of birds. Some, of course, die from natural causes, and others are destroyed by enemies, but we can hardly suppose that the number which perishes just equals the number produced. It would be enough easier to say that the surplus moves off to other localities. But the probability is that each piece of woods outside of my field of observation has its pair of birds, and has had in years past, and why should not the overflow from those places be poured in here?

### Additions to the List of Birds of Oneida County, New York.

BY EGBERT BAGG, UTICA, N. Y.

For this past year's work I am able to add two birds to our local list, the Large-billed Water Thrush (*Siturus motacilla*), a fine male of which I secured on May 9, 1887, and the Orchard Oriole (*Icterus spurius*), a male of which bird, in the third year, I had the pleasure of watching for quite a long time, both with the naked eye and with the field glass, on May 15, on a Sunday afternoon, when guns were left at home. However, with a bird of such marked plumage there could be no mistake, and the record is as good as possible without taking the bird.

The next is not as good, but I give it for what it is worth. One day in June, while wading in Oneida Lake, my gun being on shore, a pair of Common Doves (*Zenaidura carolinensis*), passed between me and the timber, and lit in a large pine. I watched them for a moment, and then started for my gun. Before I could come in range, however, they were off like the wind, and although I visited the locality every day for two weeks, I saw no more of them. They were certainly either Common Doves or Wild Pigeons (*Ectopistes migratoria*), and I am quite confident they were the former. (The latter would be quite as much out of place on Oneida Lake in June).

Near this lake I found the Small-billed Water Thrush (*Siturus narius*), and the Whip-poor-Will (*Caprimulgus vociferus*) common in June, and undoubtedly breeding, although I did not succeed in finding the nests of either.

Mr. R. J. Hughes, of Remsen, killed a Hudsonian Chickadee (*Parus hudsonicus*), at that place in December, 1886, and has found two nests of the Blackburnian Warbler (*Dendroica blackburniae*), near there, one in 1866 and one in 1887, both unfortunately with young.

There have been at least three Goshawks (*Astur atricapillus*), killed in this County the past year.

Red-Polls and Crossbills are all the northern visitors I have heard of this winter, although there may be others about, as I have had no time to tramp since last fall.

These local notes will, I hope, interest the readers of the O. & O. generally, but they certainly will those who have the *List of Oneida County Birds* as additions to that list.

### Runt Eggs.

BY EGBERT BAGG, UTICA, NEW YORK.

Reading the Oölogical Editor's notes on "Runt Eggs" in the December, 1887, number of THE ORNITHOLOGIST AND OÖLOGIST, with much interest, I am induced, in the hope of interesting some one else, to record two runt sets which are in my collection.

The first is a set of two eggs of the Chesnut-sided Warbler (*Dendroica pennsylvanica*), collected July 20, 1882, at Holland Patent, N. Y. These eggs measure .54 x .38 and .52 x .37, while the normal size is about .68 x .50.

The second set is, or rather was, a set of three of the Canada Flycatching Warbler (*Myiodynastes canadensis*), collected in Wilmurt, N. Y., on June 30, 1886. One of these eggs was broken, hence the "was" above. The remaining two measure .54 x .45 and .50 x .43; the usual size being about .68 x .51. Both these sets are perfect miniatures of normal ones.

In reading these figures, unless very well used to comparing such objects, the difference in size is not appreciated, and as they are rather too small and delicate eggs to try Mr. Hoxie's dust-shot experiments with, I suggest that the reader draw the outline of one of these runts of the correct size, and then draw the normal size beside it; or remembering from his school days, that the volumes of two spheres are to each other as the cubes of their diameters (assuming eggs to be spheres), he will see that the normal egg contains about two and a half times the contents of the "runt."

The article on the albino eggs of the Florida Towhee, also reminds me that I have a beautiful set of four albino eggs of the Bobolink (*Dolichonyx oryzivorus*), collected near Utica, N. Y., in June, 1872. They are a pale bluish-gray, with a few blackish marks and scratches about the larger end, and look about as little like a normal set of Bobolinks, as one can possibly imagine.

### The Black-throated Green Warbler at Grand Manan.

BY ELWIN A. CAPEN, CANTON, MASS.

June 13, 1887, at Seal Cove, Grand Manan, opened with an indescribably beautiful morning. The fishing boats lay off the shore reflecting their masts and sails with uncommon precision in the pale blue water, with nothing to disturb the stillness of the early hour excepting the occasional screams of Herring Gulls that coursed to and fro eagerly seeking their morning repast. This was the first warm morning we had experienced since our departure from Massachusetts, and with collecting implements and a lunch I started for the woods in high spirits.

I had traveled all day collecting a few eggs and small birds, until about an hour before sunset I came upon an old cart-path used in winter for the purpose of hauling wood. As I sauntered along homeward, I saw ahead of me by the side of the path, a stunted spruce of dense foliage about three and one-half feet in height; saying to myself, "What a nice place for a nest." As I approached I saw quite a quantity of cattle-hair hanging to one of the branches, which I examined and then dropped to the ground. Further investigation displayed a well concealed uncompleted nest. As none of the birds about seemed interested, and having but the day previous found a Black-poll Warbler's (*Dendroica striata*), nest turned upside down with its lining of gull feathers strewn about, I at once concluded that it had been robbed and I continued homeward. Having occasion to again take this path on the afternoon of the 16th, my curiosity was led to make another investigation, and I found that the hair which I had dropped the few days previous had been taken and nicely placed in the nest with the addition of some plant down. I at once began to look for the owner, but no one putting in a claim, I retreated some fifty or sixty feet and sat down at the base of a large spruce tree awaiting the return of the proprietor, but only to try my patience and slaughter black flies for nearly two hours. I had now become extremely interested in this little nest and resolved to repeat my visit on the morrow, which resulted in finding an egg, but I was unable to obtain a glimpse of the parents.

Having made arrangements to leave the Island on Sunday morning by the way of

Southern Head in one of the fisherman's boats, that we might see the high-colored rocky cliffs, gulls, and guillemots from the water, I rose early for the purpose of visiting "my nest" for the last time, hoping that I might have the pleasure of identifying the owners and finding a couple more eggs. Slowly and cautiously approaching until within two or three feet of the nest, I could see through a small opening in the furze the long-looking bird, which to my surprise was a Black-throated Green Warbler (*Dendroica virens*).

Putting forward my hand, she darted out and alighted on an alder about five feet from me, when she commenced pluming her feathers as if unconcerned. But still more was I surprised to find that the nest contained four eggs, three of which had been laid between the afternoon of the 17th and the morning of the 19th, a duration of thirty-four hours. As I had formerly associated this species with pines and hemlocks, I was no little astonished to find it building so near the ground, so shy during the process of building, and the nest and eggs differing slightly from my previous collections. The nest now before me is outwardly composed of a few minute twigs of dried spruce, fine grasses, strips of bark and two kinds of moss, with wool and small weed-stalks interwoven. The interior is firm and symmetrical and well lined with hair, with an inter-lining of orange-colored plant down and soft feathers. The eggs are dull white in ground color, with a faint yellowish tinge, irregularly marked over the entire surface with lilac, dark and reddish-brown, but confluent forming a ring around the larger ends. They are decidedly more pointed at either end than any others I have seen, and measure: .50 x .65, .51 x .64, .52 x .65, .49 x .63 inches.

### The Yellow Bellied Sapsucker in Bristol County.

BY JOHN C. CAHOON, TAUNTON, MASS.

In the December number of the O & O., 1887, Mr. A. C. Bent writes that he has noticed the omission from Mr. F. W. Andros' list of birds of this (Bristol) county, of several species which occur tolerably regularly, and others which are considered very rare or accidental. He says: "The most noted of these species is the Yellow-bellied Sapsucker (*Siphrapicus varius*). This bird, by no means common, could

hardly be overlooked by collectors of any experience."

I consider myself a collector of some little experience, and have spent many days in the woods of this county in the autumn, and I have not taken or seen any of these woodpeckers. I think that I could distinguish this bird from any of the other woodpeckers, as I saw and collected quite a number in Florida in the winter of 1883-84. I have had many of the New England Woodpeckers brought to me to be stuffed and mounted, but none of the Yellow-bellied have been among the number.

If included in the list of the birds of this county, in my opinion it should be recorded as very rare. From Mr. Bent's accounts, he has certainly been more fortunate than either Mr. Andros or myself, and I should like to ask Mr. Bent if his three records of this bird for this fall, were of specimens taken by himself, or seen being without shot.

### A Runt Egg of the Black-Throated Bunting.

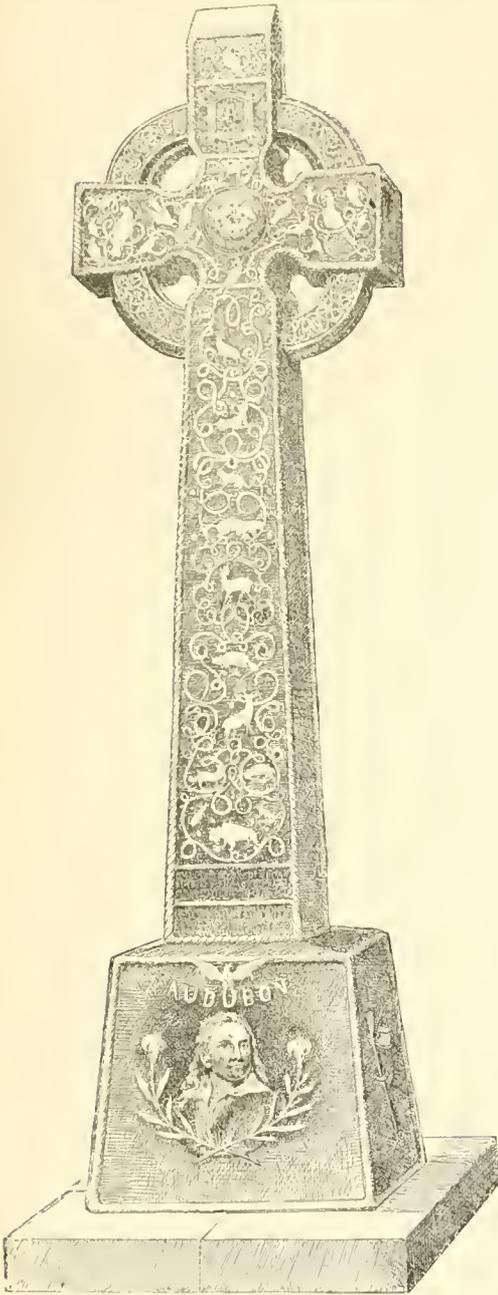
BY A. C. HAMMOND, JR.

Seeing the article on "Runt Eggs and Their Causes, in the December number of the O. & O., I thought it would not be inappropriate to give an instance of a runt egg of my experience.

On June 29, 1886, I found the nest of a Black-throated Bunting (*Spiza americana*), which contained four fresh eggs. The nest was composed of dry sage grass and was placed in some blackberry vines. The patch of briars was only about fifteen or twenty feet through, and was in an open sage field; but several nests of this species were found in this patch of briars, in some of which was incubation begun. The nest in question was about two feet from the ground. Three of the eggs were unusually large. They measured .93 x .65; .93 x .65; and .90 x .65. The average measurement of the eggs of this species is .80 x .60.

The fourth egg, which is the small one, measures .65 x .50, which is far below the average measurement, and much below the measurements of the other eggs.

This runt was most probably caused by the exhaustion of the bird in laying the three large eggs. The eggs are perfect in their shape, with the exception of being a little more elongated than the ordinary egg of this species.



The Audubon Monument.

The New York Academy of Sciences, acting in coöperation with other scientific 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 accompanying engraving, has been selected. The ornamentation, 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 about \$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 \$100.00 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 published Transactions of the Academy of Sciences.

Nesting of the Tufted Titmouse.

BY R. B. McLAUGHLIN, STATESVILLE, N. C.

Though the Tufted Titmouse (*Lophophanes bicolor*), is quiet in late autumn and early winter, I have heard him singing as blithely in the month of December as though the time of his honeymoon were at hand.

Apparently much amity subsists between the Tufted Tit and his sociable little kinsman, our Tomtit (*Parus carolinensis*). In fall and winter these two species may often be seen feeding together, and from the perfect harmony and lisp-ing chatter, one would infer that either has an insight into the nature and lingo of his fellow.

The Tufted Titmouse may be called an abundant resident with us, and, at nesting time, one can stroll out in the early morning and hear perhaps a score or more of them singing within their respective beats. Perhaps there is no other bird which breeds so abundantly in the South Atlantic States, whose eggs are such *desiderata*, and this is owing to the fact that its nest is somewhat difficult to find, and several reasons may be assigned why such is the case.

The bird builds in a natural cavity of a tree, hence the newly cut hole, with chips scattered on the ground beneath, which point like treacherous sign-boards to the home of the woodpecker, are here absent; and, in short, there is not

a single outward sign from which the collector can obtain a clue. A mere hole in a tree is no "sign of a duck's nest," and it is no sign of a Tit's nest. The tenacity, too, with which the bird clings to its nest when the intruder raps at its door, is not a little aggravating, and apt to deceive the inexperienced. I can recall but two instances of its coming from the nest when I tapped on the tree, and as one of these came from a hole forty feet above, I am wholly at a loss to know what to attribute it to.

About the twelfth of April, the birds may be seen reconnoitering the hollow trees within their accustomed feeding-ground, with a view to nesting. It is then that the old leaning sourwood stub, with a hole in the top, possesses so much magnetism; and when the top part extends beyond the entrance so as to shelter it from the weather, it is thereby rendered especially seductive. When the site is determined on, the female flies down close by the brook, and, as a first step, gathers some dead leaves, in the selection of which she is a trifle fastidious. She does not want one too wet and heavy, but wants it to have sufficient moisture to allow it to pack well, and bear pressure without crumbling.

When she is ready to leave for the nest, it is safe to assume that she has the largest load, considering her size, that the ornithologist ever sees carried by a bird. Being so heavily loaded, she does not rise and fly straightway to the nest, but hops upon the lower limbs of a bush and works her way to the top, then begins her tiresome flight. She stops here and there to rest on the way, and therefore is easily followed by the long-legged collector, but, like *iganis fatuus*, she may lead him through bogs, ditches, thickets, and what not. Then, about moist places in the same vicinity, she gets a supply of green moss and mixes in a modicum of dirt. After she has accumulated the desired amount of such materials, we will find her at the bed of the flying squirrel (*Pteromys volucella*), or some other mammal which collects the thin inner bark of trees, and she does not hesitate to appropriate as much as she needs. Then she is off for the farmer's barn, and any bunch of cornsilk about his granary is used. Again she is over where he curried his horse or butchered his pig, in quest of hair. This is the first step, and the nest then awaits oviposition. It is not improbable that some soft substances are added while the eggs are still being deposited, but, be that as it may, from the laying of the first egg the sides of the nest are carefully drawn in and the contents hidden.

When the nest is in a cavity which cannot be looked into, as is frequently the case, it is purely a matter of speculation to say when the complement has been laid, since the bird ignores the sound of our gavel.

When a bird digs its own hole, there is apt to be a thin place in the wood which may be located with a knife-blade, so when I am eager to learn the contents I make an incision barely large enough to admit the light and peep in. If the nest or set has not been completed, I carefully pin a strip of bark or a bit of soft wood over the place thus made, and usually the work goes serenely on. But as the Tufted Tit not only builds in a natural hollow, but has the precaution to cover its eggs, this little scheme often fails to work so satisfactorily. However, sad experience has caused me lately to cut the Gordian knot by having recourse to the hatchet, for surely there is as much satisfaction in cutting in too soon as there is in allowing the bird to hatch while waiting for her to lay.

The bird's boldness about her nest is remarkable, yet it is a don't care-a-cent kind of bravery rather than pugnacity. She is perfectly cool and demure as you look down at her seated upon the nest, and does not seem to care if you do put your hands on her, but, as Hood has it,

"Take her up tenderly  
Lift her with care."

for she will sometimes sink her claws into the side of the nest, and as she is being lifted will empty the eggs against the tree.

I once found a nest to which a friend climbed, cut in, took the bird off, and threw her off; and although the nest was only eight feet high, before he could climb up again the bird was out and had to be caught and thrown out again. I took a Tit from a nest of seven eggs in an old apple stump once, but as the shells indicated an advanced stage of incubation, I removed one egg only and ran a pin into it to learn if the embryo had hardened. While I was thus engaged, the bird hopped on her nest and was removed only by force.

I remember a pair which reared their brood in a hollow stump that had been drawn from the ground and leaned against a tree. I have shown this old stump some attention since, but have taken no eggs from it.

Unlike some birds which nest in holes, the Tufted Titmouse will not occupy the same one habitually, at least, a case of its doing so has never come to my notice. I have seen from five to eight eggs in a nest, but seven is unquestionably the usual number laid in this locality.

One morning, while sitting in my room writ-

ing, I heard a peculiar noise quite near, and on looking around was astonished to see a Tufted Tit in the middle of the room holding a ball of crumpled writing paper. Observing my movement he dropped it, but took it up again and carried it out of the window.

### Early Breeding of the Carolina Wren near Philadelphia.

BY I. S. BLIFF.

On the first day of May, 1880, when on a collecting trip, while walking along the bank of a small stream, I saw a Carolina Wren (*Thryothorus ludovicianus*), on a small sapling, singing in such a joyous manner as to proclaim to the world that the beautiful Spring had come once again. Not having a good specimen of this species in my collection, I shot the bird under the impulse of the moment, and a fine male was my reward. But, soon my joy was turned to grief, for I found that I had ruthlessly shot the father of a large family, and for many days I was sorry my old gun had carried so true to its mark.

In order to obtain the bird, I was compelled to cross the stream to the side where it lay, and the bank was about five feet high. When about half way up, imagine my surprise to hear a sound I knew at once was made by none other than young birds. I stopped and tried to locate it, but before doing so it had ceased. Making a slight noise with my foot it was repeated and this time I was more fortunate, and found it came from under a piece of sod that had become detached from the top of the bank and lodged in such a way as to form a cave-like apartment, only two feet from where I was standing, and a little higher up the bank.

Dropping on my knees I looked under the sod, and was very much astonished when my eyes rested upon the nest of this species, containing six young birds fully fledged and not less than two weeks old. After my amazement had somewhat abated, I felt in the nest thinking there might be an addled egg; but when my finger touched it the six youngsters flew rapidly away, showing, though so young, they knew how to use their little wings.

I then went to the dead male, picked him up and packed him carefully in my bag, feeling very sorry for what I had so thoughtlessly done. In the meantime, the female was busy gathering her fatherless family, and after she took them a short distance down the stream, I

returned and examined the nest. On lifting it carefully, I found it was placed in a small cavity in the bank, about two inches deep and four inches in diameter, which must have been partly, if not all excavated by the parent birds. The bottom and sides of the nest were very thick, making a warm and comfortable bed for the young birds, and the edge projected about an inch above the cavity, making the depth about three inches in all. Although having a northern exposure, it was securely protected against wind and storm.

I consider this a rare case of early breeding in this locality, for allowing a week for nest building, another week for laying the eggs, eleven days for incubation, and stating the age of the young birds at two weeks, this pair of birds must have commenced building on the twenty-fifth of March.

On May 15 of the same year, I found a nest placed in a stone wall containing young birds not more than two days old. I hope other collectors will give the readers of the O. & O. their experience of the early breeding habits of this species in its northern and eastern habitat.

### A Bald Eagle's Nest.

BY WALTER HOXIE, FROGMORE, S. C.

During the past year I had a good opportunity of watching a pair of Bald Eagles (*Haliaeetus leucocephalus*), constructing their nest. In the latter part of December they began to repair an old nest in the top of a dead pine tree, near the beach on Pritchard's Island.

Very near this spot is a favorite camping ground for fishermen and hunters. The beach is rapidly wearing away through the action of the tide and waves. Also, as I have said, the tree is a dead one, and thus likely to succumb to a gale of wind at any time. One or the other—perhaps a combination of all three causes—induced the birds to leave this spot before the repairs were completed.

Their new location was about a mile farther down the beach, in a monster pine tree, about fifty yards back in the woods. Here, for three days, the female worked steadily forming the foundation for a new nest. The first site chosen, on the north side of the tree, did not seem to suit her, and she removed the already half completed platform of sticks to what seemed a much less secure crotch on the southwest side. In the removal of the materials the male assisted, but it looked to me as if his ef-

forts were very clumsy. He would drag out a stick, at the same time toppling several more to the ground, and then fly to quite a distance from the tree before returning and surrendering his burden to his hard-working partner. In no instance did I detect him aiding in the placing of the materials in the nest. He merely brought them to a convenient perch, usually above the structure, and waited for his mate to do the actual building.

Having at last a foundation of about a foot thick, and four or five feet wide, as near as I could estimate, they proceeded to remove the material from the old partially repaired nest for the completion of the new one. The male bird worked fairly well at this task, and during the last day made at least three trips to one of the female. She apparently took great pains in the interior arrangements of her new home, frequently pulling out a quantity of trash upon the edge of the nest, and, after working around a while inside, tumbling it back again, and shaking it up with a great rustling of wings and scratching of feet, which sent showers of little twigs and dirt upon the watcher below.

The work was apparently completed upon January 20, 1888, and four days later the female was setting, and the male keeping jealous guard close above her.

### Nesting of the Western Yellow Warbler.

BY GEORGE E. BRENINGER, FORT COLLINS, COLORADO.

In the October issue of the O. & O., Mr. J. Parker Norris contributed a very interesting paper on the Western Yellow Warbler (*Dendroica aestiva morcomi*), and described a series of their eggs. This pale form of the Yellow Warbler has but lately been recognized from the Eastern form. It is very abundant here along the creeks among the willows. I first became acquainted with the bird early in May while trying to obtain a Poor-Will, and on returning home I saw one of these warblers seated on a swaying willow. I raised my gun and fired, bringing down the bird desired. I noticed the lighter coloring in its plumage, and, when nesting began, the nest of this species seemed more compact, and materials used showed considerable whiteness, looking like a bunch of down placed in the fork of a willow.

I carefully watched the depositing of the eggs until the number had reached five, and on other occasions I also found the complement invariably five eggs, with the exception of one nest which had but three young. The ground color of the eggs I have seen is decidedly grayish, and not greenish as is seen in *Dendroica aestiva*, marked with dottings of umber lilac and an occasional spot of black, and can at any time be readily distinguished from the common eastern species. I never met with any of the birds in the mountains, and all the nests found were in willow cottonwood and box-elder trees, hardly ever more than ten feet from the ground, more commonly five.

[If Mr. Breninger had compared eggs of *D. aestiva morcomi* with a large series of eggs of *D. aestiva*, he would have found that he was mistaken about the former being characteristic. The exact counterparts of *morcomi* can be readily found among eggs of *aestiva*, as the ground color of the latter is exceedingly variable.—J. P. N.]

### Eggs of the Texan Kingfisher.

BY J. P. N.

The Texan Kingfisher (*Ceryle americana cahooni*), is found in the United States only from the southern part of Texas to Arizona, and its eggs are still *desiderata* in most collections.

A set, now before the writer, were collected on May 25, 1878, in Comal County, Texas. The four eggs of which the clutch consists, were found in a hole in a bank of a river. They are of a dull white, and almost as large at one end as at the other. They measure .92 x .73; .96 x .72; .92 x .71; and .95 .70.

A LATE WOOD DUCK.—A gentleman living on the outskirts of the city brought me a male Wood Duck (*Aix sponsa*), which his hound pup caught in a brook about January 1st, while out for a run. It was kept in a cage a short time and then died. Upon examination I found that the primaries of one of the wings had been cut off, probably by a shot, and this was the reason of its late delay at this place. With the exception of the loss of the primaries, and its tail, which was worn ragged by confinement in the cage, it was in perfect plumage.

Taunton, Mass., 1888.

J. C. CAHOON.

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## Ornithology from a Railroad Train.

BY B. W. EVERMANN AND O. P. JENKINS.

The last days of June and the first week in July found the writers *en route* from Terra Haute, Indiana, for Guaymas, in the State of Sonora, Mexico. When we were crossing the plains of western Kansas, we began making notes of the various birds we saw. This we continued during the remainder of our journey until we reached the Gulf of California. Our route was *via* the Atchison, Topeka, and Santa Fé Railroad to Deming, New Mexico, the Southern Pacific from Deming to Benson, Arizona, thence *via* the New Mexico and Arizona Railroad to Nogales, Arizona, and from there *via* the Ferro-caril de Sonora to Guaymas on the Gulf of California.

We endeavored to keep a record not only of the various species seen, but also notes as to the abundance, repeated occurrence, and any other fact which at the time seemed interesting. Of course we saw a number of birds which we could not with certainty identify; some were too far away, while others flitted by so rapidly that we got no more than a glimpse of them.

Among the birds which we were able to recognize all the way from the Missouri River to Guaymas, the following may be named:

1. Mourning Dove.
2. Crow.
3. Red-shouldered Blackbird.
4. Shore Lark.
5. Bank Swallow.
6. Killdeer.
7. Turkey Buzzard.
8. Eave Swallow.
9. Barn Swallow.

All along the route of nearly 2,200 miles, we often had occasion to remark the great abundance of the Common Mourning Dove (*Zenaidura macrura*). From Illinois to Sonora, we saw these doves flying away from the road as

the train came upon them. Sometimes but one of them would be in sight, then for many miles, flocks of five to twenty, or even thirty, would be seen hurrying to the right or left. They seemed most abundant through parts of Colorado, New Mexico and Arizona, where the road ran through plains or broad valleys. This was especially true in New Mexico and Arizona, where they were so numerous that some were in sight nearly all the time.

At Nogales, on the border between Arizona and Sonora, they grew less abundant, and in Sonora were not at all common, though specimens were seen as far south as Hermosillo, 90 miles from Guaymas. Crows were seen somewhat sparingly even into Sonora. Red-shouldered Blackbirds were locally abundant through Kansas and Colorado, and were seen occasionally in New Mexico and Sonora. A few were seen near Crittenden, Arizona.

Shore Larks were pretty abundant as far as Sonora. The variety *chrysolæma* was the one seen in Arizona, most likely.

Bank Swallows, Eave Swallows, and Barn Swallows, were more or less common wherever suitable places were found.

Killdeers were seen occasionally at various places, the last at Hermosillo. Turkey Buzzards were locally abundant all along the route. At Guaymas they were especially numerous.

Among the species not seen west of Kansas, might be named the following:

The Eastern Meadow Lark we were able to trace as far west as Newton, Kansas. The first specimen of the western form (*Sturnella neglecta*), was heard near Topeka. From here, its melodious, note became more and more frequent until we had entered Colorado. From there to the southwest it appeared less common than in Western Kansas. One does not feel sure that the lark he sees east of this region is the Western species until he hears its song. When that is heard, there is no longer doubt. The rich, liquid melody of the song is

the chief characteristic which enables one to know it from its eastern relative. Why has so marked a change in song been accomplished by so little change in plumage?

A few Long-billed Curlews were seen in Western Kansas near the Arkansas River, and the Eastern Bluebird was traced into Colorado, but not until we reached Arizona did we certainly identify the Western species (*Sialia mexicana*).

The Kingbird was common east but finally disappeared, the last one being seen near Trinidad, Colorado.

The Red-headed Woodpecker (*Melanerpes erythrocephalus*), abundant in eastern Kansas, grew less and less common until it disappeared altogether at Lamar, near the west line of Kansas.

In Western Kansas we began to see Western Larks (*Sturnella neglecta*), Burrowing Owls (*Speotyto cunicularia hypoga*), Larks Buntings (*Calamospiza melanocorys*), and Say's Pewee (*Sayornis saya*). Most of these were most abundant near La Junta, Colorado. The Buntings were seen as far west as the Ratou Pass. Burrowing Owls first appeared near Garden City, Kansas, and continued to make sedate bows from the mounds in the prairie-dog towns until we were far down in Arizona. Nowhere did we see more than eight or ten at any one town, and none at all were seen after entering Sonora.

While our train was delayed some little time near a small prairie-dog village in southwest Colorado, attempts were made by us to shoot an owl that was close at hand, but it was found quite difficult to approach within shooting distance. When almost near enough to risk a shot, the little rascal would bow politely to us and then fly to another mound a hundred yards farther away, where the same polite but, under the circumstances, rather exasperating bow would be repeated.

It is quite as difficult to shoot the Burrowing Owl as the Prairie Dog.

Crow Blackbirds (*Quiscalus quiscula arvens*), continued to be seen until near the north line of New Mexico, and the Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*), first made its appearance in Western Kansas, was seen occasionally in Colorado and New Mexico, and last seen in a small marsh near Crittenden, Arizona.

Only in the neighborhood of Trinidad, Colorado, were any Magpies (*Pica hudsonica*), seen. This is one of the curious birds of the Rockies which always amuse the traveller from the east.

White-rumped Shrikes were occasionally seen from Missouri to Arizona.

At Albuquerque, we saw House Finches for the first time, and at San Marcial, New Mexico, we were much interested in watching a Blue Grosbeak which was taking his morning bath in the fountain in the hotel yard. Our train had stopped for breakfast, and we watched the pretty bird some time. It was quite tame and appeared not to mind the train nor the many passengers passing near it.

From a little pond or slough near Amarillo, forty miles north of San Marcial, a Wood Duck flew up as we passed, a Mud Hen scurried away over the water, and a Rail, whose species we could not make out, skulked from sight among the reeds.

Just south of San Marcial, we saw the only Sealed Partridge it had ever been our fortune to see, and a Roadrunner was seen hurrying from us through the chaparral.

The only Cooper's Tanager (*Piranga rubra cooperi*), which we saw this side of Sonora, was seen among some cottonwoods near San Marcial. Several Red-shafted Flickers were seen in Arizona. The eastern form was traced only into Colorado. Through New Mexico, we were not sure that we saw any of either species.

Numerous sparrows were seen at different places, but we were unable to identify them with certainty. Several hawks were also seen, but must go upon record with the sparrows as being "past finding out" from a car window.

We arrived at Nogales, on the line between Arizona and Sonora, on the evening of the "Glorious Fourth," which was being celebrated in fine style by the population of this thoroughly frontier town, consisting of a curious mixture of Indians, Mexicans and Americans, both good and bad, with quite a sprinkling of blue coats.

The two halves of the town are under different governments, the "line" running through one of the principal streets, which taken with the facts that it is an important customs point, and is wild enough a region to be in the Apache country, and beside combines both Arizona and Border Mexican peculiarities, makes it a place where many strange and thrilling incidents occur.

We remained here twenty-four hours. Much of the evening was spent in looking after our baggage and "getting it over the line."

But letters in our possession from Secretary Bayard and the Mexican Minister, Mr. Romero, made that an easy matter, and notwithstanding

the very strict customs laws of Mexico, our barrel of alcohol, skins, guns, etc., went through free of duty with little trouble on our part.

We received every courtesy from the Mexican Collector of Customs, Mr. Rosas, and also from our own collector, Mr. Wilson; also very great kindness from Mr. Sanduval, a Mexican broker.

Indeed, we are glad to record that on all occasions, we found the Mexican officials of Sonora with whom we came in contact, very gentlemanly and obliging in their intercourse with us.

After supper, we clambered up the barren looking hills back of the town to look for birds and whatever else of interest might be found. The most interesting thing of all to our eyes was, of course, the curious town which now lay in full view beneath us, but as this is not the place to describe it, we must hasten on to the birds.

We spent this evening and the forenoon of the following day among these hills and mountains. We found here but little vegetation. Tall Spanish bayonets and scattered groups of scraggy oaks are the only conspicuous forms, but among the red rocks are a considerable number of smaller cacti, a few grasses, and in favorable places a number of little ferns very odd and very pretty. In the canons the oaks were more numerous, and look something of the size and appearance of old apple trees.

As we scrambled up over the rocks we saw several Night Hawks (probably *Chordeiles texensis* Lawr.), circling overhead, and as we descended into a transverse canon and approached a clump of oaks, we disturbed a dozen Arizona Jays (*Aphelocoma siberii arizonae* Ridgw.), which hurried from us. As they flew from tree to tree further up the canon, their harsh, discordant notes reminded us much of the noise made by the California Jay, as we used to hear it among the Coast Ranges.

A number of House Finches (*Carpodacus mexicanus frontalis*), were seen near and in the town, and as we came down the canon after the "shades of night" had come, a whippoorwill (probably *Antrostomus vociferus arizonae* Brewst.), alighted upon a flat stone in front of us. We had no gun with us, and two or three shots from a revolver had no further effect than to scare it away.

During the morning we saw two or three Canon Wrens (*Catherpes mexicanus conspersus* Ridgw.), and we had the good luck to kill a specimen of the Rufous-winged Sparrow (*Penicula carpalis* Coues).

Far up one of the canons we came upon a male and two female Scott's Orioles (*Icterus parisorum*), but they were extremely wary, and after a long chase, we were compelled to return without them. The note of these orioles seemed to us less musical than that of any others which we have heard. A Flicker (*Colaptes cafer*) was seen, an Ash-throated Flycatcher (*Myiarchus cinerascens*), was shot from a Spanish bayonet, and a Say's Pewee (*Sayornis saya*), was seen on a rocky ledge near the town. A woodpecker of some kind was heard hammering in an old tree up the mountain side, and a Southern Mocking Bird (*Mimus polyglottos*), sang to us from the top of a Spanish bayonet.

But Nogales was not a very good place for birds.

On the evening of the 5th, we started southward on the Ferro-Caril de Sonora customs. Guards were aboard the train, and a careful search was made for smuggled goods. Under one seat a large roll of calico was found. This was, of course, confiscated. When the guard came to our small tank of alcohol, which we carried with us that we might be able to save any lizzards, snakes, etc., which we might pick up along the way, he carefully examined it with evident satisfaction, believing that he had made another "find." But when we unscrewed the top and lifted out a few snakes and such, he turned away with unfeigned disgust, evidently thinking that *agua caliente* was not what he wanted.

About midnight we reached Magdalena, fifty-four miles south of Nogales. During the afternoon and night it had been raining in the mountains, and here we were stopped by a "wash out," the constant companion of the traveler in this region in the rainy season. Here we lay till the morning of the second day, and though it rained much of the time, we saw a good deal of the birds to be found there.

Magdalena is a thorough Mexican town of two or three thousand inhabitants. From the Plaza to its very outskirts there is nothing at all American in its appearance, if we except the smoke-stack of a steam flouring mill which goes occasionally, and which may be seen at the edge of the city. The Plaza is clean enough, and there may be other clean places in the town, but the streets, which radiate from it, generally radiate very quickly into a high degree of dirt, which, on a warm, damp morning during the rainy season, lends a resultant odor which owes its origin to many mingled powerful components, which, coupled with the

information that the place was scourged with small-pox and was under no sanitary regulations, made us more than ever enjoy looking for birds among the green trees along the banks of the river. The Magdalena river is a stream of varying dimensions which flows by the town, and by means of irrigation from its water supply, very fertile gardens are maintained in this vicinity.

When we first saw this stream in the morning we could almost step across it. At 3 p. m., it was a seething torrent over three hundred yards wide, and by eight o'clock the next morning, it was again a quiet, muddy stream, perhaps thirty feet wide.

Along its banks were willows of considerable size, and many smaller bushes, making in many places veritable thickets, which, with the gardens, made the home of many birds, which in the morning made the air ring with song.

About twenty-five species of birds were seen here, viz.:

1. Gambel's Partridge, (*Callipepla gambeli*).
2. Mourning Dove (*Zenaidura macroura*).
3. White-winged Dove (*Melopelia leucoptera*).
4. Ground Dove (*Columbigallina passerina*).
5. Buzzard (*Cathartes aura*).
6. Texas Kingfisher (*Ceryle cabanisi*).
7. Yellow-billed Cuckoo (*Coccyzus americanus*).
8. Hummingbird, s p?
9. Crow, s p?
10. Dwarf Cowbird (*Molothrus ater obscurus*).
11. Home Finch (*Carpodacus mexicanus frontalis*).
12. Arizona Goldfinch (*Spinus psaltria arizonæ*).
13. Song Sparrow, s p?
14. Arizona Cardinal (*Cardinalis cardinalis superbus*).
15. Black-headed Grosbeak? (*Habia melanocephala*).
16. Blue Grosbeak (*Guiraca caerulea*).
17. Cooper's Tanager (*Piranga rubra cooperi*).
18. Cliff Swallow (*Petrochelidon lunifrons*).
19. Barn Swallow (*Hirundo erythrogaster*).
20. Bank Swallow (*Clivicola riparia*).
21. Western Warbling Vireo (*Vireo gilvus swainsoni*).
22. Western Yellow-throat (*Geothlypis trichas occidentalis*).
23. Long-tailed Chat (*Icteria virens longicauda*).
24. Mocking Bird (*Mimus polyglottos*).
25. Baird's Wren (*Thryothorus bewickii bairdi*).

Perhaps the most noticeable of all these were the Long-tailed Chat and the little White Dove.

These were both quite common, the Dove often coming within a few feet of the train, searching about over the sandy ground very much as do our Mourning Doves. Walking about among the bushes near the depot (which, fortunately, is almost a mile from the odorous town), we saw many Chats, and were most surprised and pleased to find that the nesting season was not yet over. Several nests containing fresh eggs of the Chat were found.

The number of eggs varied from one to five, and all were fresh. Two nests of the White-winged Dove were found, with but one egg in each. One set of two of the Mourning Dove and one of two of the Ground Dove were taken. These also were fresh. All these were placed at three to ten feet from the ground among the willows.

Two eggs of the Yellow-billed Cuckoo were found, five fresh eggs of Cooper's Tanager, in a nest fifteen feet up in a tall willow, and a Vireo's nest with three eggs, on a limb overhanging the Magdalena River. Besides these, several other nests which we were not able to identify were found. Several of these were brought to us by the little Mexican boys, who, seeing that we cared for such things, were not slow to avail themselves of the opportunity to make "duo centavos" by bringing us specimens.

By Thursday morning (7th), the road ahead of us had been temporarily repaired for a few miles, and our train started on. We would go ahead until we caught up with the work-train (which consisted of about 150 Yaqui Indians), when we would stop until they got a few miles and then we would pull forward again. In this way, during the day, we traveled forty-nine miles, and reached Querobabi where we spent the night. During the next day (Friday), we traveled in the same way but twenty-seven miles, and reached a station called Carbo. This very slow traveling afforded us opportunities for many a reconnoitre among the cactus, mesquite, palo verde, and other scant vegetation along the route.

These were two very interesting days to us. The vegetation and nearly everything else were new and novel. Several birds we had never seen before were found. Among these was the curious little Verdin (*Auriparus flaviceps*). Its peculiar globular nests were often found, but none contained anything. Palmer's Thrasher was seen occasionally, and a set of three fresh eggs was taken near Querobabi.

A pair of Vermilion Flycatchers (*Pyrocephalus rubinus mexicanus*), were shot, after we

had found their nest with four fresh eggs. Another Thrasher, probably Le Contes, was seen near Posa, the common Cactus Wren was often seen, the Phainopepla was seen once or twice, Gambel's Quail was not rare, a few Western Chipping Sparrows and Mocking Birds at various places along the line, and near Querebabi, we had the good fortune to come upon a family of Elf Owls (*Micrathene whitneyi*).

There were six of them just able to fly pretty well, perched upon a long branch of a large cactus, and a curious family they were. They were quite unsuspecting and allowed a quite near approach. After following them about some little time, a pair was secured and the others hurried away to a distant cactus.

A few specimens of the Gila Woodpecker (*Melanerpes uropygialis*), were seen, which had with great trouble excavated their nests in magnificent specimens of the Giant Cactus, but they were more numerous further down the road.

After remaining Friday night at Carbo, we made the run to Guaymas, 135 miles from Carbo, by six o'clock Saturday evening. Several hawks and other birds were seen, but we could not feel sure of their species. Perhaps the most interesting sight in the bird line we saw on this day, was the great number of holes which the Gila Woodpecker had dug in the telegraph poles. Nearly every pole from Hermosillo to Guaymas (ninety miles), was more or less mutilated by these birds, and in many cases as many as six to eight large deep holes were seen in a single pole. These holes are evidently excavated for nests, the site being better and safer no doubt than that afforded by the low trees or cactus of the country. We were told by officials of the road that many telegraph poles are so completely eaten away by this bird, that they frequently break and have to be replaced.

During our stay at Guaymas, we had very unfavorable opportunities for observation of the birds. The object of our visit was to make a collection of the fishes of this region of the Gulf. The time of year was the hottest season for Guaymas, which is putting it pretty strong, for the records show that Guaymas and the remainder of the West Mexican Coast, is one of the hottest regions of the world during July and August. The excessive heat prevented any serious work out of doors in the day time, consequently, our collection of birds had to be done almost wholly at night, while the caring for them and our eating and sleeping occupied the day. Thus our information of the birds of

Guaymas is scant, confined to those we saw about the city, or those we met going to and from our fishing grounds. The city is crowded into the narrow space of a strip of land that lies between high mountains and the Bay of Guaymas, and consists of about ten thousand inhabitants, and is in appearance as completely foreign as any place in the world. The rough volcanic mountains which surround it, are hot and almost barren of vegetation, and certainly possess little to invite the birds.

Not far from the house in which we had our room was an old cemetery, and beyond that was a place where offal from the city was thrown. At this place every morning, there fought together in the most spirited manner over their breakfast, three species of vultures. The Turkey Vulture was the most abundant, several Black Vultures, and a third species which we could not make out. As we were not permitted to shoot near the city, we failed to secure specimens of it, but we still hope to obtain some.

On the Plaza one morning we saw an Inca Dove, and in a cage in the Hotel Cosmopolitan, were a dozen semi-tamed Gambel Quails.

Near the depot, House Finches helped welcome the (sometimes) daily train, from the land of "washouts." Frequently a Fish Hawk, improved the appearance of a rocky peninsula near by, by perching on some of its pinnacles, and a Mocking Bird was seen at Long Bridge above the city.

Two or three Gila Woodpeckers occasionally tried to play and sing an accompaniment on a huge organ-pipe cactus near our fisherman's house, but the whole performance was of a piece with the cactus and the volcanic rocks, terribly staccato. Cactus Wrens were not rare, frequently crows passed over, and in the evening swallows explored the Bay. These land birds deserve this especial mention for venturing so far and so much, apparently for no other purpose than to get a view of the superheated scenery of Guaymas. One evening, as we were crossing to our night's collecting grounds, three or four Man-o-War Birds (*Fregata aquila*), were seen circling high in air on graceful wing, but we hoped in cooler strata, and we almost felt willing to do as they have about done, traded a pair of legs for a pair of the best of wings.

But the most abundant bird about Guaymas in July is certainly the Brown Pelican (*Pelecanus fuscus*) or *Alcatraz* of the Spaniards. Thousands were seen every evening wending their way across the bay towards some islands where

they are said to roost. They usually continued feeding until quite late at night, and we often disturbed them as we sailed to our various collecting grounds.

While the birds were few about Guaymas, the fishes were very numerous, of which we will have something to say elsewhere, and material for good friends were not wanting. Among those who gave us very valuable aid in this strange land, were the Agent of the Ferro-Carril de Sonora, Mr. Godman, an old Indian boy, and Theodore Caudvet, a very intelligent French fisherman.

Mr. Williard, our Minister at this place, is known to and is the friend of every American in Sonora. Wandering naturalists enjoy adding such friends to their collection.

### A List of Some Birds of La Plata County, Col., with Annotations.

BY CHAS. F. MORRISON.

In preparing this paper, I offer no apology as to its incompleteness, believing that a list should rather be small and with the species actually known to occur than a large one, may, if the species being entered upon mere hearsay or upon the evidence of local collectors, or that of residents of the surrounding country, who know little or nothing of the birds. The present list is based upon my own experience of two years, and also upon \*papers of Mr. Frank M. Drew of Genoa, Ill., who spent five years in the State, and much of the time in San Juan County, which lies north of the northeast corner of La Plata County, the principal avenue of migration into San Juan County being side of the Rio las Animas, which runs directly through the eastern part of La Plata. I also made some use of his paper on the verticle range of birds in Colorado, and, except where my own experience gives certain species a higher range than he gives, I shall use his notes.

Although we now have what is intended as a standard system of nomenclature, it is so little used as yet that I prefer using that of Prof. Ridgway for the present, as will answer my purpose as well. However, in my † "List of Birds of Colorado," which is now being prepared, I shall use the A. O. U. Code, as I consider it best to use one of our many nomen-

\*Field Notes on the Birds of San Juan County, Colorado, B. N. O. C. Vol. IV. April, 1881.

†A List of the Birds of Colorado, being the result of the work done by the members of the Colorado Ornithological Association for the year of 1887. Soon in press.

clatures than to have so many, which only serves to mix matters, especially among the younger students of ornithology. Outside of Mr. Drew's papers and my own investigations, the authority will always be given upon which a specie is entered. I will not take the space in the O. & O. for a description of La Plata County, but I shall use the A. O. U. Code, and enter the birds which I omit here, as for instance, the new species of Junco (*J. O. shufeldti*), lately separated by Mr. H. K. Coale, and the Horned Lark (*O. alpestris arenicola*), separated by Mr. Henshaw, but for the present purpose, the nomenclature used will answer my purpose.

1. *Hyllocichla ustulata swainsoni* (Caban), Ridgw. Olive-backed Thrush. I took a nest with three eggs, supposed to be of this species, but as it was in the post and near where a sentry was stationed, I dared not fire my gun, as by so doing I was liable to alarm the garrison, and perhaps spend the balance of the day in the post guard-house. The nest was placed upon some dead bushes hanging over a small sluggish stream, two feet above the water, nest of grass and leaves which were moist, and so loosely constructed as to nearly fall to pieces when I removed it. Eggs with ground color, dark-blueish, and I should say spotted, not speckled, as the spots were large and almost entirely covered the ground color. I am sorry to be obliged to begin this list with such a doubtful species, but I enter it with the above remarks, for what it is worth. Found up to 9000 feet.

2. *Hyllocichla unalascae auduboni* (Baird), Ridgw. Rocky Mountain Hermit Thrush. Tolerably common and breeds, the nest is generally if not always placed in the bushes where the undergrowth is thick and heavy. It prefers hillsides near sluggish water, as old beaver dams and swamps, but I have never found their nests actually in these watery places but near them. A sweet songster, eggs plain. It often arrives at Ft. Lewis before the snow is gone, although it does not breed before the last of May or first of June, higher up it breeds later. They range up to 11,000 feet.

3. *Merula migratoria propinqua* (Ridgw). Western Robin. This bird is common, and its habits so much like the eastern species as to require no comment here, although I will drop the hint so often put and as far as I know never answered, viz., "Why does that well-known law regarding the light, dry air, bleach the tail of our American Robin?"

A nest of this species which I found in 1887, was placed upon a beam of an old lime house,

in rear of the military hospital here, the inside nest being composed of coarse straw, excelsior shavings, which had been used for packing medical stores, and cotton batting, from the broken leg of a soldier, which had been thrown out. The average number of eggs is three, often four. I have never seen as many as five. They rear two and sometimes three broods. Range up to 11,500 feet in summer.

4. *Oreoscoptes montanus* (Townsend), Baird. Sage Thrasher. Rare in this county, and ranges high up to 13,000 feet during summer, have not found its nest here. Common through the mountains to the north.

5. *Mimus polyglottus* (Linn.), Boie. Mocking Bird. I received five young birds in '86, taken ten miles south of here on the Ute reservation, and I have seen the bird there since. It is quite common a little farther south (in New Mexico), but I must record it as rare this side of the line.

6. *Galeoscoptes carolinensis* (Linn.) Caban. Cat Bird. Rare. Two pair only have I noted, as this seems to be its limit as to vertical range. These pairs build their nest where I could not find them, and it was only after the leaves had fallen and the snow was on the ground that I found one of them. It was in tangled brush so thick that I had difficulty in reaching it even then.

7. *Cinclus mexicanus* (Swains). American Water Ouzel. Common in spring and summer in the mountains, wandering down to 6000 feet in winter, and breeds as high as 12,000 feet. It even reaches highest altitudes after the young take wing. So much has been written about this beautiful bird that it would seem superfluous to say more, still, in spite of this, its nest is considered a treasure when found.

8. *Sialia mexicanus* (Swains). Californian Bluebird. Apparently rare, but is found and arrives somewhat later than the next with which it associates until it breeds. Nesting habits similar, but it keeps to the pine gulches and does not as yet build about houses, but sticks to holes and crevices in decayed trees. Found one nest between the trunk and a huge piece of bark, which seemed as if it would fall at any moment. Eggs were five in number.

9. *Sialia arctica* (Swains). Rocky Mountain Bluebird. Arrives in large numbers in February and March, and during warm waves in winter it is not an uncommon sight to see large flocks upon the mesas. It often mates and commences to build in March, when a severe snow storm will again gather them in flocks, and they disappear again, so that the appear-

ance of the bluebirds is not a sure sign of spring in this locality at least. They raise two and three broods a year, and is our most common bird. It will build its nest anywhere, even in the old stove-pipes in deserted ranches. Under the porch of the band quarters I saw six nests, none of them being a foot apart. Ranges up to 12,000 feet.

10. *Myiadestes townsendi* (Aud.), Caban. Townsend's Solitaire. An abundant bird among isolated pine groves, and breeds up to 10,500 feet. It has a very pretty song, a low warble, which is more like the robin's song, only more subdued, and sounds as if from a distance it prefers pinions to other pines, probably because they do not grow so high, and it likes to sit on the topmost branch to sing, and it does not like a high perch. Pinion groves, growing from 10 to 15 feet in height, are its favorite places, and especially if this is near the edge of a rocky-sided mesa. Among the rocks it must breed, although I have not as yet found its nest. Mr. T. Howard Tripp of Howardsville, Colorado, found a nest July 9th, at 10,500 feet, containing four eggs. It was in a cranny in a bank. Incubation just begun. I am sorry I have not received his description of nest and eggs in time to insert here, but will do so further on.

11. *Regulus calendula* (Linn.), Licht. Ruby-crowned Kinglet. Common during the migrations, but breeds sparingly from 7000 up to 11,000 feet. I have not taken its eggs, but Mr. Drew has in San Juan County, and as I have seen it from the last of May to August, it no doubt breeds. The nest spoken of above was placed in the uppermost branches of a spruce, about thirty feet from the ground, in one of these dark masses where the corn grows thickest, and where it would be impossible to see your hat, were it there. The nest was loosely placed among the outer twigs, being partially pensile, and was composed of bits of fine bark externally, and within of silk-weed shreds, moss, spiders silk and feathers, all matted together in a compact manner and lined with wool. It contained four young and an added egg, the latter measuring .014 x .012 mm., white. A description of the nestling plumage I will keep for future publication.

12. *Regulus satrapa* (Licht). Golden-crowned Kinglet. Rare, only three specimens observed. Winters in New Mexico. Reaches 11,000 feet.

13. *Lophophanes inornatus* (Gamb.), Cass. Plain Titmouse. Not common up to 8,500 feet where it breeds. I observed a pair in a pinion grove, which no doubt had a nest in the vicin-

ity, although I failed to find it. Eggs white, speckled with reddish-brown. Generally four, sometimes five, and I think six may be deposited but rarely.

14. *Parus montanus* (Gamb.) Mountain Chickadee. Not common, breeds sparingly among the pines. Reaches 12,000 feet. It is often found in winter associated with the following:

15. *Parus atricapillus septentrionalis* (Harris), Allen. Long-tailed Chickadee. A resident and very common, habits like its more eastern relatives. In measuring many specimens, I find the tail never to reach three inches. Eggs larger, breeds everywhere. A large flock have been in the habit of coming to my window-sill this winter, where they were assured of a good meal of raw beef, which I cut up in small pieces for them, making very agreeable winter companions.

16. *Sitta carolinensis aculeata* (Cass.), Allen. Slender-billed Nuthatch. Common resident, found up to 11,000 feet, breeds abundantly in holes among the pines of grass lined with feathers or hair, sometimes both, eggs white, spotted with reddish-brown about the larger end, the rest of the clutch were however as usual. Never have found over five to a set. Breed here from last of May.

17. *Sitta pygmaea*, Vig.: Pygmy Nuthatch. A very common resident up to 10,000 feet. Breeds abundantly but the nest is hard to find. It often associates with the preceding species in winter when large flocks are to be found, busily engaged in gleaning its food from every nook and cranny of the pines, scrambling about and hanging in every conceivable attitude. While thus engaged they are very noisy and are heard at a considerable distance, their voices, although not loud, have a carrying quality, which would make the uninitiated believe that it came from throats of much larger birds. Eggs much like all of this family but small.

18. *Certhia familiaris rufa* (Bartr.), Ridgw. Brown Creeper. Abundant at times, but not during the breeding season. Ranges to timber line where it breeds abundantly. Nest in holes, crevices and crannies, white, spotted with reddish-brown.

19. *Salpinctes obsoletus* (Say), Caban. Rock Wren. Not at all common. Nest in crevices of rocks, constructed of most anything that is handy. Ranges from the plains to 14,000 feet.

20. *Telmatorhynchus palustris* (Wils.), Baird. Long-billed Marsh Wren. Rare. No specimens taken. Undoubtedly breeds, but I have not found its nest.

21. *Mniotilta varia* (Linn.), Vieill. Black and

White Creeper. Rare. Only one seen feeding about the trunk of a cottonwood tree in front of my window, where I watched it until it left.

22. *Dendroica auduboni* (Townsend), Baird. Audubon's Warbler. Not rare. Arrives the first part of May and commences nest building during the middle of the month. Placed in Juniper bushes generally not over six feet from the ground. Eggs four, white with blotches of blueish-black.

23. *Dendroica gracia* (Coues), Grace's Warbler. Not at all common, but breeds at 8,500 feet in the Juniper bushes. A set taken in May, 1887, was placed four feet from the ground, contained four eggs, white with reddish spots, very sparingly near and on the larger end. I secured the female. Three days later, Mrs. Morrison brought me a set of four from the same locality with both birds, making the two only sets taken here. Mr. Drew, I believe, also found eggs, but his data was not where he could get it to me in season for this paper. The nests taken were placed in forked limbs and somewhat resembled that of *D. aestiva* on the outside, but deeper inside. They were lined with dried grass, cowhair, and a few feathers. Not at all a remarkable nest does this bird build, and one would expect a much handsomer one.

24. *Dendroica nigrescens* (Townsend), Baird. Black-throated Gray Warbler. Rare. Ranges up to 9,500 feet and breeds. Have seen but few specimens, and never found it breeding. Of its nesting habits I am ignorant.

25. *Dendroica townsendi* (Nutt.), Baird. Townsend's Warbler. Rare. Ranges up to 10,000 feet in the fall, but breeds much lower down, probably much lower than Ft. Lewis, as I have failed to find it. Have never seen it here in spring.

26. *Geothlypis macgillivrayi* (Aud.), Baird. McGillivray's Warbler. One of our most common warblers. Although very shy, when the nest is approached the female will glide off, and flying close to the ground is soon lost from sight, and also from the nest as long as the safety of the eggs will allow. When without seeing the bird, you will very likely find her on the nest, where she has stolen perhaps the only moment your eyes were taken from her. Nests in Juniper bushes, four to six feet up.

27. *Mniotilta pusillus* (Wills.), Bp. Black-capped Yellow Warbler. Tolerably common and breeds up to 12,000 feet. It is common at Ft. Lewis, where it builds its nest in the cottonwoods and willows that fringe the Rio la Plata. Arrives first of May and leaves in September, with the bulk of our summer residents.

Nests and eggs similar to that of *D. aestiva*.

27. *Vireosylva gilva swainsoni* (Baird). Western Warbling Vireo. Our most common Vireo. Its nest is formed in bushes and cottonwood trees from five to fifty feet from the ground. It reaches 10,000 feet and breeds as high. A nest has been placed in a cottonwood tree, which shades my house, for the past two seasons, evidently by the same pair. Habits, nest and eggs similar to *V. olivacea*.

28. *Lanius borealis* (Vieill.) Great Northern Shrike. Rare winter visitant. Feeds upon the large troops of Titmice. Have seen but three of this species. This and the following have a very pretty song, which can be heard only at sunset and during the winter months.

29. *Lanius ludovicianus excubitorides* (Sw.), Coues. White-rumped Shrike. Tolerably common from the plains up to 10,000 feet. Breeds raising sometimes two broods in low altitudes. Nest in thorn bushes.

30. *Amphelis garrulus* (Linn.) Northern Waxwing. A rare winter visitant. A few small flocks only seen in early winter.

31. *Progne subis* (Linn.), Baird. Purple Martin. Very common. Arrives late, and at once begins nesting in decayed and hollow trees, and also in latticed ventilators of the soldiers quarters.

32. *Petrochelidon lunifrons* (Say.). Lawr. Cliff Swallow. I have not seen this bird here, but have been told it breeds on the cliffs among the Rio las Animas, which is no doubt true, as it is in a good locality for them.

33. *Tachycineta bicolor* (Vieil.), Caban. White-bellied Swallow. Rare; breeds. Have seen but some half dozen birds in two years. Saw young just on the wing last of June.

34. *Tachycineta thalassina* (Swains.), Caban. Violet-green Swallow. Very abundant, breeds in hollow trees and in rocky ledges, where it breeds in pines and lives in small colonies. Have seen as many as twenty pair in a single dead pine, and four or five pair in one limb which had been used first by the woodpeckers. Very graceful while on the wing, and just before a rain-storm the air is literally full of them busily engaged in feeding. During the storm, however, they huddle together on the dead limbs near their homes and wait for the storm to pass over, when they once more take wing to feed. They arrive the middle of May, leaving early in September. Eggs white.

35. *Stelgidopteryx serripennis* (Aud.), Baird. Rough-winged Swallow. Said to be common among the ledges of the Rio las Animas. Mr. A. W. Anthony of Denver tells me he found it

along this river near Silverton, and this leads me to believe it also breeds in this county. At all events, it occurs here if in San Juan County, and there can be no doubt of Mr. Anthony as an authority.

36. *Pyrranga ludoviciana* (Wills.), Bp. Western Tanager. Common in the pines, where it breeds, although I have not yet taken its eggs. Ranges up to 10,000 feet.

37. *Pinicola enucleator* (Linn.), Vieill. Pine Grosbeak. Common in migration, have not met with it during the breeding season. Must breed farther north or at a higher altitude, as it is found at 12,000 feet.

38. *Carpodacus cassinii* (Baird). Cassin's Purple Finch. Not common but probably breeds, as I have seen it in June and in full song. Have not yet taken its nest. Arrives in May and departs last of November. Reaches 10,000 feet.

39. *Loria curvirostra mexicana* (Strick.) Baird. Mexican Crossbill. During the winter of 1886-87, it was very abundant, and I secured a set of four eggs on January 30, 1887. This is the second set taken in the United States. The first one taken by Mr. Eugene P. Bicknell at Riverdale, New York, is now in the National Museum. The set taken by me was similar to those of the European Crossbill, and could be hardly distinguished from them. The nest was in a pine tree and of grass, with many pine needles worked in. A full description of this nest and eggs will appear later. The present winter not a bird has been seen so far. The Crossbills are constantly on the move, their movements being regulated by the food supply. They breed in winter and wherever they happen to be at the time. At least, this is the conclusion I have arrived at. They are close sitters, and my bird was nearly lifted from the nest where she sat and looked me in the eye for at least five minutes before I attempted to remove her.

40. *Loria leucoptera* (Gm.) White-winged Crossbill. Rare, only specimen taken here, and another in the collection of Dr. R. H. Brown of Silverton, in San Juan County, which was taken in Baker's Park, the altitude of which is about 9,500 feet.

41. *Egithus tinaria* (Linn.), Caban. Common Redpoll. Common, found the year round, and ranges up to 10,000 feet in winter, however. I have not as yet discovered its nest.

42. *Astragalinus tristis* (Linn.), Cab. American Goldfinch. Rare. I enter upon Mr. Drew's record in San Juan County. Have not seen it myself.

43. *Astragalinus psaltria* (Say.), Coues. Green-backed Goldfinch. One nest taken from

a young cottonwood sapling, a view of which adorns the parade ground here. The only pair seen, although probably more my fault than the birds, as more than likely they are fairly common, but in my investigations thus far, I have been putting in most of my time on other families.

44. *Pelectrophanes nivalis* (Linn.), Nreyer. Snow Bunting. A small flock of six appeared on the first day of March with a heavy snow-storm. This is the only record I know of in the county.

46. *Poetes gramineus confinis* (Baird). Western Grass Finch. Very common, nesting abundant on most of the mesas. Too well-known to need further comment here.

47. *Coturniculus passerinus perpallidus* (Ridgw.) Common during the spring migration, but have never seen it after first of June. Where it breeds I cannot say. Perhaps it ranges higher for this purpose. It arrives here in small flocks just as the snow is gone.

48. *Chondestes grammia strigata* (Sw.), Western Lark Finch. This bird is reported to me as occurring, but the authority is not to be depended upon. I have not met with it myself, but will say that it is possible it may breed either a few miles south of Ft. Lewis or to the east, as there are several localities suitable to their habits in these directions. I do not think it breeds above 6,000 feet however, but south of here twenty miles will bring one down to about 4,000 feet, where many of the birds winter, and where snow is seldom seen except in very severe winters.

49. *Zonotrichia leucophrys* (Forst.), Swains. White-crowned Sparrow. Common in migration, but does not breed below 9,000 feet. Two broods are raised at the altitude above given, when they make a vertical migration above timber line, where they raise their second brood. The nest is placed in bushes and four eggs are laid. In October, they again appear in the vicinity of Fort Lewis, and in a couple of weeks the last have gone. During migration, every clump of bushes, fence, and cultivated field is swarming with them.

50. *Spizella montana* (Forst.), Ridgw. Tree Sparrow. The first sparrow to appear in spring, arriving this year where there is a foot and a half of snow. It feeds about the houses in such a case. It cannot be called common however. It awaits good weather and then is off for the north, appearing again in the fall, when it lingers with us till quite late.

51. *Spizella domestica arizonae* (Coues),

Ridgw. Western Chipping Sparrow, common. Breeds in scrub oak and other bushes, nesting habits same as the eastern bird.

52. *Junco aikeni* (Ridgw.) White-winged Snowbird. Common during the winter, appearing with the first heavy snow, and stopping through the winter in large flocks, or as long as the snow lasts. The white of the wings is variable, being hardly distinguishable in some, while in others it is very conspicuous.

53. *Junco annecteus* (Baird). Pink-sided Snowbird. Not abundant, only seen in small numbers, and only occasionally.

54. *Junco corniceps* (Woodh.), Baird. Gray-headed Snowbird. Most abundant of all the Juncos, breeds as high as 12,000 feet, raising two broods. It is only in winter that it ranges as low as Ft. Lewis. It appears here the last of November and leaves last of April to the first part of May, as the weather allows.

55. *Melospiza lincolni* (Aud.), Baird. Lincoln's Finch. I have not as yet taken this bird, but local collectors report it. I enter it upon such sources, because I see no reason why it should not occur.

56. *Pipilo maculatus arcticus* (Swains), Coues. Northern Towhee. Very abundant, arrives early in March. Breeds in June or the last of May. Reaches 7,000 feet.

57. *Pipilo maculatus megalonyx* (Baird), Coues. Spurred Towhee. As abundant as the last, but while *arcticus* prefers the mesas to place its nest, this variety takes to the low bottoms along the rivers and on side hills of the cañons and gulches.

58. *Pipilo chlorurus* (Townsend), Baird. Green-tailed Towhee. Abundant and breeds. A very shy bird, and it is next to impossible to find its nest, which is here placed on the ground in clumps of scrub oaks. In finding nests of this kind, I have trained a pointer dog for the purpose. He will scent a nest and point. I then send him in to find it, which he does nine times out of ten, but this kind of work unfits him for any other kind of work, but he is worth more than I paid for him in finding me eggs. I can use him on all birds breeding in bushes and on the ground. Were it not for him, I could not find one in ten nests of *P. chlorurus*, as they are hard to find even when you know you have the particular bush in which the nest is marked down. The nest is generally concealed just under a tuft of grass, or the dead oak leaves of the year before are so arranged as to conceal

it. Eggs white, sparingly spotted with reddish.

59. *Agelaius tricolor* (Nutt.), Bp. Red and White-shouldered Blackbird. A flock observed by me on Feb. 3, 1887, an account of which appeared in O. & O., Vol. 12, No. 7, pp. 107-8.

Since then, Mr. Theo. D. A. Cockerell of West Cliff, Custer County, writes me, that it is reported to him as occurring at Silver Cliff on the east side of the valley, by Mr. Walter Hornback, but I own that at present I think he has made a mistake in identity, as I see no plausible way of its ever reaching Custer County. While the source of the Rio del Colorado valley and canyon would open a path to this country, and also by its tributaries into certain portions of eastern Utah, the other species of *Agelaius* I have not observed in the country, and being eastern birds there is no direct line of migration for them, as is the case with this species. With this explanation, the species stand, hoping that I may yet make its acquaintance here.

60. *Sturnella neglecta* (Aud.) Western Meadow Lark. Not common, but a few pair may be found in moist and level localities, generally in valleys between the mesas. They are far more abundant in the fall, probably being joined by more northerly birds. They leave after the first snow-storms, and, contrary to the Meadow Larks in the East, they do not arrive till ready to breed. Whereas in Wyoming and eastern localities, they appear very often before the snow has disappeared. Reaches 10,000 feet.

61. *Scolecophagus cyanocephalus* (Wagh.), Caban. Brewer's Blackbird. This poor bird, in spite of the burden it carries in the shape of a scientific name, puts up with its troubles joyfully and comes to us regularly, and its little communities are found in the wet ravines where it receives its brood or broods of four or five young, in as good form as any of its kind. In a net tract near the Ft. Lewis cemetery, there is a little clump of some five pair, building their nests upon the ground at the bottom of the low bushes which grow sparingly. Not 2,000 yards to the nest, and just over a mesa is another colony of a few pair, who build in the branches of the scrub oak. Now, please do not think I have made any mistake in these two instances, for I have been two years trying to make myself believe so, and last spring, after slaughtering both communities, I was obliged to come to the conclusion that both colonies were one and the same species. The Blue-Headed Grackle is the only one in this county.

(To be Continued.)

## A Series of Eggs of *Tinnunculus sparverius*.

BY J. P. N.

The eggs of the Sparrow Hawk (*Tinnunculus sparverius*), are smaller than those of any other North American Hawk. As a rule they are handsome, being brightly colored, and most of them have the reddish appearance which is so characteristic of the eggs of the Falcons. They exhibit a surprising variation in the style and coloring of their markings, and a series of them present a fine appearance.

While inhabiting the whole of North America, it appears to be especially abundant in California, where all but two of the sets comprising the present series were taken. It lays its eggs in hollows of trees, mostly in those which are either wholly dead, or those with dead limbs. Often the holes made by woodpeckers are used, but in no case is any material carried into the hole by the bird. The eggs are four or five in number, rarely more.

It is believed that the present series of twenty-two sets, now before the writer, shows all the variations to which they are subject.

Set I. May 5, 1885, Anaheim, California. Collected by Julius Schneider. Nest in hollow of a sycamore tree. Five eggs. Incubation commenced. Ground color white, speckled and spotted with vinaceous-cinnamon, cinnamon-rufous, and chestnut. The markings are chiefly at the larger ends on three of the eggs, and at the smaller ends on the other two: 1.30 x 1.06; 1.33 x 1.10; 1.30 x 1.10; 1.31 x 1.11; 1.33 x 1.13.

A large portion of the ground color of this set (which is a pure white), is unmarked, and this makes its appearance much lighter than any other in the series, for although other sets have fewer markings, none of them have as white a ground color as these.

Set II. April 18, 1885, Los Angeles County, California. Collected by C. N. P. Nest in a hollow tree. Four eggs, incubation well advanced. Ground color pinkish buff to ochraceous buff, speckled (and with a few spots of the same colors), with russet and burnt umber: 1.36 x 1.11; 1.35 x 1.10; 1.32 x 1.12; 1.31 x 1.15.

Set III. April 26, 1884, Riverside, California. Collected by E. M. Haight. Nest in a hole in a large cottonwood tree. Four eggs, incubation advanced. Ground color pinkish buff, speckled with burnt umber. Three of the eggs have each

of them a single large blotch of burnt umber, in addition to their speckling of the same color, and it produces a very curious effect.

Set IV. April 8, 1885, Riverside, California. Collected by E. M. Haight. Nest in hole in dead tree. Five eggs, incubation begun. Ground color creamy white, speckled, spotted, and blotched with cinnamon-rufous. In three of the eggs the markings are heavier at the smaller ends, while in the other two they are principally at the larger ends: 1.37 x 1.15; 1.28 x 1.08; 1.21 x 1.07; 1.23 x 1.08; 1.25 x 1.05.

Set V. May 3, 1886, Tres Pinos, California. Collected by J. R. C. Nest in natural hole in tree. Five eggs, fresh. Creamy white ground color, almost obscured with speckling and spotting of vinaceous-cinnamon: 1.34 x 1.08; 1.34 x 1.09; 1.26 x 1.06; 1.37 x 1.10; 1.26 x 1.09.

Set VI. April 16, 1886, Riverside, California. Collected by W. B. Nest in hole in dead tree. Five eggs, incubation slight. Ground color dull white, speckled, spotted and clouded with vinaceous-cinnamon, and cinnamon-rufous: 1.49 x 1.16; 1.50 x 1.15; 1.50 x 1.16; 1.50 x 1.16; 1.50 x 1.15; 1.46 x 1.17. Large eggs for this species.

Set VII. May 15, 1887, Los Angeles County, California. Collected by C. N. P. Nest in hollow tree. Four eggs, incubation advanced. Ground color pinkish buff to vinaceous-cinnamon, speckled and spotted with cinnamon-rufous and chestnut: 1.36 x 1.09; 1.36 x 1.11; 1.34 x 1.11; 1.41 x 1.11.

Set VIII. May 10, 1885, Chester County, Pennsylvania. Collected by E. M. T. Nest in hole in an apple tree. Six eggs, incubation begun. Ground color dull white to vinaceous-cinnamon, speckled, spotted, blotched, and clouded with cinnamon-rufous: 1.12 x 1.17; 1.39 x 1.11; 1.44 x 1.12; 1.46 x 1.12; 1.39 x 1.10; 1.38 x 1.09.

Set IX. April 9, 1885, Riverside, California. Collected by E. M. Haight. Nest in dead stub, in hole made by a woodpecker. Five eggs, incubation advanced. Pinkish buff ground color, speckled, spotted, and blotched with vinaceous-cinnamon and cinnamon-rufous. In three of the eggs the markings are thicker at the larger ends, and the other two have them grouped at the smaller ends: 1.37 x 1.11; 1.35 x 1.11; 1.32 x 1.11; 1.40 x 1.08; 1.38 x 1.11.

Set X. May 7, 1887, Los Angeles County, California. Collected by C. N. P. Nest in hollow stump of a tree. Five eggs, incubation commenced. Pinkish buff ground color, speckled and spotted over the whole surface with vinaceous-cinnamon and cinnamon-rufous:

1.40 x 1.10; 1.30 x 1.03; 1.36 x 1.10; 1.38 x 1.10; 1.39 x 1.10.

Set XI. April 20, 1886, Tres Pinos, California. Collected by J. R. C. Nest a natural hole in a tree. Eggs laid on dead wood and dirt at bottom of hole. Five eggs, fresh. Pinkish buff ground color, speckled, spotted, and blotched with cinnamon-rufous; and on each egg the markings are heavier at the smaller end, where they are confluent. Quite pointed for this species: 1.36 x 1.08; 1.36 x 1.13; 1.31 x 1.09; 1.26 x 1.08; 1.29 x 1.15.

Set XII. May 13, 1885, Riverside, California. Collected by E. M. Haight. Nest in hole in tree. Four eggs, incubation advanced. Pinkish buff ground color, speckled, spotted, and clouded with vinaceous-cinnamon and cinnamon-rufous. The markings are all heavier near the smaller ends: 1.28 x 1.08; 1.29 x 1.05; 1.25 x 1.06; 1.28 x 1.09.

Set XIII. April 16, 1886, Riverside, California. Collected by W. B. Nest in hole in dead cottonwood tree. Four eggs, fresh. Ground color creamy white to pinkish buff, speckled, spotted, and blotched with cinnamon-rufous. On three of the eggs the markings are much heavier at the larger ends, but the fourth has a wreath of heavier markings near the smaller end: 1.30 x 1.10; 1.32 x 1.11; 1.35 x 1.09; 1.28 x 1.08.

Set XIV. May 12, 1884, Los Angeles County, California. Four eggs. Ground color of one of them creamy white, speckled, spotted, and blotched with cinnamon-rufous, heaviest at the larger end. The remaining three eggs have a ground color of vinaceous-rufous, speckled and spotted with cinnamon-rufous: 1.50 x 1.10; 1.50 x 1.08; 1.37 x 1.07; 1.38 x 1.07.

Set XVI. April 26, 1884, Riverside, California. Collected by E. M. Haight. Nest in a hole in a large cotton tree. Four eggs. Ground color dull white, pinkish buff, and vinaceous-cinnamon, speckled, spotted, clouded, and blotched with cinnamon-rufous and chestnut: 1.35 x 1.16; 1.34 x 1.14; 1.31 x 1.10.

Set XVII. May 20, 1886, Tres Pinos, California. Collected by J. R. C. Nest in natural hole in tree. Four eggs, fresh. Ground color dull white to ochraceous-buff, speckled, spotted, and blotched with vinaceous-cinnamon and cinnamon-rufous: 1.36 x 1.10; 1.39 x 1.14; 1.34 x 1.10; 1.37 x 1.14.

Set XVIII. April 1, 1884, San Diego, County, California. Collected by William C. Flint. Nest in large cavity in sycamore tree. Three eggs, incubation commenced. Ground color, dull white, speckled and spotted with cinna-

mon-rufous and chestnut. On two of the eggs the markings are heaviest at the smaller and larger ends respectively, while the third has a broad band of cinnamon-rufous near the smaller end: 1.29 x 1.12; 1.31 x 1.15; 1.36 x 1.14.

Set XIX. April 16, 1866, Riverside, California. Collected by W. B. Nest in hole in cottonwood tree. Five eggs, incubation begun. Ground color, vinaceous-cinnamon, speckled and spotted with cinnamon-rufous; 1.34 x .99; (very odd shaped); 1.36 x 1.11; 1.33 x 1.05; 1.31 x 1.06; 1.38 x 1.09.

Set XX. April 9, 1885, Riverside, California. Collected by E. M. Haught. Nest in a hole in tree, made by a woodpecker. Five eggs, incubation begun. Ground color dull white to pinkish buff, speckled, spotted, and blotched, chiefly at the larger ends, with vinaceous cinnamon and cinnamon-rufous: 1.24 x 1.15; 1.27 x 1.14; 1.28 x 1.15; (these three eggs are the most globular of any in the series); 1.26 x 1.09; 1.34 x 1.13.

Set XXI. April 26, 1879, Nicasio, California. Collected by Charles A. Allen. Four eggs. Ground color pinkish buff, speckled, spotted, and blotched with cinnamon-rufous. The markings are confluent at the larger ends in three of the larger eggs: 1.33 x 1.13; 1.87 x 1.14; 1.36 x 1.11; 1.13 x 1.05.

Set XXII. May 3, 1867, Los Angeles County, California. Collected by C. N. P. Nest in a hollow tree. Five eggs, fresh. Ground color vinaceous-cinnamon, speckled and spotted with cinnamon-rufous: 1.31 x 1.13; 1.31 x 1.11; 1.35 x 1.12; 1.36 x 1.12; 1.33 x 1.11.

### Nesting Habits of the Bald Eagle.

BY WALTER HOXIE, FROGMORE, S. C.

I recently examined a file of THE ORNITHOLOGIST AND OÖLOGIST, and found that the information therein contained upon the nesting habits of the American or Bald Eagle (*Haliaeetus leucocephalus*), was more meagre than upon any of the rest of our *Raptors*. I cannot tell why this should be so, for it is not a bird that is easily overlooked, and it is moreover of wide distribution.

This locality seems to be specially favored as a breeding resort, and the following remarks are intended to in some measure fill the *hiatus* above indicated.

Although at one time I knew of thirteen nests, I have never yet taken one egg. To confess the

truth at the outset, I am a very poor climber. The nests are in the highest pines, and could no doubt be reached without serious difficulty by one who was accustomed to the use of irons.

I have participated in two futile attempts with other parties to obtain the eggs. One venturesome lad ascended a rope to within a few feet of the nest. The female bird then launched herself from it, and the male at the same moment darted down from high in the air towards her. My acrobatic friend, fearing an immediate attack, slid precipitately back to *terra firma*, and no cajoling or ridicule would induce him to make another ascent. In fact, a long rent in the widest part of his nether raiment, he insisted had been made by the talons of the wrathful birds. The second attempt at which I assisted was even further from success than the first.

The nest is usually placed in a crotch at some distance from the top of a living tree. I have never seen one perched upon a dead stub in the favorite position of the Fish Hawk. The material is principally sticks with but little grass and trash, and no perceptible lining. The hollow is not so deep as in the Fish Hawk's nest, and the general appearance is wider and rougher. (These remarks are based upon two nests which were in felled trees. One contained two young birds—both uninjured—and the other was empty).

The hunters and old residents in the vicinity state that the two eggs are laid at wide intervals of time, and thus the callow young that is first hatched aids in the incubation of his little brother. Be that as it may, my own observations with the spy-glass show very little difference in the development of the nearly fledged young, after they begin to stand up and move about in the nest.

Another oft-repeated tradition is anent a marvellous stone said to be contained in every nest, and which the great birds guard with jealous care. One of these is now in my possession—that is, if there is any truth in the story—for I dislodged it from a nest into which I fired a charge of buck shot. It is a water worn pebble of white quartz, oval in shape, and about two and a quarter inches in its largest dimensions. Such a stone as is common on many pebbly beaches, but it is the only one I ever saw among these sandy, rockless islands.

Another point that has often struck me is that frequently an immature male is seen mated with a full plumaged female. Possibly the males are slower in gaining the white head and tail, or they may be less wary and oftener fall

victims to the taxidermist. Will some one who has kept a record of the sex of the specimens that have passed through his hands for a series of years, please send a note to the O. & O. as to this?

The breeding date must be a very uncertain one—that is, its limit in point of time is very wide. I have detected young as early as February 8th, and a sitting bird on May 8th, that had not hatched on the 21st of that month. The period of incubation is also probably over four weeks. Spy glass observations are not very accurate means of determining a fact of this nature, but I think that I have seen a bird upon the nest for thirty-two consecutive days, my point of observation being a mile and a quarter by the Coast Survey Chart. The nest was for many years in plain sight from my door, and I was enabled to watch the movements and positions of the birds for hours at a time. And here let me note that the real "spread eagle," or, as it might be called the "dollar" position, was frequently assumed by the parent birds while standing upon an upper limb and watching the young consume their food. It is a position that is often ridiculed, but proves nevertheless to be a natural one.

The other day I found a new Eagle's nest. How much pleasure is expressed to me in those few words! Although I cannot turn to a well-filled cabinet of egg-shells, and write a page or two on comparative measurements, shapes and shades, I have found a new nest. Why the mere fact gives me so much pleasure I cannot say. I can never hope to obtain from it any oölogical treasures. I certainly do not intend to "lay" for the occupants with my rifle. But the same old, glad, joyous thrill comes back every time. There was the big unmistakable mass half hidden in the green top of a giant pine tree, and it was the first time I had seen it. The sky was blue, the wind was soft, the sea was silvery and gentle. I looked and saw what I had often seen before, but still there is another happy spot that cannot be effaced from that strange thing we call our life.

[After Mr. Hoxie's sarcasm, we "closet oölogists" (as they delight to call us), must needs hide our heads, but may I be permitted to mention that the breeding dates of this bird, even in South Carolina, are probably much earlier than he thinks?

Two sets of eggs of this species (each containing two), in the far from "well-filled" cabinet of the present writer, were collected respectively at Tampa, Florida, on December 3, 1884, and Merritt's Island, Florida, on Decem-

ber 13, 1883. It is therefore exceedingly probable that their laying commences in South Carolina much before February, as stated by Mr. Hoxie.—J. P. N.]

### In Embryo.

BY J. M. W., NORWICH, CONN.

A cracked *Bubo's* egg from a nest riddled with BB shot, taken on the Saturday eve before the blizzard, and some broken egg-shells of Barred Owl picked up on the ground April 11, comprise my record for the *Strigide* this season. April 13, a second nest of Great-Horned was found holding one lusty squab, with parts of four rabbits, two squirrels, and other quarry. Some wild oölogist of merit stole my Barred Owl's eggs as they were laid, and, though fairly attributable to crow, grey squirrel, or raccoon, yet I had to take the usual blame for being in bad company, for the pair of owls gave me a worse scolding than I ever received from wren, jay, thrush, or noisy *Accipiter*.

A cocker-spaniel pointed me a cluster of broken egg-shells of Woodcock, and, April 5, I picked up a female Woodcock killed by flying against the telegraph wires. First and last, I have picked up and had sent to me a dozen woodcock killed by the murderous wires. This, of course, cannot represent a tenth of the mortality from this cause in this one neighborhood alone. The injury is usually about the head, the bird's mandibles being broken. In every instance, the dead birds have been found in the mating or breeding season, and in the present instance the eggs were nearly ready for extrusion.

April 11, I saw a Redtail fly off such a high nest in such a horrible black oak with limbless trunk and rotten chipping bark, I would not let my climber risk his neck.

One Red-Shouldered, April 15, was so far from home, I contented myself with two fresh eggs, and another nearer by, April 14, was at such a dizzy height, I took these eggs when I almost knew the clutch would be increased, as this bird had laid "fours" continuously for four years.

April 17, I failed to locate a female Mottled Owl and her eggs, though I climbed half a day among a grove of old beech trees in city limits, finding the male in his day-hole filled with feathers of Bluebird and House Sparrow. Big beeches with no lower limbs are about the meanest to

climb, for the creepers do not hold in the thin bark, and fingers find no cracks to "tie to." I still think I would have been successful in my quest if I had not spurred myself and been treed more than an hour by a brindled bull-dog.

On an all day's trip in many pieces of woods, April 22, I left untouched in the nests several sets of the larger Buteos, the *borealis*, because of incubation, and the *lineatus*, on account of nest-washings from the rain of the 20th.

Numerous fine pieces of woodland in this county have been cut off by owners of portable steam saw-mills, who buy the wood of the farmers. I drove by many such deserts which were formerly good hawking grounds, and walked through one such patch half a mile square, where a touch of pathos was added to its desolation by the presence of a fine lemon and white setter bitch, lying in the middle of it, stone dead. Two pairs of Coopers were found building, and a third Cooper's nest held one egg and a steel-trap. Two other steel-traps we came across in swamps, held a Blue-Winged Teal and a Great Blue Heron. It was when we were watching some Sharp-Shinned Hawks, in a sunny interval, that the first black snake of the season confronted us. My climber seized it by the head and tail and bit the whole length of the belly, which he said was "the Irish receipt for never having the toothache." Thinks I, my fine fellow, you will not have another drink from my flask to-day! I can stand addled hawks eggs or a stale embryo in the cause of Science, but "no snakes in mine." Divesting the country-side of tall standing timber, had centered six pairs of Red Shoulders in wooded swamps fringing water-courses, where they filled the low woods with their sharp, oft-repeated cries, while the shyer Redtails, keeping well out of sight, greeted us but twice when at their egries with their single, long drawn-out eldritch shriek. In all cases, the Reds bred on higher land and taller timber, even if a bit open and scattering. One feathered nest of Red Shouldered was inaccessible in a swollen stream. There was some compensation for the long day's mishaps in an extreme set of four extra large and showy *lineatus*, and two eggs of *borealis*, sharply contrasting in size. Coming out of the woods, the very earliest of the Whippoorwills fluttered from the dry leaves at our feet. We listened for the call as we drove home in the early evening, but the season is late and our night-gar is mute.

Phœbes, White-bellied Swallows, Martins, Bluebirds, Robins, Chippies and Purple Finches, began to build on our grounds this season, and

have all been driven away by the resident sparrows. But now a ray of light! A pair of Blue Jays, braving the army of occupation, set up housekeeping in a balsam-fir within six feet of the house. Awed by the size of the intruders, the sparrows got together in noisy groups, and only sent in several walking delegates which were unmercifully hustled. Crow Black-birds take a peep into the growing nest every morning for a new laid egg for breakfast, only to find a *vigilante* on guard. On the fourth day, when both birds were away, a female robin, worried from her own site, came gently into the ready-made home, arranged it slightly, and quietly nestled in the hollow as if she had come to stay; but when the owners returned, she was ejected neck and crop.

The conspicuous motions of the visitors have attracted the attention of many cats, which follow them with greedy eyes. I have vainly emptied the coal-bod and water-bucket at them, startling the birds much more than the cats. One agile Maltese has been up to the nest and followed the pair into all the adjoining trees. I may be obliged to shoot this cat from the open casement later on, but now I find the jays can outwit her. When the cat begins to slowly force its way through the thick evergreen, the male will get below her, induce pussy to follow, and tempt her little by little into a young leafless elm near by, when, hop by hop, just out of reach of the claws, he will slowly decoy the enemy into the very top twigs of the tree, and then fly away to his mate with whistles of joy and derision. The nest is about two-thirds of the way up in the tall fir, exactly opposite a second story window, which happens to open into my study and cabinet. Isn't this like carrying coals to Newcastle? Every detail of housekeeping can be watched day by day, each egg noted as laid, the matters of food and the great questions of levitation observed by and by. The site was chosen April 17, and, working nights and mornings, the sixth day sees the nest not quite finished. It is a new departure to see these wild birds of the woods in the heart of the city without fear, breaking of sprigs of wigs of *wipplia* and *spirea* for the outside of the home, bringing it with tamarisk from the flower-garden, and adding a finishing grace with fine roots from the forest. The male is entitled to credit for doing his full share of the work. Meeting her mate at the nest with sticks, the female would nestle in the middle and arrange her contribution while "hubby" would rest his stick on the rim, but when his partner hopped off, the male would in turn nestle in the

hollow and dovetail his layer of the log-cabin. Flying in different directions, they would often time their arrival at the same moment, working in harmony and for the most part in silence. They have a variety of flutings and signals when startled, and only when pouncing on Grackle or cat are the harsh notes heard. When thoroughly alarmed, they go to the tops of some lofty elms near by, or to a hill across the way. From here, early in the morning, comes that curious ventriloquial note, exactly resembling the cry of the Red Shouldered Hawk. It is to the full as loud, and I never could distinguish the calls. Neighbors have said to me for several days, "There's a hen-hawk hollerin' upon the hill!" The deception is so great, I would myself take oath to the same thing, if I did not know the noise proceeded from my pair of semi-domestic Blue Jays.

### King Rail in Louisiana.

BY W. C. AVERY, M. D.

On the 24th of March I met three small boys who were returning from the field with dogs and guns. Besides a half dozen hares which one of them carried on a string over his shoulder, was a King Rail (*R. eleuans*) tied by the leg and in the hands of one of the boys.

It seems that the Rail had been pointed by their dog, flushed and shot at. She returned immediately, however, to the spot where she had been flushed first, and allowed herself to be captured by the boys. I asked permission of the owner to examine the bird, and observing a protuberance near the vent, I pressed it, and received in my hand a mature egg. This egg measures 1.54 x 1.22. The ground color is dull white, blotched and spotted with rusty brown, also specks of the same color and indistinct spots of lilac. The brown spots are largest and irregularly scattered over the surface. They vary in size from fifteen hundredths to the one hundredth of an inch in diameter. I returned to the marsh with one of the boys, who not being able to locate the tussock of bulrush where they had captured the Rail, our search for the nest was fruitless.

### Death of Edmund Ricksecker.

BY J. P. N.

On April 15, 1888, Mr. Edmund Ricksecker died at Nazareth, Pennsylvania, where for many years he had his home. His name has

long been connected with the study of oölogy, and at one time he was the possessor of a collection of eggs which was unusually complete, as collections then were formed. He had collectors in Texas, California and Iowa, besides other localities, and those in the first mentioned State sent him many rare set of eggs that were almost, if not entirely, new to Science at that time.

His name was a connecting link which joined those of the early students of oölogy, like Dr. Brewer and others, to those of the present day, and his loss will be deeply regretted by his many friends in all parts of the country.

### James A. Wright.

It becomes our painful duty to announce the decease, at the age of 42, of Mr. James A. Wright, at one time an Associate Editor of this magazine, he having been crushed in a machine, the operation of which he was observing, his arm being entirely torn from his body, from the effects of which he soon expired.

Mr. Wright was born in Gananoque, Ontario, Canada, from whence at the age of 21, he emigrated to California, where he spent about ten years of his life. He then returned to his native place, and there first imbibed the love for Natural History.

Coming to Boston about 1882, he gave much attention to the study of Entomology, and the next year engaged in the Natural History business in company with Mr. Frank A. Bates, at 73 Hanover street, which partnership existed for three years. During this time he gathered a very large collection in his favorite science, which bade fair to place him, had he lived, in the front ranks of Entomologists.

Naturally of jocose and lively habits, he endeared himself to all who were intimately associated with him.

He was an indefatigable collector, and his collection numbers many thousand specimens.

His decease is a great loss to the science of Entomology.

### List of the Birds of Onondaga County.

The Biological Laboratory of Syracuse University has issued a Bulletin of the above title. The author is Mr. Morgan K. Barnum, and the work he has given in the *List* is very creditable. It gives 204 Species, with brief remarks on their distribution, and contains Appendix I, giving quotations from Rathburn's Catalogue, and II, giving migration notes for 1884. Received by the kindness of the author.

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## A Visit to Crane Island.

BY GEO. C. CANTWELL.

For some time past, it has always been my great desire to pay a visit to a great rendezvous of birds near Minneapolis, Minnesota, known as Crane Island.

This is a small island, comprising about ten acres, and is situated in the upper part of Lake Minnefinka, which lies about fifteen miles from this city.

The island has very steep banks, but when once on top, it is found to be almost level and covered with a very tall growth of elm, bass-wood, and weeds growing thick and rank everywhere.

On the seventh of May, 1886, a companion and myself boarded a train for the lake, equipped with a small sized trunk full of cotton, with the necessary climbers, straps, etc., bent on reaching this island if possible. We arrived at the lake in the evening, and found accommodations in a summer hotel which had not yet opened for the season, but where the proprietor and his family live the year around.

We did some tall thinking that night, and dreamed of wading over our ears in eggs. At daybreak we were up, but alas! it was raining hard and blowing a gale, making it impracticable to make the distance of a mile and a half to the island in a small rowboat. We contemplated spending the whole day on the island, but as it was, we found we must be contented with half a day, for the wind continued till noon, but it stopped raining soon after breakfast. In the meantime we found plenty to do, as it was in the middle of the migrations, and we secured many valuable skins. Evening Grosbeaks were very common that day as well as many species of Warblers. We found some eggs of the earlier breeders, and an unfinished nesting place, each of Yellow-bellied Woodpeck-

er (*Sphyrapicus varius*), and a White-bellied Nuthatch (*Sitta carolinensis*).

Soon after dinner we were on our way to the island, and were delighted at the birds going and coming, for they proved to be Great Blue Herons (*Ardea herodias*), and Double Crested Cormorants (*Phalacrocorax dilophus*). On our near approach, great numbers of the birds could be seen sitting on the dead limbs, the Cormorants looking like so many Crows, and the Herons balancing themselves as best they could. At this they seemed awkward, as they are not "built that way." They generally alight by falling all in a heap in the leafy part of the tree, and after a good deal of fuss find a comfortable perch, and tie their necks in a bow-knot and sit and sun themselves until another Heron comes flopping along and accidentally gives him a "poke" and puts his centre of gravity out of position.

After a good deal of trampling among the small branches for a foothold and several coarse "honks," the other flops into another tree top.

Once on the island our spirits rose, for the trees were full of huge nests, almost all of which were worn and weather-beaten, and bleached almost to whiteness, as this place has been the breeding place of Herons and Cormorants ever since our "oldest resident" can remember. An adjacent island was formerly yearly occupied by a pair of Bald Eagles, but with the advancement of population they left a few years ago.

In numbers the Herons predominated, and they occupy a particular part of the island, while the Cormorants have the other part. The "line" seems very distinctly drawn, for in the Heron part no Cormorants were found, and *vice versa*. The greatest harmony seemed to prevail between the two, and on the "line" both are found breeding in the same tree.

There must have been upwards of five nests on the place, and in one tree I counted fourteen. Not a large part of the nests are inaccessible, on

account of it being at the extremities of the limbs.

The Cormorants nests were smaller and with a deep depression in the centre, while the Herons' nests were after the usual style, almost flat on top. The Cormorants' nests also differed from those of the Herons, by having a lining of rushes.

The rain of the morning made the trees extremely slippery as well as dangerous to ascend, which could only be done with the use of a strap. The average number of eggs in the Herons' nests was five, most of which were slightly incubated; while those of the Cormorants contained five also, which were fresh, however, being a complete set I believe.

When up in the top of the highest tree, a grand sight presented itself, as bunches of big blue eggs were scattered around everywhere, with an occasional nest full of young birds, and hundreds of birds were perched around in tree tops and on the edges of their nests.

A peculiarity of these birds is that they occupy but that one island, and not a solitary nest can be found on any of the other numerous islands or on the shore.

Late in the afternoon, we left the island with as many eggs as we could use, and well pleased with our trip we returned home the next morning.

In the summer of 1886, I was living at the lake, and I improved the opportunity by paying another visit to the island in the latter part of August. The scene was entirely changed, the weeds had grown taller than a man's head, and the ground was strewn with egg shells, and the squawking of the young birds was almost deafening. The trees and spots under the nests were literally whitewashed with the excrements of the birds, and it is needless to say that the atmosphere was very foul.

The young birds presented an odd appearance, the Herons sitting in rings around their nest waiting for the return of their parents, but the Cormorants arranged themselves in rows along the long dead limbs. Upon throwing a stone among them, they would hastily clamber back into their nest, but a young Heron, braver than the rest, tried his wings probably for the first time, in attempting to fly across to the mainland, but it was a failure, as he fell into the water when about a hundred feet from the island, but he turned himself right side up and looked very comical indeed, sitting in the water like a duck, with his long neck towering above him.

As we left the island we rowed over to where he was, and caught him and took him home, hoping to make a pet of it, but he would eat nothing, and soon starved to death.

Turkey Buzzards (*Cathartes aura*), are continually seen sailing about the island during the summer. This was pretty far north for such birds, but they are Buzzards, nevertheless, as I shot one and identified it.

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### Albinos.

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BY W. OTTO EMERSON, HAYWARDS, CAL.

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One of the most interesting freaks of nature, if we can so call it, is the Albinism in quadruped or bird, in some cases very beautiful. A number of specimens have come under my observation in the Fauna of California bird life, and I will try and give the O. & O. readers full benefit of them.

Bank Swallow (*Clivicola riparia*). This Albino Swallow was first seen by a friend of mine, flying with a number of others, near their nesting site, the rough face of a high gravelly hill, that had been washed down for years by the process of hydraulicing for gold, near Placerville (known as Hangtown in early days), El Dorado County, 1873. On the third day it was seen, the swallows commenced an attack on their white mate, and did not stop until they had killed it, its white coat standing it as no truce of peace. The gentleman saw it drop after the hard struggle for life, picked it up and brought it into town, as a great curiosity, and so it proved. I had a good chance to examine the swallow, which proved to have been a young bird, well feathered, and of a dull ashy or rusty white color all over.

Western Meadow Lark (*S. magna neglecta*), was shot in Haywards, spring of 1878, a year after my taking up my residence here. This bird I did not have a chance to see, but the young fellow who shot it told me it was almost pure white, the regular markings of the Lark could be seen but of a dull color, no tinge of the yellow on the breast showed. It was sent over to Woodward's Garden, San Francisco, Cal. In the city named, for some months could be seen a pair of mounted California Partridges (*Callipepla Californica*), they were as handsome a pair of Albinos as I ever beheld. A light creamy gray mantle seemed to veil the whole bird, with the peculiar shell-like markings of the flanks and belly showing out darker than the others over the Partridge. The

birds looked as if they had been bleached out in strong lye. It is not an uncommon thing for the California Partridge to be taken in some state of Albino plumage. Most every one who is interested in the study of bird life asks: "Did you ever see a 'White Blackbird?'" Not many, I guess. My bird was not wholly of the Albino type, but all the more odd in having only its tail feathers white. Was one of those fine-looking, military, red-shoulder strapped chaps (*Agelaius gubernator*), who may be seen early in April sitting on some tall weed head, or fence-rail, tuning his pipes and setting his colors well to the breeze to win his true love. After chasing this gay chap for two days through wet flowed fields, some eight miles from Haywards (this odd "Harlequin" was in a flock of some several hundred Brewer's and Bicolored Blackbirds), I gave him up, not even getting a shot at my Will o'-the-Wisp.

In the collection of Henry Chapman, one of San Francisco's oldest naturalists and taxiderists (now deceased), was a fine mounted Albino Bull-Head (*Charitonetta Albeola*), being as pure white as a Snowy Goose, none of the characteristic markings of the duck's feathers showing in the mantle of white. It was brought in to Mr. Chapman by one of the many bay pot hunters.

For a long time I have seen a fine mounted Albino Ruddy Duck (*Erismatra rubida*), in a San Francisco gun-store window, also in another gun-store a fine Albino Baldpate (*Anas americana*), neither of these ducks showed any of the fine pencillings there is to their feathers.

During the early summer of 1886, for several weeks I noticed a young Albino of the many English Sparrows (that have found their way up here from Oakland, fourteen miles), feeding along the streets of Haywards. Johnnie looked as though he had got into some house-wife's flower-barrel for his dust bath, instead of his usual highway dust hole.

His feathered markings showed all through the plumage, and I noticed, that after a time, by the fall moult, the whitish feathers had all disappeared. I got permit to shoot Johnnie, but the smell of my gunpowder was so strong it reached into town before me. He soon found a safe retreat in the many blue gum trees.

Last of the most interesting Albino diminutive feathered creatures, is one now before me (*Calypte anna*), a female, collected July 10, 1886, at Haywards, Cal. It will be hard to give a good description of this snowflake. From all appearances of its plumage, it must have been a young bird, and the Albino

feathers seem to precede the dropping of the first ones, the tail feathers are the only ones that seem to retain all the original markings and color. The bright-spotted throat patch shines with the usual lustre, but is edged with dusky white; from below the throat patch is a delicate tinge of pearl-white till the breast is reached, here, the burnished sea-green shows more on one side than the other. The head, back and wings, are spotted over more or less with white feathers. The wing primaries are all of a dusky color. A few of the tertiarials of the old dark feathers remain, as also a few of the lesser coverts and median coverts. In making a skin of this hummer, I found that the white feathers came out the easiest. The body was quite wasted away, and not, as in most cases, as I have found them to be, covered with fat. Taken as a whole, this *Calypte anna* forms a very peculiar feature of Albinoism. What the causes are to make a bird change its plumage from any natural color of its own to a white in part or whole, has given rise to many theories.

Only one case of "Melanism" has come under my notice, and for a long time I could not make it out, until I asked Mr. W. G. Blunt, of San Francisco, whose collection it was in, what kind of a robin he called that black fellow? He said it had been sent him from the mountains, as something new in the bird line. It proved to be a Redbreast (*M. migratoria propinqua*), decked out in a crow's suit of black, and truly, he looked like a masquerader, his own brother would not have known him. The plumage shone with a jet richness, and only bill and eye showed him "Robin of old." Let us hear from other collections.

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Afield.

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BY J. M. W., NORWICH, CONN.

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With climbing-irons on his arm, instead of a falcon on his wrist, the hawk of '88 continues his pursuit of the base-born *Buteos*. While driving with his eyes open from patch to patch of tall timber after his large quarry, he has fine chances in the late mornings and early evenings, along turnpikes and brushy lanes, to group new facts and confirm recorded notes "in the swim" of the Spring migration. He finds that, notwithstanding the late vegetation and so-called backward season, the feathered arrivals are fully as early as usual. The resident Bluebirds and Robins welcomed the bulk

of their species at the regular time; Phoebe and Blackbirds reconnoitered late in March; Thrashers, Catbirds, Wrens, Chewinks, Swifts and Eave Swallows, came on the crest of the hot wave of April 27; Mayday, most of the local Warblers; Orioles on the 5th of May, the exact date for many seasons; and by the 10th of May, everything was accounted for except Cuckoo.

Your observing hawkler notes no diminution in any species so far, and is happy to say that the Rose-breasted Grosbeak is still increasing in the environs of the city. On the seventh of May, I noticed five males and two females in city limits. Two pairs of Eave Swallows put nests on the barn of our first selectman four years ago, and on May 8, I counted twenty-six pairs in the growing community.

Much has been said at random about the great destruction of the game birds in this State by the blizzard of last March. I will record my observations on this point to date. Happening just before their arrival here, Woodcock, it would appear, could not have suffered much on this score, yet I find them scantily represented on good feeding and breeding grounds. Without doubt, the great bulk of the Quail were snowed under, but they did not all perish as many sportsmen insist. I ran across an unscattered bevy of fourteen, early in April, and one of eight in this town the same week. I saw no more till the eighth of May, when in a section where the farmers said they were wholly killed off, I heard three cocks calling to each other that they were survivals of the fittest. May 9th, two cocks were calling five miles south of the city, and on May 14th, I saw two single birds in the towns of Groton and Ledyard.

It is doubtful if a single Ruffed Grouse was killed by the blizzard. Their sturdy pinions can break out of drifts or through icy crusts, if, indeed, they are ever covered with snow. Their habit of perching in hemlocks and thick growths, is their salvation in such a crisis. Perhaps, because the axe has been so busy in our heavy woods the past winter, Grouse have bunched in the smaller growths. At any rate, I never before have started so many old cocks, and have found five nests without search, two of them with no birds near. On April 22, I found a nest with three eggs; visiting it again on the 7th of May, I saw that a brush fire had burned nest, eggs and perhaps the bird itself. Like cold May storms, brush fires must be most destructive to the young chicks. If one Partridge's nest was burned that came under our no-

tice, how many more are destroyed of which we know nothing?

May 6th, found nest with ten eggs, flushing no parent; on the 8th, twelve eggs; still no bird. On the 12th, Grouse just seen covering the eggs, and I did not then flush her, but noted into how small a compass she could shrink looking no larger than a quail. On the 14th, she was sitting on her completed clutch of thirteen. Site was peculiar, being in briars some rods from the woods. The eggs were of the light type, and when uncovered were conspicuous twenty-five feet away, but the setting hen, harmonizing with the dead briars and leaves, would have been passed by at close quarters. I flushed her twice to observe her method of leaving clutch. She would sneak off, run quickly about six feet, and then take wing forty rods or more, stealing back home in about half an hour. This hardy bird will never know diminution in Connecticut as long as wood-lots are allowed to grow up into the very cover needed to protect them.

Between 8 and 9 a. m. on the morning of May 6, while driving through thick second growth in low land, in about three-quarters of a mile, my climber and I counted thirty-nine Brown Thrashers and thirteen Catbirds. A singing male Thrasher was on the top of every suitable tree, and it was a veritable vale of harmony. Hereabouts, there are more of these two thrushes than when we went bird-nesting as youngsters, and I think the tearful "Audubonians" will complain of no lack of Robins when their patches and cherry trees are under tribute.

Beyond this wave of thrushes, we drove through a bog and a meadow, over each of which a Harrier lazily swept along, indicating promising ground to beat over for Marsh Hawk's eggs between 20th of May and 1st of June. A mile further on, we again vainly tried to reach our nest of *B. lineatus*, surrounded with water from a till swollen stream. We could see that it was very heavily feathered, and bits of drifting hawk's down, caught on many bushes near shore, was a sure sign of incubation. We drove to two Cooper's Hawk's nests, nearly done, on the 22d, finding no eggs, but added lining in each, contenting ourselves with four eggs from the third Cooper in an easy chestnut. We found that two pairs of *lineatus*, harried on the twenty-second of April, had begun their second clutches.

We took a set of *lineatus* from an unusual site. The interior of a small wooded swamp had been cut off, leaving a fringe of tall bushes,

poorly screening a single vigorous Pepperidge, standing in the middle of the open glade. Here Master *Buteo* had built a huge black nest, looming up in its isolation as big and conspicuous as the Osprey's castle. A *borealis* had well toward completion a wholly new nest for her second clutch in a chestnut crotch, from which we had torn down an old nest of her's two weeks before. The first clutch of this Redtail was peculiar. One egg was just half the size of its normal fellow, but otherwise was its fac simile in design and color, which was a decided green. Though incubation had begun, the roughness of this set to the touch was not paralleled in the whole '88 series. Another nest of *lineatus*, feathered, as yet held no eggs, but the tree itself for many seasons has been chosen for the second nest of a certain *Buteo*. For first choice, the limit is nearly as strict. Why is it, however closely they are harried, the big Buzzards always choose the same trees? If the nest is torn down, next year or a few seasons later it is sure to be rebuilt. Clearly the bulk of the trees are only trees to them, but some three or four forks or crotches are houses and fit tenements for their housekeeping. Take any piece of woods with which I am acquainted, and nest or no nest, I can show you the only half dozen trees which Buteos will ever deign to live in.

On our way home we entered a swamp of small chestnuts and maples, where there were large nests in good order, each of which, through the field-glass, showed a single feather, and one trunk was spurred with peculiar "climbers," which I at once recognized. Seeing no hawk we did not climb, reading the hieroglyphics this way: A certain young collector has taken a short set of Coopers from nest No. 1, and Mrs. Accipiter has not quite made up her mind whether to move into nest No. 2 or No. 3. We lost this set, but will let the reader judge whether honors are not easy against the young collector.

The account of our second trip afield after hawks will conclude with this incident, for the personality of which we beg pardon in advance. It was at Boggy Meadow Reservoir, April 27, I found a Red-shouldered Hawk covering two eggs, which I left for a full clutch. On May Day I took her set of three, picking one perfect egg from the ground. Now, this was one of the very eggs I noted in the nest four days before. How did it come in its queer position? Could it have been carried there by talons or claws? On what exact part of its periphery must an egg strike to

remain unbroken after a fall of sixty-five feet?

The young collector referred to had told me he was going to take a run up to the Reservoir, so keeping quiet about my find, I set the following trap for him. I am much lighter than he, and on both occasions managed to scramble up a tall slim birch and to swing into the lowest crotch of the big chestnut tree, thus making no abrasions on the lower trunk. And on securing the eggs, I took handfuls of feathers from inside the nest and stuck them on the outside and base of the limbs near by, so they could not fail to attract his attention. Sure enough, two days afterward, with a friend, he lay in wait over three hours to shoot the hawks, without seeing a bird.

His companion told me that he had climbed the tree with his clumsy irons, sure of the eggs. Upon reaching the nest, he hung out in his surprise, "There isn't an egg in it. I'll be hanged if he hasn't got 'em!" "Who's got them?" said the watcher below. And the response from the young collector "up a tree" was: "What, don't you know? He's always around. It's that rascally 'J. M. W.' of course!"

### Nesting of the Burrowing Owl.

BY L. B. HARTZELL.

The Burrowing Owl (*Speotyto cucicularia hypogaeus*), is a very common bird in the Western part of the United States. It is resident wherever found, and lives in colonies, almost always occupying the same "Prairie Dog towns" with the dogs. It does not occupy the same burrows with the dogs however, although some people think they do.

A deserted Prairie Dog burrow is always selected for its nest. The hole is generally crooked, although sometimes it is straight. It is about seven inches in diameter at the entrance, but narrows down to about six inches where the nest is. This is usually about four feet from the entrance of the burrow, but I have found some that were only two feet, while others would be ten feet from the opening.

The nest is simply a slight excavation in the ground, at the end of the burrow, and is lined with small pieces of wool, and any refuse material that may be found lying around loose on the prairie.

I have heard it stated that the owls and the Prairie Dogs all live in the same burrows, but I think this is a mistake, as I have never found it to be the case in the many nests that I have dug out. I was also cautioned against rattle-

snakes when going after the owl eggs, but I have never found one around a dog-town, either in the burrows or out, and I never heard of a snake eating an owl. I am positive that the snakes do not live in the burrows with the owls, all stories to that effect to the contrary notwithstanding.

Occasionally the Prairie Dogs will rout the owls out of a burrow and occupy it themselves, but in that case they do not break the eggs but simply cover them over with dirt, and let them remain there.

Any collector who was not accustomed to the habits of the Burrowing Owls, would waste quite an amount of muscle in trying to obtain their eggs, as he would be digging out the burrows occupied by the Prairie Dogs, and would not suspect the difference, until he would finally become disgusted or discouraged. There is one infallible sign, however, by which the burrows occupied by the owls can always be detected, and this is the general litter around the entrance. When this has once been observed it can never be mistaken.

About the fifteenth or twentieth of May the first set of eggs is complete, but if the birds are deprived of them they at once select another burrow and begin making another nest. If deprived of the second set, a third and even a fourth clutch may be secured. About the time the second set is laid, however, the ground has become so dry and hard, owing to the power of the sun's rays, that it is almost impossible to dig them out.

I have found from one to eleven eggs in a nest, and they vary greatly in size and shape. Incubation begins as soon as the first egg is laid, and fresh and heavily incubated eggs are no uncommon occurrence in the same set.

The female is constantly on the nest, from the time the first egg is laid until they are all hatched. During this period the male is busily employed in gathering food for his mate, and large quantities of dead mice and insects are found within easy reach of the female, so that she can feed without leaving her eggs.

As civilization advances, these birds are driven farther and farther west, until the day is not far distant when they will probably be extinct.

[The eggs of the Burrowing Owl are of a pure white, quite glossy, and vary greatly in size and number. Eight is probably the average set, although sometimes six is all that are laid, and the number occasionally runs up to eleven.

A series of twelve sets now before the present writer may be thus described:

Set I. June 16, 1885, Los Angeles, California. Ten eggs: 1.17 x .96; 1.20 x .98; 1.18 x .98; 1.17 x .96; 1.20 x .98; 1.18 x .98; 1.20 x .98; 1.16 x .97; 1.21 x .98; 1.21 x 1.01.

Set II. May 8, 1886, Harper County, Kansas. Eight eggs: 1.30 x 1.06; 1.30 x 1.05; 1.30 x 1.06; 1.28 x 1.02; 1.25 x 1.06; 1.25 x 1.07; 1.25 x 1.05; 1.28 x 1.06.

Set III. May 19, 1886, Harper County, Kansas. Ten eggs: 1.21 x 1.03; 1.26 x 1.03; 1.22 x 1.02; 1.24 x 1.01; 1.20 x 1.03; 1.27 x 1.02; 1.21 x 1.05; 1.21 x 1.02; 1.22 x 1.02; 1.24 x 1.04.

Set IV. May 8, 1886, Harper County, Kansas. Eleven eggs: 1.19 x 1.02; 1.21 x 1.01; 1.21 x 1.02; 1.21 x 1.01; 1.20 x 1.00; 1.23 x 1.01; 1.19 x .99; 1.17 x .99; 1.17 x .98; 1.22 x 1.02; 1.24 x 1.00; 1.21 x 1.01.

Set V. April 13, 1887, San Bernardino County, California. Eight eggs: 1.36 x 1.06; 1.34 x 1.04; 1.35 x 1.03; 1.32 x 1.06; 1.32 x 1.05; 1.29 x 1.04; 1.29 x 1.05; 1.33 x 1.05.

Set VI. May 8, 1886, Harper County, Kansas. Eight eggs: 1.19 x 1.04; 1.18 x 1.02; 1.16 x 1.00; 1.20 x 1.04; 1.22 x 1.03; 1.15 x 1.04; 1.21 x 1.02; 1.23 x 1.02.

Set VII. May 8, 1886, Harper County, Kansas. Eight eggs: 1.26 x 1.05; 1.25 x 1.01; 1.27 x 1.05; 1.24 x 1.05; 1.24 x 1.05; 1.24 x 1.05; 1.24 x 1.03; 1.26 x 1.05.

Set VIII. May 8, 1886, Harper County, Kansas. Eight eggs: 1.21 x 1.01; 1.20 x 1.05; 1.15 x 1.04; 1.24 x 1.03; 1.23 x 1.01; 1.23 x 1.00; 1.24 x 1.01; 1.17 x 1.02.

Set IX. May 8, 1886, Harper County, Kansas. Eight eggs: 1.32 x .99; 1.30 x 1.01; 1.31 x .98; 1.26 x 1.03; 1.29 x 1.00; 1.28 x 1.02; 1.27 x 1.03; 1.03.

Set X. March 28, 1884, Los Angeles County, California. Six eggs: 1.25 x 1.06; 1.26 x 1.08; 1.24 x 1.04; 1.30 x 1.09; 1.27 x 1.05; 1.27 x 1.06.

Set XI. May 27, 1886, Harper County, Kansas. Ten eggs: 1.28 x 1.06; 1.25 x 1.05; 1.28 x 1.07; 1.28 x 1.07; 1.29 x 1.06; 1.29 x 1.06; 1.28 x 1.06; 1.27 x 1.08; 1.27 x 1.06; 1.30 x 1.05.

Set XII. May 8, 1886, Harper County, Kansas. Ten eggs: 1.15 x .98; 1.18 x .98; 1.15 x .99; 1.17 x .99; 1.10 x .93; 1.18 x .99; 1.16 x .99; 1.21 x .99; 1.16 x .97.

Mr. Hartzell's observations of this species were made in Harper County, Kansas, and the sets from that county, in the above series (which were collected by him), fully carry out his statements as to the date of its nesting in his locality. The sets from California, however, indicate that a much earlier date is chosen in that State.—J. P. N.]

### Set Marks on Eggs.

BY J. P. N.

The subject of set marks on eggs would appear to be very simple, which could readily be understood by the average collector, and yet such is by no means the case, as experience has taught the writer that very few of those who take eggs understand how to properly mark them for the cabinet.

The whole object of set marks is, of course, to prevent different sets of eggs of the same species from becoming mixed together, and also to serve as a reference from a particular set to a certain data. Unless they accomplish these two things they are a delusion and a snare, and worse than useless.

It has been deemed fit, therefore, to give a few plain directions as to the proper manner of making set marks. And first, let it be understood that a set mark, if correctly made, is always in the shape of a fraction; of which the numerator is the set mark proper, and the denominator expresses the number of eggs in the set. Thus 1-4 signifies that "1" is the set mark, and "4" is the number of eggs in the set. The second set of the same species found by the collector would be marked 2-4 (or if it contained five eggs, 2-5), the third, 3-4, etc. The denominator is made with each set to represent the number of eggs in the set.

Numbers are preferable to letters for set marks, as the latter may be mistaken for subspecies. Thus the number of the Chipping Sparrow (*Spizella domestica*), in the old Ridgway nomenclature is 211, while the number of the Western Chipping Sparrow (*Spizella domestica arizonae*), in the same nomenclature is 211 a, and a set of eggs of *S. domestica*, marked 211 a 4, might possibly be confounded with those of its western brother, *S. domestica arizonae*.

The set mark on the eggs must be repeated *verbatim* on the data. Many collectors mark the fraction set mark properly on the eggs, but omit the denominator on the data. This is a mistake and may lead to confusion.

It is always well to mark all eggs with the numbers of the species, either in Ridgway's old nomenclature, or that of the A. O. U. This number is to be an addition to the set mark, and preceding it. The best place to put all pencil marks is under the blow-hole.

Use a soft pencil in marking all small eggs. (A. W. Faber's "BBB" is the best kind). Larger eggs than those of the Crow will require a harder pencil, however. If the shell is

greasy or difficult to mark, a little finely powdered chalk rubbed over the place where the mark is desired, will make the operation much easier.

In drilling the hole to blow the egg, always select the least handsome side, in the case of those that have specks or spots. This will put the hole and the set mark on the side which it is desirable to place downwards when the egg is finally placed in the cabinet.

Finally, small but *distinct* figures are much to be commended, but never let the desire for neatness cause the collector to mark the eggs so that they cannot be easily read.

### A Delicate Position.

BY W. HONIE.

In my young and frisky days, I was a school teacher in the northeastern corner of Massachusetts. I was an ardent ornithologist, and carried my gun to and from school in sections, concealed in long pockets inside my coat.

One spring I was invited to read a paper before the Essex County Teachers' Association, and just as I had finished a laborious essay and was thinking that I should have to make pretty good time to catch the train for Peabody in time to deliver it, my mother came rushing in to announce that a flock of Teal had settled just above the water fence, and were in easy shot from "Sandy" point.

I clutched my gun and was off in a twinkling, but being in too much of a hurry no doubt, the birds flushed and went off up the river to "Rony." Totally oblivious of all else, I followed them and bagged two. The rest flew over the hills, and while I was creeping for a shot, my train slowed up at the "Kuow-nothing station," close by. I fired, picked up one more bird, ran for the cars, and, of course, got left.

So all I had to do was to try and make the twenty miles between me and my expectant audience in three hours and a half on foot. Away I went behind the fast receding train. Somewhere down beyond Ipswich, I killed two Snipe, and loaded up the gun again, as I double-quickened it to make up for lost time.

When I got among the houses on the outskirts of Peabody, I stored my gun away in the inside pockets, and walked into the Hall just in time to hear my name announced as the reader of the next paper. As I mounted the platform, the gun barrels—still loaded, remember—

struck the end of a settee with a resounding whack. I was hot and tired, and this quite unsettled me, for I thought what a mess I would have been in if the plaguy thing had gone off.

Groping in my pocket for my essay, while I tried to make an assortment of my best bows, I was further frightened by nearly pulling out a dead snipe. And when I did get hold of my paper, I discovered to my sorrow that I had used about half of it to wad my gun when I reloaded after shooting these same snipe.

How I got over the next quarter of an hour I have not the faintest recollection. If any one who was in the audience that day and chanced to read these lines, will write and tell me how I got along, I will thank them heartily. I really want to know. I remember that I talked, pretending, of course, to read, and at last got pulled together enough to really read what I had left. Hand clapping followed my final bow.

How those confounded Teal did dangle about my legs. I was at the time unable to decide whether it was intended for praise or ridicule. When at last, I descended among my friends, I was extremely grateful to find it was the former. But my troubles were not quite over. I was accosted by a stranger who introduced himself as the reporter for a Boston paper, and requested that I would let him have my manuscript for publication.

At first I was non-plussed, but on second thought, it was such a good chance for a joke that I retired with him into an ante-room, and then and there drew the wads and presented them to him. They were published, and it was the first time I ever saw my name in print.

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## Two Days in the Kentucky Bottoms.

BY L. O. PINDAR.

Nine miles southwest of Hickman, Ky., is a saw-mill, and less than a half mile from the mill is the chute, cutting Island No. 8, from the mainland. The chute, however, is always called No. 2 Chute. During the summer, the chute dries up, except for numerous pools which remain, and these are a favorite retreat for the ducks and geese which fly south every fall, until the chute is filled by the heavy winter rains, when they frequent the numerous ponds, sloughs and bayous in the adjoining country. There is a colored man working at this mill who is a keen hunter and a fine shot

with shot gun or rifle, and several persons have gone to the mill and secured his services as guide, with varying success with the game, but always well pleased with the trip.

The above may explain why I left home one morning about the middle of November and headed the pony I rode in the direction of the mill. My outfit consisted of a repeating Winchester rifle, 32 calibre, plenty of cartridges, and a sack of corn for the pony. This sack, by the way, acted in a most abominable way, falling off every now and then until I tied it to the saddle. The ride down was fairly pleasant despite the wind, and birds were very common. White-throated Sparrows flew from every brush-pile and weed patch I passed. Crows and Hawks flew over me, and a pair of Sparrow Hawks circled round me till I almost tried to shoot one on the fly. My attention was diverted from the hawks by an immense flock of Purple Grackles. I passed, and soon after a flock of Mallards flew over, and I foolishly shot, and, of course, missed.

I reached the mill in time for dinner and hunted French, the aforesaid "colored constituent," and we went to the chute. Several small flocks of ducks were seen from 200 to 500 yards away. There was no possibility of getting closer, as they would fly as soon as we emerged from the woods, so I selected the closest (?) one, a fine ♂ Mallard, as it proved, fully 200 yards away, and catching a good sight, fired. To my great satisfaction, he jumped up, flew a few feet and fell, but, alas, he fell in some quick-sand and I couldn't get him. The same was true of a Willet, which French killed, at a range of at least 400 yards, and which, with another one seen at the same time, is the only one I have seen in this country.

There was one huge flock of geese seen, but too far away, also several Blue Herons, a lot of Killdeers, and a fine Blue-winged Teal, but Mallards were largely in the majority, although we didn't kill any more. After leaving the chute, we got a Red Squirrel apiece in the woods. The scarcity of game was probably due to the fires in the bottoms along the river. The game was surely scarce, for we only saw these two squirrels. Even the birds were quiet. Bluebirds, Cardinals, Robins, Flickers, Tufted Titmice, and Chickadees, being the most common.

We reached the mill in time for supper, and after a two hours' talk, I went to bed and sank into the arms of Morpheus, till the whistle of the Cardinal awakened me, and I dressed,

breakfasted and went for the woods. Nothing of interest was seen, and the smoke from the fires was so dense we could scarcely see one hundred yards before us, so I started home early.

On the way I saw a large Hawk, with a blotch of *white* on his breast, and tried, but in vain, to kill him. I never saw one like it before, and would like to know what it was.

In conclusion, I will say that I expect to spend about a week at the mill in January, and will give the readers of the O. & O. the result of the trip in a later paper.

### Nesting of the Pine Warbler in 1888.

BY C. S. BRIMLEY, RALEIGH, N. C.

Since reading Mr. McLaughlin's article on the breeding of this bird (*Dendroica pinus*), at Statesville, North Carolina, it has been my intention to look up the matter in this locality, and as I had considerable success in so doing, I give the results below.

In this locality, the Warblers began building about March 26, and in a week the whole colony were engaged in so doing. They lost no time while building, but rapidly completed their nests, and two weeks from the time of starting the nests, had them supplied with full sets of fresh eggs.

The nest is composed of grape-vine bark, weed stems, and sometimes some cotton, and is well lined with horse hair and feathers, the outside being usually garnished with some sort of cobwebby material, and the whole makes a warm, deep and compact nest, which completely hides the setting bird from view.

The structure is placed on the horizontal limb of a pine tree, usually one of the old field growth, at a distance of from two to twelve feet from the trunk, varying from twenty to eighty feet high from the ground. The usual height was about fifty-five feet, only one nest under fifty feet being found, and that was the first one.

The set complement is four, but one set of five was found. The date for full sets of fresh eggs is April 9 to 13, the birds all seeming to breed at once.

When incubating, the female was constantly on the nest, which she would not leave until the limb was displaced or was violently jarred. The birds mostly showed considerable anxiety at being disturbed, but only one tried to decoy

us away by the broken wing dodge, and that was the owner of the set of five.

The nests were all hard to find, and all except one were found by seeing the bird go to them while building, and as the female usually gets nesting material from a long distance from the nest, it often took a good deal of watching, especially as the bird seldom went straight to the nest, but would fly to another part of the tree first or else fly to a tree a little beyond before going to the nest.

The song of the male bird was not much help in finding the female, as she didn't appear to think it necessary to keep particularly near him as long as she wasn't more than fifty yards away.

[Mr. McLaughlin writes me that he has taken twenty-seven sets of this Warbler's eggs near Statesville, North Carolina, this past season. Of these, only one set contained five eggs.—J. P. N.]

### Retention of their Eggs by Birds.

BY WALTER HOXIE.

Less than a hundred years ago, a bad little boy lived on a country place in New England. His mother had a number of hens, and in the dead of winter one of them became "broody." Various methods of treatment were resorted to for the cure of this unseasonable desire, but all to no purpose. "Old Top Knot" clucked pertinaciously.

Now this bad little boy took it into his head that his mother erred on the side of mercy, so one evening he thought he recognized the pertinacious old hen—he thought he recognized her I mean—skulking in the barn cellar. So he seized her, and clapped her into a tub which had a little water in the bottom. He then covered it over with some pieces of board and left her.

That was on Sunday night. The next Saturday he came home from school, and there in the barnyard, amongst the mud and slush of the "January thaw," was old Top Knot clucking away as vigorously as ever. Commenting upon the fact to Tim, the Irish boy-of-all-work, the latter remarked that "she looked like his mother's best layer that got out of the coop a week ago come to-morrow, with a hard egg in her, and hadn't shown up since."

Well, the long and the short of it is they went to the barn cellar together, took Tim's mother's hen out of the tub, and found that the hard egg

was still unlaidd as Tim plainly demonstrated. So runs an ancient household tale, which is every word of it true.

A hen is a bird, and what one bird can do with its egg, another can do just as well. Here was an egg due from Tim's mother's hen on Sunday, which, through the interposition of adverse circumstances, was not laid until the following Sunday.

Three other eggs were also due on Tuesday, Thursday, and Saturday respectively, for this was an old hen of very regular habits.

I think that the explanation of this phenomenon of the retention of eggs by birds, may be a comparatively easy one. The distension of the organs, by the egg with a hard shell, suspends, for the time being, the development of the others behind it. This explanation is offered until a better one is found.

The case of a bird that proceeds to sit upon one or two of its own and a Cowbird's egg, may be somewhat similar. The large Cowbird's egg pressing upwards against the abdomen of the small bird, compresses the lower part of the oviduct much in the same manner as her own hard shelled one would do. I think that cases may occur too where *one* egg of the foster parent is laid after the Cowbird's egg has been deposited, although I cannot remember noting such an occurrence.

### Nesting of the Green-Tailed Towhee.

BY G. F. BRENINGER, FORT COLLINS, COL.

The Green-tailed Towhee (*Pipilo maculatus*), is one of the most rare and beautiful of the Pipilo family. It probably extends as far south as the southern boundary of Colorado, and possibly north to Fort Laramie. The late Snowden Howland records the taking of a set of their eggs at that place.

Late in June last, while strolling among the lower range of hills, bordering the more lofty mountains, at an elevation of about 7,000 feet, far up from the canon below, my elevated position gave me a good opportunity to see the surrounding scenery. Far to the east, the rugged walls of rock stood out in bold relief. These are known as chalk bluffs, and some thirty miles or more to the south could be seen the City of Fort Collins. I had been reconnoitering the mountain side from gulch to gulch, collecting a fine set of eggs at intervals, flushing a Poor Will (*Phalacroptilus nuttalli*), now and

then, when suddenly, right before me, something like a small ground rodent beat a hasty retreat. I lost no time in following it, as I thought it to be a Pine Squirrel, around a clump of junipers among some grease wood shrubs, and then I caught a glimpse of it, and saw that it was not a squirrel, but a bird that I had flushed from her nest, so I returned to the place where I had previously flushed the bird.

Beneath the friendly protection of a dense clump of junipers I found the nest, which was sunken a little below the surrounding surface, and was sparingly lined with roots and dead pieces of grass. Within its walls, were five eggs of the usual type of the Pipilo family. I lingered near by for a short time to obtain the bird, entered the situation in my note-book and passed on. During the day, I found the shattered remains of several last year's nests of this species.

The female is about the size of a Catbird, is bright olive-green above. The primaries and tail are still brighter, almost yellow. Crown, chestnut-red; throat white. During the fall migration, I noticed them quite common among the willows that border our mountain streams, but it is by no means as common as its relative, the Northern Towhee (*Pipilo maculatus arctica*), and seems to bear little resemblance to it, both in habits and song. It is far more reserved, and is seldom seen during the breeding season, while the notes of the latter are continually heard from sunrise till sunset, and even into twilight. Every thicket has its full quota of them.

### Nest of the Golden Eagle.

[*Aquila chrysoctus canadensis*.]

BY SAMUEL C. EVANS.

In Santa Clara County, in the region of Mt. Hamilton, stands a high and bulky mountain, called Mt. Day. On March 19, 1887, I sought the vicinity of Mt. Day in order to procure the eggs of the Golden Eagle.

In these mountains the Golden Eagle is not scarce, neither is it plentiful. I found on the above-mentioned day three Eagle's nests, all of which were inhabited by the birds. Of these nests, two were first found on March 12, but I will speak of them hereafter. This region of country is wild and rugged, clothed with live oaks, white oaks, pines and other trees. The mountains are very steep, and in some places can only be ascended by holding on to poison

oak bushes and cutting footholds at nearly every step. The ground is very loose in many places and hard to get a footing on.

Nest No. 1 was a new nest, placed in a large pine tree, which overhung a deep and rocky canon. It was dangerous to climb this tree, so I left it, although I saw the Eagle leave the nest. This nest was first noticed on March 12, 1887.

Nest No. 2 was a bulky structure, composed of large dry sticks of the forest, of oaks, sycamores, etc. It was in a large live oak, about seventy feet from the ground, and contained three eggs. Two of the eggs were spotted with red-brown blotches, while the other was a dirty white color without spots. The eggs were badly incubated.

Nest No. 3 was in a live oak, about thirty feet from ground. The nest was as large as any I saw (for I found several deserted nests the week before), composed of dry sticks and lined with straw. This nest was first found on March 12, 1887, and had one egg. On March 19, it still had only one egg, so I concluded it was all the bird was going to lay. I think this nest must have been three feet thick, and it was certainly large enough for a man to get into.

While at the nest, I rested my whole weight (140 pounds), on it, having no other support. The Eagle was very tame, and did not fly till I was within ten feet of the nest. This Eagle builds in these mountains, and in the same nest year after year. Their nests seem to be equally distributed in sycamores, pines, and oaks. The structure in all the nests I saw, five in all, was bulky and very strongly placed in the branches. I never heard this Eagle make a noise on being disturbed, and only in one case did the bird return to the nest while I was at the tree.

### The Rough-Winged Swallow.

[Sea Island Notes.]

BY WALTER HONIE.

Among the Sea Islands, the Rough-winged Swallow finds very convenient breeding places, and is a very regular resident, though his Spring arrival is somewhat of a movable feast, varying as my record shows, between the 21st of March and the 8th of May. If his cousin, the Bank Swallow, ever accompanies him, he certainly does not come to stay, and has never yet introduced himself to me.

As soon as they get home, the Rough-wings begin to inspect their nesting sites. They

scratch little hollows in the side of a sand-bluff, and then sit around on convenient sticks and indulge in lively discussion regarding the merits of the locality. This prospecting work lasts but a few days or a week at most, and the real work of excavating the subterranean dwelling soon begins, and seems to be quite a laborious process, occupying three to four weeks. The eggs are four or five in number, oftener less than more, and average a little over three-fourths of an inch in length.

A detailed account of the nesting of a pair I have watched carefully this Spring, will illustrate sufficiently well the above general statement.

On the fourth of April, I found signs of scratching in a sand-bluff near my house, and a pair of Rough-wings were seen near the place. On the ninth, the hole was begun, the excavation being then something less than six inches. Work continued till the 21st, when a few grass roots were seen at the farther end. The measurements at this time were: depth, 18 inches; width, 1-2 inches, contracting at the end to 3-4 inches; height, 2-5-8 inches. On the eighth of May, a set of these eggs was taken. Incubation begun. The nest was composed of grass roots (Joint grass), and for a subterranean structure was very compactly constructed. The front was well raised, being an inch and five-eighths high, but there was no back to speak of; inside diameter, 2-3-8 inches. The shape was thus very similar to a nest of the Climbing Swift.

As a study of "capacities," I subjoin the measurements of this set and their cubic contents both by weight and by measure.

No. 1. .81 x .51 in.; capacity by weight, 13 inches; by measure, 14 inches; No. 2. .83 x .53 inches; capacity by weight, .17 inches; by measure, 16 inches; No. 3. .80 x .53 inches; capacity by weight, .14 inches; by measure, .14 inches.

### Finding a Turkey Buzzard's Nest.

BY C. S. BRIMLEY, RALEIGH, N. C.

In the early morning of May 20, 1887, I started out to investigate a good-sized tract of woods which I had always looked upon as being in all probability the favorite breeding grounds of warblers and all other birds; the land, however, being strictly "posted" and near to the owner's house, I had never cared to collect there, not wanting to get into trouble

with my neighbors. Accordingly I left my gun at home, and only supplied myself with plenty of boxes, full of cotton, to receive the eggs I expected to get.

Well, I traversed those woods east to west, from north to south, and I followed branches and peered into thickets, but I only found two old nests, and the scarcity of bird life was simply appalling. At last, however, as I was walking along a branch and had completely lost my bearings, and was wondering which way to get out of the place (as I was heartily sick of it), there came a flapping of wings as some large bird flew up from the hillside on my right. I turned and caught a glimpse of a large black bird through the trees, which I at once recognized as a Turkey Buzzard (*Cathartes aura*).

Thinking it might possibly have a nest near by, I turned my attention to the slope it had flown up from, and as I was looking about for a suitable situation for the nest, my glance fell on a good-sized pine log which had evidently lain there for several years. I immediately hurried thither, and a search soon revealed the desired nest (?) if a bare spot from which the bird had scratched away the dead leaves and other rubbish, could be so called. Here, reposing on the bare ground close to the fallen pine, lay the two large eggs, one handsomely marked with large distinct spots and splashes, on a clear white ground, the other dirty looking, with splashes, small spots, and dots which obscured the ground color. Hastily packing up the eggs, I retired from the nest, as it smelt too unsavory, and the murky odor of a Buzzard is not pleasant. On leaving the place, I presently discovered the old bird on the lower limbs of a large pine some seventy feet from the ground, walking backwards and forwards, drooping her wings and giving vent to a harsh wheezy sound as if she was a confirmed asthmatic.

### Additional Notes on the Broad-Winged Hawk.

BY GEO. G. CANTWELL, MINNEAPOLIS, MINN.

It was with great interest that I read the excellent article of J. W. Preston's in the February O. & O. on the Broad-Winged Hawk. His notes agree exactly with the habits of the bird in this vicinity, where it is quite common.

As far as my experience goes, I have always

found the nest in the immediate vicinity of a lake or marsh, and never, as some say, "in tall trees," the highest, I believe, was about thirty feet, and one was so low I removed the eggs while standing on the ground. On May 15, 1886, I also took a set of four eggs slightly incubated, the eggs in this set were curiously marked, one having very large bright blotches, two of the average type, while the other was destitute of spots of any kind.

Here the favorite nesting is a small red oak, with a convenient crotch, formed by the spreading of the largest limbs, and never among the smaller ones as in the case of some hawks.

The collector does not have to reconnoitre around two or three hundred yards to get a shot at a Broad Wing, but can walk deliberately up to within easy range and collect his bird.

Last summer, one allowed me to approach so near him that I killed it with a stone from a "sling." They are beyond doubt the least suspecting of all our hawks.

Here the lining of the nest is a mixture of fragments of bark and small buds and leaves. Nests found late in the season contain a large amount of green leaves, resembling a squirrel's nest. As Mr. Preston says, I have on several occasions seen the birds gathering sticks from the ground for the nest.

Let us hear from other localities on the habits of this hawk, it will surely be interesting, as the habits of a bird vary greatly according to the locality.

### Estray Notes.

BY H. B. TAYLOR, ALAMEDA, CAL.

Early in April, while stopping at Sargent's, on the Pajaro River, which separates Santa Clara from San Benito County, I heard early every morning the cheerful drum-beat of several species of Woodpecker, among which I noticed Gairdner's, Nuttall's and the Red-bellied.

Nuttall's Woodpecker, the rarest of the three species, was to me a special object of interest, particularly one superbly dressed fellow which I saw one day perched on the top of a tree, and if I should tell what Mr. Woodpecker was doing, I fear I might be met with very incredulous looks from some observers, but as even an amateur ornithologist must be truthful, it becomes incumbent upon me to say that that industrious collector of entomological specimens was—singing!

You will say that a Woodpecker should have

a right to sing if he chooses, and I reply, very good, but should he steal another bird's song? That is the charge we must bring against our pretty friend, and as the solo was almost exactly like that of the Wren Tit, it is easy to see in what quarter our feathered larcenist got his inspiration, unless he can prove a prior ownership. Perhaps this is a good illustration of the evils growing out of the present lamentable state of affairs in international copyright! I have heard this Woodpecker singing his song, and it impresses me on every occasion as a very fair imitation of the Wren Tit's notes, and one with which, to an unpracticed ear, it might seem identical. My surprise at hearing a Woodpecker sing a real song was much akin to that I experienced last June at the summit of the Sierra, near Donner Lake, where I was privileged to listen to some charming notes from the throat of a bird I had always supposed had no song whatever in the proper understanding of that term. In a small shed, at the door of which a snow-drift had piled, was a nest of mud, cemented to a beam, and lined with grass and feathers. Singing joyously away on the roof, I espied, to my great surprise, the owner of the nest, a common Barn Swallow. At no other time have I observed a Swallow singing.

### Nesting of *Bubo virginianus*.

BY C. R. REYES, DES MOINES, IOWA.

The Great-horned Owl is a rather common resident in the heavily timbered portions of this region, and is, perhaps, with the exception of *Megascops*, more familiar generally than any other member of the *Bubonidae* found here. The nest, as is usual with this species, is a cavity in some forest tree, though sometimes a deserted hawk's nest is occupied. Nidification commences earlier in the season with this than any other species breeding locally, and even though the weather at this time is severely cold as is generally the case, the full complement of eggs is laid before the 16th or 17th of February, and it is not of uncommon occurrence to find a broad band of ice encircling the impression in which the eggs are deposited. The eggs are usually two, sometimes three in number, but personally they have not been found to exceed the latter. A typical nest examined on the 17th of February, 1883, was in a gigantic old sycamore tree, situated at the entrance to a deep ravine at Devil's Gap, near Des Moines. The cavity, about fifty feet from

the ground, at the base of two immense branches, was three feet in diameter and about the same height. There were three entrances: the one used by the owls, on a level with the bottom of the cavity, and which had been formed by a large branch breaking off close to its point of origin; a smaller opening on the opposite side; and the third at the top, a long irregular slit four or five inches in width. A few inches from the first of these entrances were the two eggs in a shallow depression in the decayed wood that formed the floor of the cavity. Scattered around the nest were a dozen or more tail feathers of the owls, the skull, and bits of fur of a rabbit, the big bones of a large raptorial bird, besides many bones of smaller birds, and the body of a common pigeon recently killed.

The following season, from the same nest a set of three eggs was taken, and in April, an egg and a young owl about a week old were found; the inference being that where disturbed, this species deposits a second set. Certain it is, however, that even when disturbed, this bird will continue to occupy the same nest year after year, and though this is personally the only case in which a nest, after being once examined, has received a second visit the same season, it is quite probable that when the first set is taken, a second one is deposited.

About the first of May the young are fledged, and six weeks later the "horns" are noticeable. A pair taken from the nest was kept confined for nearly three years in a barn, when a protracted absence from home necessitated the disposal of them. They were fed on fresh meat from the butchers' shops, and occasionally rats and mice, the latter they usually captured for themselves.

### Nesting of the Nuttall's Woodpecker.

BY H. R. TAYLOR, ALAMEDA, CAL.

Nuttall's is one of the most interesting of our smaller woodpeckers. It is about the size of Gairdner's Woodpecker, but much handsomer. Their eggs still remain *desiderata*, I believe in most collections, and I therefore feel especially favored this year in having seen three nests and taken one set of eggs.

I found my first nest April 30, 1888, while at Sargent's, Santa Clara County, Cal. The bird flew out from the hole as I walked by it, and then sat on a limb near by and executed some

sharp, crying notes, which were probably as much in anger as in fright.

Fearing to find an empty nest, I delayed chopping the hole open until May 2, when I succeeded, after considerable effort, in getting the nest. I soon enlarged it sufficiently to look in, and found that it contained three, delicate looking, white eggs. They were perfectly fresh, doubtless but a partial set. The hole was about seven feet from the ground, in a dead limb of a small tree, and was about 1½ inches in diameter at the entrance and thirteen inches deep.

The other nests both contained very young birds, and were found May 10 and 11.

The first one was in a dead limb about twelve feet up. Several other old holes were in the same limb, showing that the bird had perhaps nested there for several years.

When I tapped the limb with my hatchet, having climbed up near to the hole, I became conscious of a subdued squealing, emanating from its interior, which I thought at first must be the setting bird, but on cutting a little window above, I could see the contents—three young birds, with apparently others behind them.

The next day I heard the song of this Woodpecker proceeding from a bunch of trees on a hillside, where I found the nest in a dead limb about eight feet above the ground. It contained four hungry, young woodpeckers, just hatched, and two eggs, which I left undisturbed.

### A Winter Collecting Trip.

BY JOHN EWART, YARKER, ONTARIO.

As nearly all your papers on ornithology seem to be from the South, I thought that a few notes on a winter collecting trip in Northern Ontario, ought not to be out of place. The locality is on the line of the Kingston and Pembroke Railroad, about eighty-five miles north of Kingston, Ontario. The time, the second week in December, 1887.

The following is a list of the birds seen and identified. A few others were seen, but not obtained for identification:

Canada Grouse. Rare, only one specimen shot. Said to have been quite plenty a year or so ago, but a heavy fire went through this district last summer about hatching time. Since then, very few have been seen.

Ruffed Grouse. Common, said to have been abundant before the fire.

Hairy Woodpecker. Common.

Downy Woodpecker. About the same number met with as the preceding species.

Arctic Three-toed Woodpecker. Tolerably common. Out of five or six collected, only one had the yellow patch on the head.

Pileated Woodpecker. Tolerably common, but very wild and difficult to approach. Saw some nearly every day, but owing to heavy crust on the snow, it was impossible to go through the woods quietly. Only obtained one specimen.

Blue Jay. Abundant. By far the most common bird we met with.

Canada Jay. Only saw three or four, two of which I obtained. Reported as very common, and very familiar some winters.

American Raven. Rare. Obtained one from lumbermen, which they had shot a day or two before.

Snow Bunting. Saw two large flocks.

Nuthatch. Only saw two specimens, which I did not shoot, but think they were the white-breasted variety.

Chickadee. Abundant and very familiar.

### The Turkey Buzzard in Ontario.

BY W. E. SAUNDERS, LONDON, ONT.

The Turkey Buzzard has so far been published only from the extreme west end of the Province, but in January, 1887, one was trapped twelve miles west of London, which I saw alive in March in a barn, where it was confined. It was quite lively, and on being caught by its owner, disgorged some of its dinner for our inspection.

It fed greedily on carrion, and generally allowed itself to be handled without demur. Mentioning the occurrence in June, 1887, to my friend, Mr. L. H. Smith, of Strathroy, Ont., he said one was shot there a few months before, and in the preceding summer a newly stuffed one had been left in a store there for some weeks.

In May, 1887, there was mention in a paper of one killed seventeen miles northeast of London early in the month; and in the collection of Mr. John Dodds, St. Thomas, I saw another, and he informed me that he had mounted several local specimens. As the previous specimens have all been recorded from the extreme west of Ontario, these notes are probably worthy of record, as showing either progress or chance occurrence ten miles farther east than hitherto recorded.

### Baird's Sandpiper in Ontario.

BY W. E. SAUNDERS, LONDON, ONT.

Some time ago in looking over my series of Sandpipers, I suspected that a specimen labelled "White-rumped, Port Franks, Ont., Sept. 5, 1883." was not of that species, and after some study determined it to be Baird's. I sent the skin to D. D. Merriam, and he very kindly corroborated my identification and returned the skin.

On August, 17, 1886, I took another at Port Stanley, from some Least Sandpipers, but it was unfortunately destroyed by a cat. The first-mentioned is the first earliest recorded capture of the species in Ontario, several individuals mentioned in that useful volume, "Birds of Ontario," by Thomas Mearns, Esq., being the only other recorded occurrences.

### Curious Nesting Place of the Sparrow Hawk.

BY H. R. TAYLOR.

In San Benito County, near Sargent's, California, Yellow-billed Magpies nest in considerable numbers in the oaks and sycamores, and the Sparrow Hawks evidently admire the convenient style of architecture adopted by the Magpies, for I have found that almost every pair in this locality deposit their eggs in these empty Magpies' nests.

Of twelve sets of eggs of the Sparrow Hawk taken this year by a friend and myself, all but two were found in Magpies' nests. The exceptional sets of eggs were placed one in a hole in an oak, and one in a cavity in a bank on the San Benito River.

### Fun Among the Birds.

BY DR. W. S. STRODE, BERNADOTTE, ILL.

That some birds possess a sense of humor is often made evident to the close observer of their actions. Perhaps no other birds possess this faculty to a greater degree than that of the family *Corvidæ*. Crows, Jays, Magpies, etc. And many instances are on record showing that the love of fun and mischief is highly developed in some of these birds.

A short distance from my office stands an old locust tree, where in a cavity about twenty

feet up, made by a Flicker (*Colaptes Auratus*), a Screecher (*Scops Asio*), has made his winter home. I often run up this tree to see if he is at home, and generally find him present, his sleepy eyes blinking at me in a lazy "don't bother me" fashion. This *Scops* has recently been discovered in his home by a half-dozen Blue Jays (*Cyanositta cristata*), and the discovery seems to afford them a great deal of mirth. One at a time they will edge up to the cavity and take a peep at his *Scopship* and then go screaming and shouting away in an apparent great fright, only to return in a few minutes and repeat the same proceedings.

A few days ago I found a Red-bellied Woodpecker (*Ceanturus carolinus*), playing bopeep with this *Scops*. The "Zebra" bird would stealthily approach the entrance, and, after several short retreats, would take a peep, when almost instantly the owl would appear at the entrance, but as quickly the woodpecker would disappear on the opposite side of the tree, and this "now you see me" and "now you don't" fun would continue as long as the screecher would appear at the entrance.

### A Cross-billed Woodpecker.

BY W. F. WEST, GREENSBURG, IND.

While out collecting one day this winter, I shot a male Red-bellied Woodpecker in normal plumage, but with the mandibles of the bill crossed. When the tips of the mandibles were placed together, there would be a space of about  $\frac{1}{4}$  inch between the upper and the lower. This bird was in good shape, but it would seem almost impossible for it to feed after the fashion of woodpeckers.

### Smith's Longspur in Ohio.

BY CLARK P. STREATOR.

Smith's Longspur (*Calcarius pictus*), collected at Garrettsville, Ohio, on Jan. 29. I observed a large flock of strange birds busily engaged in feeding upon the seeds of rag-weed. They would only stay a moment in a place and were very shy, but I was lucky enough to secure two very fine specimens. I believe this to be the first time this species has been taken in Ohio.

With this issue, quite a number of subscriptions expire, and by our rules, we shall be obliged to discontinue sending the magazine to those who do not renew. We hope that we shall hear from you, gentlemen.

### Editorial.

If a law should be enacted making a continual close season on game birds throughout the country, what would be the result? How would the high-toned sporting gentry like it, and what would be the sentiments of the foster mother of the Audubon Society? A movement would at once be inaugurated that would make Rome howl. And in our opinion, the law would be as dormant as the feather tip act of the New York legislature. To-day in Massachusetts, our naturalists find themselves entirely shut off from all privileges of pursuing their field work. The lines have gradually tightened, and so far as they *obey* the code, they are virtually in the same position as they would be if the birds were exterminated. In the past, we have endeavored to point out to whom they should feel particularly obligated for this result, and now we propose to advise those what we consider the only action to take.

*Oppose every law looking to the protection of Fish and Game, providing the granting of permits to collect are not provided for.* Use your political influence to sit down on those who oppose your special interest. The number who are interested is large enough to make their rights respected, and influence felt, if they only have backbone enough to fight for it.

We have always been in favor of protecting and still are, but we do not propose to see the lovers and students of nature driven from the field, without protest. Nor are we satisfied to see them made dupes of, as they are in this State.

With the May issue, Mr. F. H. Carpenter retired from the editorial department of the O. & O. Like his predecessors, he has devoted his time freely without remuneration to his favorite science, and deserves the best wishes of those who have been entertained by his efforts.

### Brief Notes.

Terns are reported on our coast in usual quantity this Spring. They have full permission to guzzle fish in peace till October. We understand that they can be viewed at a distance through opera glasses, by a special grant of Springfield's Boss.

Charlie Goodale, the famous Boston taxidermist, is visiting his boyhood home in England.

It is suggested that each member of the Au-

audubon Society have his nose pierced and wear the badge where it will show to the best advantage.

E. H. Forbush, the Worcester taxidermist, has started for Alaska.

If that professor had bought his Ostrich Egg from a regular dealer, he would not have been blown up. We hereby notify all, that we are not in the market to buy eye-witness accounts of the affair from other parts of the world.

Mr. M. Chamberlain, of St. John, called recently on his way for a collecting trip in the northwest. Mr. C. is an old stand-by of the O. & O., and he has our best wishes for a successful and pleasant trip.

It is intimated that a would-be Audubon, not a hundred miles from the Hub, on a certain festive occasion, entertained by making a *Sketch of a Woodcock on a tree*. While it was considered a little *Fishy*, the effect proved *Gamey*.

The many friends of E. S. Bowler will be pleased to know that his health has improved under the genial clime of Colorado.

There was a demand for large gulls for millinery purposes this spring.

We are indebted to Mr. Austen, of Halifax, for a series of photographs of mounted birds. They are from specimens that he has personally prepared, and show a close observation of nature. Harry is an enthusiastic naturalist, and places himself on record as a success.

We hope as soon as the collecting season is over that our friends will send us notes.

A specimen of the Yellow Rail was taken on Wakefield meadows, May 9.

Walter E. Bryant, of Oakland, Cal., has just returned from a very successful collecting trip to Lower California.

*Pennsylvania Farmer*—"What do hawks live on?"

*Advanced Naturalist*—"Mosquitos, Sand Fleas and Rats."

*Pennsylvania Farmer*—"But I found feathers in the stomach of one I shot?"

*Advanced Naturalist*—"Oh, that was merely the lining of last year's nest."

We recently became possessors of a specimen of the Common Tern. A nail had become detached from the toe and had located midway on the outer edge of the web. The part was perfectly healthy and no scar can be noticed.

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### The Wood Thrush.

BY JAMES B. PURDY, PLYMOUTH, MICH.

The Wood Thrush is singing from the depth of the glen,

His clear, bell-like music so pleasing to me,  
In the fair month of May, when all nature looks gay;  
They vie with each other from briar and tree.

In a deep shaded nook, where the woodbine entwines,

And the dark, gloomy forest conceals them from view;

By a clear, winding brooklet, o'er tangled with vines,  
His dear mate is guarding her treasures of blue.

Though dark be the weather, and gloomy the morn,  
And other birds in the forest are still;

And the sad face of nature, all dreary, forlorn,  
His clear, mellow notes through the drooping woods thrill.

In the evening, when nature is seeking repose,  
And his dear little mate has repaired to her nest;  
And the last rays of sunbeams are kissing the rose,  
It is then that his song is the sweetest and best.

Oh, man, why repine, and be downcast on your way,  
As through the long years you are journeying on;  
For the sadder the morning, and gloomier the day,  
The happier and sweeter is the wood thrush's song.

### How Birds Breathe.

WITH A PECULIAR INSTANCE, ILLUSTRATING  
THE FUNCTION IN AN ABNORMAL CONDITION.

BY SCOLOPAX.

Many people deem the wing as the chief characteristic or feature in the separation of birds from other divisions of animals, notwithstanding the fact that the bat, a mammal, as well as some fish known as flying fishes, can maintain themselves in space by means of a membranous wing and long fins. To carry the point further, it is well known that *struthious* birds, as the ostrich and cassowary, cannot raise

themselves from the ground, merely using their breviated pinions to increase their speed in running. Others, as the *Apteryx*, a word meaning without wings, have the wings so rudimentary, that they cannot be discovered without close inspection. These peculiar orders of birds rank therefore lower in the scale of animals that can maintain their weight in space, than the flying squirrel, the flying fox, and even a species of frog that can sail from an altitude to the ground by means of expansive membranous webs on its feet.

What distinguishes the bird in general classification is not the wing. In birds, the diaphragm, a membrane separating the throax from the abdomen, the function of which is to arrest the air, thereby assisting in respiration in the mammalia, is almost entirely wanting, and air inhaled passes to all parts of the body; the bones are filled, that is, many of the long bones, while numerous small sacs lying between the muscles and *faciæ*, are expanded with air.\* Figuiet in his excellent work on Reptiles and Birds, says: "The external air penetrates into every part of the body by the respiratory tubes, which rarify the whole cellular tissue, the interior of the bones and the feathers, even between the muscles, their bodies dilated by the air inhaled, lose a proportionate amount of weight; balloon-like they float in the air, and from their peculiar forms, they can swim, so to speak, in any direction in the gaseous element."

These peculiarities to the division of birds had been known to me for many years, when an incident occurred which seemed to fully confirm all I had read, and furnished a most valid illustration of the peculiarities of bird respiration, vividly showing convincing proof why birds can swim in space.

The time of year was about the middle of May, the season of 1879. While on a collecting

\*If a recently killed bird, still warm, is experimented upon, by forcibly inflating the lungs and securely preventing exit of air by the windpipe, upon dissection, numerous small sacs filled with air may be seen between the tissues of the body.

trip of a fortnight in the wilds of Ottawa Co., Michigan, latitude, 43°, 20' north, we were visiting a herony of the Great blue, *Ardea herodias*. It proved late for eggs, excepting those advanced in incubation, of which I secured an excellent series, and also several squabs of sizes varying from the downy chick of a day to the disgusting bird of twelve to fifteen inches in length, with bare shining skin, all of which I threw into alcohol that I might study the embryology and anatomy at leisure. Being in want of adult specimens, three were shot from the mammoth, stately sycamores as they were alighting on the limbs or nests, their long legs dangling and vainly pawing for a perch, while the extended wings were flapping, offering a sure shot to the veriest tyro.

One immense black-breasted male fell near with his wing broken only, and a charge was immediately made on the wounded patriarch. He met the attack with a single thrust of his sharp, strong beak, which was parried and fell harmlessly on the gun-stock. In another second, before he could repeat the act, and ere the poor fellow could disentangle himself from the underbrush, a hand grasped his throat, and successive vigorous jerks brought him, despite his awkward struggle out of the brush and water, which was waist deep all about. Dragging the unwilling victim to a half submerged log, we prepared to execute him. This is never a pleasant task, and the writer is ever considering a new method whereby speedy death may follow the wounding of a bird or other animal. Mention may be made here how a bird may be killed in the least barbarous manner, as the subject in the cause of humanity among ornithologists can never be out of place or too often dwelt upon. An excellent method to forever ease the suffering of any of the smaller birds, is to place the specimen in left hand, back down, head toward thumb, and carefully folding fingers and thumb over the excited prisoner, to protect the plumage and prevent struggling, place the right thumb well forward on breast bone, and clasping fingers of right hand beneath left, firm pressure may be made, which will result in death in an instant.\* But to return to our captive which we left with wildly beating wing and scrambling legs.

\*A device with which I have succeeded admirably in killing small birds, is a wide-mouthed bottle containing cyanide of potassium in small chunks, mixed with sufficient plaster of Paris and water at bottom to hold in place. A little cotton can be placed in bottle, and bird allowed to remain within a short time. The fumes quickly kill small birds, mammals and insects, after cork is applied to mouth of bottle.

It is not a small undertaking to kill a specimen of the size of a large heron, and I remember ruefully my experience with a whistling swan (*Cyanus americanus*), in which "long neck" proved the better slugger, and knocked me out with an upper cut on the knee pan with his long reaching cross counters. I knew it was not fair to hit below the belt, but learned better when I fell that time in the bottom of the boat with *Cyanus* on top, and resolved to profit by my bruises in future engagements with cornered wounded birds of any size.

Closing my knees upon the wings of my heron, I vainly tried to choke him by grasping his windpipe between my thumb and finger, but signally failed after grasping it until my hand was numb. That I was cutting off his supply of air was patent to me, but to make a more thorough application of my strangling process, the gun was brought into requisition, and with the ends of the barrels pressed upon the trachea of the, as I supposed, now dying bird, the gun was forced against the log with a third of my weight, and I waited his demise. Singularly enough, *herodias*, although the before apparent gasping ceased, his lemon iris was turned on me as brightly as before, and the restless legs vainly and ceaselessly scratched, notwithstanding fifteen minutes of steady pressure on his windpipe.

Stooping over to arrange the plumage of the wounded wing, which was becoming soiled with blood, a faint sound was heard as of escaping air. Investigation demonstrated that air was "apparently" respired through the wounded parts in the wing. I leave my readers to judge of the nature of the case and to draw their own inferences. Basing my opinion on this case, other species of birds were experimented upon; bones being cut asunder and *tracheae* occluded with the same result. Of course, in these later experiments, I used ether as an anæsthetic in necessary mutilations, as it is evident that any person loving birds will be heartily opposed to painful vivisection. To resume, the wound in the wing was tamponned with cotton and mud, and poor heron was quickly subdued, all the vivacity soon fading from his fierce lemon eyes.

There is yet much to be learned of the many peculiar and abnormal functions in animals, but to me this was a most surprising illustration, one, which, for interesting features, was so puzzling and yet so self-evident, that its impression will never be effaced.

At another time, other articles may be writ-

ten on this and kindred subjects, if a spirit of interest is manifested in the readers of the O. & O. It appears odd though, to one who is so intensely interested as the writer, in all that pertains to the internal economy of all animals, that so many who call themselves naturalists are almost utterly ignorant of even the anatomy of our common birds.

### Nesting of the Yellow-Throated Warbler in South Carolina.

BY J. P. S.

Mr. Arthur T. Wayne has been fortunate enough to secure five nests containing eggs of the Yellow-throated Warbler (*Dendroica dominica*), this season in the vicinity of Charleston, South Carolina. He states that all five nests were taken from two pairs of birds that have been breeding in an old avenue of oaks for years. The trees are more than a hundred and fifty years old, and owing to the great height at which this warbler makes its nest, it is a very difficult matter to discover them.

Mr. Wayne further states that Mr. William Brewster and himself looked very carefully for them in former years, but they were unsuccessful. Mr. W. considers that it is the hardest nest to find that he knows of, and he is only able to do so by watching the female very closely: and he believes she constructs the nest wholly by herself.

Of the five nests above referred to, three contained four eggs each, and the other two nests three eggs each. One nest found by Mr. Wayne in 1887 contained five eggs, but was probably exceptional, and four must be regarded as a full set.

### Remarkable Runt Egg of the Caracara Eagle.

BY J. P. S.

Probably the most remarkable runt egg of the Caracara Eagle (*Polyborus cheriway*), belongs to a set of three, collected by W. H. Werner, in Brazoria County, Texas, on April 21, 1885. The two eggs in the set of normal size measure 2.37 x 1.92, and 2.40 x 1.90 inches respectively, while the runt only measures .74 x .64, being about the size of an egg of the Song Sparrow. In general coloration and appearance, it corresponds with the other two.

### Birds Found Nesting in Bucks County, Pa., May 13, 1888.

BY I. S. REIFF.

Being anxious to know if the cold backward weather of April, 1888, would make any difference in the date of nest building of our early birds, I left Philadelphia on a late train on Saturday afternoon, May 12, for a favorite hunting ground of mine in Bucks County, Pa.

I arrived at a friend's house after a ride of 25 miles, just in time to escape a good wetting. Being too late to do anything that evening, I had to content myself the best I could until bed-time.

After a good night's rest, I was awakened at four o'clock on Sunday morning by a Robin singing on an apple tree which stood close to my window, and springing out of bed, I looked out to see what the prospect was for a fair day. I was very much disappointed when I saw a dark and threatening sky which did not change as the day grew older. After waiting until 7 a. m., and seeing there was no prospect of the sun appearing, I concluded to take a drive and run the risk of a wetting. Getting the team ready, my friend and I jumped in, and after a drive of four miles, we arrived at the river, and while my friend took charge of the team, I started to see what I could find.

The first nest was that of a Song Sparrow, placed on the ground, containing three eggs of the Sparrow and one of the Cowbird. Walking about fifty feet farther, I found another of the same species containing the same number of eggs with the Cowbird's egg represented, and about forty yards from nest No. 2, I found the third of the same species, also containing three eggs of the Sparrow. Their nests were all in a line, being placed on a narrow strip of ground overgrown with grass, that lay between the road and fence. The eggs were fresh. Breaking the two Cowbird's eggs, I left the Sparrows in possession of what rightfully belonged to them. I then left the road to walk along the shore to look for the holes of Kingfishers and Bank Swallows. Of the latter, I found quite a number of nests finished, one which contained two eggs.

I found three Kingfisher's nests, each containing seven eggs. Set No. 1 had incubation advanced about one-third. Set No. 2 was very far advanced; this set I did not take. I caught the females of both sets. Set No. 3 had incubation in six eggs advanced about one-third,

the other egg was perfectly fresh and looked as if it might have been laid that morning. I found the fourth nest but got there too late, as some boys had just finished digging the eggs out, and broke them all, as the shells were laying on the ground.

I found a number of nests of the Spotted Sandpiper, finished or nearly so, but no eggs. Being somewhat tired, but more hungry, I concluded to start for home.

In the afternoon I examined the trees in the orchard, and found Chipping Sparrows' nests in different stages of completion, and one containing four eggs, with incubation advanced about one-half. Robins' nests were in the same state, only one containing eggs. The Barn Swallows were building, and I found one Phoebe Bird's nest containing young birds.

Comparing notes of this day's find, with other years having more favorable weather, I cannot see that our birds were one day behind.

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### Supposed Breeding of the Barred Owl in St. Joseph's Co., Mich.

BY LEON E. REED, WHITE PIGEON, MICH.

What I believe to be the first known instance of the breeding of this bird in the county, was lately brought to my notice. A young man of unquestionable veracity showed me the foot, and gave me the description of an owl which he had killed. The foot and the description tallied exactly with the Barred Owl.

The bird was on the nest when first seen, May 12, and from the absence of feathers under the breast and under the wings, had evidently been setting some time. This, I am certain, adds another to the four species of *Strigida* known to breed in the county.

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### Nesting of the Carolina Chickadee in 1888.

BY C. S. BRIMLEY, RALEIGH, N. C.

The Carolina Chickadees (*Parus carolinensis*), started building toward the end of the first week in April, selecting an old rotten stump or a natural hollow for the scene of their operations, seeming however to prefer to do at any rate some digging on their own account. After digging out a hole to suit their taste, they started apparently in a great hurry to line it, using almost any soft material that was

handy, such as cotton, green moss, rabbit fur, and horsehair.

In lining the nest cavity, which, as a rule, was not directly below the entrance, but somewhat on one side, they built the nest higher on the side towards the light, so as to effectually hide the eggs from view in most cases.

The nest complement varied from five to seven, usually five or six, one set of four being found, but this was the second laying. The entrance hole varied in height from two and a half to twelve feet, the nest being some six inches deep in the hole.

While incubating, the bird did not seem to keep on the nest more than half the time, but when once on the nest, she didn't seem inclined to leave it, as in several cases while breaking out the hole, I almost buried the bird under the trash before she would leave the nest.

Full sets of eggs were to be found only from April 21 to 24, these birds all seeming to nest at the same time. They did not any of them take long in building, fifteen to eighteen days being the time from date of starting digging to date of taking full sets from the nests.

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### Notes on the Nesting of the Yellow-throated Warbler.

BY WALTER HOXIE, FROGMORE, S. C.

In a recent issue of the O. & O. (October, 1887), two articles appeared on the Nesting of the Yellow-throated Warbler (*Dendroica dominica*). The experience of the two observers seems to be so very different, that it would appear at first as though one or the other of them must be wrong. But when we take into consideration that they are both well practised collectors, and also that there is a wide difference in the localities in which their observations are made, we must pause and seek for a natural explanation of the apparently conflicting facts which they record.

Leaving out of account the difference of locality, it seems as though the habits of the bird itself will almost explain away all these conflicting points. Pre-eminently a searcher for his food, he is no less an adept at fly-catching on the wing, and can also if occasion requires it, do some pretty fair work at pecking into the bark and crevices after the manner of the Nuthatches and Tits. In fact, I remember once seeing a pair of Yellow-throated Warblers shower down so much bark and rotten chips

from the partially decayed limb of an oak, that I was quite suspicious that they were excavating, or at least enlarging a hollow in which to build; and I do not think it would be a surprising fact to find a nest in such a location.

A general rule for all birds seems to be that the greater their range of adaptability to obtain subsistence, the greater is their range in nest architecture. This observation does not necessarily imply a wide geographical distribution, which would of itself explain much of the local variation in nesting habits. But a bird that inhabits the moss-shrouded swamps of the sea coast, the open sunny pine barrens of the back country, and even extends his range into the hard wood forests of the foot hills, must of necessity be well able to rear his young in such widely different places as a bunch of hanging moss or an open nest placed against the trunk of a pine tree.

### Ratio of the Minor to the Major Axis of an "Ideal" Egg.

BY WALTER HOXIE.

A casual glance through a series of measurements of different species of eggs, shows that the minor axis is in the majority of cases somewhat less than three-fourths that of the major. To determine this ratio experimentally, I have selected at random one hundred eggs, reduced the minor axis to hundredths of the Major, and taken the measure of all. The result is that .73 2-10, which oddly enough is the numerical complement of the constant .268 suggested in a former article for the purpose of ascertaining the capacity of eggs.

Fifty of the eggs measured different but one per cent. from the mean. The greatest difference was a little less than five per cent—five eggs. The mean variation of the fifty eggs which differed most from the "ideal," was little more than three per cent. From these results it is easy to compute the probable error in capacity where all eggs are considered to be of one form.

### The Yellow-Bellied Sapsucker in Bristol County.

BY A. C. BENT.

Mr. J. C. Cahoon in the April number of the O. & O., refers to my records of the Yellow-bellied Sapsucker (*Sphyrapicus varius*), with some doubt as to their genuineness.

I should like to say in reply that my records are positive in every case. The first bird observed by me in Bristol County was shot last fall and is now in my cabinet; there is no doubt that this specimen is *Sphyrapicus varius*, although not in full adult plumage.

While shooting at Norton a few days afterwards, a Woodpecker flew past me and alighted on a willow tree a few feet ahead of me. I was so close to him that I easily identified him as a fine specimen of this species. While retreating to get a fair shot at him, he darted around the trunk of the tree and disappeared.

The third record is equally good; a bird of this species was shot by a boy living on the outskirts of the city, and brought it to Mr. R. G. White to be stuffed. He will also vouch for the identity of this bird.

I also have two other records for the past year which I cannot guarantee as good from personal experience, still the birds were seen by persons who ought to know them by sight.

Perhaps I made it appear to Mr. Cahoon that the species was common. I do not consider it so, and think it was rather unusual to meet so many of them in one season. Still, there is no reason why this bird should not occur in Bristol County regularly, as it is common in the New England Fauna.

I think it rather strange that Mr. Cahoon has never met with it here, and he may be fortunate enough to take some during our next migration. But they are shy birds and easily overlooked, and very hard to get a shot at when seen.

[During four years experience in the taxidermist business in Boston, I do not think that I have received over half a dozen specimens, nor do I remember a single instance of one in full plumage.—F. B. W.]

### Notes on the Savannah Sparrow.

BY WALTER HOXIE.

Last week while searching for a nest of the Sea Side Finch, I shot a Savannah Sparrow, and on picking it up was surprised to find also a half finished nest. I regretted that I had not watched the bird a few minutes longer, and made sure that it was its own nest in the vicinity of which it had met its fate. But as it is, its ownership can only rest on a sort of "color of title."

It was a late date (May 3, 1888), for finding the bird here. My latest record is May 4, 1870,

and the earliest Sept. 25, 1885. The farthest southern breeding record that I can find is in upper New Jersey (O. & O., Vol. 10, No. 2, p. 23). I would like to hear from some of the other southern contributors to the O. & O. who have records, either pro or cons., in regard to its breeding range. Ridgeway says: "Northern United States."

### Unmarked Eggs of the Turkey Vulture.

BY H. R. TAYLOR, ALAMEDA, CAL.

In the pretty hills of the southwest part of Santa Clara Co., Cal., I took a set of eggs early in April which I regarded as unique, and from what I have read of the species, I was correct in that belief.

The set was of the Turkey Vulture (*Cathartes aura*), two eggs, and both of them were *immaculate*. All the eggs of this bird I have ever seen were both heavily and richly marked, which makes the peculiarity in this set strikingly odd. I am not prepared at this writing to make comparisons, but these white eggs seem to me much larger than is usual. There is quite a marked difference also in the size of the two specimens. I found the eggs in a natural hollow in the side of an immense rock, about six feet from the ground. The hole extended in about three and one half feet, and its walls were almost perfectly smooth.

### Five Sets of Eggs From One Bird in One Season.

BY J. P. N.

On May 16, 1888, a set of six eggs of the Yellow-shafted Flicker (*Colaptes auratus*), were found in Chester Co., Penn. Desiring to ascertain some facts in relation to the time occupied by this species in laying their eggs, the eggs were all removed.

On May 23, another set of six eggs were taken from the same hole.

On May 31, a third set of six were taken, also from the same hole.

On June 6, a fourth set of six were removed from the same nest.

On June 18, a fifth set of six were found in the same place. These last eggs were incubat-

ed, while all the others were perfectly fresh.

All of the eggs were remarkably large and pointed for this species, and no nest eggs were left to induce the bird to continue laying, as all were removed in each set each time. They showed no diminution in size, as the last set were as large as the first.

### Notes on the Nesting of the Rough-winged Sparrow.

BY WALTER HOXIE.

I have continued my observations upon the pair of Rough-winged Swallows mentioned in a previous note.

After the first set of three eggs were taken, they laid another set also of three, which I intended they should hatch. But their nest was discovered by a lad who lives near me, and knowing my liking for such things, he brought them to me to-day, nest and all.

I knew it was useless to return them, as he said he got them the day before and could not find me till to-day, so I have blown them, though it was hard work, the young birds being nearly ready to hatch.

Mr. Alfred Cuthbert has taken a number of sets this year of five and six eggs, but "my pair" seem to be less enterprising, and only get as far as threes.

### The Florida Red-Shouldered Hawk in Texas.

BY J. P. N.

The Florida Red-shouldered Hawk (*Buteo lineatus alleni*), has hitherto been supposed to be confined to Florida, but as will be shown below, it has been found in Texas also.

Mr. J. A. Singley, of Giddings, Lee County, Texas, has collected a large number of sets of eggs of this hawk in that county, and he was under the impression that they belonged to the Red-bellied Hawk (*Buteo lineatus elegans*), and sent them out under that name. Mr. William Brewster saw several sets of these eggs, and learning that they were collected in Texas, he doubted the correctness of the labeling. He stated that *Buteo lineatus elegans* had never been found in Texas.

The writer then asked Mr. Singley to procure a ♂ and ♀ skin of the birds he called *Buteo lineatus elegans*. Mr. Singley recently sent me

the skins and I forwarded them to Mr. Brewster. On their receipt he wrote as follows:

CAMBRIDGE, July 14, 1888.

DEAR MR. NORRIS: The pair of Hawks collected at Giddings, Texas, by Mr. Singley have just reached me. They prove, as I expected, referable to *Buteo lineatus alleni*, Ridg., although they are not, perhaps, quite as typical as average Florida specimens. The sub species *alleni*, as you doubtless know, represents the gray extreme of the *lineatus* group, while *elegans* represents the opposite or rufescent extreme, typical *lineatus* occupying the middle or intermediate place in the series. Hence these Texas specimens are less like *elegans* than is the true *lineatus*.

Please accept my sincere thanks for these interesting birds. You are welcome to publish the above if you think it worth publishing.

Sincerely yours,

WILLIAM BREWSTER."

The seven sets of eggs taken by Mr. Singley near Giddings, Texas, and described by me in the O. & O. for March, 1887 (Vol. XII, p. 39), when under the impression that they were *Buteo lineatus elegans* must now, of course, be understood to belong to *Buteo lineatus alleni*.

This Hawk is not the only bird which had hitherto been supposed to be confined to Florida alone. The Florida Barred Owl (*Strix nebulosa alleni*), has also been found breeding in Lee County, Texas.

### The Philadelphia Vireo in Connecticut.

BY A. H. VERRILL.

On May, 19, while in a small piece of woods near New Haven, my attention was attracted by a bird which kept flitting about in some bushes, acting much in the manner of the White-eyed Vireo, for which I at first mistook it. But on a closer examination, I decided that it was a Warbling Vireo (*V. gilva*), and being in need of one, I decided to procure it.

After following it for some time, I at last succeeded in getting a shot, and on picking it up I noticed that the spurious quill was lacking, and at once conjectured it to be a Philadelphia Vireo (*p. Philadelphicus*), which it afterwards proved to be. The bird was a male in very fine plumage, and was examined while in the flesh by several ornithologists, all of whom immediately confirmed my identification. This, if I am not mistaken, is the first record of its capture in Connecticut.

### Food of the Great Northern Shrike.

BY JOHN C. CALOON.

In the August number of the O. & O., under the heading of the "Great Northern Shrike and its Prey," Mr. C. C. Maxfield says from his observation that the food of the Great Northern Shrike seems to be principally English Sparrows.

With all due respect for Mr. Maxfield in his assertion, my own experience with this bird, which is based upon the taking and dissecting of quite a number, proves to me that in this section their food consists principally of bugs, worms and small insects. That they do occasionally kill and eat sparrows and other small birds, when driven to it by hunger, is assuredly so, but I have shot them in the middle of the winter where English Sparrows were abundant, and upon dissection, failed to find any traces of sparrow in their stomach.

Below I give the contents of the stomachs of five, which were shot in the fall, winter, and spring;

No. 1. Adult ♂. Nov. 17, 1884, Taunton, Mass. Contents of stomach—bugs and small insects.

2. Adult ♀. Nov. 27, 1884, Taunton, Mass. Contents of stomach—small bugs and parts of large ones, and buds of trees.

3. Adult ♀. March 17, 1885, Taunton, Mass. Contents of stomach—small buds and insects.

4. Adult ♂. March 31, 1885, Taunton, Mass. Contents of stomach—flies, bugs, worms and small insects.

5. Adult ♂. Dec. 24, 1886, Taunton, Mass. Contents of stomach—bugs and white worms.

6. Great Northern Shrike, (yng?), shot at Matineus Island, Me., Dec. 15, 1887. Stomach completely filled with black bugs, other small insects, and a substance resembling purple berries.

It has generally been conceded that hawks and owls of all kinds live on birds, poultry and small animals, but by recent investigation by Dr. B. Harvey Warren of Westchester, Pa., it is found that many of our hawks and owls live wholly on mice, insects, etc.

If all ornithologists and taxidermists would note down the contents of the stomach of such birds as come into their hands, I am certain that there would be many new things brought to light in the study of ornithology.

[In January, '82, I noted the appearance of a pair of Shrikes in the locality of a large colony of English Sparrows. The number of the

Sparrows decreased until about April 1, when there was but one left. The Shrikes shortly afterward disappeared. On several occasions I observed Shrikes pursuing the Sparrows, but did not witness a capture. In afterwards referring to it, while in company with Mr. S. F. Dexter of Pawtucket, R. I., I found that gentleman had also been observing the same case. In the previous June, I witnessed a Shrike capture a Sparrow within ten feet of my window, and fly off with it struggling in his beak.

In examining the contents of several stomachs, I have occasionally found parts of birds; in one instance, the entire body of a field mouse, but as a rule they have proved to have been subsisting principally on beetles.

F. B. W.]

### Winter Notes From Wellesley, Mass.

BY S. W. DENTON.

I have the pleasure of recording the capture of a specimen of Greater Shearwater (*Puffinus major*), about Nov. 25, 1887, in the town of Dover, near the Wellesley line, by a young man in the employ of B. P. Cheeney. The night preceding the day of its capture had been a very windy one, accompanied by heavy rain. As Mr. Nilan was passing a hedge near the barn, he noticed this strange bird crouched behind it. It was easily caught, but bit furiously when taken in hand. Mr. Nilan, however, took it home in the hope of being able to keep it alive, but as it refused all food and was so ugly, snapping at any one who approached the cage, he gave it to Mr. Thomas Smith of Wellesley, who mounted it for his collection. Mr. Smith endeavored to kill the bird as one would a Sparrow, by pressing tightly with his fingers and thumb on each side of its body, and though finally successful, he assured me he never wanted to try another, the bird coming to life several times after he supposed it dead. It was a male, no doubt blown in from the sea by the storm, and had evidently been without food for some time, as it was in poor condition, and the stomach contained absolutely nothing.

Dec. 27, while passing through Watertown, Mass., in the horse-car, I saw an albino English Sparrow (*Passer domesticus*), alight for a few moments in the street. So far as I could see it was pure white, with the exception of a slight reddish tinge on the back.

On Dec. 30, a Catbird (*Mimus carolinensis*),

was shot by a young man in Wellesley in some bushes on the edge of Charles River. It was a male in full plumage.

All winter. Bronze Grackles (*Quiscalus p. aureus*), have been seen in Wellesley, but none were secured until Feb. 5, when a fine male was shot by Mr. Thomas Fitzgerald. Its crop was full of corn and one foot was gone, there being only a stub in its place.

On Jan. 30, a Red-headed Woodpecker (*melanerpes erythrocephalus*), was seen by a young friend of mine while riding from here to Foxboro.

Seven Screech Owls (*Scops asio*), several of them being in the red phase of plumage have been taken here during December and January. They were found in holes in old trees or were shot in the evening, being lured within gunshot by an imitation of their note. A flock of White-winged Crossbills (*Loxia leucoptera*), about fifty in number, were seen Feb. 4.

Feb. 22 and 23, I saw and heard several Bluebirds (*Sialia sialis*), and Song Sparrows (*Melospiza melodia*).

### Winter Notes.

BY J. WALDO NASH.

NORTH CONWAY, N. H., Feb. 20, 1888.

EDITOR O. & O.:

I guess you think by this time I am frozen up. Well, I have been very near it, and the snow is enough to make one long for the sweet "Sunny South," though nature is letting up some now. I had something new, to me at least, sent in last week. A Blue Jay, with a pure white collar, half an inch wide all around the neck just back of the crest, crossed on the sides by the usual black line, the crest in front being made up largely of pure white feathers, making a very curious looking bird.

Birds are not plenty here this winter, owing, I suppose to the severity of the weather, indeed, so far, I have not seen a single Nut-hatch, though I have been in the woods a great deal.

There are a few Blue Jays, but they do not appear like their usual saucy selves, but half frightened as if they expected an avalanche of snow. Redpolls have been fairly common among the gray birches. I have noticed some Crossbills on Moat and Middle Mountains.

Snowbuntings came before the snow last fall in abundance, but have been very scarce since. Three Crows have kept us company all winter,

but seem more like dark spectres, they have been so silent, while last winter they were noisy.

Hairy and Downy Woodpeckers have stood by us all winter. Saw the first Pileated Woodpecker last week. Titmice have been conspicuous by their absence until within a week.

Ruffed Grouse have had a hard time, I should think, for I saw a number of places where Sir Reynard has dug them out from under the crust and had a feast.

I did not intend to write so much when I began, but if my observations here among the Mountains of North Conway are of any use to you for the O. & O., you are welcome to them.

[While the mercury's up to 90, send in your thanks by notes to those enterprising fellows who furnish Winter Notes.]

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### Song of the Brown Thrasher. A Legend.

BY ARTHUR H. HOWELL.

The Brown Thrasher is one of our common summer residents. Their song, which is novel as well as pleasing, is frequently heard, the singer usually occupying the topmost branch of some small tree or hedge on the edge of a field. They prefer dry, upland ground, and I have met them most frequently along old deserted roads, where they delight to wallow in the sand, after the manner of the domestic fowl.

They build their nests in small bushes or on the ground, usually in a hedge, and the sharp, metallic "chip" which they utter when it is disturbed, while flying about the head of the intruder, is positive identity of the species. Once heard, it can never be mistaken.

I would not attempt to improve upon Mr. Oliver Davie's description of their song, as given in the January (1888), OOLOGIST, I will simply give an old legend concerning it which is current around my birthplace on Long Island, though I have never seen the story in print.

There were three persons concerned; a Mr. Raynor, a tavern-keeper; Terrill, an old toper; and Zopher, his friend and companion in revelry. As the story runs, the friends, one night, partook freely of the contents of the cup, and by ten o'clock the next forenoon, Mr. Terrill had not sufficiently recovered from its effects to be very clear in his reasoning. It was a warm

June evening, and as he wandered aimlessly along an old road, he heard a Thrush singing, and to his somewhat clouded imagination, it seemed to say, "Terrill, Terrill, Terrill, Terrill," "Hot to-day, hot to-day." "Where's Zopher? where's Zopher?" "Gone to Raynor's? gone to Raynor's?"

Upon hearing this, he became angry at the Thrush and accused him of telling tales, but all to no purpose, for the innocent bird kept right on with his song. The culprit probably told his friends at the tavern about it, and the story has now passed down through several generations, and for myself, I never heard a more apt illustration of this unique song. Every time I hear one of these Thrushes singing, the story comes back to me, and now, while I am writing this, the above sentences, if rapidly uttered, bring the song vividly to my mind, and I long for the time to come when I can hear it again in some quiet, sunny nook of the old farm.

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### How a Set of Snipe's Eggs Were Saved.

BY WATSON L. BISHOP, KENTVILLE, N. S.

On May 31, 1888, a friend sent me a set of eggs of the Wilson Snipe (*Gallinago delicata*). The sod on which the nest was built was carefully dug up and placed in a basket, so that the nest might reach me without being disfigured or put out of shape, in order that I might get measurements of the nest and see what the material was that was used in its construction.

The eggs were carefully laid in cotton to keep them warm, so I could hatch them out and have the young birds for mounting, but when I got them they were cold, so the next question was, how to save the eggs? After thinking the matter over for some time, I at last hit upon a plan. I first took a thin piece of rubber such as is used by dentists while filling teeth, about 1½ inches square, cut a hole through the centre the same size that I wished to drill the egg, the hole in the rubber coming where the young bird had already commenced to break the shell. The rubber was held in place by sewing the edges together around the egg. I then took a little block of pine plank, and cut a hole in it large enough to allow the egg to lay in and not project above the surface of the wood. I then put the egg in the wood (with the place to be drilled uppermost), bedding it nicely in corn meal, leaving exposed

only a small portion of the egg. Three or four carpet tacks were then driven in the edge of the cavity containing the egg, leaving the heads a little above the wood. The block was then marked across each way with a pencil, and where the lines intersect showed just where to drill.

I then covered the top of the egg with plaster of Paris, mixed to a proper consistency with water, and covered the entire cavity, allowing the plaster to come a little out on the wood. When the plaster hardened, the tacks in the wood prevented it from cleaving off while working at the egg. The lines made on the wood showed where to mark the plaster for drilling, so as to have the hole cut in the rubber. The plaster was left an  $\frac{1}{8}$  or 3-16 of an inch thick over the egg in the spot to be drilled. In drilling, I first cut away with the point of a sharp knife a small hole to start the drill, as the plaster did not drill easily. The hard plaster over the top of the egg prevented the hole from breaking any larger while extracting the embryo. The rubber over the egg prevented the plaster from sticking to the shell, and the only care that had to be taken was in breaking the shell from the inside with the embryo hook. After the egg had been emptied, I raised the plaster off by means of a strong knife, and the egg came out whole and good.

Of course, it is only rare eggs that it will pay to handle in this way, but it is often the case that a person is willing to go to a considerable trouble to save an egg. Some brother Oölogist may have a better method of emptying badly incubated eggs, and if so, I should like very much to read it in the O. & O.

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### Fun Among Birds.

BY H. R. TAYLOR.

A number of observers have written of the playful habits of various birds, and the following incident may be of interest as showing that very often birds, as well as animals, know the nature of a good practical joke.

In the early part of February of the present year, while out walking one day, I was greatly amused by the playful action of a Sparrow Hawk. I was standing on the railroad in town, and about a hundred yards away was a vacant lot next a house, where a number of hens and roosters were strutting about and busily scratching for food.

The little Falcon, frequenting the neighbor-

hood, saw the chickens also, and doubtless thought to have some fun at their expense. Dashing down to a foot above the ground, he flew along at that height toward them. Passing under the lowest bars of two fences *en route*, he struck terror into the heart of a big rooster by clawing him on the back as he came up unawares. Then off the joker flew again, chuckling I doubt not, at the success of his stratagem, and the general scattering it had caused among the fowl.

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### Curious Nests of the Sparrow Hawk.

BY J. P. S.

Dr. J. C. Merrill, U. S. A., while in Montana, collected twenty-five or more sets of eggs of this bird, and noticed a most peculiar fact in regard to their nests. He has kindly permitted me to quote from his notes on Montana Birds the following:

"Of the many nests examined, most were in cavities in trees, either natural or made by Flickers. The eggs are placed in a slight bed of leaves and grasses, or a few chips, or on the bare wood. Holes of suitable size and shape in rocky cliffs or river banks are also favorite nesting sites.

"In nests found along the lower streams, five eggs are the usual complement, while those found in the mountains generally contain fewer."

This is the first authentic instance that has come to my knowledge where this bird has taken lining of any kind into the hole occupied by it as a nest. Their almost universal habit is to lay their eggs on the bare wood, and Dr. Merrill's experiences are therefore all the more interesting.

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### The Canadian Grouse in Captivity.

BY J. P. S.

Mr. Watson L. Bishop, of Kentville, Nova Scotia, has kept several Canadian Grouse (*Canace canadensis*), in captivity for some time, and has had some beautiful photographs of them taken. These exhibit the male bird in the act of strutting before the female, and are probably the first pictures ever taken which show this curious performance.

## A List of Some Birds of La Platta Co., Col., With Annotations.

BY C. F. MORRISON.

[Continued from May.]

62. *Corvus corax carinorosus* (Bartr.), Ridgw. American Raven. Common winter visitant. Where they breed I am at a loss to know, although a range of bluffs five miles east of Ft. Lewis looks very suspicious.

63. *Corvus fragilaris* (Bartr.) Common Crow. Abundant resident. Have not found its nest, however.

64. *Picicorvus columbianus* (Wils.), Bp. Clark's Nutteracker. A very common resident, ranging from 7,000 up to 14,000 feet. Breeds at its highest limits. Have only seen one specimen as low as 7,000 feet, which was in winter.

65. *Gymnocitta cyanocephala*. Max Maximilian's Nutteracker. Common in winter, going in large flocks. Breeds a little lower than 8,000 feet in the pinons.

66. *Pica rustica hudsonica* (Scop.), Baird. Black-billed Magpie. Very abundant resident, and breeds along all the streams of any size. Ranges up to 12,000 feet.

67. *Cyanocitta stelleri macrolepha* (Baird). Ridgw. Long-crested Jay. A common resident, breeds in bushes and pinons, like all of its kind it goes in large troops in winter, and so noisy that one often wishes it was an inhabitant of some other country.

68. *Aphelocoma woodhousei* (Baird), Ridgw. Woodhouse's Jay. Not as abundant as the preceding, and breeds about a thousand feet lower than Ft. Lewis. All the Jays breed early in May, unless in the case of an early spring, when by the middle of April their eggs are to be found.

69. *Perisoreus canadensis capitalis* (Baird). Rocky Mountain Jay. This Jay is the worst of its tribe, and is found near timber the year round, although I saw one in January, 1887, at 8,500 feet. As big a thief as ever wore feathers, they can be tamed if taken from the nest, but I wish joy to those who attempt it; but if you do try it, always hide whatever you care nothing about, and anything you prize highly leave about anywhere, it will be safer this way, and you will own it much longer.

70. *Tyrannus verticalis* (Say). Western Kingbird. One solitary individual seen in fall of '86. Breeds lower down.

71. *Cantopus borealis* (Swains.), Baird. Olive-sided Flycatcher. Not common, breeds up to 8,000 feet.

72. *Cantopus richardsoni* (Sw.), Baird. Western Wood Pewee. Common, breeds in the aspens, and in small trees in the ravines, which branch off from the gulches.

73. *Empidonax pusillus trailli* (Aud.), Baird. Trail's Flycatcher. Not common, breeds in the small gulches and side ravines. I am not able as yet to say if this may be *E. obscurus*, not having specimens on hand at time of writing, but I believe that both specimens occur in the county.

74. *Trochilus alexandri* (Bonre & Muls.) Black-chinned Hummingbird. Common and breeds. A nest shown me contained three eggs.

75. *Selasphorus platycercus* (Swains.), Bp. Broad-tailed Hummingbird. Common and breeds in much the same localities as the preceding. Ranges up to 13,000 feet in summer, or as high as there are flower fields.

76. *Selasphorus rufus* (Gmel.), Aud. Rufous Hummingbird. This bird is also common, and breeds most abundantly of all, it also ranges higher than the two preceding species, and is to be found above timber line after the young are raised. I included *I. latirostris* in some of my former notes as occurring in this county, but have since concluded it to be a mistake on my part, and so I drop it, with the remark that it may yet be found here. The present species is found up to 15,000 feet.

77. *Cypselus vociferans* (Woodh.) White-throated Swift. Rare. I have never seen it, but enter it, as Mr. Drew gives it in San Juan county, as breeding up to 10,000 feet. If it occurs in that, it must in La Plata. If not breeding, it occurs as a migrant, but my opinion is that it breeds in this county at very high altitudes, and as the Swifts are not a bird easily noticed in migration, probably that is the reason I have not noticed it.

78. *Chordeiles popetue henryi* (Cass.), Allen. Western Nighthawk. Very common, and breeds abundantly on the high mesas to the east of Ft. Lewis.

79. *Picus villosus harrisi* (Aud.), Allen. Harris' Woodpecker. Very common, breeds up to 12,000 feet. In winter it keeps near the tops of the trees of the pine belt, and in less numbers among the trees of the streams. Quite noisy, and not to be overlooked.

80. *Picus pubescens gairdneri* (Aud.), Coles. Gairdner's Woodpecker. A common resident, not as abundant as the preceding, ranges up to 12,000 feet in summer, breeds from 11,500 feet up.

81. *Picooides tridactylus dorsalis* (Baird),

Ridgw. Striped-back Three-toed Woodpecker. Not at all common, but three pair seen in a pin-on grove south of here. Probably breeds there, a resident all the year round.

82. *Sphyrapicus varius nuchalis* (Baird). Red-naped Woodpecker. Common, and breeds in low, broken stumps along the river bottom. It seems to prefer a stub of from four to six feet in height to tall trees, no matter how many inducements it may have to build in such. They will not leave their eggs until obliged to, no amount of rapping or pounding on the outside of their domiciles will move them, and you generally have to cut down to them, and then I have had to remove them by hand.

83. *Melanerpes torquatus* (Wils.), Bonap. Lewis' Woodpecker. Very common, breeds in the pines up to 9,000 feet. Their flight much resembles that of the Grackles, and might easily be taken for them at a distance. I have noticed them sitting on the limb of a pine, a favorite position with them, now and then flying away, only to return by a short circle to the same place, seemingly one of some of the Flycatchers, but I have no doubt but that it does take insects on the wing, but have never been able to prove it beyond a doubt. However, I think it does so.

(To be continued.)

### Wintering of Pectoral Sandpiper on Monomoy Island, Mass.

BY JOHN C. CAHOON.

On April 9, a gentleman stopping with me on the Island, found two Pectoral Sandpipers near a salt pond on the marsh, and shot one, a ♂. Several days later, I secured the other in the same locality, which also proved to be a ♂.

When I left the Island late in November last, there were several remaining about the marsh near the pond, and from the fact that the above birds were seen by parties in March, leads me to think that they remained in that locality all winter. The portion of the marsh that they were found on is sheltered by numerous sand hills. The birds taken were poor, their stomachs were well filled, and contained with other matters several thin, compressed whitish worms. I have never before seen this bird in the spring on our Cape Cod coast, and our oldest and most experienced gunner in this vicinity says that he has never seen or known of one being taken in the spring.

### Birds and Their Relation to Agriculture.

BY C. S. BRIMLEY, RALEIGH, N. C.

In the February number of the O. & O., there was an article by Mr. Singley under the above heading, which interested me very much, and has impelled me to offer a few notes on the same subject.

Birds may be divided into four different classes as to their relation to agriculture:

1. Injurious birds.
2. Birds of mixed character.
3. Beneficial Birds.
4. Neutral birds. All birds not coming under the three previous heads being in the last class.

Of course, it is often hard to know how to place any particular bird under the heads, the second class being by far the largest, especially if we take the whole country into consideration, as a bird may be injurious in one section and beneficial in another, and vice versa.

To commence with, the *Injurious Birds*, the *Fringillidae* and *Icteria* furnish our most conspicuous examples, the English Sparrow and Goldfinch in the former, and the Bobolink and Blackbirds in the latter family heading the list. The English Sparrow, although chiefly confined to the city, has already begun to do some damage in this neighborhood to grain, and to judge from the report of the U. S. Department of Agriculture, we cannot expect him not to do more, as in the last year he has been spreading rapidly into the country.

The Goldfinch does some damage in this neighborhood to turnip seed, sometimes causing loss to those who grow it, and so far as I can find never does any good. The three Blackbirds (Cowbird, Redwing and Crow Blackbird), all appear in March on the fields of spring oats, and being sufficiently numerous to make a good showing, they employ their energies in preventing said oats being too thick. The Bobolink does not do any appreciable damage here, but makes the rice growers down east feel badly when he arrives in the fall.

The Mourning Dove does some damage to turnip seed and corn here, but gets in his finest work in the trucking district around New Berne in the east of the State. A great many early peas are grown there for the Northern market, but the Dove does his best to prevent the market from being glutted. The truckers, however, don't appreciate his efforts.

Birds of mixed character are very numerous, but I shall only give two instances, viz., the Catbird and Kingbird. The Catbird, though mainly insectivorous, is very partial to strawberries, and causes great loss in the spring to the growers of that fruit. This bird also eats other birds eggs. The Kingbird is another mainly insectivorous bird, but in his case he excites no enmity except when he comes into collision with the prejudices of a man who keeps bees.

Beneficial Birds—All insectivorous birds frequenting the fields come under this head. The Mockingbird, Field and Chipping Sparrows being the most useful in this section, especially the latter two species, which are about the only small birds abundant enough in fields and gardens to do any good worthy of the name.

### The Barn Owl in California.

BY CLARK P. STREATOR.

If you will look carefully and examine hollow trees, church towers, deserted buildings and rock cavities in the hills, in one of California's bright days of sunshine, you will usually find a resident at home. By approaching cautiously to the entrance, you peep in and observe a fearless looking, sleepy bird, crouched down upon a bed of hair and bones. He will at once begin squinting and looking at you, sometimes almost turning his head upside down. You advance to catch him and he will make a noise like escaping steam, and should you catch the bird without getting your wrists and hands lacerated by its sharp claws, you can consider yourself lucky.

But the Barn Owl is of untold benefit to the California planter, and no other California raptorial does as little havoc and as much good as this species. Where I have observed the bird in Southern California, it feeds almost exclusively on gophers, which is the crop raiser's worst enemy. My experience goes to show that the old birds stay in the same home throughout the year, but on taking one specimen, I would go again in a few days and find another in its place, and by continuous observations I would be able to find an owl there every month in the year.

In the cavities of several live oak trees, I have found the cavities filled a foot in diameter and three feet deep, with nothing but pellets of gopher hair and bones that were thrown up by the owls. In California, the Barn Owl begins

to lay in January, the number usually varies from three to five. On several occasions while examining their nests when the old birds were not around, I found the eggs were covered to a depth of an inch or more with gopher hair.

The downy young birds are very interesting to study. When disturbed, they keep up a constant buzzing, hissing sound, so that one might mistake them for a colony of bees.

While a single brood of young birds are being reared, the number of gophers that the old ones destroy will amount into the hundreds. Mr. P. C. Higgins, a prominent horticulturist and a very reliable man of Southern California, daily observed a brood of these birds from the time they hatched until they left their nest. He says that there was rarely a morning when there were not a dozen gophers lying at the foot of the tree. They were the surplus after what they had eaten, and the number that he collected was so great, that the dogs and cats made daily visits to the tree to feed upon them.

### The Number of Eggs in a Set.

BY W. W. GILMAN, MINNEAPOLIS, MINN.

I have read with a great deal of interest the discussion in recent numbers of the O. & O., regarding the number of eggs in a set. I have never written for your magazine as I do not consider myself well posted. I have always had to work all the week days, having only Sundays for the pursuit of my favorite study. But in this case, I thought perhaps the observations of even so young an enthusiast as myself might be of interest.

To begin with, I must inform the readers of the O. & O., that up to the season of 1887, my observations have been confined to a very small portion of Dane County, Wis. This last season, however, I went on a farm in Freeborn County, Minn., where I had some opportunities to make observations through the week.

I will commence with the Catbird. This interesting bird was very common in both places I have spoken of. In Dane County, Wis., I have examined many of their nests, and found the sets almost invariably to consist of four eggs, and very rarely three. What few nests I examined in Freeborn County, Minn., contained without exception three eggs each.

With the Brown Thrasher, the sets varied from four to six in both localities.

In regard to the Kingbird, I notice that several of your correspondents seem inclined to

doubt the statements of some of our prominent ornithological authors that a set consists of from four to five eggs. They should not be too fast however. I have found a number of sets with each of the above numbers as a complement. In Dane County, Wis., I found the sets to consist almost entirely of four eggs each. But in Freeborn County, Minn., the case was altogether different. Of some twenty sets found there, they were about evenly divided between three, four and five. In most of them incubation was well under way, showing that all were complete sets.

In the November number, Mr. F. H. Carpenter stated that the Red-eyed Vireo generally lays four eggs to a set. In my collecting in Dane County, Wis., I have examined many nests of this species, and very seldom four eggs in a set. Most of the nests contained three eggs, and two was by no means an uncommon number.

You will notice that the birds I have cited are all very common, so I think no one can reasonably accuse me of being mistaken in the species.

Do not these observations, coming from various correspondents all over this vast country of ours, go to show that habitat has a great deal to do with the number of eggs in a set? It seems to me that it does.

#### Occurrence of *Vireo flavoviridis* at Riverside, California.

On the 31st of Sep., 1887, I noticed while hunting in the Santa Ana River-bottom a little bird flitting about in the top of a high cottonwood tree. It was secured and to my surprise I found it to be *V. flavoviridis*.

Prof. Ridgway, to whom I sent it for positive identification said it was the most highly colored specimen he had seen.

This Vireo is confined to the Lower Rio Grande Valley and outward, therefore my specimen must have been a straggler.

WILL W. PRICE.

#### Editorial.

Naturalists generally find more satisfaction in following up their investigations in the material world than they do in consideration of those of political economy, and it is not strange that in the absorption of their studies they fail to notice the drift of legislation, even though

they suffer by it. The nation for the next few months will be convulsed from ocean to ocean upon a question of vital importance to every citizen, whether he be greatly interested in the study of Natural History or not, that of the Tariff. Few of our naturalists have ever given it a thought as affecting their interests in their studies, and consequently have not taken the trouble to look up the law or ascertain what the interests are, or wherein they personally may be affected. While they may be in favor of protection to American industries, they are in the dark as to whether the present law protects the industry or aids the study of the American Naturalist, and it is only when a case arises that directly affects them that light is thrown on the matter.

The law, as it now reads, is that all bird skins prepared for transportation by being poisoned or filled with cotton, bear a duty of twenty-five per cent., if they are to be used for taxidermic or millinery purposes.

That this in the first place don't protect the American taxidermist much, all will agree. Again, any person who purchases or has collected for him, or has sent him in exchange bird skins from abroad, is permitted to bring them in free of duty, on the claim that they are to be solely used in the interests of science. It makes no difference whether there be ten or ten hundred of the same bird. The result is, he who is so favored as to be able to fit out a collector personally, or as proxy for some institution, is under the law given an opportunity to do quite a stroke of business for himself at the expense of his less-favored neighbor. He receives a large number of foreign bird skins from his collectors or correspondents, passes them free as being for scientific investigation, and immediately opens shop for sale or exchange, while others must buy at his figures, or if they import pay 25 per cent. duty. That this has been and is now being done, there is no question.

Why should there be any duty on bird skins?

The sentimentalists who have raved so over the destruction of native birds for millinery purposes, seemed content that there should be, losing sight in their madness to follow a "fad," that a duty on the bright plumaged foreign bird skins has only the effect of enhancing the value and increasing the destruction of our natives, the fashion demanding a feather, and if the purse will not admit of this purchase of a high-priced foreign (made high-priced by a duty), the most brilliant of our native will be used in lieu.

But in this, as in many others, these people

of one idea, and that but half digested, "strain at a gnat and swallow a camel." Our idea would be that a tariff so regulated that the work of foreign taxidermists should pay a duty of 25 per cent., and all skins, bird or animal, to be used for taxidermic or scientific purposes, be admitted free, would be much more sensible from a protectionist point of view.

The political pot is beginning to seethe and bubble all over the country. The "scurvy politician" will soon be on the road "to cleave the general ear with horrid speech," the whispering sycophants will cluster around the nominee likely to be elected, and "crooking the pregnant hinges of their knees," declare that body and soul, boots and breeches, are they devoted to his election, but with the request that they be considered when the giving out of offices takes place. In times past, the Naturalist has not taken much interest in the political struggle. If we do not mistake in the coming election in this State, they are liable to be a factor in one direction at least. The law regulating the taking of Fish and Game, through the machinations of interested parties and by a good deal of bluster and buncombe, is so evidently a piece of legislation favoring a class, and the execution has been so unqualifiedly preposterous and absurd, its officers so pulled up with grandiloquence, have assumed and arrogated to themselves powers never delegated them, that the naturalists all over the State will, before they vote for the candidates this year, assure themselves that a change will be made, if not in the law itself, of which they have strong hopes, at least in the officers who are supposed to execute it in spirit as well as in letter. They want to see as Game Commissioners men like Stillwell and Stanley of Maine gentlemen of education, who labor for the best interests of all, rather than little puffs of egotism, without brains enough to fill a mustard seed, swelling and strutting about the State as the autocrats in the execution of the law, denying the request of an earnest student of Ornithology, a permit to take birds for his studies, and at the same time *without being asked*, and probably to curry favor, sending permits to others. It is high time that young, active, earnest men were placed in charge of this law, the fossils laid away, and the swell and strut of egotism confined to the limits of a river city police court—but, pray don't lay him away, for he is as A. Ward says of his kangaroo: "an amusing little cuss."

### Stolen Names.

A young publication entitled *The Bay State Oologist*, which has issued six numbers, has decided to change its name, and coolly appropriates the title of THE ORNITHOLOGIST AND OÖLOGIST, having chosen *The American Ornithologist and Oologist* as the name for its future issues. If that paper can afford to dress itself in borrowed plumes, we can afford to stand the appropriation of our name, feeling sure that the puerile publication so calling itself, will never be mistaken for the old established ORNITHOLOGIST AND OÖLOGIST.

It would have been in better taste, however, for our young contemporary to have chosen a title of its own, and not have endeavored to gain credit at our expense.

### Brief Notes.

Michael Elroy told Alick McCloy that Bridget McMurphy had said, that old man Tuley told Elick McCauley that Johnny McFadden was dead.

[Applicable to the following.]

By actual count, a single Black-billed Cuckoo took 302 tent caterpillars from an apple tree in less than an hour. So says James Clark of Walnut Hill, Mass.

A Tennessee Warbler and two Yellow-bellied Flycatchers were taken May 30 at Woburn, Mass., by W. W. Brown.

A 3,000 edition of the O. & O. was printed in June.

J. Waldo Nash has a Blue Jay taken at North Conway, N. H., Feb. 20, with a decided cross-bill. Length of upper mandible, 1.51; lower, 1.48.

Some one writes that he has noticed an unusual number of birds on a lawn at one time this Spring, and at once it is editorially heralded as owing to the efficacy of the Audubon Society. *Tuffy*.

E. A. Lewis, while at Plymouth, Mass., March 11, found a nest of the Great Horned Owl. It measured 18 inches in diameter outside, and 8 inches inside; was lined with feathers from the breast of the Owl. Buried in them were two eggs, both measuring 2.25 x 1.94.

It costs one cent to mail the O. & O. to Boston subscribers, and one-eighth of a cent to those in California, one of the beautiful consistencies of the postal law.

The migration South of large numbers of the White-bellied Swallows was observed Oct. 18, 1887, at Diamond Hill, R. I., by S. F. Dexter.

*R. E. K., Fitchburg.*—The birds you write about we think you will not find to be of rare occurrence. Perhaps your Bohemian will prove to be the Cedar. Taking the Yellow-bellied Woodpecker in April was the best catch.

*W. J. Sherratt, Philadelphia, Pa.,* reports Pine Crossbills shot within ten miles of the city, also fifty miles due East, Nov. 23, 1887. Very early for that neighborhood.

*E. T., Attleboro Falls.*—Great Northern Shrike are usually common in February and March in your locality. The Loggerhead is rare. It would be difficult for you to distinguish it from the White-rumped, except by close examination.

For a period of six months, we mailed regularly a complimentary copy to a prominent French Naturalist; in return came prompt "acknowledgements." Our early French being neglected, we took it for granted that each letter was a compliment "à la Française," and carefully laid them aside. One day in want of employment, after a mighty effort we succeeded in translating, and, oh horrors! Our cousin, "via Adam," was unable to read *plain* English. His national politeness was compelling him to make the attempt. He prayed, begged, and beseeched us to discontinue, and was evidently being killed by monthly installments. We discontinued, and modestly suggest a medal from the S. F. P. of C. to A.

**BOSTON SCIENTIFIC SOCIETY.**—At the meeting of the Boston Scientific Society, June 26, the subject of albinism in birds was discussed by Mr. F. A. Bates. He inferred the remote cause of the phenomenon to be a disease in the birds. The immediate cause is the failure of a supply of coloring matter or pigment. Climate at any rate is not the cause, as specimens are found in various latitudes. He exhibited several specimens, one of which was a pure white jay of the species known as the blue jay. Another was a "rusty blackbird," which was partly white.

**A CLAM CAPTURES A SEA GULL.**—A fisherman on Plymouth Beach, Mass., captured a large gray sea gull in a rather peculiar predicament. Firmly pinched upon the bird's bill was a sea clam about the size of the palm of a man's hand. The clam weighed enough to keep the head of the gull hanging downward, and

thus effectually prevent any long flight, while it was evidently nearly exhausted in trying to escape from its strange captor. It is thought that the gull, seeing the clam's snout protruding, endeavored to seize the dainty morsel, and was in turn gripped by the hard shells of its intended victim. The clam had to be cut away from the bird's bill.—*Boston Herald.*

We have no sympathy for the clam or gull. By the way, clams are reported as being of extra fine flavor in Rhode Island this year. But are not the Prohibitionists assuming a grave responsibility in contaminating Narragansett with mixed drinks? How many of her noble sons will sink into an untimely grave, and in departing say: I first acquired the taste from Rhode Island clams and Providence River oysters.

### Correspondence.

*Correspondents making inquiries are requested to be brief and to the point.*

OSWEGO, N. Y. March 13, 1888.

**EDITOR ORNITHOLOGIST AND OOLOGIST**—SIR: I have read the article on "Data Blanks" by Messrs. Ingersoll and Bryant in the February O. & O. While not taking exceptions to their mode, I think that data of a private collection can be preserved in a more satisfactory manner. It is this: Have a rubber stamp made two and a half inches wide and four inches long. Then get a book eight inches long and five and a half inches wide, of heavy, unruled paper. A book of this size is large enough for three data on each page, and allows quite a margin, and a small space between each data. With a little practice and care, any one can make a nice print every time with a rubber stamp. A nicer but more expensive way is to have a register printed (in blank, of course), and bound by some job printer and book binder. Each data can be numbered on the margin, and indexed in the back part of the book when filled out. Such a data book will always make a neat and attractive appearance, on account of uniform size of data, if nothing else.

When exchanges are made, it is a short job to fill out the blanks with the memoranda received.

If a rubber stamp is used, it can be brought into play in another blank book devoted to duplicate sets for exchange. Mr. R. W. Ford, a rubber stamp manufacturer, who advertised in the O. & O. about two years ago, gave me good work at an extremely low figure.

Snowy Owls have been conspicuous by their absence. This winter, January 30 (just after a fierce blizzard lasting four days), I saw a Yellow-shafted Woodpecker. This is the first time I have ever observed one of these birds here in winter. In spring they generally arrive here between the 10th and 20th of April. I have one instance noted, when they arrived March 10, 1873.

Most respectfully yours,

D. D. STONE.

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—AND—

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## Nest and Eggs of the Mountain Solitary Vireo.

BY WILLIAM BREWSTER.

I am indebted to Mr. J. S. Cairns for the valuable gift of a nest and set of eggs of the Mountain Solitary Vireo (*Vireo solitarius alticola*),—the first identified specimens, I believe, that have ever been taken, accompanied by the skins of both the parent birds.

The nest was found May 27, 1887, on Craggy Mt., Buncombe Co., North Carolina. It was in a chestnut, ten feet out from the main trunk, and about twenty feet above the ground, and contained four perfectly fresh eggs. These measure respectively .84 x .49; .78 x .58; .78 x .58 and .80 x .58. They are ovate to elongate ovate in shape; in color pure white with a few fine spots, and rather numerous, minute dots of brown varying in tone from vandyke to seal brown. To the naked eye their shells appear smooth and slightly polished but under a magnifying glass they show numerous shallow pits and occasional short, straight or wavy ridges.

The nest is a substantial structure suspended, of course, after the usual Vireo fashion, in the forks of a slender terminal twig. It measures externally 3.25 in diameter by 2.10 in depth. In places the rim is nearly an inch in thickness. The exterior is beautifully diversified with white and purplish-brown sheep's wool, grayish lichens, small strips and fragments of decayed wood, and a few spider's cocoons, bound firmly to, or hanging loosely from, the framework proper, which is composed of coarse grass stalks and strips of bark, the latter partly a reddish-colored inner bark, probably from the hemlock, but largely the pale gold, sheeny outer bark of the yellow birch, (*B. lutea*). The interior cavity is lined with fine bleached grasses and the reddish stems of some species of club moss.

Upon comparing this nest with four New England nests of *V. solitarius* I find that it is much larger, with thicker walls and more elaborate external decorations. The eggs also are larger and finer spotted than any of the series of fifteen eggs of *solitarius* in my collection.

## Nesting of the Mountain Solitary Vireo.

BY R. B. McLAUGHLIN, STATESVILLE, N. C.

Until June 2, 1888, the day on which I found my first nest, I considered the Mountain Solitary Vireo (*Vireo solitarius alticola*) a rare migrant. I was very anxious to secure a specimen, but saw only two birds during the spring migration, and was without my gun on each occasion.

The body of woods in which I found the nests consists wholly of pines, is high and dry, and, after the Pine Warblers (*Deudreca pinus*) have quit building, has little to attract the oölogist. My hope on June 2nd was to find some nests of the Louisiana Water Thrush (*Sialurus motacilla*) and, having previously planned my route, I was on the nearest way to the first stream, which led me through these pines, when I heard, and immediately recognized, the song of *V. s. alticola*. I had seen a single individual there in March, and at once realized that the bird had been nesting near. I followed up the notes in order to get a view of the bird, not with any thought of looking for its nest, however.

Having located the bird, I had been watching him but a short time when a pause in his song and a low musical note announced the arrival of his mate. Turning my attention to the female I saw her step upon the side of her nest, which was suspended from a pine limb, and after drawing some webs across the bottom part and along the sides she got down in it.

She then flew to another tree and the male got in the nest, where he remained a short time. Meanwhile the female was being followed by another bird, which by the hungry motion of its wings, its attitude of utter helplessness and its note, I knew to be a young one, though being of the usual size, there was nothing else to suggest its infancy. It was treated with "cold, indifferent respect." I found that the pair had hatched a brood earlier in the year which was still following them.

I kept them under eye for some time and on different occasions for the purpose of ascertaining the exact number of young and am sure it was three.

I took the nest of this pair with four fresh eggs on June 15th. The male was incubating and refused to be frightened from the nest. After throwing at him a few times, I buckled on my climbers and went up the tree—a small slim pine. The bird never left the nest until I placed my finger on his head. When he left he began singing and his mate immediately appeared. They scolded me in a language peculiar to other members of their family. I shot the female.

The second nest was found on June 11th. I had located the male by his song and the fact that he was several times in a fight with a Pine Warbler, which he evidently regarded as a trespasser, gave me assurance that his nest was close at hand. However, I failed to discover it until he went to it and the female flew away. All attempts to frighten him from the nest were also futile. He kept his seat until the limb was cut off—this nest, too, was attached to the limb of a tall, slender pine, about forty feet from the ground and nine or ten feet from the body of the tree. Both birds were shot, as this nest, containing three eggs, was the first taken, though the other was the first one found. The set of three had been incubated for four or five days. The two nests were less than a hundred yards apart.

The Mountain Solitary Vireos arrive quite early and I feel that my observation of the species, both as a migrant and as a breeder, warrants me in saying that while with us it confines itself exclusively to the pine woods. The song of the male is not very unlike that of the Redeyed species (*Vireosylva olivacea*), and he has the same habit of occasionally repeating his notes very rapidly as though he were in a hurry but did not care to leave anything unsung. In fact, I believe this trait is more pronounced in the Mountain Solitary than in the Redeyed.

Mr. Norris has very kindly consented to de-

scribe the eggs and a nest of the Mountain Solitary for the readers of the O. & O.

[Mr. Brewster and Mr. McLaughlin having both sent in their papers on this rare bird at the same time, they are published together.

Mr. McLaughlin has sent me one of the nests which he refers to in his article, and also the two sets of eggs for description.

The nest is built suspended by the top edges between the fork of a horizontal branch about half an inch in diameter. It is a much more solid structure than any nest built by a bird of this family that I have ever seen. The exterior is almost entirely covered with bits of bark, cotton, hornets' nest and lichen. The interior, or real body of the nest, is composed of dried grass several layers thick, and it is impossible to see through it, as can be done with many vireo's nests.

The set of four eggs are of the usual shape for eggs of this family, white with a rosy tinge, quite heavily spotted at the larger ends with bright chestnut. The spots are not sharply defined, but gradually fade into a lighter tint on the outside margin of each piece of color. This produces a very beautiful effect: .80 x .59; .80 x .59; .81 x .59; .79 x .59.

The set of three are of the same shape as the preceding set. They are also white, but without the rosy tinge in the former set, and more glossy. The spots are smaller, more sharply defined, and are of a darker shade of chestnut. They are also more confined to the larger ends than in the former set: .79 x .59; .80 x .58; .79 x .57.—J. P. N.]

### Nesting of Audubon's Warbler.

BY WM. G. SMITH, LOVELAND, COLORADO.

On July 1st I discovered the nest and four eggs of Audubon's Warbler, (*Dendroica auduboni*) in Estes Park, Larimer County. It is at about 8000 feet elevation. I have never seen any record of its breeding so far south, so I thought it would interest some of the readers of the O. & O. to give a brief description of it.

The nest was placed in a water birch tree near the river, about eight feet from ground, and was composed of grass and small stems of sage brush, well lined with horse hair and feathers of the domestic fowl. Outside diameter of nest about four inches, inside one and one-third inches, and one and one-half inches deep. The eggs measure on an average 18-32 x 23-32 inches, and the ground color is light

blue, dotted thickly around near the middle, but a little toward the larger end, with dark brown and purple spots and dashes. The whole of the remainder is covered sparingly with small spots of same color. The eggs were quite fresh. The female was quite reluctant to leave the nest, so I went to camp which was but a few yards away and got my gun and when I returned she had again taken possession. I then reluctantly shot her to leave no doubts as to the identification of the eggs.

### A List of Some Birds of La Plata County, Col., with Annotations.

BY C. F. MORRISON.

(Continued.)

84. *Colaptes auratus mexicanus* (Sw.), Ridgw. Red-shafted Flicker. Common, breeds everywhere up to 12,000 feet. All our flickers are true *mexicanus* and I am glad to be in a country where *hybridus* is not found; in Wyoming I nearly became demented arranging my numerous specimens taken there, and it is no wonder I feel relieved now that no such work has to be done on this species here.
85. *Ceryle alcyon* (Linn.), Boie. Belted Kingfisher. Rare, a few pair seen along the Rio las Animas and Rio La Plata, have not seen it higher than 8,500, although Mr. Drew quotes it at a thousand feet higher. The fact is, its food supply is rather short on the Rio La Plata and judging from my experience with that river it would take all the fish for many miles to supply a pair and its brood of young. Trout are scarce, also a small minnow which are about the only fish found in the stream.
86. *Geococcyx californianus* (Less.), Baird. Road-runner. Rare, but a few found this side of the New Mexico line on the Ute reservation which I include in this list; does not go above 5000 feet.
87. *Asio americanus* (Steph), Sharpe. American Long-eared Owl. Our most common owl, breeds up to 10,000 feet in nests of its own, but more often in old Magpie's nests, the domes of which have decayed and fallen in. The large number of such nests make it quite an inducement which this species cannot resist. Sets of three eggs are most often found but four are also laid; have not found more.
88. *Asio accipitrinus* (Pall.), Newton. Short-eared Owl. Rare, I have taken but one specimen, in Feb., 1887; it was on a large flat mesa to the west of Ft. Lewis.
89. *Scops asio macralli* (Cass.), Ridgw. Rocky Mountain Screech Owl. Common, breeds in hollow pinons, took three young and an addled egg from a nest last June. The birds soon became great pets, one especially would fly about wherever I went and would perch upon my shoulder while writing and quietly doze; when I was through it woke up and was all ready for a frolic. It finally disappeared from its coop and I knew not what became of it. The other two, after a long series of adventures with both cats and dogs, passed away; one meeting a violent death at the hands of my bird-catching tom cat, the other being drowned in a water barrel.
90. *Bubo virginianus subarcticus* (Hy.), Ridg. Western Horned Owl. Not apparently common, have secured but five specimens and seen two others, have not found its nest yet so have been unable to take any "phenomenal sets." As my "Bird invigorator" has run out perhaps I may not be able to do so. Reaches 13,000 feet.
91. *Glaucidium gnoma* Wagl. California Pigmy Owl. Rare, found one nest and saw a single specimen. The nest was in a Woodpecker's hole in a large pine stub, contained three young in June. Nestling plumage will be given later on.
92. *Aesalon columbarius* (Linn.), Kaup. Pigeon Hawk. Not at all common, breeds sparingly, have taken one set of five eggs, the only nest I have been able to find. Goes lower down in winter.
93. *Tinnunculus sparverius* (Linn.), Vieill. Sparrow Hawk. Abundant, breeding in old flicker's holes, ranges to 12,000; arrives early in April.
94. *Accipiter cooperi* Bonap. Cooper's Hawk. Abundant, breeds in tall pines and on rocky ledges, very common in the fall.
95. *Accipiter fuscus* (Gmel.), Bp. Sharp-shinned Hawk. Common, breeds abundantly in heavy growths along the La Plata, generally like *A. americanus* in old Magpie's nests. Eggs from three to five. The set of five I took last year are now in the Museum of the Worcester (Mass.) Society of Natural History and differs from many sets taken, in having very small spots instead of large blotches. Ranges up to 9,500 feet.
96. *Buteo borealis calurus* (Cass.), Ridgw. Western Redtail. Common, breeds in the tall pines of the gulches and in trees that put our New England pines in the shade. One nest which I found (from the ground) was in a tree at least 80 feet high and the trunk was as large

in circumference as a boiler of a river steamer. I do not stretch this I believe, although it might have looked larger to me as I could not reach the nest. The parent bird carelessly watched me from the nest not caring for me in the least.

97. *Buteo swainsoni* Bonap. Swainson's Hawk. Common but does not choose such lofty sites for its nest as the preceding, as its nest will be found in pines of stunted growth as readily as in high ones. It also builds or adds to the old nest for several seasons. More fond of building along the streams than in the pine timbers of the *mesas*.

(To be continued.)

### Changes in the Relative Abundance of Species.

BY WALTER HONIE.

A sudden change of habitat is not often observed among birds and when it does occur it is a very noticeable feature of the locality. This is equally true whether it occurs as an advent of a new species or the desertion of an old one. As an instance of the former I can mention the sudden influx of Cat birds on the sea islands to which I have alluded before in these pages. The latter phenomenon is now exemplified by the Snipe. This winter, so far, I have seen but three, and last winter probably not more than a dozen. In former years they were one of our commonest birds, coming early and staying late. Why they should have taken themselves away so abruptly I cannot surmise. All the conditions of life, so far as I can see, are the same and they certainly were not much molested.

The gradual withdrawal of a species is exemplified in the case of the Kildeer Plover, and here again I can detect no change in food supply or other natural circumstances. Twenty years ago they were a resident bird, breeding abundantly in the cotton fields. Eight or ten years ago they became only a winter visitor but were then very abundant. For the last five years they have steadily decreased in numbers and are now almost ready to be classed as a rare bird. If I see three or four in a day it is a fact to be remarked.

The Long-billed Curlew has fluctuated quite remarkably. In ante-bellum days I am told they were a fairly common breeder. In 1868 I saw several pair during the summer and they were noticed at that season for eight years more. Then for ten years were never seen ex-

cept in winter. In the summer of 1886 a pair remained about, and I had good reason to suspect them of nesting. Last summer none were seen.

Their abundance in winter has also varied curiously. About the time they deserted this as a breeding location the Hudsonian Curlew began to appear among the winter flocks. These gradually became more abundant and the Long-bills less so until about 1880 when they were quite rare. Since then they have gradually increased and their born allies have grown fewer. This winter there are large flocks with only an occasional solitary Hudsonian to be found among them.

Similar phenomena to those here cited can be noticed in other localities. I could cudgel my memory of by-gone days and speak of the Black-breasted and Pasture Plover in the old Bay State, and my savage feats among them with an old "King's Arm." Really at this remote epoch it seems as if I had to "shin" up to the top of the old thing to load it. Now do some of you old boys who can nearly go back to "flint-lock days" tell the young lads about those good times.

### Rose Breasted Grosbeak "Jack."

Editor O. & O.:—I again ask you to place on record the fact that my Rose Breasted Grosbeak still lives and is now ten years old. The record in the O. & O. shows that he was taken from the nest a naked little thing early in July 1878, he and has kept in good health ever since. The present spring he commenced to sing as usual, but seemed to take cold and has not sung since, although he tries hard and seems to be in good health and is in fine plumage. "Jack" is a remarkably intelligent bird and blessed with a good memory. He is just beginning to moult and shows unmistakable signs of age. He is perhaps the first Rose Breasted Grosbeak that ever spent ten years time in the same cage.—  
JOS. M. WADE.

### Occurrence of the Least Bittern in Salt Marshes at Port Royal, S. C., on June 13, 1888.

BY M. W. C. G.

Attention was first attracted to the bird by a succession of unusual and most uncanny sounds, proceeding from the marsh, where the water was about two feet deep.

Though it was 11 o'clock and a starlight night, almost too dark for shooting, we procured a boat and went in search of the strange visitor, whose voice bore more resemblance to the hooting of an owl or the harsh croaking of a frog, than any thing else. We knew it must be some strange water bird, and I naturally concluded that it was the night Heron, *Ardea nycticorax* (Wilson), from the continual sound of "quok, quok."

We paddled softly in the direction of the sound, the gunner standing in the bow. We ran the little boat straight into the marsh, when suddenly the object of our search rose almost from under the boat, too close for a shot, and the darkness rendered it impossible to get a shot at any distance, so we had to give it up and return home a much disappointed party.

The next morning to our great satisfaction, the ghostly cry was again heard in the same spot from which we had frightened it the night before. The boat was again brought into use and the enthusiastic amateurs went in search of the stranger.

This time the expedition was crowned with success and in a few minutes the beautiful little visitor had fallen a prey to ornithological zeal. It proved to be an exquisite specimen of *Ardea herodias*, but unfortunately it could not be preserved, as none of us were equal to the task and the weather was too warm for it to be sent farther afield.

The extreme length of the bird was not more than twelve inches; the plumage was remarkably varied and beautiful.

I would like to hear from others on this subject, as I think the occurrence of this bird is rare in salt marshes.

### The Mockingbird as a Mimic.

BY H. R. TAYLOR.

It has somehow happened that in my researches in ornithological literature I have never met with a description of the Mockingbird's remarkable genius as a mimic, and so the other day, when I heard a wonderful medley proceeding from a cage by the window of a cottage, I stopped to listen and was richly rewarded for so doing.

As I had thought, the musician was a Mockingbird, and a better singer I never heard. The extent of his *repertoire* was something wonderful and he imitated the notes of some of our wild birds and domestic fowls with a facility

that surprised me. Song after song poured forth from his little throat without intermission, till he stopped for a moment's rest, soon to go on again as before with an almost infinite variety of notes.

A partial list of the birds and animals he so well imitated may prove of interest: American Goldfinch, Canary, Blue-fronted Jay, Parkman's Wren (song and scolding notes), Brewer's Blackbird, Humming bird, dog barking, Crimson House-finch, Turkeys and young, Hen clucking and cackling, Yellow-bellied Fly-catcher, young chickens, howling of a puppy, frogs croaking, rooster's crow.

The crowing of a rooster was of course in miniature but a charming imitation and it was always followed by an artistic little trill or flourish. It is but just to give this talented Mockingbird credit for his own music also, which was of great merit and should, I think, properly entitle him to the name of composer.

The lady who owned the bird soon observed my interest and kindly volunteered some information regarding him. He could imitate, I was told, almost any sound he heard. At one time the lady had a cough and was considerably annoyed to hear her pet mimicking her continually. The bird used to imitate a neighbor who whistled for his dog. The whistle was repeated so exactly by the Mockingbird that someone in the house would often remark, "there, Charlie has lost his dog again."

### The Mockingbird.

BY C. S. BRIMLEY, RALEIGH, N. C.

The Mocker has always been one of my favorite birds since the first time we became mutually acquainted; his courage, conspicuous appearance and lively song all combining with his distinguished manners to make a favorable impression on strangers.

The Mockers have only just arrived from the South, but have already settled down to their old ways and can be seen in all their accustomed haunts. The Mocker in this part of the world prefers the society of man—I presume the woods make him feel lonesome, as he is never found there—and wherever there is a house there also is a pair or two of Mockers and what follows, as a matter of course, a good deal of noisy bird music as well.

As a singer the Mocker is unequalled, although considered by many as a mere piratical imitator of other birds, he always seems to me

to stamp his own trade mark on his adaptations and besides he quite as often indulges in his own genuine song which certainly is no imitation of any other bird.

In his breeding habits he is quite exemplary; he begins to raise one family in May and in July his second or third are introduced to the world. He builds a bulky nest of small twigs with most anything else thrown in to help out, strings, rags, wire, grass, etc., generally choosing a small tree or bush to place his domicile in.

While his family are being raised, he and his wife are very jealous of any interference and speedily put to flight any hawk, cat, dog or other suspicious character found in the neighborhood, not only making the welkin ring with their loud remonstrances but enforcing said remonstrances with sundry vicious pecks which cause many an unsuspecting dog to flee howling from the vicinity of their nest.

When November comes most of the Mockers leave us, a few, however, remaining through the winter, chiefly in thickets, but they seem pretty lonesome and forlorn and do not sing much unless an unusually fine day is sent us by the weather bureau.

One word about the Mocker's imitations: some of them seem mere adaptations, others again are exact reproductions of the bird's notes; he can fool the unsuspecting on Killdeer, and imitate the Brown-headed Nuthatch so well that if he only stayed in the right locality he would get away with me every time, and so with a good many others, but he usually gives himself away by keeping straight ahead with his song and blending some half a dozen other bird's notes with it.

One habit of the Mocker which is pleasing or not, according to circumstances, is his way of singing all night (and all day too) when the weather gets hot. His song is very pleasant if you don't want to sleep, but a Mocker just outside an open window makes more racket than is desirable at night.

### Phainopeplas and Humming Birds at Riverside, Cal.

BY THEO. D. HURD.

In 1887 *Phainopepla nitens* and Humming birds, mainly *C. annas* and *C. costae*, arrived and bred in great numbers in the vicinity of Riverside, Cal. Never before had they been so common, and their nests were found nearly everywhere, but mostly in pepper trees about

dwellings and streets. This year it has been just the reverse. I have seen but four or five *Phainopeplas* in the valley and Hummers have been nearly as rare, although both were rather common in the river bottoms during the migration.

Can anyone suggest a reason for this? If in other localities the same has been noticed, we should like to hear from them.

### Albino Robin at Grand Rapids.

BY GEO. C. HOLLISTER.

On the 1st of September my father was attracted by a bird that looked like a Robin, except it had a white head. The next day I saw the same bird feeding on the ground with other Robins. After I shot him I found that it evidently was a young bird, as the feathers on the upper parts of the neck were not fully developed.

The following is the description: Crown pure white, hind head and nape white with a few black feathers scattered about, the greater number being over the right eye, edge of eyelids yellow surrounded with white, a very indistinct black superciliary streak, throat and sides of head with a few black feathers, the shoulders also have a few white feathers and there are two more in the back, the first secondary of the wing is white, though the corresponding feathers of the wing are dark. Otherwise it is the same as any other Robin.

### Eagle vs. Fish Hawk.

BY J. F. W.

It is a well-known fact among Naturalists that in localities where both birds are commonly found, the Eagle robs the Fish Hawk of many a savory meal, relying on its superior prowess and power of wing to force from the Hawk its hard-earned but lawful prey.

I had often read of this fact but never had a practical illustration of it until the spring of '86 while camping on the Matanzas river in Florida. One hot day in May I was sitting on the bank of the river lazily smoking my favorite pipe and watching the graceful motions of the Least Terns that were continually flying up and down the river. Suddenly a Fish Hawk appeared on the scene and my whole attention was at once centered on his repeated unsuccessful

ful plunges in pursuit of his finny prey. At last he was successful and brought to the surface of the water a Mullet that as near as I could judge would weigh about two pounds. With a shake he divested his feathers of all unnecessary weight in the shape of water, and started to fly slowly toward a large dead tree where he could enjoy the fruit of his labor. He had nearly reached the tree when all at once he uttered a cry and with quick hurried flappings started to fly toward the heavens. For a minute I could not understand this change of tactics and was wondering what had happened to the Hawk, when actor No. 2 appeared in the shape of a Bald Eagle, with wings set, coming straight toward his victim with the velocity of the wind. They met and then began a series of aerial evolutions that made me hold my breath as I watched pursued and pursuer each struggling to outdo the other. The Hawk had quite a start, but inch by inch the Eagle gained on him until with a last despairing cry the Hawk dropped his fish. For a second I saw the silvery sides of the Mullet dash in the bright sunlight as it fell toward the earth, and in another second I saw the Eagle falling rapidly head first toward the fish which it caught before it had fallen one hundred feet. With an upward swoop the Eagle gained his equilibrium and sailed rapidly toward a neighboring dark pine forest that undoubtedly contained his nest.

This was the final act of a drama enacted in nature's own theatre and it left me with a feeling of uncertainty as to whether I had been up in the air chasing the Hawk with the Eagle or whether I was standing on terra firma during the performance.

### Nesting of the Barred Owl in Mass.

BY C. L. PHILLIPS, TAUNTON, MASS.

April 28, 1888, while exploring a large, dense swamp in South Dighton, Mass., I was so fortunate as to find the Barred Owl (*Strix nebulosa*) breeding. The nest was placed about thirty feet high, in the fork of a swamp maple. The owl had evidently utilized an old Red-shouldered Hawk's nest, simply adding a few pine twigs and lining it with downy feathers and moss. The nest contained two white, translucent eggs, measuring 56 x 44 mm. and 57 x 46 mm. respectively.

I sat down and watched for the owl's return; she soon made her appearance, approaching

slowly and cautiously from tree to tree. She had got within two rods of her nest when a crow came diving down on her back; taken by surprise she took to flight and soon disappeared in the dark recesses of the swamp with *corvus* in hot pursuit.

### A Trip to San Benito County After Golden Eagle's Eggs.

BY J. R. CHALKER, HEALDSBURGH, CAL.

This year I left San Francisco on March 5th, 1888, and after riding to the San Benito County line, I got off at a small station, packed up my outfit of blankets and other materials and struck off into the hills.

Having been shut up in the city for three months I felt as though I could storm any eagle in his strong hold and carry away the best works of art in his castle. I had not proceeded more than a mile before I saw an eagle sailing with its mate in circles, and very high up.

It being then about one o'clock I knew the female bird was taking some exercise before going on her nest. (I have observed that eagles usually leave the nest near noon and seek it again before three o'clock. If the weather is pleasant and hot the bird is apt to spend almost all day in company with her mate flying and sitting around on the fences and trees. On a windy and cloudy day a little exercise of perhaps thirty minutes is all she will take during that day).

Having sat down in an easy position I looked the country over with my glass, and while doing so I noticed the female bird fly away over the hills followed by her mate. I knew then that her nest was at least a mile away and might be two. Over the hills I went and after hunting a while I found the nest in a big live oak tree. This made me happy and I forgot my city legs were beginning to give out with only a three hours' walk. I, however, was soon up to the nest. It was empty, although a new nest. The nest was ready to lay in but the cold weather had made the birds backward and they had not laid yet.

I had two weeks to walk some sixty miles, to get around to my old nests and I plainly saw I could not get back to get the eggs that would be in this nest in a couple of weeks, so I consoled myself with the thought that I might strike it again next year.

Picking up my traps I decided to go and see the Tar Springs, so called. I had heard about

the country near the springs as being favorable places for eagles, and that it used to be a great place for California Vultures; also that they used to breed a few miles back in the heavy red-woods, and much other information about this locality.

I spent the best part of two days in this section and never saw either an eagle or a California Vulture, but did find the asphaltum springs and saw them sending out their sticky tar all over the face of the hill. I saw some fossil shells in a streak of gravel that were very perfect, and a little farther on a cow that had got in a tar hole and was apparently becoming fossilized, as nothing could get to her; even the Coyotes and Turkey Buzzards had to stand back and look on.

Crossing the Pajaro river I started for Watsonville and about three o'clock found a new eagle's nest in a big red-wood. I could see the old bird on the nest, as the tree was on the side of a gulch. I went down in the gulch to the bottom of the tree and there it stood, five feet in diameter and not a limb for thirty feet up. I had a mind to give it up as the nest was high (94 feet) and the limbs large. On the lower side of the tree was another red-wood that stood close to this one and whose branches lapped across over on to the limbs of the big red-wood.

I cut some pieces of wood, and having cut a notch in each tree I placed one of my pieces of stick and hammered one end down till it was solid. In this way I made a ladder between the two trees and got up quite a distance, and then by using a tree ladder which I hooked over the second limb of the small tree, I had things ready for a good start in the morning. I slept near the tree and the first thing I heard in the morning was the old eagle on her nest calling to her mate.

It was very foggy and as I was in a hurry to get the eggs, I went to my last night's work and started up the tree. I climbed up within four feet of the old bird and could have caught her by the tail with ease, and would have done so if the eggs would only have kept whole during the performance, so I spoke to her kindly and said "old eagle, good morning." She turned her head, rose up, took one step forward, spread her wings and sailed away. It added one more pleasure to my life to see this sight. There was no hurry, no fear, nothing but dignity. It said, I only leave because I am the weaker, while you are a coward to take advantage of me.

I did feel sorry for the old bird, but I had

come all the way from the city for what she owned and so I had to rob her.

The eggs, two in number, were deeply marked. This nest was made of large sticks and lined with red-wood twigs and straw stubble. It was very large and ninety-four feet from the ground. As it had begun to rain I hurried down and started for shelter but could find none that would enable me to keep dry during the night, so I went about two miles to a farm house where I got dried out. It was a pleasure to sit by a good fire in the best of company after being out in a heavy rain nearly all day.

I started the next day for the eagle cliff where I took a set of eggs last year. I camped that night in a cave high up on a hill in a big rock. The next day I climbed up to the old nest and found two eggs lightly marked. (The set I took from this nest last year were heavily marked). I saw no eagles near this nest and only climbed up to see how it looked, so I was somewhat surprised to see two eggs.

I went to Watsonville and from there to a nest from which I took a set of eggs last year. I found it had been fixed up but was forsaken. I then started for Tres Pinos, and the first night got another soaking which gave me a hard cold.

On my second day out from Watsonville I found another nest. I had spread my blanket out to dry on a fence and was enjoying my cold and the sun when an eagle flew by me, and after going nearly half a mile flew into a tree.

I waited for her to fly out, and after thinking she might have a nest in that tree and not seeing her get out, I picked up my glass and gun and went to investigate. On getting close to the tree I discovered the nest and presently the bird flew off. This nest was in a white oak tree up thirty-seven and a half feet and contained three eggs not heavily marked.

This nest was lined with stubble and moss and was apparently an old one that had been used several seasons. The three eggs are more elongated than usually is the case with eagle's eggs.

The eagle that laid these eggs had a beautiful ring tail. I returned to my blankets and camped that night in a barn. Next day I went to a nest from which I took a set of nearly white eggs last year and found the nest unused.

Crossing the San Benito river I traveled to a nest from which I took the first set of eagle's eggs I ever collected and found it torn down.

Going to Tres Pinos I found the town booming. Setting out early I went up the Tres Pinos river to a nest from which I took a set of eggs

last year, but found it deserted; the eagles were around but I could not find their nest. The birds acted strangely and I believe had no nest within two miles, but were attached to their old home and so they came there to enjoy their nooning and have a good time.

On St. Patrick's day I went to a nest from which I collected a set of eggs last year and was pleased to find a nice set this year, and very similar to those I took last year. This set are quite below the average in size and are nicely marked.

Returning to Tres Pinos I took the train home, looking much like the wandering Jew, outside. I was well pleased with my success, however.

The several sets measure:

First set:  $2\frac{3}{8}$  inches  $\times$   $2\frac{1}{2}$ ;  $3 \times 2\frac{3}{8}$ .

Second set:  $2\frac{3}{8}$   $\times$   $2\frac{10}{16}$ ;  $3 \times 2\frac{10}{16}$ .

Third set:  $3\frac{1}{2}$   $\times$   $2\frac{3}{4}$ ;  $3 \times 2\frac{3}{4}$ ;  $2\frac{10}{16}$   $\times$   $2\frac{3}{4}$ .

Fourth set:  $2\frac{3}{8}$   $\times$   $2\frac{3}{4}$ ;  $2\frac{3}{8}$   $\times$   $2\frac{3}{4}$ .

Incubation, 1st set, one egg fresh, the other advanced; 2nd set, incubation commenced; 3rd set, incubation advanced; 4th set, fresh.

The dates of eggs taken are as follows:

1st set March 7, 1888. 2nd set March 9, 1888.  
3rd set March 13, 1888. 4th set March 17, 1888.

Coloration of the eggs:

1st set, eggs darkly marked with reddish brown and lilac all over, one darker than the other.

2nd set, one egg nearly white, the other lightly marked on small end with reddish brown splashes, remainder of eggs sprinkled with dots of brown.

3rd set, eggs light with abundant markings of pale lilac and a few spots of brown.

4th set, eggs lightly marked with lilac and brown, one egg more so than the other.

[Mr. Chalker's success in finding the eggs of this bird has been truly remarkable.

In 1886 he found one set of their eggs and described their taking in THE ORNITHOLOGIST AND OOLOGIST for June, 1886, vol XI, p. 85.

In 1887 he took five sets. (See THE ORNITHOLOGIST AND OOLOGIST for June 1887, vol. XII, p. 86.

This year he has taken four sets. This makes a total of ten sets. Who has beaten this record?—J. P. N.]

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If every subscriber would make an effort to add one new name to our subscription list, it would result in an immediate increase in the amount of reading matter. While the O. & O. is a permanent publication, its increase in size will depend entirely on the amount of financial support it receives.

## The Shore Birds of Cape Cod.

BY JOHN C. CAHOON.

There is no locality on the New England coast so favorable for observing the migration and habits of our *Limicola* as Cape Cod.

It extends from the southeastern part of Massachusetts in shape like an arm into the broad Atlantic Ocean. Its bold sandy beaches and islands, its large area of salt and fresh marshes, and miles and miles of sand and mud flats laid bare at low tide, afford a most desirable feeding and resting ground for the large number of shore birds that pass this point, as they wing their way north in the spring and south in the summer and autumn.

In former years shore birds were so plentiful that enough plover to fill a bushel basket were sometimes shot at a tide by one gunner. Although the birds are much decreased of late years, enough return each season to offer considerable sport to those who are on the grounds during the flight periods.

The best marsh shooting is to be obtained on the north and west sides of the Cape, there being large tracks of marshes nearly the whole distance from Barnstable to Wellfleet. Some of the best localities are Barnstable, North Dennis, Brewster, Orleans, Eastham and Wellfleet. Along the east or ocean side there are high beaches and flats, the birds feeding on the flats at low tide and returning to the beaches to rest at high tide. The best grounds on this side are Eastham, Orleans, Chatham and Monomoy Island. The shores of the south side have but little flats or beaches, so only a few birds stop.

The birds given in the following list are those that occur in Barnstable County, and I have included none that have not been authenticated by specimens taken. There are doubtless several others that visit our shores which ere long will be added to the list.

The dates of their arrival and departure have been taken entirely from my own notes, and I have endeavored to give them as exactly as is possible from many seasons observations at different localities on the Cape. The condition of the wind and weather hastens or delays the movements of shore birds. Some touch quite regularly, but most of them fly far out from land, and if the wind is fair and weather clear, we have no flights of birds. If at the time these large flocks are passing our coast the wind blows fresh from the east or southeast, and still better, if there is a thick fog, many

birds are blown in shore and stop to feed and rest. This relates to the autumn migrations when the birds are flying south. In the spring, the wind most favorable for flights would be northeast.

In this list I have given in addition to the scientific and English name by which it is known to ornithologists, the local name, that it is called by the gunners on Cape Cod.

Red Phalarope, *Crymophilus falcicarinus* (Linn.) Whale Bird on Cape Cod. A rare spring migrant. This bird arrives in the spring at the same time as the following species (*Phalaropus lobatus*) with whom it associates in its migrations, and like the latter is not regular in its appearance on the Cape coast.

Northern Phalarope, *Phalaropus lobatus* (Linn.) Whale Bird on Cape Cod. A common spring migrant. This bird passes the Cape coast between the first and twenty-fifth of May. As this bird feeds and lives wholly in the water, it may most properly be called a "sea bird." It is irregular in its appearance in shore, and it is only after a heavy storm on shore or thick fog that it is seen in the bays, harbors, and inlets of Cape Cod. The men that go ten to twenty miles from shore in boats cod-fishing in the spring, report seeing many flocks of "whale birds" as they call them. I have seen them when on a fishing schooner on several occasions in large flocks feeding on some kind of substance that they got from the large masses of floating sea and rock weed. They are very tame, especially in foggy weather, and will allow one to approach within a few yards, in a boat, before they will fly. They are pretty to see, as they float or swim gracefully and lightly on the water. One of the flock will leave the others and fly a short distance ahead and alight on the water, and a second, third, and fourth will follow, and so on. In this manner, many of the flock are always in motion. When they come in about Monomoy Island, they are usually seen in the tide rips off the point, and near the cut through which the out tide flows through the Island into the bay from the ocean.

American Woodcock, *Philohela minor* (Gmel.) Summer resident. Breeds. Although this bird is not common in the summer, it is tolerably so in the spring and autumn flights. Its dates of arrival are the same as in other portions of New England. Its habits are pretty well known, and as it cannot properly be called a shore bird, I will not take up the space by an account of them. They have been taken as far down towards the end of the Cape as Orleans,

and I have seen borings in corn fields and flushed one from the edge of a swamp at that place. Quite a number are shot in the autumn at Barnstable, and are usually found in pines.

Wilson's Snipe, *Gallinago delicata* (Ord.) A common spring and autumn migrant. It arrives in the spring early in April, and all do not pass before the middle of May. In autumn it reaches the Cape about the second week in August, but is not in full force until the middle or last week of September. On the Cape it is found on fresh marshes and springy bottoms at the edges of salt marshes. The best locality that I know of is a soft, muddy marsh near Harwich called the "Grassy Pond." It is very springy and miry, and is overflowed with water in the winter and spring, which dries away during the summer, leaving large pools of water in some places. It is crossed by several wide ditches and is covered by patches of grass, rushes, and lily pads. It is exceedingly hard, tiresome work traveling about on the marsh, and although in some parts there is a firm bottom, in most parts it is very miry, and one will sink to his hips at every step. On several occasions I have gone down into the mud up to my arms. I have had some fine sport with duck, teal, rail birds and snipe, and have started as many as forty of the latter in a few hours tramp over this marsh on a September morn. Of late years they have not been as plentiful in this and other localities on Cape Cod. Most of them leave by the last of October, but a few remain until the soil freezes.

Red-breasted Snipe, *Macrorhamphus griseus* (Gmel.) Brown-back on Cape Cod. A common spring, summer, and autumn migrant. The first arrivals in the spring reach the Cape as early as May 1, and become common about May 20. Only a few stragglers are seen after June 1. In the summer migration the first ones arrive at Cape Cod about July 5. Several old Cape gunners say that they always go for them at Monomoy Island the 12th of July. They are the most common from July 15 to July 25. A few continue to arrive until the middle of August, and by the last of that month none are seen about the Cape. One thing that I have noticed, is that there are very few young birds of this species seen. Unlike the other shore birds in the fall migration, a very great majority of these birds seen on the Cape are adults.

These birds go on to the flats to feed as soon as the tide ebbs off sufficient to allow them to wade about. They follow the tide out in the manner of sandpipers, wading belly deep in the water, sticking their long, probe shaped bill

into the grass and mud for the numerous marine bugs, worms, and soft shell fish that they feed upon. Often several are seen in company with a flock of small sandpipers ranging about on the sand flats, and are easily distinguished from their smaller companions by their slower motion, larger size and length of bill. As soon as the tide flows, they fly to the salt marshes or meadows and stop until the next ebb tide. They seldom go on to the high beaches with the curlew, plover and sandpiper that go there to roost at high tide.

They have decreased very fast during the last five years, and where we saw a flock of several dozen then, we now see them singly, or in bunches not exceeding ten or twelve. They are the least shy of any of the shore birds, and it is due to this fact that they have decreased so fast. They are easily decoyed, and although they fly swiftly, their motion is steady and they keep closely together. They alight in a compact bunch, and the gunner usually shoots into them before they scatter out. Many are killed by a single discharge, and those that remain spring up with a sharp whistle and fly a short distance away, when hearing what they think to be the call of a deserted comrade, they wheel about and come skimming bravely back to the murderous spot where they were first shot at. Again they are shot at, and again the remaining half dozen are loath to leave their dead and dying companions, and return to share their fate. One or two may escape, and as they drop silently down on some lonely sand spit, sad relics of their departed companions, what sorrowful thoughts must be theirs as they wait for their comrades that will never come. When scattered on the meadows they lie very close, and when flushed their actions are similar to the Wilson's Snipe. They can swim very fast, and I have several times got a good wetting by following a wounded one into deep water.

Long-billed Dowitcher, *Macrorhamphus scolopaceus* (Say.) A rare migrant. In New England *Bird Life*, Vol. II, I find the following note: "A female was shot at Eastham by Mr. L. Tileston, November 2, 1878. I have not been able to distinguish it from *M. griseus*."

Stilt Sandpiper, *Micropodina hiansantopus* (Bonap.) A tolerably common summer and autumn migrant. It is seen on the Cape between the last week in July and the first in September. Most of them seen at Monomoy Island are during the first or second week in August. It is usually seen on the flats and beaches in company with sanderlings and

*Erwinetes pusillus*, and with the exception of being more shy its habits are the same.

Red-breasted Sandpiper *Tringa canutus* (Linn.) Adults, Red-breasts; young, Gray-backs, on Cape Cod. A common spring, summer, and autumn migrant. This beautiful bird arrives early in May, a few passing as late as June 15. In the summer, adult migrants from the north reach the Cape as early as July 15, becoming common about August 6. The young arrive August 21, and by that date nearly all of the adults have passed south. They remain as late as the first week in October, and a few straggle along up to November. They are very fat in the autumn, and as they bring a good price in the markets, are much sought after. They feed on the flats, sand spits, and low beaches at low tide, on small shell fish and marine animals. At high tide they go on to the high beaches to roost. When plenty, the young birds afford excellent sport as they fly in a compact flock, and are easily decoyed to the blind by a person proficient in shore bird shooting.

Purple Sandpiper, *Tringa maritima* (Brünn.) An irregular autumn and winter visitor on the Cape. This bird is tolerably common in the autumn and winter, but it is not regular in its appearance. It is found on the north side of the Cape on the rocky and pebbly shores. Mr. W. A. Jeffries shot one as early as Sept. 11, 1887, at Chatham, on the sandy beach. It does not usually arrive before October 1, and is rarely seen on a sandy beach. Its food consists of small snails and other shell fish which collect on rocks and pebbles.

Pectoral Sandpiper, *Tringa maculata* (Vieill.) Grass-bird on Cape Cod. A common summer and autumn migrant. I do not know of any of these birds being seen on the Cape in the spring, and, if they do occur, it is very rarely. The first comers in their migrations south reach the Cape early in August, becoming common by the last of that month and increasing and decreasing at intervals during September. I copy from my note-book of 1885 as follows:

"Sept. 23, wind blowing from the northwest. The storm of last night caused a flight of shore birds. On the meadows (salt), which the rain had overflowed, I found Pectoral Sandpipers abundant."

Under date of August 31, 1886, I found notes as follow:

"The wind and rain of the 30th brought along a flight of birds. Pectorals abundant on the meadows."

Under date of October 4, same year, I find "Pectoral Sandpipers common;" and later, Oct. 22, "Found only four Pectorals on the meadows to-day."

This present year (1887), although only a few stopped, three were seen on the meadows as late as Nov. 1. I think very few ornithologists are aware of the protracted stays made by some of our shore birds in the autumn. I was surprised this last fall, on date of November 14, to find several small flocks of Black-bellied Plover, Sanderlings and Red-backed Sandpipers about the flats, as we had been having some cold, blustering weather with snow squalls. On the Cape it does not go on to the sandy beaches and flats, but frequents wet, fresh and salt meadows and marshes. Its favorite resorts are salt meadows or marshes, near the shore, on which the grass has been cut, and which after a rain is covered with shallow pools of brackish water. Its food consists principally of small shell fish and worms. They also eat small grasshoppers and crickets which are very numerous on the meadows. Their flight and action when flushed are much like the Wilson's Snipe, and I mentioned it in the O. & O., Vol. XI, No. 1, page 10. Several old gunners at the Cape say that there are two distinct varieties, basing their inference on the difference in the size of the birds. I had supposed until this last fall that they were adult and young, but on examining some of largest birds, I found both adult and young among the number. There is certainly a great difference in the size, the former being more delicately formed, less common, and are more frequently seen on the fresh meadows and marshes some distance from the shore.

White-rumped Sandpiper, *Tringa fuscicollis* (Vieill.) Peep; Sandpiper on Cape Cod. A tolerably common autumn migrant. Like preceding species, this bird is a rare visitor on Cape Cod in the spring. All of the writers of New England ornithology have described it as being abundant in its migrations. It may be in some portions of New England, but it is certainly not so on Cape Cod, or the islands off the Cape. In its southern migration, the first ones arrive at the Cape about Sept. 1. Individuals continue to arrive until the last of the month, and from this period until Oct. 5 they are the most common. None are seen after Oct. 15. It frequents the wet meadows and marshes near the shore, feeding on small insects and shell fish. It shows no preference to the marshes, being as often seen on the sand flats and beaches.

On the flats it is seen singly, or in small flocks mixing with other sandpipers, feeding along the edges of channels and the receding tide water, on such tiny worms, fleas, and shell fish as they may find there. I have never seen more than eight in a flock. They sometimes go on to the high beach to rest during high tide.

Least Sandpiper, *Tringa minutilla* (Vieill.) Peep or Bumblebee on Cape Cod. An abundant spring, summer and autumn migrant. The first comers reach the Cape the last week in April or first in May, becoming abundant about May 13, and remaining so until June 1. The first ones from the north come about July 6, becoming common July 15, and increasing at intervals during August and September. It is the most numerous about the last of August. A few stragglers remain into October. In the spring they are seen in pairs or small parties of from six to twenty, and seem to be in a hurry to continue their northern journey. In the summer and autumn they are in no hurry, and gather in large flocks on and along the edges of marshes, muddy flats and creeks and pebbly beaches, in search of small worms, aquatic insects and tiny shell fish, which they eagerly devour. They are very numerous on the marshes at Barnstable, Dennis, and Brewster, in the summer and autumn, after the grass has been mown. I remember when quite a small boy what sport I had in one of the above meadows during the haying season while after these little snipe. Often in my eagerness to reach a flock on the meadow, I got into a muddy slough-hole up to my waist, but that was soon forgotten if I made a successful shot.

As we walk out on the marsh, we see several of these graceful little birds about the edge of a muddy pool, sticking their bills into the soft mud after small worms and insects. If we stop and look carefully around, we will see some of the little fellows only a few yards distant from us, standing perfectly still, their little black eyes watching every movement we make. As we start on, one springs up with a faint cry, and as he goes skimming away he is joined by other individuals that we had not noticed, which get up out of the grass near by. As they continue their flight twisting and diving, they are reinforced into a good sized flock by companions from different portion of the marsh, and rising to a considerable height they circle about several times and come flying back, often alighting upon the same place that they started from.

(To be continued.)

## Editorial,

The O. & O. is mailed each issue to every paid subscriber. If you fail to receive it, notify us.

We received a short time since Public Document No. 25, State of Massachusetts, it being the report of the Commissioners of Inland Fish and Game, and the perusal of the same has been very interesting. As a citizen of the state we were somewhat anxious to know what the expenditure of between \$1000 and \$5000 was for, wherein the Commonwealth was benefitted, or we as individuals. We found that His Excellency the Governor and Honorable Council were respectfully notified on the first page that in the year of grace 1887, May 14th, at the Lawrence fishway there were first seen "a few lampreys and suckers" and that "suckers, chubs, and small silver eels" were last seen Nov. 9th. As that valuable information did not satisfy our longing to find reports of mighty deeds of valor and of superhuman efforts for the protection of the fish and game we turned over the pages, not without some trepidation, fearful that our Commissioners might have commenced cautiously for fear of alarming His Excellency and the Honorable Council, and that the climax with the list of dead, wounded and missing would be found in that portion of the report which is supposed by common report to be looked after by the Commissioner who "has shot over fifteen states of the country and knows what he is talking about." The same one who was so blood thirsty that he wanted "the scalps of every taxidermist in the state."

We hurried through the report only stopping long enough to read that portion wherein a Deputy reports that he "had been allowed the largest liberty possible, no one questioning his right to search, except in one instance," and that by a poor old darkey who was peddling from a cart, some lobsters that did not measure a full ten and a half inches in length. As the unfortunate colored man was unable to read this Deputy's commission, the officer read it for him, as well as the law relating to short lobsters. Stunned and shocked undoubtedly at the information imparted, the contraband "modestly asked if Cleveland made that foolish law?" The imputation was unquestionably too much for the political dignity of the valiant deputy, and he "took six short lobsters out of the cart and proceeded to walk away," (we are glad to know that he *walked* away), and poor "nig" asked him if he "wasn't going to pay for

dem lobsters?" supplementing his inquiry by saying "A white man wouldn't do dat in Virginia," and he was without question right in that statement. With sarcastic brevity we are informed that the poor illiterate colored man was compelled to pay a fine of \$20 and retire from business.

The majesty of the law had been upheld and a poor old black fish peddler, who could not read the law, instead of being cautioned that he was breaking it first, and punished at the second offence was compelled to pay \$20 and lose his business. This extremely industrious deputy, who is so minute in detail, fails to tell what *he* did with the lobsters he seized, he should have done so, it would have rounded up his story. We find he was paid that year \$158 for services and \$83.48 for expenses, a total of \$241.48 and the sum total of his work was in fines and costs \$172.40 and a darkey driven out of the business of peddling fish.

After this harrowing tale our heart sank, for we were confident that when we should arrive at the report upon Game there would then such a tale be unfolded as would harrow up our souls and freeze our young blood, but we were unnecessarily alarmed, for we are informed that in the opinion of the Fish and Game Commissioners, "*Massachusetts lays*. First in *intelligence*, and quick in the recognition and adoption of methods of advancement *in all desirable things*, the old Commonwealth is the least efficient of all the states in the matter we have discussed."

Well there is "han hopinion has is han hopinion," with a vengeance, and it is worth while to scrutinize that which they have discussed. Space will not allow us to criticise but a portion in this issue and we will speak only of that which relates to Song and Insectivorous Birds. The Commissioners say "the law for the preservation and protection of singing and insectivorous birds is thus soon producing gratifying and palpable results." If there was ever a palpable piece of buncombe and humbuggery, that statement every ornithologist knows is the grossest and without the least foundation. It starts off with an implied assumption that there has been at some past date a diminution in the ranks of the song bird which every naturalist and close observer knows was a false one when made, and was as absurd as it was groundless. It emanated from a source which is always seeking after a cheap notoriety in building up something or another over which to gush and upon which to shower sweet sentiment. There were enough in the state to make quite a stir in the public press. In a neighboring state one

particular paper by toadying to the sentiment managed to bring quite a respectable grist to its mill, and although a large portion of each issue is devoted to advertisements of death dealing instruments for game birds and colmans taken up with tales of slaughter, still it was used as a mouth piece, and its selfish ends not discovered for some time, and not until it was found its only object was to sell more of its issue and do the necessary printing in shape of pledges, etc., to keep step with the procession and float in on the wave of this new "fad." The Fish and Game Commissioners, or at least some of them, joined hand and glove. The one who stood forward as the champion of the sentimentalists early disclosed his total unfitness to speak on the subject, by declaring that "we had nothing more to learn of the birds, we knew all about them now," declared "that all one needed to study them with, was an opera glass to watch them in the trees," and yet after all that exhibition of ignorance of the subject, now comes forward and says, "the law is producing gratifying and palpable results," and "the birds are largely upon the increase to the great benefit of the agriculturist," (that last is only a little sop to the rusties who are always thought to be susceptible to "blarney"), "and the comfort and delight of all people." We are not surprised at the statement they make that "Massachusetts lags in intelligence," if they think that the Commonwealth takes any stock in such balderdash. People who have to use opera or other glasses to study the feathered creation, whose days are not spent in the forest and field in actual observation and study are not entirely qualified to give an opinion of any value upon such a question. We have confidence to affirm that there is not a naturalist of any reputation in the country that would undertake, upon a three or four year's ordinary observation, to declare whether there was any change one way or another in the numerical strength of the song bird, much less then those who have other business affairs to attend to, and to whom the protection of fish and game is but a side affair. The succeeding paragraph is one which is particularly interesting to those unfortunates who were assured when the law was passed that "if they would moderate their assault upon it that they might rest assured that all reputable ornithologists should be given permits to collect," and who immediately afterwards were coolly informed that the commissioners had determined to grant no permits, and this followed up by information reaching them that the honorable gentlemen had granted per-

mits to some who never had even expressed a desire for them. It is real refreshing to an enthusiastic ornithologist to read that the "restriction of permits had been brought to a minimum, only fourteen being issued in the year and they only to people entirely trustworthy and who do not abuse the privilege."

Were it necessary we might call into question the desirability of granting permits to some we know have received them if the matter of bird butchery is really what the commissioners desire to prevent.

It will suffice, however to say as showing the evident insincerity and favoritism of the Commission that it has no qualms of conscience in appointing as a Deputy to spy out infractions of this part of the law, one who has used the columns of the severely virtuous paper we have mentioned before in advertising for "bright plumaged birds, Tanagers, Orioles etc." Was it because he was a member of a society that gives a free dinner semi-occasionally to the Commission?

As to the concluding portion of the paragraph, asking the farmer and the women of the state to co-operate. That is all right, we don't object provided the farmer will let his charity for the birds begin at home, and kill off a good portion of his cats which prowl along the walls and fences killing birds the ornithologist would not expend powder and shot for, and grease up the old blunderbuss and lay it away, allowing the Orioles a full swing at his pears, and Robins, Thrushes, Catbirds, Cherrybirds and all, free license to his cherries and pears. And the ladies—well, we don't need to ask them to do any thing but what they always have done, wear the plumage of our domestic fowl fancifully colored, or if their brother, or some other girl's brother gives them a Quail or Partridge wing, even if he should go to Quincy market and buy the wing of a Plover shot while on his way north to breed, that his body might be a tid-bit at some Game Protection Society's dinner, it will help protect our song bird.

The next paragraph, however appears to give, in rather an obscure way, a reason for declaring our dear old Commonwealth so backward in intelligence. She has not yet awakened to the fact that here at home we have an abundant food supply of a new and *recherche* character. But we doubt not, but that the gigantic intellect which made this important discovery of such a new food supply, after it has recovered from the great mental strain it must have had in making it, will in the next report give so many and such exhaustive recipes for the pre-

paration of the delicacies as would make a Soyer green with envy. That utterly despised and filthy foreigner, the gamin of the bird world, that gutter gleaner of our highways, that bird outcast which shuns the bright, beautiful fields to build and nestle where grim and soot is thickest, who finds his *pièce de résistance* in the garbage heaps and his *bonne bouche* on the pavement—the English Sparrow. Is it not unfortunate that the fact that this great food supply has been overlooked so long? Who can measure the immense benefit that is so sure to be realized when the Commonwealth is thoroughly awakened to the fact that it has been loitering. To be sure under the beneficent influence of our great Fish and Game Commissioners its citizens have been able for years to eat and enjoy half decomposed Grouse, Quail, Duck, Woodcock, Snipe and Plover that have been months in a cold storage warehouse; the flesh sodden, the feathers and skin so near putrefaction that no plucking is necessary to denude the body, a simple wipe of the hand taking both off effectually, and it will benefit the Protective Societies who don't believe in killing game in close time in Massachusetts, but yet don't object to eating it provided some one will declare that it had the ear marks of another State.

Now, all that is necessary is to gum for Sparrows at any time of the year, there need be no excuse for any one not having a "bird and a bottle" provided he can muster funds for the bottle, birds are plentiful enough. And then it will be so like la belle France, you know. There anything clothed with feathers is declared delicacy. Johnny Crapeau will hunt as indefatigably for a poor little half starved titmouse as our mighty hunter of the Commission ever did for the game he was after in fifteen states. Of course the little urchin who is gunning for English Sparrows won't shoot our Song Sparrows, Robins, Bluebirds or any of the native birds that the ornithologist makes war on. Oh, no, he will be taught by this new school of gastronomy that our Chipmunks, Robins and the like are not food birds, they sing, and their whole diet, when there are no fruit or berries, is of an insectivorous nature, and of course they won't be shot.

The only thing which appears to be lacking in the report upon this question is, we are given no directions as to whether the bird should be *boiled, broiled or baked*, whether to be served *à la Française, au naturel*, head, feet and tail feathers, trussed and larded, with *sauce piquant*, what brand the bottle should wear, and all

these little details which a *chef de cuisine* always notes.

The naturalists of Massachusetts are not a murmuring class, they dig and delve in their sphere with but little attention to what is going on in the outside world, but unless we mistake the sounds, they are becoming awakened to the fact that they are being hindered and disturbed in their investigations in an unwarrantable manner, and it seems for no other purpose than that some interested parties may make a little ephemeral notoriety and pocket about \$700 a year each, for services and expenses that do not benefit the state one penny. They have suffered long and patiently and they propose by all honorable means in their power to bring about a change from the present execution of the law. They do not believe that the legislative branch of the state government ever contemplated creating an autocracy or placing it in the power of any one, two, or three men to thwart any student of nature by compelling him to break the law or give up his studies. They feel very confident of their ability to demonstrate the unfitness of the present Commissioners for the position they occupy should it be necessary, even now to a great many who do not claim to be naturalists, it is a self-evident fact.

While not so directly interested in the protection of fish and game we propose in some future issue to present some matters of interest in that line to our readers.

### Spiteful.

A special town meeting was called at Chatham, Mass., last month, and the Selectmen were instructed to take measures to prevent a certain party from shooting on Chatham Flats. From our correspondent we find the *true inwardness* is that Chatham derives a yearly income from sportsmen "who put up at hotels," and they fear that if any one locates to windward it will interfere. *There is not one iota of love for the law or birds* in the move. It is simply, WE WANT THE EARTH. This is not the first time our attention has been called to what we believe to be a spiteful persecution in that section. We will watch the move in that quarter, and let our readers know the probabilities of being obliged to wear in the hat a ticket, "That ginger pop and cigarettes were bought at our cottage hotel," in order to shoot on Cape Cod beach.

## Consistency.

A frisky old maiden, of years, two and forty;  
Thought to kill birds fearfully naughty,  
With soul overwrought with fictitious piety  
She became a bright star of the Audubon Society.  
She preached of its virtues, by day and by night,  
And to deal out its tracts was her special delight;  
She donned its *toy badge* (for fifty cents bought),  
And by her appeals great excitement was wrought.  
She called on the farmers, the butchers, the bakers,  
She appeared to the sportsmen and all the law-  
makers,  
She spun out such yarns, and *seemed* such a saint,  
'Twas enough to make mortals at sight of her faint.  
Now, it chanced, that our lot was cast in her way,  
And we'll lisp unto you what we saw in one day.

In the morning she rose from her EIDER down bed,  
And with ELEPHANT ivory scratched the top of her head;  
Next she put on her jacket of CHAMOIS skin made,  
Which with bones from the WHALE was artistically stayed;  
Then with KANGAROO boots so shapely and neat,  
With PORPOISE strings tied, she covered her feet;  
With a twist and a turn, and a terrible rustle,  
A FOREST and STREAM was attached for a bustle;  
It faded from sight under azure blue gown,  
Which was daintily trimmed with snowy SWAN'S  
down;  
With a TORROUSE shell comb she adorned her gray  
hair,  
Put M'ASK on her kerchief and went down the stair;  
At the table, a chair lined with HIDE was her seat,  
And a newly made FOX mat lay at her feet;  
While she ate for her breakfast, GROUSE covered  
with sage,  
She talked to a BIRD that was confined in a cage!  
Next TABBY, received from her mistress, *kind words*,  
(By the way, she's a rattler at *killing small birds*.)

For the morning walk out, it was *early* spring,  
The SQUIRREL lined SEALSKIN seemed quite the  
thing;  
A pin carved from WALRUS tusk, both ancient and  
neat,  
Was used to secure it, where the collar ends meet;  
An OSTRICH tip leather was on hat front and back,  
And a HORN handled umbrella she drew from the  
rack;  
A GAROR skin satchel with care she did fill,  
With circulars, petitions, and PORCUPINE quill;  
She paused as she placed her hand on the door,  
And her eye caught a TIGER skin stretched on the  
floor;  
Her wing feather fan she surely must take  
To forget her KN gloves would be a mistake;  
An order for dinner, "VENISON and QUAIL,"  
And WOODCOCK for supper form part of our tale.  
Then began the day's work, in behalf of the birds,  
And the maid's pleading voice once more was heard.  
Now as we leave her, this *thought* rushes in,  
Does not this whole movement have a *mighty thin*  
skin?

Some people think *they* can do as *they please*,  
And bring every one else down on their knees;  
But in the long run they surely will find,  
The ORNITHOLOGIST AND OOLOGIST is not one of the  
kind.

## Brief Notes.

A Leconte's Sparrow, female, was taken by W. W. Worthington at Sapelo Island, Ga., Feb. 22, '88.

Because O. & O. fails to reach you don't conclude it has retired. There is lots of vitality still on hand.

J. M. Wade, former proprietor of the O. & O., in his Fibre and Fabric, has a paper which fills the bill. Success to it.

Mr. H. W. Henshaw of Boston, it is reported, has sold to the British Museum his entire ornithological collection for \$10,000. It is a great pity that there was not public spirit enough to purchase it and retain it in this country.

A. G. Wallace, sends us a sketch of a trout taken July 5. Length, 18 inches; depth, 4 inches; width, two and a half inches; weight, three and one-fourth pounds. This bird fell the victim to a Jenny Lind Fly and three and three-fourth ounce Nichols split bamboo rod, three miles above Hell Gate camp, Dead Diamond Run, N. H.

The article, "Shore Birds of Cape Cod," by John C. Cahoon, is of value to the shooting fraternity. An extra edition containing it will be printed and furnished for twenty-five cents.

Our foreign subscription list we hope will increase. We shall mail a number of sample copies to collectors in England, and would call their attention to the O. & O., as the most popular ornithological magazine published in the States. Mr. Hurst of Birmingham (see advertisement), is our foreign agent.

Mr. John C. Cahoon has organized a sporting association known as the Bristol Brantling Club. Its members are from Boston, Taunton, and New Haven. They have completed their arrangements for the season's sport at Monomoy Island Club House.

We recently received the following Albinos: Blue Jay—Shot near Lynn, Mass., about 1857. Pure white, with slight pearly indications of the regular markings.

Rusty Blackbird—Male, Burlington, Iowa, May, 1888. Head white, rest of plumage natural, except two primaries on each wing, and a few scattering feathers which are white.

White-winged Scoter, male—Taken near Portland, Me., May 9, '88. Bird pure white, with gray markings on head, neck, and upper tail coverts. A remarkable specimen.

Migratory Thrush (Robin)—Taken at Marlboro, Mass., May, '88. Pure white, excepting one tail feather which is very dark, and a few scattered brownish markings.

The Jay and Blackbird are the specimens described by Mr. F. A. Bates over the Boston Scientific Society. (July O. & O.)

Just before going to press we had the pleasure of opening a very fine lot of rare Mexican Bird-skins, from one of our most enterprising collectors. Among them we noticed two varieties of Trogons, Parrots, Jays, &c., some of which are almost unknown to the majority of our ornithologists, except through books.

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No. 9.

## The Shore Birds of Cape Cod.

BY JOHN C. CAHOON.

(Continued.)

Red-backed Sandpiper, *Tringa alpina pacifica* (Cones.) Crooked-billed, or Fall Snipe on Cape Cod. A common spring and abundant autumn migrant. It usually arrives the last week in April, and by the 13th of May all have passed Cape Cod on their northern journey. In the autumn, the migrants for the south reach the Cape about Sept. 23, becoming abundant about Sept. 30, and remaining so through the greater part of October. A few remain late into November. In the spring they are in pairs or small flocks, and are quite shy, but in the autumn they are apparently without fear, and large numbers are shot by tyro gunners who are not successful with the larger and more wary birds. They feed on the sand flats, spits, and low beaches, in flocks by themselves, or in company with sanderlings and sandpipers. Their food consists of sand fleas, marine animals, and shell fish. I have seen them at the fish works on Monomoy Island eagerly devouring flies and insects that were very numerous about the guano spread out on the sand. They go on to the high beach to stop during high tide. They stop with us in the autumn later than any of the other *Limicola*.

Curlew Sandpiper, *Tringa ferruginea* (Brünn.) This is a very rare straggler on our Cape coast. Ten authentic instances of the occurrence of the Curlew Sandpiper in New England are given in New England *Bird Life*, Part II, and one of these is of a specimen that was shot on Cape Cod about the 10th of May, 1878.

Semipalmated Sandpiper, *Ernocetes pusillus* (Linn.) Sandpiper, or Peep on Cape Cod. An abundant spring, summer and autumn migrant. The first comers in the spring reach Monomoy Island about May 1, becoming common the

12th, abundant the 16th, and last seen June 25. On return migration, the first ones reach us as early as July 4, becoming common July 15, and abundant through August. Usually by the last of September all have departed for the south. This bird is more of a beach peep than its little cousin, *T. minutilla*, with whom it often associates. They frequent sand flats, bars, pebbly beaches and about the sedge grass that is found on portions of the flats. They are sometimes seen on the marshes, and at high tide they retire to the high beaches to rest until the tide begins to ebb. It is interesting and sometimes amusing to watch them as they run about on the sand flats industriously searching for some tiny flea, worm or mollusk to satisfy their capricious appetite. One little fellow finds a choice morsel, but before he has time to devour it, he is beset by a number of his companions all eager to have a share in the feast, and the wrangle is finally ended by the last comer seizing the prize, and running away a few yards hastily swallows it before the views of his expectant companions.

Sanderling, *Calidris arenaria*, (Linn.) "Gray back," "Whiting," "Sandpiper," or more often "Bull-peep" on Cape Cod. An abundant spring, summer and autumn migrant. The first arrivals of this handsome "beach bird" in the spring are seen on Cape Cod about the last week in April or first in May, the full force passing during the second and third weeks in May. Stragglers are seen as late as June 24th. In the summer the first ones migrating south, which are adults, reach the Cape as early as July 6th, becoming common by the 17th and abundant by the 25th. The young commence to arrive the first week in August, and by the middle or last of the month no adults are seen. They are abundant at intervals during September and October, a few remaining late into November and individuals have been seen in December. In the spring they are seen in pairs or small flocks of from six to twelve and evince

a marked shyness which is not noticed in the autumn. They go to the sand flats and low beaches to feed along the edges of channels and receding tide water. They are very restless and exhibit great activity while running about in search of their food, which is sand fleas and other small marine animals. As soon as the tide flows they retire to the high beaches to wait until the next ebb tide. They are often seen in large flocks running about on the sand near the surf picking up small bits of food washed up by the waves—and from this habit they are best known in some localities on the Atlantic coast as "Surf snipe." As soon as a breaker comes rolling in on to the beach they beat a hasty retreat, keeping ahead and out of reach of the rushing water, then turn and follow the retreating waters, often wading belly deep to get a dainty morsel before it is carried beyond their reach. About five years ago I found this bird very plentiful in September at fish works on Monomoy Island, about some guano that was spread out near the beach. They were feeding on small flies and insects that were very numerous about and on the guano. I have never seen it on the marshes and it is a bird of the sand, as its name implies. They are very salable in our markets and since some of our larger birds have become scarce, a great many are shot each season by the market gunners and sportsmen from the cities. An old gunner writes me that about ten years ago he shot six of these birds on Race Point, Provincetown, and that he had never seen any before or since.

Marbled Godwit, *Limosa fedoa*, (Linn.) This large shore bird, second in size to the Long-billed Curlew only, is a straggler from the south and is rare on Cape Cod. On one occasion I saw two of these birds on a marsh at Monomoy Island, but on account of their shyness I was unable to secure a specimen. I am certain of their identity as I have had much experience with them on the Florida coast. In color this bird very much resembles a Curlew, but instead of its bill being curved downward like a Curlew it is bent slightly upward.

Hudsonian Godwit, *Limosa haemastica*, (Linn.) Spot-rump on Cape Cod. A rare spring and tolerably common migrant in the autumn. It passes the Cape coast in the spring between the first and last weeks in May. In the autumn they arrive about the middle of September and individuals are seen from this period at intervals until the last of October. They are more often seen from the 25th of September to the 10th of October. They are usually seen after a

heavy south-easterly storm and for this reason are quite irregular in appearance. They frequent the sand flats, low beaches and marshes, after the manner of the Curlews. I am told by old gunners that they were at one time very common on the Cape.

Greater Yellow-legs, *Totanus melanoleucus*, (Gmel.) "Winter Yellow-legs" or Cucu on Cape Cod. A common spring and autumn migrant. This is one of the first shore birds to reach the Cape in the spring, and migrants are seen as early as April 15th in a forward spring. The first comers usually arrive at the Cape from the 25th of April to May 5th, becoming common the 10th or 15th and none are generally seen after June 15th. In the autumn the first ones arrive about July 21st and are seen in small numbers at intervals from this time until October 1st. From the 25th of September to October 15th they are the most plentiful, as during this period the "flights" usually occur. They are tolerably common until the middle of November and because of this protracted stay in the autumn are called "Winter Yellow-legs" to distinguish them from the succeeding species, which is much smaller. They are found on fresh and salt water marshes, about muddy creeks and on low beaches and on the sand flats, about the edges of sedge grass. Its favorite resorts, however, are salt marshes and meadows near the beaches and flats. Its long yellow legs enable it to wade about in shallow water after the tiny fish which is its principal food. Though usually seen singly or in small parties of three to six I have seen as many as thirty in one flock in October. They often go on to the high beaches to roost with other birds. It is a very noisy bird and its loud shrill whistle of six or more rapidly repeated notes with a short interval between the second and third like cu-cu—cu-cu-cu-cu is often used to warn other shore birds and water fowl of danger approaching. I have on several occasions been tempted to "shock the bishop," when crawling towards a flock of plover on the marshes, to have one of these tattlers which had been watching me for several moments get up from the marsh and vociferate his alarm notes with such success as to cause most of the birds on the marsh to hastily seek safer quarters. Their note is easy to imitate and as they are not wary many are despatched from blinds made in the tall sedge grass at the edge of flats where they come to feed as soon as the tide ebbs sufficiently to allow them to wade about. When standing still or walking about they have a peculiar motion of nodding their heads and tilting their bodies up

and down with a sort of jerk. Like most of our other shore birds a marked decrease is noticed in their ranks during the last five seasons.

Yellow-legs, *Totanus flavipes*, (Gmel.) Summer Yellow-legs on Cape Cod. A rare spring, and abundant summer and autumn migrant. I have never seen this bird in the spring and although individuals have been seen on Cape Cod at this season, it is of very rare occurrence. In the summer early migrants reach the Cape by the 15th of July and the flights usually occur between August 6th and September 7th. In looking over my notes I find that the largest flights on Monomoy Island during the last three seasons have taken place on the following dates: August 15th, 1885; August 30th, 1886; September 7th, 1887. None are seen after the middle or last of September. This elegant wader so familiar to New England sportsmen that go for marsh birds, is called Summer Yellow-legs on account of its being numerous in the summer season and to distinguish it from the preceding species. It frequents mud flats, wet marshes and meadows and about the edges of muddy ponds. Its favorite haunts, however, are salt marshes or meadows, where during heavy summer rains the water collects in large shallow pools. I have never seen it on the high beaches or sand flats. Its food and habits are similar to *T. melanoleucus* with the exception that it is more gregarious. Its notes are not as loud but clearer and mellow with no long interval and are repeated with greater rapidity. None of our shore birds are less suspicious or more easily decoyed, and after a flock has been shot into many times, if any of the number are left they will return at the sound of a whistle, a poor imitation of their notes, with outspread wings and gracefully and confidently alight among the decoys in the spot where a number of other relatives and friends had been slain a few moments before. Like many of our other shore birds it is very fat in the summer and autumn.

Solitary Sandpiper, *Totanus solitarius*, (Wils.) A tolerably common spring, summer and autumn migrant. It arrives from the south early in May and specimens are occasionally seen in June and July. They are more often seen in August and September on the Cape than in any of the other months. By the 5th of October all have taken their departure for their winter home. While with us in the spring and summer it is seen about the shores of secluded fresh water ponds and streams, but in autumn migrations it is frequently found about pools on fresh marshes as well as on salt, near the shore.

I have seen individuals on several different occasions on Monomoy Island in company with Yellow-legs about a meadow that was covered to a depth of several inches with fresh water. It exhibits but little shyness and generally will allow a person to approach within a short distance before taking flight.

Willet, *Symphemia semipalmata*, (Gmel.) Humility on Cape Cod. A tolerably common spring, and a common summer and autumn migrant. It arrives in the spring between the middle and last of May, and is seen singly or in pairs as late as June 15th. In the return migration the first ones reach the Cape as early as July 8th and are common at intervals from the 11th until the last of September. It is the most common during the month of August. It is larger, stouter and its legs are shorter than *T. melanoleucus* and it is more wary and clamorous. Their food and haunts are similar to their above long-legged relative. They are restless and suspicious and at the first intimation of danger will take flight, their notes of alarm usually starting into the air all of the other shore birds within hearing distance. The young birds in the autumn, however, are often easily approached within shooting distance. This species was once very abundant on the Cape in the spring and autumn.

Ruff, *Pavonella pugnax*, (Linn.) An accidental visitor on Cape Cod. There is one instance of its occurrence, a young male which was shot by a Mr. Churchill at Chatham, Mass., Sep. 11th 1880, as recorded in Forest and Stream of Oct. 7th, 1880 p. 186.

Bartramian Sandpiper, *Bartramia longicauda*, (Bechst.) Upland or Field Plover on Cape Cod. A tolerably common spring and common summer migrant. It arrives on the Cape in the spring between April 12th and May 10th. On their return from the north they reach the Cape in small flocks about the last of July or first of August. They are the most common from the middle or last of August to September 12th. After the first week in October none are seen. I think a few pair of these birds reside through the entire summer, but as I am not positive I have not included it as a resident. My acquaintance with this species is limited, but from what I have been able to learn from old gunners it was in former years abundant on the Cape during the migrations. It well deserves the name of Field or Upland Plover by which it is most commonly known, on account of its frequenting high pastures and fields. Its food consists of beetles, crickets, grasshoppers and other insects which impart to its flesh a savory

flavor and causes it to be much desired for the table. It is rarely if ever seen on the beaches or flats, but occasionally goes on to the dry salt marshes to feed on the crickets and grasshoppers that are very numerous there in the summer and autumn. They are very wary and as they are in small parties and fly swiftly, a person to make a fair bag must be a good shot and have much experience.

Buff-breasted Sandpiper, *Tryngites subruficollis*, (Vieill.) A rare spring and autumn migrant. I have never seen this bird in the spring. I have taken two specimens on Monomoy Island, one Sept. 24th, 1885, and the other Aug. 30th, 1886. They were both in adult plumage and were shot on a wet salt marsh where they were associating with Pectoral Sandpipers. I am inclined to believe that if a sharp lookout was kept for this bird at the time of the flights of the Pectoral Sandpipers, they would be found to be of tolerably common occurrence.

Spotted Sandpiper, *Actitis macularia*, (Linn.) Peep, Tip-up, or more commonly Ox Eye on Cape Cod. An abundant summer resident. They arrive in pairs as early as the middle of April and become common by the first or second week in May, and a few remain as late as the second week in October. It is not confined to the sea shore but is quite evenly distributed over most portions of the Cape. It commences to nest about the middle or latter part of May, and young birds full feathered are seen by the 2nd of July, in a favorable season. They are usually found about wet meadow land, pond streams and pools, but I have found it nesting in wheat fields at a considerable distance from any water. From fifty to one hundred pair breed on Monomoy Island each season. Their nests are usually placed in the beach grass near the beach and occasionally on a bunch of dry sea weed above high water mark on the sandy beach, and is loosely constructed of dry seaweed and grass. It is often a mere depression in the sand. There are few observers of bird life in New England who are not familiar with the "peet-weet" notes of this little wader, and its curious habits of tipping its body and tail up and down which has given it the appellation of "Tip-up," by which it is best known. The young birds are able to run about as soon as they are hatched, and if pursued will often try to escape by taking to the water, and I have seen them swim a short distance under the water near the shore where it was shallow, their feet touching the bottom and using their wings as well as their feet to help along their progress through the water.

(To be continued.)

## Nesting of the Ruddy Duck.

BY WM. G. SMITH, LOVELAND, COLORADO.

Although the Ruddy Duck (*Erismatura rubida*) is quite common here during the breeding season, but very few of them undertake the burden and responsibility of housekeeping, as they prefer to drop their eggs on a muskrat mound, or in the water when they cannot entice one of the few good housewives of their own variety from home long enough to leave them a legacy in the shape of an egg.

I once found a nest with three eggs which on the second morning contained eight, (of course they were all one set!)

The Ruddy Duck commences to lay about the middle of June, and I have found young birds unable to fly on the sixteenth of October.

Unlike other ducks the Ruddy builds a very neat compact nest, exactly like the Redwing-Blackbird, in composition and structure, but always pulls the tops of the flags together to form a roof. I suppose that is done to make a shade against the hot sun, or to conceal them. It piles up a lot of roots on one side of the nest for a runway and is generally placed where the water is at least a foot deep. It is about six inches in diameter inside, and as the usual number of eggs is nine they are piled on top of each other. Although one of the smallest of our ducks, the eggs are larger than those of the Mallard or the Great Blue Heron, measuring about  $2\frac{1}{2} \times 1\frac{3}{4}$  inches. Six which I found weighed as much as a fresh killed specimen that was in good condition. They are creamy white, very hard-shelled, and quite rough. The young leave the nest as soon as hatched, then catch them if you can.

...

## "We Think the Same."

EDITOR O. AND O.:

I notice in an advertisement of a dealer in natural history goods the following quotation, purporting to be from President Ballard in *his* Agassiz Association Handbook: "His specimens are the very best, and his prices will be found to be much lower than those of any other reliable dealer."

If the quotation is correct then President Ballard has done an injustice to other dealers, and misleads those who look to him for advice.

A DEALER.

## Nesting of Golden-crowned Thrush.

BY LYNDIS JONES, GRINNELL, IOWA.

When my first report on bird migration was forwarded to Prof. W. W. Cooke I was not a little surprised that he should have had doubts regarding the breeding of the Golden-crowned Thrush (*Sialurus auricapillus*) near Grinnell, since it is one of our common breeders. I believe that he accounted for what seemed a remarkable circumstance, that *Accentor* should breed here, by saying that this must be a southern continuation of the Spirit Lake Region, long noted for the large number of northern breeders nesting there. Whether or not this be true I do not know; but I do know that *Sialurus* is quite common in woods throughout this region during the whole summer season.

Although it arrives here about May 1st in full song, it does not nest until the 20th. Perhaps there is some difficulty getting mated! The earliest date of taking a nest with fresh eggs (full set) was May 24th, and latest with slightly added eggs June 20; this is probably a late date since its song is seldom heard of in July 4th.

Although the birds are so common the nests are by no means easy to find. At first I supposed the nest was always placed close to the foot of a tree, having found two or three in that position, but I find that such is not the case usually; rather independent of tree or bush or a wooded hillside, but always where the natural surroundings are most favorable for concealment. The composition of the nest varies with the surroundings, as hinted above. If it be a grassy spot, grass is used almost exclusively, if leaves lie thickly scattered about, they are freely used, especially externally, while a brown colored moss and skeleton leaves, with a few rootlets and horse hair, make up the lining.

Every nest yet found has been sunken into the earth an inch or more, and always arched over leaving the small opening on the downhill side. The mother bird sits very closely, leaving the nest only when one comes very close, and then she glides off like a squirrel, and is not readily recognized.

An egg before me, collected here, one of a set of four, the other three being eggs of Cowbird (*Molothrus ater*) has a white ground color and is pretty evenly marked all over with dots, spots and blotches of a light brown, with a wreath about the large end of a lilac and lavender shell markings, making the egg appear more heavily marked in a wreath about the large end; it measures .75 x .60.

Another one is quite different: The ground color is a grayish white, and the markings are almost wholly confined to the large end where they become confluent and hide the ground color, not in a wreath but as a great blotch. These markings are lilac and lavender with a heavy overlaying of a yellowish-brown wash in which appear dark brown, and a few black pencillings, a few dark brown dots are scattered over the whole egg. This one measures .78 x .57. I have selected these two as extremes.

Never yet has a nest been found here but two or more Cowbird's eggs completed or completely made up the set. In one nest I found only three Cowbird's eggs nearly hatched; in another three of Cowbird with one of *Accentor*; another contained four of Cowbird with two of the parent bird; and another June 20th, 1888, contained just five Cowbird's eggs! It would be interesting to know if *Sialurus* is thus imposed upon by *Molothrus* elsewhere.

## A Collecting Trip to Cresson Springs, Penn.

BY HARRY K. JAMISON, MANAYUNK, PENN.

While looking about for a good collecting locality where I might spend a while next season, some place where I could expect to find the nests of a class of birds different from those I have studied up to the present, I noticed the advertisement of an excursion to Cresson Springs, Cambria County, Penn. This place lies at an elevation of 2200 feet, on the crest of the Alleghenies; and as birds that breed that much further north at a lower altitude would probably be found nesting here, I determined to take advantage of the excursion and have a tramp over the mountains to get some idea of what the bird life is there.

Leaving Philadelphia about 10.30 a. m. on June 26th we completed the run to Cresson in about eight hours; the beautiful scenery along the route fully repaid us for the tiresome ride.

The next morning I was out early and was in the field five or six hours. The morning was cloudy and early in the afternoon it began to rain, so I did not get out again. Taking a late train that evening I arrived home the following morning.

The greater part of my time was spent in the old fields and in the edge of the woods, and the commoner species of birds were abundant on every hand.

A female Towhee (*Pipilo erythrophthalmus*) was flushed from her nest on the ground under

a low black berry sprout; four eggs in which incubation had begun were in the nest. A Field Sparrow (*Spizella pusilla*) nest about one foot up in a deciduous bush, also held four eggs which were almost fresh. I noticed a Wood Thrush (*Turdus mustelinus*) on its nest on a horizontal beech branch; it sat close and would not fly off when I shook the branch.

The following species were identified:—Woodcock (*Philohela minor*); Flicker (*Colaptes auratus*); Kingbird (*Tyrannus tyrannus*); American Crow (*Corvus americanus*); Purple Grackle (*Quiscalus quiscula*); American Goldfinch (*Spinus tristis*); Chipping Sparrow (*Spizella socialis*); Field Sparrow (*Spizella pusilla*); State-colored Junco (*Junco hyemalis*); Song Sparrow (*Melospiza fasciata*); Towhee (*Pipilo erythrophthalmus*); Indigo Bunting (*Passerina cyanea*); Cedar Waxwing (*Ampelis cedrorum*); Ovenbird (*Seiurus aurocapillus*); Cat-bird (*Galeoscoptes carolinensis*); Wood Thrush (*Turdus mustelinus*); American Robin (*Merula migratoria*). Also heard the familiar notes of Blue Jay (*Cyano-citta cristata*); Scarlet Tanager (*Piranga erythromelas*); Red-eyed Vireo (*Vireo olivaceus*); Yellow-breasted Chat (*Icteria virens*); and Brown Thrasher (*Harporhynchus rufus*).

The State-colored Juncos, of which I noticed two, doubtless breed here; the residents know this bird merely as a Sparrow.

Of course my stay was too short to form an accurate idea of the ornithological value of the place but I concluded that I could find a much better locality than this, to spend a week or two collecting.

### Large Set of Eggs of the Yellow Warbler.

BY T. W. GLOVER, WHITMAN, MASS.

Thinking that the nesting of a Yellow Warbler (*Dendroica aestiva*) the set of which contained six eggs of that bird and one of the Cow Bunting may be of some interest to the readers of the O. & O. I submit the following:

On May 16th, 1888, while searching for birds in a small bit of swamp on the shore of a pond, I found the nest of a Yellow Warbler about one half done, the bird being busy at work. On the 19th I visited the nest again, and found it completed and it contained an egg of the Cow Bunting. Thinking that the Warbler might build a new bottom to the nest, leaving the Cowbird's egg below, I went again on the 20th and found an egg of the Warbler with the

Bunting's egg. On the 21st the nest contained two eggs of the Warbler. I next visited the nest on the 25th and found it contained five eggs of the Warbler, and on the 26th I found the nest to contain six eggs of the Warbler and the old bird sitting.

I then took them. The coloring is substantially the same in the six eggs, and as six days were consumed in depositing the six eggs I think there can be no doubt about their belonging to the same bird.

The lower part of the nest was composed of cotton waste, probably from some of the factories near by. The remainder was of grasses and plant down. It was about six feet from the ground.

### Food of the Great Northern Shrike.

BY BENJ. F. HESS.

I take pleasure in noticing a discussion arising about the food of this bird. In the July number of the O. & O. last year, will be found a short article written by me on the food of this bird. My notes were mostly taken from observations during the winters, as the Shrikes are not very numerous during summers. My observations since that time have assured me of the accuracy of the statement in regard to the English Sparrow forming a principal element in the food of the Great Northern Shrike during the winter.

The observations of ornithologists in different sections differ, but such has been the case at least as far as my limited experience goes. I, in conjunction with other members of the brotherhood, would like to hear about the experience of collectors in different parts of the country relative to the food of this bird. The columns of this magazine have often been open to friendly discussion, and I presume that a corner may be found for the discussion of this topic until all are satisfied as to what constitutes the chief element of food of this bird.

### Food of the Great Northern Shrike.

BY C. C. MAXWELL.

Referring to Mr. John C. Cahoon's article, July O. & O. "Food of the Great Northern Shrike," the sentence to which Mr. Cahoon probably refers is this;—"The Shrike at Phoenix, N. Y. is a bird very hard to find in

summer, although occasionally seen, but in winter are rather common, and I can say from observation that their food seems to be, principally, English Sparrows."

That is, their food, *in winter*, seems to be, principally, English Sparrows. By this I do not mean that their food, all the year, is English Sparrows, but only as far as my observations go in winter. It would certainly be committing a falsehood to say that their food, in summer, is English Sparrows, when I have no chance to observe them and satisfy myself as to their summer food. I have no record of seeing more than two or three of them in summer all through the five or six years that I collected at Phoenix.

The winter in Oswego County is severe enough to drive all the bugs and worms out of sight and no doubt the Shrikes were driven to eating English Sparrows by hunger, but they did it, nevertheless. No doubt in a vicinity where there are bugs and worms in sufficient quantities the Shrikes would choose and eat them in preference to Sparrows.

The only other collector near Phoenix, N. Y. who can bear me out in my assertions, is Mr. Benj. F. Hess, who, in Vol. 12, pp. 114, writes of shooting a Shrike while in the act of pursuing a phoebe (pewee) through bushes, and he also speaks of their destroying Sparrows. I will ask Mr. Hess to give his later observations to the readers of the O. & O.

### English Sparrow.

BY BENJ. F. HESS.

For a few years back, since this bird has become abundant in the country, various testimonials have been recorded as to the beneficial or injurious effects we have received from its presence. All are satisfied at the present time that he is regarded as being destructive to the interests of mankind.

A new feature in the case has been noticed for the past two years. It is this: when the wheat crop is standing in the field in shocks, large droves of these birds will fly upon the shocks and remain until they are gorged with wheat, and they will remain in near-by places as long as the wheat is still in the field. Now the English Sparrows are not numerous enough in this part of the country to be a very great nuisance but if they increase for the next six years as fast as they have in the past, we will undoubtedly have ample reason to raise a war

cry for their extermination. The amount of damage they do to our wheat at present is hard to ascertain, but all know that the wheat interest of our country is large and with the yearly increase of this bird astonishing facts may be brought to light in the near future.

### Occurrence of the Yellow-bellied Woodpecker in New Haven, Ct.

BY W. G. VAN NAME.

The first time I noticed this bird was in August, 1885, in the White Mountains. It was quite abundant, but all the specimens shot were young birds. Returning to New Haven in September I found them tolerably common and they remained late in the fall. In April, 1886, I received a full plumaged male, (April 10th, I think, but I am absent from my collection and can give no exact dates). On the next day my friend, Mr. A. H. Verrill, shot another. I have the specimen still, as well as several others, if any doubt its identity. In September and October 1887, I found them common.

This bird is particularly partial to coniferous trees. I never thought them shy, on the contrary I have considered them quite tame. They are often found within the city limits. I have noticed that they are very active in dodging around the tree when approached closely. Their commonest note is a sort of squeal.

### A Timely Word in Behalf of the Crow, *Corvus americanus*.

BY EDWARD TENNANT.

Early one morning in May last a friend of mine, a well-to-do farmer, called on me and said he wished to know some way to poison Crows. He said that they had bothered him considerably for the past three years and this season he wanted to be rid of them, and asked me if I could give him the desired information. I told him that I could, but did not feel as though I ought to, for the simple reason that crows were more useful birds than most people were aware of, and asked him in regard to the nature and extent of the damage done. He said that three years ago this spring he ploughed up an old piece of land about three acres in extent and planted it with corn, and as soon as the seed was up the Crows began to congregate and

some times there would be a hundred or more on the field scratching and pulling up the corn, and no amount of scare-crows would keep them off, so they bothered him all summer.

The next year they were not so plenty, as a near neighbor had poisoned a good many, but he said he had to plant a good deal of the corn over, though the damage done was trifling he didn't want the trouble of planting it over so many times, and for this reason he wanted to be rid of them.

I explained to him that it was not the corn the crows were after but the various small insects, larvæ and coleoptera that invest the corn and potato fields in this section, and in order to get at them the Crows had found that pulling up the corn was the easiest and most effective way, and this piece of land in particular being old was full of the kind above mentioned, and of course the Crows found it out naturally and had worked on this till they had cleaned them all out as he said they had not bothered him any thus far, and after showing him some of the records of the examinations of the stomachs of these birds, he said that he was convinced that after all the Crows were not so destructive as he thought and he went home a wiser if not a better man.

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### Nests of Flicker and Downy Woodpecker in the Same Stub.

BY C. C. MAXFIELD, WILLARD, NEW YORK.

In the spring of 1884, while camping on the Oneida river, about three miles above its junction with the Seneca, I fortunately found a prize in a small, rotten, soft-maple stub, which was about eight feet high and ten inches in diameter. The stub was standing near the water among a lot of scraggly swamp bushes, that usually grow at the margin of this stream. Just back of this stub was a small grove of walnut (hickory) trees. There was a pathway made by cattle, passing within five feet of the stub.

At a distance of four feet above the ground was a Golden Flicker's (*Colaptes auratus*) nest. Just above, about ten inches more, was a nest of the Downy Woodpecker (*Picus pubescens*).

The stub was so decayed that I picked away the wood with my fingers to get the eggs. The Flicker's nest was eight inches in depth; the Downy's five inches, and both were entirely worked out by the birds and seemed to be freshly built. The Flicker's nest contained

eight eggs, incubation about one week. In the nest of the Downy were five eggs, all fresh.

When I had obtained the eggs from both of the nests, the whole top of the stub had been picked away, leaving about four feet still standing, and in the top of it was a slight convexity: the bottom of the Flicker's nest.

The nests of the Flicker are common in that part of Oswego County, but this is the only time I have ever observed the Downy nesting there. The latter are to be seen at all seasons of the year and probably breed in some numbers.

In the spring of 1885, I was again on my way up the Oneida and passing the stub I found a Crow Blackbird had taken possession of it and had built her nest in the top. I was very near the bird before she flew off and could not be mistaken in such a common bird. I took a set of four eggs from the nest.

This nest was very light and flimsy as compared with other nests of the same species. It appeared to be only lining, and was totally lacking the coarser outside material that is usually found in their nests. In fact some parts of the wood of the stub were plainly visible through the nest.

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### Remarkable Nesting Sites of the Black Snowbird.

BY W. L. BISHOP, KENTVILLE, N. S.

Nest No. 1 was found May 13th, 1887, and contained five fresh eggs of this species (*Junco hyemalis*). It was in a hole nine feet from the ground, in the side of a large apple tree which stands about fifty feet from a dwelling house, and within eight feet of the barn in the central part of the town of Kentville. The cavity extended down about nine inches below the entrance and here the nest was built. Not much material of any kind was used in its construction, simply a little dry grass and sparingly lined with hair.

Nest No. 2 was found in the woods about half a mile out of the town of Kentville, on May 17th, 1887, by Walter Ryan. This was situated about four feet from the ground on a branch of a fallen spruce tree, and contained four fresh eggs. The nest was composed of the usual material used by this bird, except that it contained in its lining a black Ostrich feather about seven inches long.

Nest No. 3 was found in Kentville, June 1st,

1887, containing three fresh eggs. The site of this was in an ivy that grew up by a corner post of a veranda and spread along each way under the eaves, eight feet from the ground, making a thick cluster of vines. In this a Robin had nested in 1886 and the nest being in a sheltered place remained in a good state of preservation until the following spring, 1887, and in this little Junco built her nest. She first rearranged the original lining of the nest and then lined it with cattle hair. I have this nest and eggs in my collection at the present time.

Nest No. 4 was found June 5th, 1887, within a few rods from the site of nest No. 1, and contained five fresh eggs. This was also in a hole in an apple tree ten feet from the ground, and was probably the same bird as described in nest No. 1, the eggs of nest No. 1 having been taken.

Nest No. 5 was found June 22nd, 1887, contained four fresh eggs. It was in a hole five feet from the ground in a large apple tree that stands within two feet of the line of the sidewalk in a central part of the town. The bird, when on the nest, was in plain view from the sidewalk. The nest was composed outside of miscellaneous material, among which was some pieces of rope yarn, and lined with fine grass and a little hair.

Nest No. 6, found June 4th, 1888, contained young, was situated in a hole four and a half feet high in a large apple tree, within a few feet of a dwelling house in Kentville. The entrance to this nest is quite small, not large enough to admit a persons hand, and the nest is about seven inches below the entrance.

Nest No. 7, found June 4th, 1888, was seven feet from the ground in a hole in the same apple tree as that of nest No. 4, and contained young birds.

### Nesting of the Florida Burrowing Owl.

BY T. H. JACKSON, WEST CHESTER, PA.

By reason of its small geographical range, and the isolated situation in which it is found, the eggs of the Florida Burrowing Owl, (*Speotyto cunicularia floridana*) have long been among the leading desiderata of the writer, and though probably differing but little in its breeding habits from its near western relative, a few facts concerning the nesting of this bird, furnished by a Florida correspondent, may be of interest.

The set of six now in my cabinet differs but

little from those of the typical Burrowing Owl. The shell is very smooth and glossy, having much the texture of eggs of the Woodpecker's family, with thin, clear white, ivory-like appearance, and they are free from the rough granulated shell so often noticed in those of the common Burrowing Owl.

These eggs were taken on the 28th of April, 1888, in Manatee County, about fifteen miles back from the Gulf Coast. A small colony bred together, their burrows being but a short distance apart. The locality is situated on a level plain, or prairie, with but little vegetation, except a scattering growth of "scrub" palmettos and "wire grass." The ground here is somewhat elevated and the soil of a light sandy nature. The burrow in which this set was found was about ten feet in length and the nest three feet perpendicularly from the surface of the ground. It consisted of a small quantity of grass and chips of cow manure broken in small pieces.

Judging from the debris around the nest these birds feed on bugs and grasshoppers largely.

The Florida Burrowing Owls are less numerous there than formerly, the plume hunters having decimated some of their colonies in the merciless war of extermination against all the feathered race in that State.

The measurements of the six eggs are as follows: 1.02 x 1.26; 1.08 x 1.26; 1.03 x 1.23; 1.08 x 1.28; 1.01 x 1.26; 1.06 x 1.26.

### Brief Collecting Notes.

J. C. CATOON.

May 23d found first set of Piping Plover. This is an early date for this bird to nest, and I have but two records of as early instances.

June 8th, found a nest of Marsh Hawk in "Cat Swamp," containing two eggs. Waited four days, and as no more eggs were deposited at the end of that period, I added the set to my collection, upon blowing, found eggs but little incubated. This is the latest record of Marsh Hawks first nest that I find in any note book.

On the 12th of June, found a nest of sharp-tailed Sparrow on salt meadow. Nest contained one egg. There were three others outside of the nest and near it. Visited the nest again on the 14th, and found five eggs outside and none in the nest. Two of the eggs were three feet or more away from the nest on top of the fine

grass that was bent down. Took the eggs, but left the nest. Visited the nest for the third time on the 15th, and found top of the nest torn out and several feet away. Went to the nesting site four days after and found that the nest had disappeared with the exception of a few blades of seaweed. Did not see any birds about, the last time.

### A Brown Creeper Feeds a Chickadee.

EDWARD TENNANT.

While afield March 31, a few miles south of Attleboro Falls, Mass., I had occasion to pass through some large Oak and Chestnut woods. It being a warm day and having walked some distance I sat down to take a few notes and rest. I had not been sitting there long when a ♀ Brown creeper and a ♀ Chickadee lit on a large Oak close by, the creeper ran rapidly up the tree working its slender bill into every little crevice, occasionally stopping and uttering a few calls, evidently upon having discovered an uncommonly large Maggot she would be immediately joined by the Chickadee and together they would enjoy the savory morsel. I shot the creeper and the Chickadee flew off a few yards but immediately returned apparently looking for the Creeper, she gave up searching for food and flitted about for some time chirping loudly. Eying me suspiciously suddenly she uttered a loud *twee-twee* and flew off in silence, soon she returned however, seemingly more agitated than before. She continued to fly about close by and although I fired at another bird she refused to go away, so I brought her home with the Creeper.

### Reminiscences of Audubon.

WM. BRADFORD.

A few days since, I happened in the store of F. B. Webster, the Ornithologist, when he said, "Here is something I know you would like to look over!" I opened the volume, and found it was Audubon's "Birds of America." As I turned the leaves over, memory carried me back, o'er the hills of time, to my school days. When vacation came, it found me frequently at my brother's store in New York City. On one or two occasions Mr. Audubon called to see my brother on some business, and I remember well the impression he made on my mind at the time. One of Nature's Noblemen, nearly six feet in

height, full form, hair and beard long and silver white, every action showed him to be a perfect gentleman.

He carried under his arm a large volume of his "Birds of America." As he laid it on the counter, and unfolded page after page of that most beautiful work, his countenance would glow with enthusiasm as he portrayed the nature and habits of the different kinds of birds he would point out. Sometimes he would come in, sit down, and tell of his travels o'er hill and dale, through woods and swamps, all intent on finding out the secret haunts of his pets.

Years ago his tired footsteps were seen going down the hill of time into the valley of sweet fields and gentle rivulets, with the birds caroling forth their glorious songs overhead, while "he wraps the mantle of his couch about him and lies down to pleasant dreams."

### A Visit to the Four Brothers, Lake Champlain.

BY A. H. JORDAN, WILLSBOROUGH, N. Y.

The Brothers are four small islands near the centre of the lake and some two miles from the New York shore; they contain altogether six acres, partially wooded. Last spring I decided to make a collecting trip to these islands, so accompanied by my ornithological partner, set sail early May 22nd, and soon reached our destination. The woods were alive with Warblers and the air discordant with the screams of the Herring Gull (*Larus argentatus smithsonianus*).

Eight or ten years ago a large colony of these Gulls used to breed here, but owing to the relentless persecution of the farmers and small boys, who gathered their eggs by the basket-full, the colony had been reduced to some fifty pairs and I do not think they raised a single brood last season. We found the nests scattered all along the shore, but only three contained eggs, and these held full sets of three. Most of the nests were clumsy affairs of grass, placed on the bare rock, while others were mere hollows in the ground, but we found a few, quite well concealed in the edge of the woods under low hanging trees.

While carefully approaching two Loons that were having a good deal to say, I was startled by a frantic flapping close to my feet and on looking down saw a Black Duck (*Anas obscura*) entangled in some brush. Before I recovered from my astonishment the duck was speeding across the lake, but after a few minutes search

the nest was found carefully hidden under the brush, about fifty feet from the shore. It was composed entirely of down and contained nine eggs of a creamy buff color.

During our two day's stay we observed the following birds:

- Loons, several pairs.
- American Herring Gull, common, breeding.
- Black Duck, one pair, breeding.
- Spotted Sandpiper, common, breeding.
- Bald Eagle, one.
- Night Hawk, a few seen.
- Kingbird, a few seen.
- Phoebe, common.
- Crow, one pair, breeding.
- Bobolink, one male seen.
- American Goldfinch, not common.
- White-crowned Sparrow, several specimens taken.
- White-throated Sparrow, common.
- Chipping Sparrow, not common.
- Song Sparrow, abundant.
- Bank Swallow, abundant, breeding.
- Tree Swallow, abundant, breeding.
- Black and white Warbler, common.
- Yellow Warbler, abundant.
- Yellow-rump Warbler, abundant.
- Black and Yellow Warbler, common.
- Black-poll Warbler, common.
- Blackburnian Warbler, a few seen.
- Oven Bird, a few seen.
- M'd. Yellow Throat, common.
- Canadian Warbler, one specimen taken.
- American Redstart, common.
- Long-billed Marsh Wren, one taken.
- Wilson's Thrush, abundant.

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### A List of Some Birds of La Plata County, Col., with Annotations.

BY CHAS. F. MORRISON.

(Concluded.)

98. *Aquila chrysaetus canadensis* (Linn.), Ridgw., Golden Eagle. Not an uncommon resident and breeder in the La Plata Mountains. A set of two eggs was taken by a citizen of Parrott City, the nest of which had been added to and built upon for eight successive years, these eggs were blown by a hole in each end and strung on a string and are now hung up to adorn a mirror behind a bar! ! !

99. *Cathartes aura* (Linn.), Hlig. Turkey Buzzard. Rare; a few individuals seen at the slaughter house and now and then are seen soaring high above the post; more common

farther south; does not reach above 8,500 feet.  
100. *Zenaidura carolinensis* (Linn.), Bp. Mourning Dove, common, breeds in bushes and trees, and on the ground.

101. *Meleagris gallopavo americana* (Bartr.), Coues. Wild Turkey, common along the Rio Pinos, in the eastern part of the country; below 7000 feet.

102. *Canace obscura* (Say.), Bp. Dusky Grouse, common in mountainous pastures; keeps near timber-line throughout the year, coming down to 9000 feet in summer.

103. *Bonasa umbellus umbelloides* (Dougl.), Baird. Gray Ruffed Grouse, Not common, have seen but a single live bird.

104. *Pediocetes phasianellus columbianus* (Ord.), Coues. Common Sharp-tailed Grouse, common on the mesas among the scrub oak. This is the bird which I entered as *C. empido*, the result of pure carelessness on my part, of which I was not aware until it was brought to my notice by Mr. Ridgway in his correction, for which I owe him my thanks, however, the notes remain the same as it was *P. p. columbianus*, which I also encountered in Wyoming, (see O. & O. for April, pp. 58-59, Vol. 12 and pp. 192 same volume), as Mr. Ridgway says in his correction, "the species is commonly called prairie chicken here," (local name) and hence arose my carelessness.

105. *Centrocercus urophasianus* (Bp.), Swains. Sage Cock, common near Cortez and the Montezuma Valley. A covey of over forty of them seen by me near the above named town, and I often have them sent in to me by a friendly ranchman who knew how to treat them for eating purposes; served properly they make a fine bird for the table and if drawn while still warm are not too strong of sage.

106. *Oryzochus vociferus* (Linn.), Reich. Killdeer, very common and breeds in moist, swampy places, or rather near such localities. Found one nest (five eggs) upon a tussock and water all about. Arrive in March.

107. *Gallinago media wilsoni* (Femm.), Ridgw. Wilson's Snipe, rare, only one seen, but it no doubt breeds, as Mr. Drew gives it as breeding in San Juan county.

108. *Actobromus maculata* (Vieill.), Coues. Pectoral Sandpiper, rare; found up to 13,000 feet. Probably breeds; have seen and taken but five specimens.

109. *Symphoricarpha semipalmata* (Gmel.), Hartt. Willet, common in fall, when the September rains come on, the "Willet" appears and is often seen flying about among a flock of domestic pigeons, which are kept by the post trader

here; ranges up to 12,000 feet. None seen in spring.

110. *Triingoides macularius* (Linn.), Gray. Spotted Sandpiper, common, breeds; found along all the streams in the county; up to 13,000 feet.

111. *Lobipes hyperboreus* (Linn.), Cur. Northern Phalarope, rare, a few seen about some deserted beaver dams, five miles south of Ft. Lewis.

112. *Grus canadensis* (Linn.), Temm. Sandhill Crane, rare, only seen by me during spring and then only far south at 6000 feet. Cannot say whether it breeds in the county or not.

\* \* \* \* \*

A flock of eight geese were seen flying over in spring of 1887, do not know what they were, the only birds I have seen.

\* \* \* \* \*

113. *Anas boscas* (Linn.) Mallard, rare as are all the ducks, never seen in fall.

114. *Chaulelasmus streperus* (Linn.), Gray. Gadwall, rare, a few seen each year at the beaver dams.

115. *Querquedula discors* (Linn.), Steph. Blue-wing Teal, rare; a few seen in the spring.

116. *Fulie marila* (Linn.), Baird. Scaup Duck, rarest of the rare; have seen but one in the fall.

117. *Fulie affinis* (Eyt.), Baird. Little Black-head, reported to me by a ranchman and I also saw some in a market in Durango. Was told they were taken on the lower Las Animas.

118. *Histrionicus minutus* (Linn.) Dresser, common at 10,000 feet, where it breeds near some small lakes, or rather Buffalo wallows.

119. *Podiceps holbolli*, Reinh. American red-necked Grebe, rare, seen occasionally about the beaver dams. May breed but I have not seen its nest taken here.

This ends the list up to date. Many other species probably occur but if so I have not as yet noted them, but with a longer experience in the county I hope to yet add at least thirty more species and find many of these I have listed as rare to be much more common. The White-tailed Ptarmigan (*Lagopus leucurus*, Sw.) occurs in the mountains without a doubt, and such is the case with other mountain birds but as I have not seen them they are omitted.

In a list of the birds of this county which I shall issue the coming summer I shall be able to give fuller notes and add certain species which the many revisions in nomenclature has left me "on the fence" in regard to. The new variety of Junco, (*J. o. shufeldti*) will be de-

scribed, and the Lark lately separated by Mr. Henshaw (*O. a. arenicola*), as well as the western variety of *D. aestiva*, which has also been separated by Mr. H. K. Coale. In the mean time I hope the present list may be worth something and if it in any way helps the student in any one case I shall feel well repaid for undertaking this list.

## Winter Notes from Raleigh N. C. (1887-8).

BY C. S. BRIMLEY.

The past winter has had but few remarkable features as far as Ornithology is concerned, though the mildest we have had in eight years no warm weather stragglers have visited us and our regular winter visitors have been present in their usual abundance except the Ruby crowned Kinglet which has been very scarce, though the Gold crown was quite common. Of the birds which occur irregularly in winter here, Purple Finches were very abundant up to the end of December, but have not been very plenty since then; Pine Finches have been fairly common all winter; Shore Larks were seen four times but none taken. Of the Nuthatches the Red-breasted has not been observed at all, while several of the White-breasted species have stayed with us all winter. A few Thrashers wintered here as usual and a single Towhee was seen on Feb. 22.

Of larger birds a short-eared Owl was taken Jan. 12, our first winter record and a fine ♂ Summer Duck was brought to us to mount on Feb. 1. Ducks have been unusually scarce all winter, in fact I only saw two and those not near enough to identify.

Crows were unusually common throughout the winter, feeding on the peanut fields and late in the meadows; whatever degree of liking a Crow has for corn, he is certainly death on peanuts.

## Late Nesting of the Yellow-billed Cuckoo.

BY J. P. S.

On September 1st, 1888, two eggs of the Yellow-billed Cuckoo (*Coccyzus americanus*), well incubated, were found in Chester County, Pennsylvania. This is believed to be one of the latest dates of the nesting of this species in that locality on record.

### Nest Building.

BY HON. JOHN N. CLARK, SAYBROOK, CONN.

I have observed that in the case of most birds the nest is fashioned after a stereotyped pattern. The Robin builds her mud walls just about so thick and so high, so deep and so wide, and just about so much of that soft brown grass is platted together as lining.

The little Summer Warbler will gather the soft yellow down from the fern stems of the marsh for the walls of her delicate cradle, and what singular dark brown rootlets the Catbird always secures to line her nest. There are none such around my place that I have ever seen, and yet an old Catbird that builds in my shrubbery every year always secures the desired quantity and smoothly fits each little rootlet in its place, and she doesn't take from the old nest to line the new either, for I noticed today on the low branch of a spruce, where she reared her brood a year ago, and those little fibrous roots appear just as fresh as before they formed the cradle bed of a whole family.

The Brown Thrasher, the Wood Thrush, and the Blue Jay all draw from the same unknown source the lining for their nests, certainly not for its softness, though such a bed might be comfortable and airy in a hot day, yet I believe they always use the same material regardless of season or weather.

This study of nests seems to me a very interesting one, and its relation to oölogy is evidently held in high regard by most collectors, as all the patterns of blanks on which to record the data, so called, of sets collected, contain a place devoted to the description of the nest and its situation, evidently looking to the nest as a substantial source of identity; and further, the nest received that failed to fill the description of the expert would at once cast a shadow upon the identity of the eggs found therein. How we should smile to see a Swallow building a nest like a Warbler, or an Oriole like a Robin, and yet there would be no apparent violation of the fitness of things therein if their old pattern had been unknown.

I always like to read the description of bird's nests, the materials, where obtained, how put together, the site and the shape, and wish we might have more of them. In different sections of the country the same species, I learn, do vary the pattern, using diverse materials and putting them together in a different manner with different site, all of which is perhaps not remarkable but very interesting.

I was very much interested in a curious nest of the Hooded Warbler, which I secured last June. Curious in that it so decidedly differed from the ordinary fashion of the series, being suspended between the forked branch of a small bush after the manner of the Vireos, which it so nearly resembled that one could scarcely believe that it could belong to any other than the Red-eyed Vireo, with perhaps a few more leaves among the materials of its composition than that species usually affect. And yet I found the old *Mitras* sitting proudly on her four eggs of ordinary pattern, and rocking in her pendant cradle as gaily as if her infancy had been passed in a Vireo's nest and she had never known any other pattern in the family. I carefully preserved the nest with its attachments, and it is now in the collection of Mr. S. B. Ladd, who values it very highly.

### On the Food of the Woodpeckers.

BY C. S. BRIMLEY, RALEIGH, N. C.

Some years ago I happened to come upon the statement that these birds were "pre-eminently insectivorous," and as I had found them feeding a good deal on berries and seeds I concluded to note the contents of their stomachs whenever I had time.

I now give the result of my investigations, and it will be seen that of one hundred birds, seventy-five had indulged in berries and seeds and only twenty-seven in insects, and this appears still more marked if we exclude the two species of *Dryobates* which seem to have a liking for insects. Not counting the twenty-four stomachs of these two species we have seventy-six Woodpeckers, only eleven of which showed any taste for insects at all.

The absence of insects is accounted for, to some extent, by most of the birds having been taken in the fall and winter, but the two species of *Dryobates* seemed able to find insects then, and so why not the others?

I now give my results in detail for each species:

*Southern Hairy Woodpecker*; eight examined, six contained insects, three seeds and one was empty.

*Downy Woodpecker*; sixteen examined, ten contained insects, and nine seeds.

*Pileated Woodpecker*; three examined, two contained seeds, one insects.

*Yellow-bellied Woodpecker*; thirty examined, twenty-two contained seeds or berries, five in-

sects, one had been "sapsucking," and four were empty.

*Red-headed Woodpecker*; five examined, all contained seeds or berries including three with acorns, none contained insects.

*Red-bellied Woodpecker*; six examined, all contained seeds or berries, (three had been eating acorns and one blackberries.)

*Flicker*; thirty-two examined, twenty-eight contained seeds or berries, (thirteen of which had indulged in peanuts) five insects, and two were empty.

Thus one hundred stomachs were examined, seventy-five contained seeds or berries, twenty-seven insects, one sap, and seven were empty.

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### Nesting of the Field Sparrow at Raleigh, N. C. in 1888.

BY C. S. BRIMEEY.

These birds began laying May 7th, and a nest with about half incubated eggs was found Aug. 2nd, this however, is not surprising as I found my last nest last year on Aug 26th, being the latest date I have ever found birds eggs in this locality.

The nests were built of grass, or weed stems usually lined with horsehair and usually placed in small bushes or weed tussacks, two-thirds of the number being from one inch to one foot from the ground, the remaining third being from eighteen inches to five feet in height. The favorite situation seems to be on sloping hillsides in small thorn bushes, but the birds are not particular, being abundant everywhere in this locality. The set complement was almost invariably four in the early part of the season, though even then some nests only contained three; but towards the end of the season when the second or third layings were in progress, the set was more usually three than four.

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### Nesting of the Tufted Tit in 1888.

BY C. S. BRIMLEY, RALEIGH, N. C.

I found three nests of this species this year, two containing eggs and one young. The two first I thought rather remarkable in situation and so proceed to describe them.

On April 28th, while looking for eggs in a large tract of woods, I happened to look in a hollow in a small dogwood, whereupon something squirmed and tried to hide itself. On

further investigation I discovered not a flying squirrel, as I expected, but a Tufted Tit, which I removed with some trouble and then collected and packed a beautiful set of six eggs. The opening of the hollow was about two feet from the ground, and the hollow reached to the earth, but for half the distance three sides of it were gone. So the birds had piled up moss, leaves, etc., from the ground right up into the hole and then lined the nest at the top with white cat fur and a few pieces of snakeskin, the eggs being at least eighteen inches from the bottom of the nest.

My next nest contained young, and was in a still more peculiar position. A dead birch limb had rested in a live birch in a nearly upright position until it was a mere hollow tube of thin bark. The birds had appropriated this and as in the other one, had piled up dead leaves, moss and dirt in the shell and then lined the top with moss and lint cotton. This was found on May 15th.

The third nest was found on June 8th in an old apple tree and contained five eggs, slightly incubated. The hole was about eleven feet high and the nest about a foot deep inside. It was composed of grass, green moss and some snakeskin. Like the first, the bird had to be pulled off her nest, and she also apparently tried to break her eggs, which was also a characteristic of the first one.

This concludes my experience with the Tufted Tit this year. Next year I hope to make a nearer acquaintance with her and her eggs.

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### Brief Notes from Raleigh, N. C.

BY C. S. BRIMLEY.

I notice several articles in the July O. & O. which I can supplement a little by my own experience.

First on page 100, the article on the Yellow-throated Warbler by Mr. Hoxie, leads me to say that on April 24th of this year I found a nest of this bird building, in a large pine; after leaving the nest until May 11th, my brother took it, but to our disgust it only contained one fresh egg. The nest was sixty-five feet from the ground and twelve feet from the trunk of the pine; being built on and among a number of small twigs to which it was so firmly attached that it was with considerable difficulty we got it away. It was composed of grapevine bark and horsehair, lined heavily with white chicken feathers and somewhat resembled the nest of the

Pine Warbler but was much deeper, and more pensile in character.

Secondly on page 101, Mr. Bent alludes to the Yellow-bellied Sapsucker as a shy bird. It may interest your readers as showing how its habits differ in different localities, that here, where it is our commonest Woodpecker, except the Flicker, it is also the least timid, with the possible exception of the Downy Woodpecker.

Thirdly on page 103, Mr. Cahoon's article on the food of the Great Northern Shrike, impels me to give my experience with the Loggerhead Shrike (*Lanius ludovicianus*). On only one occasion did I ever see a Shrike in pursuit of a bird, and that time I killed one just after he had captured and killed a Song Sparrow, — this was in January, 1885. On another occasion in the winter of 1886 I found a Yellow-rump Warbler impaled on a thorn, but as a rule their food here seems to consist of insects, chiefly grasshoppers, which may frequently be found impaled on the barbed wire fences around here.

I have examined the stomachs of eleven of these birds with the following results: Containing mice, 2; insects, 9; not one of the eleven stomachs contained the slightest trace of any bird.

### Editorial,

The O. & O. is mailed each issue to every paid subscriber. If you fail to receive it, notify us.

The intelligence that Mr. Henshaw had disposed of his large ornithological collection and the amount received for it was unquestionably a surprise to a great many, and the fact that the result of years of industry and effort should go abroad was greatly deplored. While we do not consider the price received, \$10,000, a large one by any means, still it shows the young ornithologist what may be secured by a studious, close application in observing and collecting in the great field of nature. While he may be able only to reap pleasure and satisfaction in the acquiring of a large collection, he may be assured that like many agriculturists who labor hard all their lives upon their land, realizing but little in their life time, at death a competency secured to their heirs, in the one case, in a valuable accumulation of specimens, in the other, in the fertile fields reclaimed from the wilderness.

We were sorry that the collection could not be kept in America, as it was very complete and but few are in existence upon which so much study and care had been spent. It would

have been a great acquisition to some of our young Western educational institutions. While the Smithsonian, Agassiz's and one or two other museums in the country are as complete as money can make them, still the result of individual effort in this particular instance was so marked it would have a value beyond the intrinsic.

We can be congratulated, however, in view of the fact that we have in this country some who find time to devote, have means to pursue and are amply qualified to replace whatever we have lost in the sale of the Henshaw collection.

Notably, and not generally known either, is this the case here in Massachusetts. In one particular instance, that of Mr. William Brewster of Cambridge, it is very evident. Secure in his competency, he has devoted no small sum in securing, studying and preserving probably as fine, if not the finest, private collection of American birds in existence; has built a museum upon his grounds, which in perfection of detail we cannot see how it may be improved upon. The only fault we could find, if it was a fault, was that the building should not have been placed in a more prominent place, if for no other purpose than as a monument to the builder's zeal in his studies and research. For its present purpose, that of a secluded, quiet study, it is perfectly adapted, but we cherish the hope that at no far off date it will be found too small for its owner's accumulation and a larger building required, for the time is near at hand when, judging from what we have already seen, it will be a Mecca for the ornithologist of the Eastern States to journey to, in making comparisons and studying typical specimens, as quality rather than quantity appears to be Mr. Brewster's rule. We certainly never had the pleasure of seeing such perfectly prepared skins, or so systematically arranged.

We may at some future time be able to give our readers a better understanding of the building and its contents than at present, with the hope that the example set by Mr. Brewster may be followed in other sections of the country.

We notice that the Massachusetts Fish Commissioners are being found fault with because they do not compel the toiling fishermen of Vineyard Sound and Buzzard's Bay to desist from setting drift nets for blue fish, so that some of the kid-gloved sportsmen may enjoy the sport of trolling for them.

Stop it by all means gentlemen; it is really

too cruel to allow the bronzed toiler of the sea in his struggle as a bread winner, to curtail the pastime of the effete class of sportsmen that are "perfectly charmed, bah jove," when hanging on to a line trolling behind a boat sailed or rowed by some one else.

It does seem as though the Commissioners were getting into difficulties all around; soon there will be "none so poor as do them service." Those who have ever seen the favoritism and partiality shown a class, the pandering to the market men and at the same time the truckling to quasi sportsmen who never see any game except when placed before them at a Protective Game Societies dinner, together with others, who, wrapped up in sweet sentiment, have shed so many tears because those horrid naturalists had not been brought to grief, and now the lavender scented popinjays, calling themselves sportsmen, are wailing because "an unhandsome corpse," (in the shape of a hard working fisherman) should come between the the wind and their nobility. We expect next the smocked market man redolent of half decayed cold-storage game, will join in the hue and cry at them and then the Commission will find that the straight road of equity and justice to all is much smoother than the cross cuts of favoritism and partiality.

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We are pleased to announce that the subscription list of the O. & O. shows signs of an increase. We are in receipt of letters from all over the country expressing interest in our course of defending the rights of collectors. While at present our showing up is somewhat local, it involves a question that is *wide* spread and we invite information with regard to any unfair oppression in any section. Give us an impartial account and we will give our attention to it.

### Brief Notes.

If the air is not peculiarly sulphurous in our editorial columns this month, it is owing to the pugnacious end of our corps being away fighting mosquitoes and sand fleas in his endeavors to capture some of the large flight of shore birds passing over Monomy Island.

We can inform the web-toed gentlemen of the South Shore who seem to fancy that Cape Cod is the earth and they are the owners thereof, that "A chile's amongst you, taking notes. In faith he'll prevent them."

Mr. C. E. Hoyle recently purchased from F. B. Webster Audubon's Birds of America. They were a fine set, 7 vol. 8 vo., bound in full morocco, in perfect

condition. They were purchased by the former owner in 1873. Copies of this work are exceedingly rare.

A Black Tern in nearly full plumage was taken by A. M. Tufts, at West Gloucester, Mass. July 22, 1888.

Mr. Harry B. Booth, of Bradford, Yorkshire, England, reports the taking of a Whippoorwill in Derbyshire, this being the first recorded occurrence of this bird in the British Isles.

The society that annually decorates country stores, depots and out buildings with flaming placards, offering tempting cash prizes to any one who will give information that will convict a person of shooting a bird, must have derived its lofty scheme from the Judas Iscariot affair. While we are forced to acknowledge that there are a few individuals in our midst as unprincipled as he was, we doubt if there are many who would stunt their manhood by accepting such a soul belittling fee. It is to be regretted that such an open attempt should be allowed to convert our people into *sneak-peeps*.

Mr. C. H. Andros has resigned his position as cashier of the Taunton Bank and removed to Colorado, where he will be engaged in surveying. We imagine that his Transit will be levelled at every suspicious tree fork. This change will present a fine opportunity to Mr. Andros to follow his favorite study.

We refrain from recording the capture of an unsavory bird in Massachusetts, as the *purchaser* desires to send a note of it to another publication.

We pigeonholed an article two months since. Just as we were to print it we discovered it had been furnished to our contemporary the Auk. No second hand fiddles for us gentlemen.

What has become of that proposed Audubon monument? From the many expressions of opinion that we have heard we are inclined to believe that the design presented is not quite popular.

Early in September ten subscribers to the O. & O. were occupying the stands on Chatham Flats, and still we are not allowed to gather under the mantle of rights. Keep right on gentlemen and you will see where we get.

Capt. Gould reports that he has had the best Plover shooting at Chatham this season that he has experienced for a number of years. We guarantee that none came within reach of him and got by.

Now say, some of you members of the F. and G. Association, how about those small birds taken during the Branting season, when you looked at them and mildly expostulated, why did you not push the case? Too bad it had not been a poor naturalist who had shot them, so you might have made an example of him. What's sauce for the goose is sauce for the gander, and don't you forget it.

We notice that collectors are very slow to adopt the new A. O. U. code in numbering their specimens. In fact most of the dealers find it impracticable to adopt it, adhering to the Ridgway System. This will remain the case if the list is not reduced to a price that will place it in the hands of all.

••••• No exchange notices will be accepted in future at less than regular rates. —

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No. 10.

## A List of the Birds of Colorado.

Compiled and edited for the Colorado Ornithological  
Association.

BY CHAS. F. MORRISON.

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### INTRODUCTION.

The compiler of this list, having always been of the opinion that, in ornithology, a given district could be far better investigated by a number working together, than by individual research, decided to adopt his pet theory.

In March, 1887, therefore, he sent circulars to all the ornithologists in the state of Colorado, known to him at that time, requesting them to join him in forming the Colorado Ornithological Association, and briefly presenting an outline of the work to be done, as well as the manner of doing the same. The result was most satisfactory, all, with but one exception, joining heartily in the work. With the spring migration of that year the work began. There being but little time for preparation, it was decided to simply issue a list of the birds of the state as the result of the first year's work, making it as complete as possible. This has been done, and as the association was formed upon a foundation of mutual good fellowship, and not upon a financial basis, I think the readers of this list will agree that the results have been of a very satisfactory nature. Many names were sent in, but it was found necessary for our own interests to only enroll those as members who were known to be workers of repute, and upon whose word reliance could be placed. This finally necessitated dropping the names of a few who were found to be boys, and simply egg collectors, (let us hope they will some day make themselves known as earnest workers). After this was done the active

members consisted of the following named gentlemen in the order of their joining:

1. Henry G. Smith, Jr.            Denver, Col.
2. A. W. Anthony,                North Denver, "
3. A. H. Woodbury,                Monte Vista, "
4. H. W. Nash,                    Pueblo, "
5. Fred. M. Dille,                 Greeley, "
6. William G. Smith,               Loveland, "
7. Walter A. Abbey,                Grand Junction, "
8. Geo. F. Brenninger,              Fort Collins, "
9. Frank M. Drew,                 Bunker Hill, Ill.
10. T. Marten Trippe,                Howardsville, Col.
11. Dennis Gale,                    Gold Hill, "
12. Theo. D. A. Cockerell,            West Cliff, "
13. Edwin C. Davis,                Aspen, "
14. Chas. F. Morrison,                Fort Lewis, "

The following list is as near complete as it is possible to make it, up to date, although it will no doubt be enlarged by a number of species, as the writer has a list of several, all of which probably occur, but are omitted here on account of a lack of proper evidence as to their occurrence at present.

Colorado is a state of more than usual interest to the student of ornithology, having in the eastern portion boundless plains, with lakes, rivers, ponds and sloughs, the most favorable localities for waders and swimmers, while on the plains themselves are the numerous birds of the prairies. In the western portions the loftiest peaks of the main chain of the Rocky Mountains rear their heads, many to perpetual snow and ice, and still west of there, is found a fauna different in many respects from the rest of the state. It is this portion and the eastern plains that require investigation, the mountainous districts having been closely studied by visiting and local ornithologists, all, or nearly all of whom, direct their steps to the mountains, either for their health or business purposes. Four of our principal cities and towns are on the western edge of the plains, and we have observers at these places, but east of these we have none, a fact to be deplored as it is from

the plains we must look mostly for additions to this list. I wish to express here, the thanks of the association to those gentlemen who have so kindly helped us in many ways. To Prof. J. A. Allen for copies of notes taken by him in the state, also to Mr. William Brewster for the same, and to both these gentlemen for their kind offers of help. To Dr. C. Hart Merriam for schedules for recording migration notes. To Capt. Platt M. Thorne, U. S. A. for list of birds observed by him at Fort Lyon, and to Mr. Charles Wickliffe Beckham for copy of notes on birds observed by him near Pueblo, and last, but not least, to our jovial friend Mr. Frank B. Webster, who has helped us in more ways than I can mention. The names of these gentlemen will not be forgotten in the annals of the Colorado Ornithological Association.

And now I wish to express my thanks to those members of the association who have worked so earnestly to make this list what it is. Although many of them were strangers to me personally, they have shown a zeal and energy which does them credit, and it has been with sincere regret that I was, for the present, obliged to leave the perfect climate of Colorado and genial friends, for the hot summers and arctic winters of Montana. But the thought that I shall again be with them will help me bear the disappointment, while the years I spent in Colorado will always be considered as among the happiest of my life.

A few hints before closing this somewhat lengthily introduction. I wish to call the attention of the members to a very interesting part of the study of ornithology, viz: The food of our birds. This is a neglected part of ornithology, and why? Probably because it is not a pleasant duty to examine a bird's stomach, or is it from carelessness? If it is unpleasant I can say that I have often been asked for the stomachs of birds skinned by me by *ladies*, some of whom were interested in this part of the study, but the most of them were after *entomological specimens*, many small and rare ones often being found in the stomach of insectivorous birds, which, as one lady told me, would escape the eye of man, but not of the birds. The study of the food of our birds is of more importance just now on account of the "hue and cry" about the birds that are beneficial to man. Examine every one of your birds and make careful notes of its food, this is just as important as a description of its plumage.

Another matter, never delay in sending in the name of a new species to be recorded, but do so at once with full particulars, even if this in-

volves the labor of writing several pages of foolscap. By so doing you may render more service to science than you are aware of.

In this list I use the nomenclature of the American Ornithologists' Union.

#### A LIST OF THE BIRDS OF COLORADO.

1. *Aechmophorus occidentalis* (Lawr). Western Grebe. Reported by Brenninger as a summer visitant at Fort Collins. I did not observe it in La Plata County, but it is a little strange, that other members have not seen it, it being the largest of our Grebes, and not easily overlooked. An examination of the many ponds, and sloughs, in the San Luis valley, will no doubt show it to be of common occurrence, and its nest and eggs be found there. As usual with this family it builds a nest of aquatic vegetation, brought up from the bottom, and of very large dimensions, often being begun on, or near, the mud, and rising above the water. Upon this a slight nest is made, on which rests its eggs, which range from five to nine, although ten are sometimes deposited. The nest may also be afloat, as one I found at Lake Desmet, Wyoming, it being attached to the flags in such a way as to move up and down, as the water rose and fell. This may be the case where the pond and sloughs are liable to sudden rise and fall. Although ungainly in many respects it is second to none for its grace in swimming and diving.

2. *Colymbus holbellii* (Reinh). Holbell's Grebe. Migratory; rare, may winter in southern portion. Drew reports it as occurring at 10,000 feet in autumn.

3. *Colymbus nigricollis californicus* (Heerm). American Eared Grebe. Summer visitant; common, breeds. Mr. Henshaw,\* found its nest and eggs as early as 1874, "about thirty miles north-west of Fort Garland" in the San Luis valley, but no late record has reached me of its breeding. Messrs. J. A. Allen and William Brewster† "saw a specimen in the flesh at Mr. Aiken's, killed May 1st" (vicinity of Colorado Springs), and Anthony of Denver, and Smith of Loveland, both report it to me from their localities. I took Mr. Henshaw's description of nest and eggs from the American Naturalist, as it is the best I have seen. He says, "A colony of perhaps a dozen pair had established themselves in a small pond four or five acres in extent. In the middle of this, in a bed of reeds, were found upwards of a dozen nests. These in each case merely consisted of a slightly hol-

\*AM. NAT. Vol. VIII, 874, (breeding).

†Allen and Brewster on Colorado Birds, B. N. O. C. Vol. VIII, July and Oct. 1883.

lowed pile of decaying reeds and rushes, four or five inches in diameter, and scarcely raised above the surface of the water upon which it floated. In a number of instances they were but a few feet distant from the nest of the Coot, (*Falica americana*), which abounded. Every Grebe's nest discovered contained three eggs, which in most instances were fresh, but in some nests were considerably advanced. These vary but little in shape, are considerably elongated, one end being slightly more pointed than the other. They vary in length from 1.70 to 1.80, and in breadth 1.18 to 1.33. The color is a faint yellowish-white, usually much stained from contact with the nest. The texture is generally quite smooth, in some instances roughened by a chalky deposit." Mr. Henshaw also states that "during the three days spent in the vicinity, the parent birds did not visit their nests," but as the nests were covered with reeds and other vegetable matter there can be no doubt but that the artificial heat produced, has much to do with the process of incubation. Some writers claim it is done to hide the eggs from the sight of natural enemies. There can be no doubt but both theories are correct.

4. *Podilymbus podiceps* (Linn). Pied-billed Grebe. Summer resident; not rare; abundant during migration. Observed by Brenninger and Smith of Loveland. No record of its nest having been taken, but no doubt it breeds in the San Luis valley, the lakes in the vicinity of Loveland, and the lakes and sloughs of north-eastern Colorado. In winter it retires as far south as northern South America. Eggs from five to ten, nest as usual with this family.

5. *Urinator imber* (Gunn). Loon. Transient visitant, marked by Anthony as "not rare." Often found in company with *P. podiceps*. *U. lunum* should be looked for, as it is likely to occur as a migrant.

6. *Stercorarius parasiticus* (Linn). Parasitic Jaeger. Entered in Drew's list upon Mr. Ridgway's authority. May occur as a migrant, but rare, if at all of late years.

7. *Larus argentatus smithsonianus* (Cones). American Herring Gull. Migratory; not common. Reported by Anthony and Brenninger. In the "Auk"\* Mr. Smith, Jr., of Denver has the following: "A young bird of this species was shot Nov. 17, 1883, and is now in the collection of Mr. Anthony. The persons who shot the bird said that many other Gulls were seen, but whether they were of this species is questionable. It was shot on a small lake a few miles from the city."

\*"Auk," Vol. III, No. 2, p. 284-286, 1886.

8. *Larus californicus* (Laur). California Gull. Reported by Brenninger as a transient visitant. I know of no other record in the state. Breeds farther north, and is only abundant at low latitudes in fall and winter.

9. *Larus delawarensis* (Ord). Ring-billed Gull. Migratory; common. This species was noticed by nearly all the members and it is found through the entire state. Woodbury found it at Monte Vista in the mountains and Drew reports it at 9,500 feet.

10. *Larus atricilla* (Linn). Laughing Gull. Reported by Capt. P. M. Thorne, U. S. A. from Fort Lyons. This is the only record which I find for the state, Dr. Cones in "Birds of the Northwest" throws discredit upon its being found so far in the interior, but in the "Key" gives it from New Mexico and Arizona, therefore I enter it pending future investigations.

11. *Larus philadelphia* (Ord). Bonaparte's Gull. In reporting this Gull Anthony writes, "A black-headed gull is often seen about the lakes in fall, I have no specimens, but think that it is this species." This gull should be found in Colorado during migration and it seems a little strange that it has not been observed by more of the members. I found it common at Lake Desmet in Wyoming and so early in the summer as to lead me to think they bred in the vicinity, which they no doubt do, as I saw them from May throughout the summer.

12. *Xema sabini* (Sab). Sabine's Gull. Entered in Drew's list upon the authority of Mr. Ridgway. Not observed by any of the members during the year of 1887. I enter it as a rare, accidental visitant.

13. *Sterna forsteri* (Nutt). Forster's Tern. Reported by Drew and Smith (Loveland), also by Allen and Brewster\* upon Chas. E. Aiken's authority, who says it is taken at *rare intervals*. It no doubt breeds in the state, although I know of no record of its nest and eggs having been taken.

14. *Sterna hirundo* (Linn). Common Tern. Reported as a transient visitant by Brenninger, rare? This and the preceding should be more diligently sought for. Smith of Loveland also reports the Sooty Tern (*S. fuliginosa*), but I think it must be a mistake.

15. *Hydrochelidon nigra surinamensis* (Gmel). Black Tern. Observed by Drew, Anthony and others. A common summer resident, breeds abundantly in company with Yellow-headed and Red-winged Blackbirds, in the flags of the ponds and sloughs. Three eggs are laid, often

\*B. N. O. C. Vol. VIII, No. 4, pp. 198.

two and occasionally four. Sometimes a nest is built, at others the eggs are deposited upon the bare ground, or upon the dead flags of the year before, in such instances it takes a keen eye to discover them, as they are almost the color of the flags. Eggs brownish-olive, spotted and blotched with different shades of brown. Pyriform in shape.

16. *Phalacrocorax dilophus* (Sw. & Rich). Double-crested Cormorant. The only record is that of Anthony and Smith, Jr., of Denver. I quote from the "Auk."\* "About the 1st of Nov. 1885, one of our daily papers mentioned a bird called a 'Surf Coot,' which was on exhibition at a certain restaurant in the city. Mentioning the fact to Mr. Anthony, he started in quest of information, only to learn that the bird had been sold to some unknown person. A few days later, however, he stumbled upon the supposed "Surf Coot," in the possession of an amateur collector, and on examination it resolved itself into the Double-crested Cormorant. We understand it was shot about twenty miles from Denver."

17. *Pelecanus erythrorhynchus* (Gmel). American White Pelican. Reported by Drew, Anthony and Smith (Loveland). Anthony marks it a "transient visitant" and says. "A few years ago this bird was not uncommon about Denver, not found often now." It is migratory and common in Northeastern Colorado. I have never seen it as abundant anywhere as along the North, and South Platte rivers. Breeds in northern Wyoming, and Montana. One taken in the San Luis valley, Oct. 1887. (Cockerell).

18. *Merganser americanus* (Cass). American Merganser. Marked "transient visitant, common," by Anthony who seems to be the only one that has observed it. Breeds from the northern tier of states north.

19. *Merganser serrator* (Linn). Red-breasted Merganser. Migratory; common. Winters in southern part of state, migrating to high latitudes to breed.

20. *Lophodytes cucullatus* (Linn). Hooded Merganser. Reported as a transient visitant; tolerably common, by Anthony. It breeds in the state in small numbers, in hollow logs, and trees. Eggs six to twelve. I have found its nest in various northern and southern localities, east of the Rockies, and believe that the largest sets of eggs are laid at its most southern breeding point, the smallest at the north. A set taken in northern New Mexico being my largest, while in northern Montana I took the smallest of six eggs.

21. *Anas boschas* (Linn). Mallard Duck. Migratory; common. Without doubt breeds, as it certainly does in Wyoming. Cockerell writes, "Two specimens shot Sept. 18th 1887, were found to have eaten large quantities of the shell-like cases of the *trichopterous*, genus *Helicopsyche*, which were abundant on the stones in the creek."

22. *Anas obscura* (Gmel). Black Duck. Eastern Colorado. Reported by Capt. Thorne.

23. *Anas strepera* (Linn). Gadwall. Reported by Smith, and Anthony, the latter says it is a "transient visitant; common." It breeds in the sloughs and small lakes at 11,000 feet, in southwestern Colorado. I secured ten young from the La Plata river, unable to fly. These, with the parent birds, came down from the mountains. They started quite young on their southern migration.

24. *Anas americana* (Gmel). Baldpate. Transient visitant. Tolerably common. Observed by nearly all the members. Breeds north, in Montana and northern Wyoming.

25. *Anas carolinensis* (Gmel). Green-winged Teal. A transient visitant, and not rare in any part of the state. The earliest migrant, both in spring and fall. Breeds north, in Montana and British America, as far as Alaska. Eggs greenish, 1.85 in length by 1.30 in breadth.

26. *Anas discors* (Linn). Blue-winged Teal. Summer visitant; common. Habits similar to preceding species. Nests on the ground, sometimes a long way from water.

27. *Anas cyanoptera* Vieill. Cinnamon Teal. A transient visitant; tolerably common. Observed by nearly all the members. It may be found to breed in the mountains, as I have seen them in July, in lakes among the La Plata Mts. It would not be surprising as this is on the Pacific slope, where it is said to be most abundant.

28. *Spatula clypeata* (Linn). Shoveller. Summer resident; breeds abundantly in western part of state, not common, or rare in eastern. Reported by all the members. Nest on ground, near water, of grass lined with down from breast of parent. Eggs average eight, although six to ten are found.

29. *Aythya affinis* (Eyt). Lesser Scaup Duck. Transient visitant; much more common than the preceding, and reported from both eastern and western Colorado. Like the other it goes far north to breed but many stop in Montana. It also retires farther south in winter.

\*Some Additions to the Avi-fauna of Colorado, Auk, Vol. III, No. 2, p. 284-286, 1886.

### Nesting of the Water Ouzel.

BY WM. E. SMITH, LOVELAND, COLORADO.

Away up towards the head of our rivers in Colorado, where the waters come down in a succession of leaps, where the massive rocks that lay in its path are nearly obscured by its spray, there will be found the greatest little wonder of our feathered friends, the Water Ouzel. In the depths of winter, when most birds have gone south, or sought some secluded shelter, our little songster will be found at his post. Although many times Jack Frost has roofed his abode nearly over, leaving but a small hole not much larger than the bird itself, yet there you may see him standing, after peering into it a few moments, then like a flash and he is gone, and only perhaps a half minute elapses, and like a black cork up he bobs, after courtesying two or three times, down he goes again into the water that seems almost impossible a small bird could live in, much more dive against, so strong is its mad rush, yet he comes up safe every time.

I hardly think it would be possible to find a boy that would throw a stone at this little fellow at such times, after watching how hard his lot is to pick up a living during the winter. All his food he has to pick up from the bottom of the river, which appears to be a small worm that is numerous and adhering to the rocks. His only propelling power lies in his wings which he uses very dexterously.

As soon as the ice is melted in spring, then you will hear him above the roar of the elements, singing beautifully. He no longer confines his haunts to one locality, but is busy looking up a mate to start in housekeeping, which they do early in June.

The Water Ouzel's nest is a wonderful piece of architecture. One that I took last season was placed on a beam under a bridge that spans the Big Thompson River in Estes Park. It was oval in shape, entirely domed over, and built of fresh green moss and roots of the same, and it appeared to be water proof. It was externally about thirteen inches long and about ten inches high by ten inches wide. The walls appeared to be about two inches thick. The aperture was situated about the middle of the largest side and was about two inches in diameter. The nest did not appear to be lined with any different material, but the whole was woven together wonderfully strong and artistically. Some boys had previously taken the eggs

which I afterwards secured. They were white, and had a very rough surface and averaged about one inch long by three quarters of an inch wide.

### The Nesting of the Brown-headed Nuthatch at Raleigh, N. C., in 1888.

BY C. S. BRIMLEY, RALEIGH, N. C.

This past season has added considerably to my experience with these birds, but in most respects it has varied so much with regard to individual pairs that I cannot make any deductions to help me in the future in collecting their eggs, and therefore I will give my experience in detail.

First. On March 22, I found a pair lining a newly dug out hole about four feet high in a small pine stub in a branch. On April 6th there were four eggs in the nest, and next day I took a full set of six eggs. This made fifteen days from commencing to build to taking a fresh set—supposing they had only just started building when I found them. The nest was some six inches deep in the hole, and was composed of pine seed leaves, bark strips, chips, some pieces of colored wool and a few feathers.

Second. On April 2, I found a pair working on an old blackened stub in a corn field. They were very industriously digging, and I allowed them twenty-one days to lay a full set; and then on April 23, to the great alarm of the birds, who made themselves very much excited over the matter, laboriously cut out the hole, and found to my disgust, they hadn't even begun to line it. On May 2, this same pair of birds were again hard at work digging on another old stub not far from the first one, and this time I was more successful. On May 15th I took a slightly incubated set of four eggs from the nest. The nest was composed of bark shreds, and pieces of corn shucks. Both holes this pair had dug out were about the same height, a little over six feet.

Third. On April 16, I found a pair just commencing to line a hole in a fence post, but did not expect to get any eggs from it as it was in a place where the small boy was almost certain to find it. However, on looking in the hole on April 26, I was delighted to find five fresh eggs which I took, although the bird might very probably have laid another had they been left.

This nest was six feet high, and unlike all the others, was not right below the entrance

hole, but on the other side of the post, and was composed of lint cotton, pine seed leaves, and bark shreds.

Fourth. On April 26, we took a nest my brother had found some days previously, but had been unable to take without assistance, and we had been prevented by wet weather from securing sooner. This nest was fifteen feet high in a birch stub, and proved to contain five hard set eggs. The nest was mainly composed of birch bark with a few pine seed leaves. On May 9th my brother found a second nest of this pair, and judged from the reluctance of the bird to leave her nest that she was setting. Unfortunately he could not see into the nest, which proved, on breaking it out, to contain only three fresh eggs. The nest was composed of pine seed leaves and pieces of corn shucks and was twelve feet high in a slim and shaky dead stub.

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### With Rope and Irons.

BY H. H. BRIMLEY.

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Plenty of information as to the finding the nests of certain birds can be gleaned from the O. & O., but the writers usually leave one in blissful ignorance of the way in which they take a difficult nest. Perhaps this omission is a delicate compliment to the inventive power of the average collector. Most collectors can manage to take a rare nest in some way or other and I would be glad to read some descriptions of the methods they employ.

Two years ago climbing irons were an unknown quantity to me, and a rope, just sufficiently thin to give a bad hand-hold, was the only means in use of going up a tree. A Red-shouldered Hawk's (*Buteo lineatus*) nest thirty feet above the grit in a big white oak, is an example. A stone attached to a light line was thrown over the lowest limb (about twenty feet up) and by means of the line the rope was drawn over the limb and made fast. The tree was too large to hug, and the rope cut my hands pretty badly, but three eggs was the result. The second laying of same birds was fifty feet up a pine, twenty-five feet to the lowest limb. The same method was employed, but the tree being hugable, the work was not so hard, though quite hard enough for two rather dull eggs.

The next March, on passing this nest, two projections appeared on the edge of the struc-

ture—suggesting "*Bubo*." Thrashing the tree with a long pole didn't have any effect and I about gave it up but tried a load of sixes to satisfy myself. At the crack of the gun a pair of mighty wings beat the air for a second, and Mrs. Owl came crashing down. The rope was fetched and put in place, and one well incubated egg brought safely down.

A Great Crested Flycatcher (*Myiarchus crinitus*), was watched into a knot-hole in the bare trunk of a fair sized elm, several feet below the lowest limb. The usual method put the rope over the limb, a short stick was tied across the middle of the rope and then drawn up until it hung a foot or two below the hole, the end of the rope being then made fast to a sapling near by. As the hole was too small to admit my hand my brother improvised an egg scoop made out of a small forked twig, the fork being covered with a piece of his coat lining pinned in place. I went up the rope to the cross stick, which afforded a good seat, and scooped out five eggs.

This rope business got to be rather tiring, so climbers were procured and are now considered as much a necessity as a gun. When they came to hand nothing would do but to try them at once. I strapped them on and waddled out to the largest tree in the yard—a small elm. I took a firm grip of the tree with my hands, shut my eyes, dug in the spurs and walked right up to the first limbs. Then looking down from the dizzy height I found my feet to be at least three feet from the ground. This gave me confidence and when I did get to a sure enough tree I rose to the occasion.

Pine Warbler's (*Dendroica pinus*) nests were found from the end of March. Early in April full sets began to be in order and, with the help of the climbers I did not find much difficulty in reaching the level of the nests in most cases; few of which, however, could be reached by hand from the tree trunk. A long, slender pointed stick was used for taking those not within reach. The pointed end of the pole was carefully thrust through both sides of the nest, about half way of its height, and being a well-woven structure, the nest was in every case broken loose from its hold without material injury. This loosening process has to be done very carefully, however, otherwise the spring of the pole is liable to break the nest away suddenly and jerk out the contents.

Out of ten nests taken, but one shared that fate. Sixty feet up a pine swaying in a strong breeze, the nest was at least twelve feet away. The pole was more springy than usual, the

wind seemed to freshen, and I seemed getting scared. In my hurry to get the eggs and come down, I pulled the nest away with a jerk, it turned completely over and an empty nest was my only reward for an old fashioned climb. It was all the more annoying from the fact that I believe, from one or two scraps of egg shells picked up below the nest, that this set was of the rarest type with red spots on a pure white ground.

I have found a common reed fishing pole about the best stick to use in this method of taking nests. I carry a hundred feet of light line, tie pole and egg box at one end, coil the line on clear ground near the tree, tie the other end to my belt, and go aloft. When the nest is taken and packed in the egg box, the line lowers it to the ground and a knot tied when the box has reached terra firma gives the height of nest.

A Brown-headed Nuthatch, (*Sitta pusilla*) had a nest fifteen feet up a very rotten twenty foot stub, on the edge of three feet of water. A loop in the middle of the rope was passed around the stub, and drawn taut after having been pushed up nearly to the hole. My brother, on the land side, holding one end of the rope, lowered the stub into the water as I pulled it down with the other end of the rope after wading across. The stick broke into several pieces as it struck the water, but we floated out of the nest five handsome eggs, all too far incubated to be saved.

Another Nuthatch was occupying a hole twelve or fifteen feet up a stub too rotten to bear my weight, and too solid and heavy to pull over. Six feet from it grew a slender birch sapling, leaning away from the stub, and likewise too weak to bear me. I dragged up a couple of ten foot fence rails and tied them together with my belt and game bag strap, close to one end after being crossed, just leaving enough fork to hold the birch sapling when the long ends were stuck in the mud on the side away from the stub and far enough apart to give a wide base. This gave a very shaky climb and foothold, as my weight on the birch caused the ends of the rails to sink in the mud, but after a good deal of hard work tearing out and cutting away the half rotten wood surrounding the nest, at full arm's length, I managed to secure what there was — an incomplete set of three.

A Barred Owl (*Strix nebulosa*) was rapped out of the top of a twenty foot birch stub standing in the water. The outer wood was rotten, and I had to tear away the shell with my fingers, as I

went up, to expose a hard enough surface for the spurs to bite. The two eggs were put in my hat with some cotton and the hat replaced on my head. I did not pack in the egg box, as I had all my work cut out in clinging to the old rotten stub and could only use one hand at once. The eggs, which came down safely, were both addled — putrid, I should say — and I don't think I could have blown them without parting company with my dinner. I got a whiff of them at long range as my brother was calmly removing the contents, and I left the room. If they had only broken when in my hat!

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### On the Fading of Colors of Eggs After they are Prepared for the Cabinet.

BY J. P. N.

I find that it is impossible to prevent the eggs of certain species of birds from fading after they are prepared for the cabinet.

Exposure to the light will of course fade their colors, but I do not refer to that. Eggs should be kept in tightly fitting drawers, away from all light; but even when this is done with the greatest care, still it seems to be impossible to prevent some of them from fading.

Eggs of the Bluebirds are especially liable to lose their color. I have noticed those of the Eastern species (*Sialia sialis*) which were of a beautiful blue when taken, and after being carefully prepared for the cabinet and at once shut up in a dark drawer, they gradually faded until they were several shades lighter than they were at first.

The same thing is noticeable, although in a lesser degree, in eggs of the Robin, (*Merula migratoria*), Wood Thrush, (*Hylocichla ustulata*), Brown Thrasher, (*Harporhynchus rufus*), and many others.

White eggs, with a thin shell show the yolk through the shell before they are blown and lose the pinkish tint afterwards, but this of course cannot be called fading. Many eggs, however, appear much darker before they are blown, and I have thought that the drying of the inside white membrane after blowing is answerable for this. Several times eggs have almost entirely changed color when dry. Often have I congratulated myself on the possession of what I thought were an unusually green set of eggs of the Brown Thrasher before being

blown, only to find that when they had dried they had almost entirely lost their greenish tint.

I have seen eggs of the Eastern Nighthawk (*Chordeiles popetue*) dry several shades lighter than they were when unblown, and once I received a beautiful set of eggs of the Chuck-wills-Widow (*Antrostomus carolinensis*) from one of my collectors in Mississippi just after they had been taken and blown, and was much disgusted to find their pale brown markings fading day by day, although they were carefully kept in a dark drawer. When these eggs first came they were entirely different from any of the other nine sets in the series, but now they could hardly be distinguished from them.

Again, this past season I received a large series of sets of eggs of the Olive-backed Thrush (*Hyllocichla ustulata swainsoni*), from one of my New Brunswick collectors, and some of them had been taken only a few days before. As soon as they were blown he had wrapped them up in raw cotton, packed them in their nests, and sent them to me. On unpacking them several of the sets were of a brighter blue than any eggs of this species that I had ever seen before, but they speedily faded to a tint that was uniform with the others. My theory is that while wrapped in the raw cotton the air had no chance to get in the blow hole and dry them, and therefore did not fade. When unpacked, however, this was not the case, and hence their fading.

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### Some Curious Sets of Eggs.

BY I. S. REIFF.

Set I. Four eggs of the Red and Buff shouldered Blackbird, (*Agelaius phoeniceus*). Three of these very closely resembled the eggs of the American Bittern, (*Botaurus lentiginosus*). In ground color No. 1 has a wreath around the larger end of very fine lines. No. 2 has also a wreath around the larger end, the lines being much heavier, with a heavy black spot nearly in the centre about one-eighth of an inch in diameter. No. 3 has a few fine lines on one side leading from the larger end. No. 4 has the typical ground color of the species without a mark.

Set II. Four eggs of the Great Crested Flycatcher, (*Myiarchus crinitus*). All of these have a delicate creamy ground color a trifle darker than found in fresh eggs of the Acadian Flycatcher, (*Empidonax acadicus*) before they

are blown. In Nos. 1 and 2 the markings are all at the larger end forming a solid color, the ground color being entirely hidden. Nos. 3 and 4 have also the larger end covered, being sparingly marked with fine short dashes covering about one half the eggs, the smaller ends being entirely plain.

Set III. Four eggs of the Brown Thrasher, (*Harporhynchus rufus*). Three of these have a delicate bluish ground color, somewhat resembling the ground color of the Curved-billed Thrasher, (*Harporhynchus curvirostris*) with the markings all around the larger end forming a wreath, the remaining parts of the eggs being without marks shows of the bluish tint more decidedly than in the eggs of the Curved-billed. The fourth egg is what might be called a typical specimen of the species.

Set IV. Two eggs of the Brown Thrasher, (*Harporhynchus rufus*). These have a heavy dark green ground color with the usual fine brown pin specks evenly distributed over the eggs. There are no eggs I have ever seen that I can compare them with, it being a peculiar shade. The pair of birds that built the nest these eggs were taken from, were carefully watched by a friend of mine, from the time the nest was started in an old brush pile that lay in the orchard, only a short distance from the house. After the first egg was deposited, seeing the peculiar color and being anxious to secure the whole set, he kept a close watch over the birds and nest to see that no stray "tabby" or anything else molested them. On the following day there was another egg deposited, but the next three days passed by without any more eggs being added, although the birds remained around and often visited the nest. As three days had passed without adding any more to the set, he secured the two eggs, being afraid, as he told me, that if he did not take them something might destroy them.

It has always been a debatable question between us whether the female was not ready to complete her complement, or after laying the two eggs and they being so entirely different from what she or any of her sister birds of that species had probably ever deposited, if she did not think nature was playing a joke on her and becoming disgusted, after holding a consultation with her partner, they decided to desert this nest, build another and try again. They are certainly a curious pair of eggs, and could not be mistaken for any other species, for leaving out the ground color, they resemble a typical egg of the Brown Thrasher, but are a trifle smaller than the average.

### The Shore Birds of Cape Cod.

BY JOHN C. CAROON.

(Concluded.)

Long-billed Curlew, *Numenius longirostris*, (Wils.) A rare spring and autumn migrant. On the 27th of August, 1883, I saw two of these birds on the "Quivet Marsh" at Brewster, but was unable to get within shooting distance of them. Several seasons ago an uncle of mine while on a marsh at Harwich in early autumn, saw three of these birds fly over the marsh and easily distinguished them by length and curve of their bills. This is the latest record I have of their occurrence. About thirty years ago it was very common in fall migrations and was not uncommon as late as twelve years ago. It is the largest as well as the most wary of the shore birds that visit the Cape. It cannot be mistaken for any of the other species on account of its greater size and length of bill. Its bill, which is from four to eight inches long and considerably curved towards the end, has given to it the name of "Sickle-bill," by which it is best known on the Atlantic coast. I have one in my cabinet whose bill is nearly eight inches in length and this was the greatest length of any in a series of sixty specimens taken in Florida. Its habits and food are similar to the species next to be mentioned.

Hudsonian Curlew, *Numenius Hudsonicus*, (Lath.) Jack Curlew on Cape Cod. A tolerable common spring and a common summer migrant. It arrives singly or in pairs from the middle to the last of May. It does not seem to be in a hurry to continue its journey and remains later, with few exceptions, than any of the other shore birds. I find in my note-book of 1885 that a pair arrived at Monomoy Island June 3rd and stopped until June 23rd. I saw these birds nearly every day during that period, as they "tended" quite regularly certain locations on the flats and beaches. In the summer this bird makes an appearance by the 15th of July and is quite common by the last week of that month or first in August. It is the most common between the 6th and 28th of September, as during this period the flights occur. It is, however, irregular in its appearance. In coloration and habits it shows a great resemblance to its long-billed relative, *N. longirostris*. It is considerably smaller and its bill is only half as long. This species frequents low beaches and bars, devouring flies, sand fleas and other insects which it finds about the bunches of seaweed thrown up by the tide and wind, and is often seen about the edges of the

sedge grass on the sand and mud flats feeding on marine worms, shell fish and small fiddler crabs. It goes on to the salt marshes adjoining the beaches or flats to rest and feed during the greater part of the flood, and the first of the ebb tide. On the marshes it feeds on snails, grasshoppers and black crickets, which are numerous at these places. Although not a wary bird, in the summer and autumn it flies high, and its notes not being easy to imitate, a small number only are taken. I have, quite a number of different times, shot individuals on the flats by walking boldly up towards them until within shooting distance, being in plain sight of them while approaching. I have a pair of adult birds in my cabinet that were secured in this manner on "Brewster Flats," in August, 1883.

Eskimo Curlew, *Numenius borealis*, (Forst.) Dough-bird on Cape Cod. A rare spring and common summer and fall migrant. The bird rarely, if ever, visits the Cape in the spring and I do not know of one instance of its being taken or seen. This is one of the birds that is the most irregular in appearance on our coast. It is seen at intervals from July 15th to October 1st. The occurrence of this bird in any great numbers depends entirely upon the wind and weather, for if we have a heavy gale from the east or south-east of a few day's duration during the latter part of August, or in September, we are sure to have one or more flocks stop. As soon as the wind shifts about so as to be favorable for their southward migration most of the number will depart but a few individuals will remain for a considerable length of time. There were a great many flocks of these birds, in company with Golden Plover, passed over the Cape in the latter part of August, 1883. I saw large flocks high in the air flying in over the land in a south-easterly direction at Brewster. I learned of quite a number of Eskimo Curlews being taken at Eastham, Orleans, and other localities at this same date. In September of the same year I found them common on Monomoy Island, and heard of their being so at Chatham. Since that time there have been no flights of any consequence, and for the past three seasons they have been quite scarce. They frequent old fields and pastures, often several miles from the shore, and feed on berries, grasshoppers, crickets and other insects. They occasionally go on to the dry salt marshes and there too they find an abundance of grasshoppers and insects. On Monomoy Island they are found on the sand hills about the gray moss that covers a large portion of the Island. I

have a specimen that was shot out of a flock of Sandpipers on the dry sand beach at Monomoy Island Sept. 10, 1887. Like the other Curlews, they fly high and swiftly, their wings moving with great rapidity, and the flock usually takes the form of the letter V in flying, thus resembling some of our water fowl. While in the air they keep up a continual whistling, which is not as loud as the Hudsonian. Many writers give the name by which this bird is known in New England as "Doo-bird." It should be written "Dough-bird," which does not change the sound. The reason that it is called by this appellation is on account of its fatness, which give a soft and yielding feeling, like dough upon handling. They are well flavored and being very fat and of good size, command a price nearly double that of any other shore bird. Gunners realize as much profit from these birds in several day's shooting, when they are plenty, as they do in a season's shooting of other birds.

Black-bellied Plover, *Charadrius squatarola*, (Linn.) Adults, "Black-breasts" or "Beetle-heads;" young, "Beetle-heads" or "Pale-bellies," on Cape Cod. A common spring and abundant summer and autumn migrant. The first ones in the spring arrive as early as April 15th, but are not generally seen until the last week or first in May. They become tolerably common May 15th, increasing until the 27th, and by this last date they have reached the height of their spring migration. They are rarely seen after the 10th or 15th of June. In the summer the first birds flying south, which are adults, reach the Cape the latter part of July or first of August, although individuals are occasionally seen as early as July 15th. They increase until the middle of August, the flights usually occurring from the 1st to the 15th of the month. The young birds commence to make their appearance about the middle of August, increasing until the middle of September, and the largest flights occur between this date and October 15th. Most of them leave by the first of November, but a few small flocks remain as late as the middle of the month. This bird is seldom seen on the uplands, but frequents the sand and mud flats at low tide, feeding on small shell fish and aquatic worms. As soon as the tide flows over the flats it resorts to the high beaches, salt meadows and marshes to wait until the next ebb tide. On the marshes it finds an abundance of small snails, crickets and grasshoppers. There is no shore bird on the Cape so well known to gunners, or so eagerly sought after, as the "Black-breast," or "Beetle-head. No bird,

however is more wary than the old "Black-breast," and to be successful in shooting them, one must have good decoys, be well concealed behind a stand or blind, and be able to imitate their call note correctly. Stands are built on the meadows and marshes by cutting bushes of about the proper height and sticking them in the grass or mud so as to form a circle of convenient size for one or more gunners. If bushes cannot be found handily, dry seaweed, grass and other materials are sometimes used. On the mud flats bunches of sedge grass afford concealment, but the most successful method is to make a bar in the sand flats and sink a box, or dig a pit in the sand. It requires considerable labor to build and keep a bar in order, also to sink a box. The bar is laid bare before any of the surrounding flats, consequently the birds, finding no other feeding place uncovered, fly to the bar. One other way in which large numbers are sometimes taken is to find out the locality on the high beaches where they roost during high tide, and digging a hole in the sand for a place of concealment. They usually come to the same spot to roost each high tide and by examining the beach these places can be easily found, by the numerous foot prints in the sand. The blind should be completed soon after the tide begins to flow, as these birds leave the flats as soon as the tide commences to cover them. For the young, or "Pale-bellies," all that is needed is a pit dug with the sand thrown out around the top edge and a few decoys placed out the right distance from the pit. For the old "Black-breasts" it is necessary to have the top covered over with boards and dry sand spread on them and have an opening in the sides and front, to shoot from. It is best not to put out any decoys as the old birds will seldom alight to decoys on the beaches, even if they are made to look very natural.

American Golden Plover, *Charadrius dominicus*, (Mull.) "Green Plover" on Cape Cod. A common summer and autumn migrant. This species is very rarely seen on the Cape in the spring, and I do not know of an instance of its being taken. The appearance of these birds on the Cape in the summer and fall is largely due to the weather and winds. Large numbers pass our coast from the 15th of August to the last of September and whenever we have an east or south-easterly storm during that period some of the flocks are certain to stop. The first flight is looked for by the old gunners from the 25th to the 29th of August. It bears a marked resemblance in color to its cousin, the Black-bellied Plover, but can always be distinguished

by the absence of its hind toes. Its habits and food are the same as the Eskimo Curlew, with whom it associates. It is very fat in the autumn and, like other birds that feed on insects, berries and grains, it is in much demand for the table on account of its fine flavor. The most successful gunners get these birds in the following manner: Several weeks before the time for the flights to occur, they go to an old field or pasture that they know the birds usually come into and burn off the old grass and bushes for quite a space. Then a hole is dug large enough for one or two persons to sit in comfortably, with only the top of their heads above the surface. In a few weeks the grass springs up and the green patch is easily distinguished from its duller surroundings by the Plover flying about, and they are sure to come to this place. The gunner, with his decoys out, sits in his pit with only the top of his head out, which is covered with a green cap. A flock, before alighting to the decoys, will usually circle about several times, often flying directly over the gunner's head only a few yards away. An experienced gunner will not shoot when they are so near and scattered, as he could kill but one or two, but will wait for them to bunch at the right distance, which they are sure to do while turning, and seize that opportunity to fire, killing many at one shot. A friend of mine, "Dr. T.," is considered a fine marksman and has shot Plover for many years, and this last season, in the manner I have described, he killed fourteen Plover out of a flock of nineteen at one discharge of his gun.

Killdeer, *Agialitis vocifera*, (Linn.) A rare spring and autumn migrant. It is the first of the shore birds to arrive in the spring, sometimes reaching the Cape as early as March 1st. In the autumn, migrants remain as late as the last of November. This bird was common on the Cape in former years and bred in some localities. They frequent ploughed fields and pastures, marshes and the muddy edges of ponds and rivers. Their shrill notes of "killdeer," are incessantly reiterated while on the wing or running along on the ground.

Semipalmated Plover, *Agialitis semipalmata*, (Bonap.) "Ring-neck," on Cape Cod. A common spring and abundant summer migrant. Arrives from the south in the spring the last of April or the first of May, becoming common about the 21st of May, nearly have passed by June 1st. First comers arrive in the summer about the 12th of July, becoming common by the last of the month, and are most numerous through the month of August. They be-

gin to decrease about the first of September, and by the 28th nearly all have taken their departure. The spring arrivals and the adults in the summer and autumn are usually in pairs, but when the young commence to put in an appearance they are seen in small flocks by themselves, or in company with the Sandpipers. They go on to the mud and sand flats, sand bars and low beaches, where they feed on small shell fish and marine animals. As soon as the tide begins to flow over the flats, they fly to the high beaches to roost, in company with other Plover and Sandpipers. In the spring they are often seen on the salt marshes near the shore. There is no doubt but that it bred in former years on Monomoy Island in company with its paler relative, the Piping Plover, and Mr. Samuels, in his *Birds of New England*, speaks of a pair that he found with their nest in 1866 on Muskeget, an island off the Massachusetts coast.

Piping Plover, *Agialitis melodia*, (Ord.) Pale Ring-neck, "Clam bird," or more commonly "Mourning Bird" on Cape Cod. A common summer resident. The first ones in the spring arrive at Monomoy Island from the 8th to the 10th of April, increasing until May 1st at which date the migration is at its height. They are usually in pairs when they arrive, and on Monomoy they commence to nest about the last of May or first of June. I have instances of their nesting as early as May 10th and as late as July 20th. Wherever I have found their eggs on Monomoy and other islands off the Cape, they have been laid on the bare sand on the high beaches above high water mark. The nest is usually a slight depression in the sand, but it is sometimes lined with small pieces of shells and sea weed. The eggs are usually four in number and the ground color is so near like that of the sand upon which they are deposited that it requires a sharp eye to discern them. Whenever a person approaches the vicinity of their nesting site, they resort to various devices to entice them away. They make a feint of being wounded by dropping one of their wings as if it was broken and fluttering along as if in great pain, and a person who has not seen this habit performed by other birds would be certain to be deceived. Another device is to alight on the beach a short distance from a person, then run along a few yards, and crouch down, fluttering their wings and acting as if on their nest. They will remain in this position until the person approaches quite near them, when they jump up and run along and repeat the performance. The young, as soon as they

leave the eggs are able to run about on the beach and when discovered will try and make their escape by running away, but as soon as they are overtaken will crouch on the sand and will make no movement to get away, even when taken in the hand. When the old birds are nesting they seldom go out on to the flats to feed at low tide, but feed on tiny marine animals washed up by the surf and small insects found on the beaches. As soon as the young are full grown they are seen in small parties by themselves, or in company with the Semipalmated Plover on the flats, the old birds, however, being usually in pairs. The old birds commence to leave about the middle of August; the young linger several weeks longer and then they too start on their journey south. They run very swiftly and it is exceedingly hard work to catch one wounded. They alight and the very instant their feet touch the beach they are running along as fast as their propelling muscles can move them, with their heads drawn in close to the shoulders. The note of this bird is a soft plaintive whistle, quite prolonged, which is shortened when quickly repeated. It is from these mournful notes that it receives the appellation of "Mourning Bird." It was abundant in former years on the east part of the Cape from Chatham to Provincetown, but there has been a great decrease during the last five seasons.

Turnstone, *Arenaria interpres* (Linn.) "Chicken" Plover" on Cape Cod. A common spring, summer and autumn migrant. The first ones arrive at the Cape in the spring about the first of May, increasing until the 24th and a few remain until June 15th. I have seen individuals as late as June 24th. The first comers on their return from the north reach the Cape about the last of July, increasing about the middle of August by the arrival of the young birds. They are the most common about the last of August and remain tolerably common until late in September. It was, some twenty or thirty years ago, abundant on the water side of the Cape. In its handsome adult dress it is the most conspicuous of any of the *Limicola* that visit our Cape shores. Although it is often seen on the sandy beaches, bars and flats, its favorite haunts are low pebbly or rocky beaches, mud flats, and the shores of salt creeks. In the summer and autumn it retires to the high beaches to rest during high tide, but in the spring it goes on to the salt marshes like many of our other birds. In the spring of 1883 large flocks came on to the Quinset marshes at Brewster in company with Black-bellied Plover.

Their food consists of small crustaceans, horse-foot eggs and soft marine animals, many of which it finds by turning over small stones and from this habit it derives its name of Turnstone. This is one of the several shore birds that I have found feeding about heaps of guano on Monomoy Island. This species is not usually shy and will alight to any of the shore bird decoys. Their note, a short, sharp whistle, repeated with great rapidity, is very hard to imitate. They are generally seen in parties of from two to six, but in the spring when flying to the marshes, they congregate in flocks of twelve or more individuals and fly very swiftly, calling incessantly to each other.

American Oyster-catcher, *Hematopus ostralegus*, (Linn.) A rare visitor on the Cape coast. I have one instance of its occurrence of late years, that of a specimen taken near Monomoy Island during the latter part of April, 1885, as recorded in the O. & O., Vol. 10, No. 10, 1885.

### Nesting of Peregrine Falcon.

BY FRANK A. BATES.

Two fine sets of eggs of the American Peregrine Falcon, (*Falco peregrinus navius*) were found during the past season on Mount Tom, Mass., by Mr. Geo. H. Avery.

The first set was found April 15th, 1888, and the clutch contained four eggs, seven-tenths incubated. The nest was on a shelving rock, and consisted of a little dirt, grass and pine needles, but there were no sticks. The female was on the nest.

No 1: Ground color, creamy white, lightly blotched on large end with light reddish brown, gradually increasing in density toward small end, where the ground color is entirely and evenly obscured. This egg at the large end bears considerable resemblance to some of the darker specimens of the Sparrow Hawk. Size 2.22 x 1.69.

No. 2: Lightly blotched on small end, increasing in density toward the large end, exactly opposite of No. 1. General color slightly darker; 2.30 x 1.68.

No. 3: Similar to No. 1, but general color darker than No. 2; 2.14 x 1.74.

No. 4: Is so deeply colored that the ground color is entirely obscured, slightly paler at the small end; 2.12 x 1.67.

Nos. 1 and 3 at the dark ends bear lighter blotches, as if touched before the color was dry.

The color of this set is very peculiar, being a very dull, *raw sienna* color.

The second set were found on May 13, 1888, about twenty rods south of the former nest, and contained three eggs, six-tenths incubated. The nest was on a narrow shelving rock, similar to the first nest. No sticks were found.

In this case also the female was on the nest.

No. 1: Evenly blotched all over with reddish brown, overlaid with finer markings of darker, almost chocolate brown. This egg is generally darker than any in the preceding set, still the ground shows through: size 2.07 x 1.62.

No. 2: Generally darker than No. 1, ground color not showing through at the larger end and the darker markings more intense; 2.21 x 1.65.

No. 3: Has general appearance of No. 1, but darkest of all; 2.21 x 1.64. This egg very closely resembles the figure (Pl. 16, fig. 2), in *Cape's Oölogy of N. E.*

Nos. 2 and 3 bear each a dark blotch which looks as if the color which was rubbed off of Nos. 1 and 2 of Set 1, was daubed on these.

Both of these sets are now in the cabinet of Mr. William Brewster.

### A Day on Dead Creek.

BY C. H. PARKHILL.

About half way between Lake Champlain and Snake Mountain, that historic land mark of Revolutionary times, lies a marsh forty or fifty rods wide and miles in extent, through which winds a black sluggish stream known as Dead Creek. June 11th, 1887, accompanied by a friend, we started for a day's collecting among the reeds of this marsh.

Arriving upon the scene, we found the Long-billed Marsh Wren in large numbers and at once began searching for their eggs. After examining at least one hundred nests we gave it up, not having taken a single set. We came to the conclusion that it was early for them. While pushing our boat among the reeds to examine one of their nests, I discovered a nest of the Virginia Rail. It was composed of grass and reeds raised about six inches from the water, was quite shallow, and contained eight eggs, slightly incubated. The bird remained on the nest when we were within six feet of her, and even then did not fly till I touched her with a pole.

Towards night the Rails set up a cackle from all directions, accompanied here and there by the deep base voices of the American Bittern.

We learned that if we would get at the inhabitants of the marsh we must come prepared to wade in the mud and water.

Our next trip was made on June 18th, when we went provided with an extra suit of clothes. Upon arriving at the place of action we immediately prepared ourselves for our day's tramp in the mud and water, which was up to our boot tops, with an occasional hole which would take us in to our waist. Our first capture was a Carolina Rail, which I shot as it flew out of the reeds. We also found a large number of nests of the Red-winged Blackbird.

On one side of the marsh was a tangle of willows from six to ten feet high. In the thick tops of these the Wrens had placed their globular nests, and a good many are attached to the tall reeds, some not more than a foot from the water and others at least ten feet high. Their nests are certainly a curiosity in the line of bird architecture, not unlike a cocoon in shape. They are composed of a mass of grass, reeds and dead vegetation, with an entrance on one side, sometimes near the top and again near the bottom, which is nearly closed up with the down of the willow and the cat-tail, with which the nest is lined. We examined a large number of these nests and succeeded in taking half a dozen sets of their little chocolate-colored eggs.

As we went ashore for our dinner we took a stroll through a hard wood near by, where we took several small birds, two nests of the Wood Pewee, and found half a dozen of the Summer Warbler, which we did not disturb.

On returning to the bog the first bird which we started was an American Bittern, which I shot. As I went to secure my bird my friend exclaimed that he had found the nest. It was as large around as a bushel basket, flat on top, built of coarse grass, reeds, etc., and contained four fresh eggs. Upon digging into the nest we discovered the fifth egg which had been completely buried from sight. We succeeded during the afternoon in securing three more specimens of the Bittern.

As the sun went down the Rails set up their usual cackle and we tried to trace some of them out, but after a faithful search we gave it up, not having succeeded in starting a single one from the reeds.

Towards evening, mud-begrimmed and thoroughly fatigued, we returned to land in quest of a much needed bath and refreshing sleep.

Information is requested as to the whereabouts of Arthur Le Moync, and also of Dr. Northrup, former contributors to our columns.

## Bird Notes of Northern New Jersey.

BY HENRY HALES.

During the early cold spring the regular migrations were much interfered with, especially when the cruel cold breath of the blizzard with its banks of snow, came like an avalanche upon us. It caused much suffering and great destruction among our early migrants. The Robins, Bluebirds, Fox-colored Sparrows, Blackbirds, Tree and Song Sparrows were great sufferers. In the villages as soon as the least clearing was made, or the snow soiled, all the above named species of birds came vainly seeking for food in such a famished condition and so tame that they almost allowed passing teams to run over them. All the out buildings on the farms were swarming with the poor starving birds; great numbers became an easy prey to cats and rats, even the hardy Blue Jays could not withstand such cruel cold and hunger. I picked up one near the barn and took him in to warm him, but he was too far gone to revive. I found remnants of another one a few rods off, only wings and feet left. Many Song Sparrows were found dead around, but as far as my observation went in this direction the House Sparrows suffered least. They appeared much harder than our native Sparrow; they are also very plentiful here, yet I did not see one dead one.

Amongst a number of smaller birds in the barn was one Crow Blackbird, he ate the grain on the floor, but as soon as one approached him he flew up to the upper part of the barn and out of a small broken pane. This he did very nimbly for such a bird, he would not fly to another pane or window, but patiently waited till one left the barn when he as quickly returned.

Later in the season, when the hests of Warblers usually pass on north, many of them entirely unobserved, by most people in New Jersey, the weather proved very cold; snow was reported in Maine as the little northern migrants made quite a stay and were very numerous over most of the state and Eastern New York, and quite plentiful in Central Park. The report was started by some original amateur ornithologist that the blizzard had killed nearly all the English, or House Sparrows and these bright birds were now come to take their places. This silly assertion went the rounds of the New York dailies, soon to be dissipated.

As usual the warblers kept mostly on the trees, but as the cold increased many were seen

on the ground and in low bushes, especially currant bushes, which were just in blossom. Such a variety will perhaps rarely be seen again at one time, or within a very few days, (as the earliest arrivals did not move on). There were Magnolia, Blue Yellow-backs, Black Poll, Black cap, Green, Black and White Cerepers, Chestnut-sided Blackburnian, Redstart, Bay-breasted, Hooded, Summer Yellow, and of course the Maryland Yellow-throat, and no doubt some of the duller colored specimens amongst them. Those that kept much on the ground besides the last two named were the Redstart and Black-capped Green; these fairly lined the ground on road side and gardens. The Redstart was very often seen on buildings peering in corners for spiders. Often in one apple tree five or six species could be counted, with twenty to fifty birds. After the blossoms left the apple trees they took more to evergreens, the Black poll bringing up the rear. It was a truly beautiful sight, one to be long remembered by the most ordinary observer.

## Cowbird's Eggs with Sets.

BY J. P. N.

It is the custom with many collectors not to preserve any eggs of the Cowbird (*Molothrus ater*) which they find in the nests of other birds. This is a mistake, as their eggs should always be kept with the set they are found with, and marked with the same set mark. The fact of their accompanying the set should also be noted on the data.

We wish to caution our correspondents with regard to being too profuse in the use of scientific names. The average reader will recognize what is meant by Barn Swallow, without its being coupled with *Hirundo erythrogastra*. We find in the Ridgway nomenclature a straight, honest English name for every bird, and even the A. O. U. (whatever may be its future intention,) has allowed the same with a little fancy tampering. While we recognize the importance of the scientific appendage we believe it should be carefully preserved to wag on special occasions. Remember, we are an English speaking people, that space is valuable and life is short.

Mr. W. Otto Emerson informs us that he is just recovering from a severe illness of five months, and for this reason will not be able to attend to any exchanges for the next six months.

### Editorial,

The O. & O. is mailed each issue to every paid subscriber. If you fail to receive it, notify us.

Since our last issue we have received many inquiries as to our reasons for attacking the Mass. Fish and Game Commissioners. We thought we had shown in the articles the utter incompetency and incapacity of the commission for the positions they occupy, and the evident unfair, unjust and unprincipled manner in which the letter as well as the spirit of the game law is executed.

The Naturalists of the state are awakening to the fact that it is high time for a correction. The following quotations from public utterances may be interesting:

“STRONGLY URGED EFFORTS TO DESTROY THE INTERESTS OF TAXIDERMISTS.”

E. H. LATIROP.

“THE BUSINESS OF EVERY TAXIDERMIST IN MASSACHUSETTS SHOULD BE KILLED PRIMARILY.”

E. A. BRACKETT.

Both are sentiments given at a dinner of the Mass. Fish and Game Protective Association.

### Communication.

The following extract from a letter received lately is but a reflex of a complaint which has come to my knowledge, quite frequently within the last year, and I wish to call the attention of collectors throughout the country to it.

*“Will you kindly tell me why and how it is, that large dealers in skins and eggs are compelled to pay collectors the same price for specimens as a person who is buying but a single one. I prefer to pick what I desire from a series, even if I have to pay more, and deal with parties that I know are responsible, than to send to some one I do not know, a thousand miles away, with a result too often of not receiving what I want.”*

The only reply I could give was to quote that given me personally in a neighboring city, by one of the largest dealers in the country, which was: “I have not got them in stock nor do I carry them, for the reason that I cannot get them of the collectors at any less price than you or any one else can, and I am not doing business for fun.” Upon expressing my astonishment he said, “The collectors will find by and by that they are making a mistake in being so greedy,” and he instanced one who

sent him a large number of skins and affixing a price to be sold at on commission, at the same time taking orders for single specimens at the same, and in some cases a trifle less than the list price furnished him. The result was he stored and cared for the skins some months, and until he found out where the trouble lay in not being able to dispose of them, and then shipped them back, losing the freight and the expense of handling and caring for them while in his hands. The effect being that he (and I find other dealers in the same position), has not in stock the skins of several birds that are plentiful in this collector’s vicinity, and naturally enough declines (except as a favor to a friend) to advertise the collector’s business by giving any information where or of whom they may be procured.

I think the collectors are making a great mistake. Almost every buyer prefers to select what he wants from a series, as there is sure to be variations of some sort or another, either in the make-up of the skin, coloration, data etc., and has a fancy he can suit himself better in the selection than any one else. Added to this the fact that frequently when receiving a skin by mail it is not what he expected, poorly made or has been damaged in transit, and if eggs, broken, and the consignor is condemned. We notice that many who are making collections have declared that they will deal only with those who carry a stock and who have a business reputation at stake, preferring to hold them responsible. There is no question but that a middle-man is of great pecuniary value to a collector, and it would seem that those who have not yet realized that fact stand in their own light; they should understand also, that it costs something to carry a large stock of skins, eggs etc., and that the opportunity of quickly disposing of their consignments is greater in the hands of parties of extended reputation at home and abroad, doing a large business, and with ample financial resources, than in their own or those who do what is called “a postage stamp sort of business.” The business of supplying specimens of Natural History to individuals, museums and educational institutions has outgrown its infancy and is now as thoroughly established as any requiring capital and reputation. It has been discovered by not a few who have ventured to embark in it that it requires no small amount of both, added to energy and a thorough acquaintanceship with each and every department to make it successful. And those who are in the business of collecting will find that it is for their interest to ally them-

selves with firms who will best serve their interests, bearing in mind that there is such a thing as being "penny wise and pound foolish." \*

### Brief Notes.

Mr. Chas. F. Morrison, whose valuable list of birds of La Plata is now being printed, has removed to Fort Keogh, Mont., and all communications should be sent to that place. Mr. Morrison has enlisted the interest of a number of people in the sections that he has visited and his productions represent their united effort under his guidance. He is now completing a list that will soon be presented in these columns.

Mr. Walter Brett of Niagara Falls, Ontario, on last April made an extended collecting trip. Going to San Diego, Cal., at that place he purchased a wagon and pair of mules and with them travelled about 1400 miles, collecting birds. On his return trip at Green River, Wyo., his satchel containing about 200 unidentified skins was stolen—"a sad loss." This is one of the many instances that daily come to our attention, showing what our naturalists are doing, their *determination* and *pluck*. Mr. Brett by his loss was unable to give us a complete list of his collection. He writes that he took every opportunity to speak a good word for the O. & O. and sends us a list of names for sample copies.

The Eskimo Curlew has of late years been far from plentiful on Cape Cod. There was quite a flight of them and Golden Plover on the afternoon of the first Sunday in September. The boys had to resort to a vigorous singing of psalm tunes to keep from popping at them.

Many a farmer's boy is to-day an enthusiastic naturalist, and in pursuit of his knowledge of nature is collecting birds and eggs, and will continue to do so, law or no law. Let the sportsmen frame their laws with equity and curb the serfs who execute them, lest they find an increase of barbed wire fences and notices of "No Trespass." The action of some of the Connecticut farmers is an index of what may occur in other localities. A law is a law and it is very thin to say it will not be enforced on the boys.

That Coues Key is a popular work is evident from the fact that the cloth bound edition is nearly exhausted. Those of our readers who have not procured a copy should avail themselves of the opportunity at once. The third edition is offered in two forms only—cloth bound and the flexible leather or sportsmen's edition.

"PLUMAGE," or identity smothered by art, the style in which birds are worn this season—congenial to the tenderest heart.

The American Angler, a bright, New York publication, in its June issue strikes at the Legislative donkey. That's right; stir them up.

We are in receipt of the "Osteology of the Carolina Rail," by R. W. Shufeldt, M. D. Dr. Shufeldt is the author of many contributions to Natural Science, and

this work cannot fail to be of interest to ornithologists.

And now a naturalist from Connecticut says, "The laws here show us no favor, but they are so stringent that they are not enforced. Our columns are open to all. Let some gentleman from that state point out a line of action for the naturalists there.

Now that Oliver Davie's new egg check list is about to be offered, the conundrum is, how many dealers will publish themselves as *sole agents*, and who will offer the greatest premium with it? Mr. Davie deserves the support of the Oologists of the country for his persistent efforts to furnish them with a work that is of great value and at a price that places it within the reach of all. When it is *actually* published we will offer it to our readers, and at the *best terms*.

It is surprising how few notes of interest pertaining to bird life appear in the press of the country. Such as we notice are mainly a rehearsal of what has been going the rounds for the last half century. It is safe to say that if a thousand people were stopped in the streets of Boston and put to test not a dozen of them would be able to name correctly a score of our most common birds. Would it not be an advantage to devote a little of the space now occupied in a minute description of the prize fights and other similar society damning transactions, to a diffusion of knowledge that would be far more fit, desirable and entertaining to all.

An Acadian Flycatcher's nest and three eggs were taken in Hyde Park, Mass., during the past season, by Fred W. Hill. That gentleman reports that he observed a Mocking bird on several occasions in the Blue Hills, Milton, during April. He is quite confident it remained in that locality but failed to discover its nest.

Again we notice an unusual flight of amateur publications. We wish their proprietors, one and all, unlimited success. The novelty of the enterprise soon wears off; a limited subscription list and the printer's bill have a dampening effect on the ambition that is demoralizing. We advise collectors to secure specimens early, for such flights are not lasting.

"Eastern ornithologists are quite jubilant over the fact that our native birds are unusually common this year. We fail to notice any increase in the vicinity of Wyandotte."—*Agassiz Companion*.

Nor do we see any particular increase, except in the report of the Massachusetts Fish and Game Commissioners. While certain birds are noticed more plentiful some years than others, on the other hand a like scarcity is found. We refer to the large flight of Pine Grosbeaks in this section in early spring of '85, and since that time we have had no reports of them.

### "HONOR TO WHOM HONOR IS DUE."

We take pleasure in announcing the capture, at Monomoy Island, Mass., of a specimen of the Hoary Bat (*Atalapha cineria*). Dr. Merriam, to whom the specimen was sent, informs us that it is a tree-dwelling species belonging to the Canadian Fauna. It is a disputed question whether this bat was shot by Webster or Whiting, and for the safety of ourselves we prefer to leave it to posterity to decide to whom the credit belongs.

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### Nesting of the Yellow-throated Warbler near Charleston, S. C.

BY ARTHUR T. WAYNE.

The month of April I spent at Hobcaw Point, Berkeley Co. S. C., with the intention of devoting the whole of the time in searching for the nests of the Yellow-throated Warbler (*Dendroica dominica*).

This place (Hobcaw Point) is one of the most beautiful country places near Charleston, and it is opposite the town. On entering the "Point" by water, the approach to the dwelling house is marked by a most exquisite avenue of Live Oak trees, which are over one hundred and fifty years old, and which are draped in Spanish moss which grows very luxuriantly. It is in this avenue that the beautiful Yellow-throated Warblers are to be found. They very rarely leave this location, and are resident the whole year.

At the time of my arrival April 2d, I knew that some of the nests were already built, and I doubted if I would be successful in finding even one. The season was very backward, however, as it was very cold in March and I consoled myself with the hope that the Warblers were delayed in their nest building.

The next day April 3d, I marked three pairs of birds that were mated and undoubtedly breeding, and from two pairs of these Warblers I took five nests with eggs.

The female builds her nest wholly by herself; the male takes no part whatever; he simply has a good time flying around and singing as if to encourage her with her work. The nest is only to be found by watching the female closely, and I do not hesitate to say that it is the most difficult nest I know of to find. The female alone incubates the eggs, and is not even fed by her mate. She has a pretty hard time!

My first nest was taken on April 11th, and contained three fresh eggs. It was built in a

bunch of moss, completely hidden, and under a large oak limb, and about thirty feet from the ground, and at the terminal branch of a large limb which grew from the main body of a Live Oak tree. In five days only three eggs were laid, which shows that the set was complete, as the female was sitting.

My second nest was found April 14th, and contained four eggs with large embryos. It was built like the first nest, but much higher—being fifty feet from the ground. I had much trouble in securing this nest, as it was on such a high tree, and the limb in which it was built was very rotten.

Nest number three was taken April 19th, and was built in a bunch of moss, in a Black Gum tree, forty feet from the ground, and contained four eggs with large embryos. The eggs in set are very handsome.

My fourth nest was taken April 25th, and was built in a bunch of moss, in an oak tree, about forty feet from the ground, and contained four eggs slightly incubated. This nest was hardest of the series to secure, as the limb was rotten and hung down about five or six feet, and the limb from which it grew was very small. I had to bind myself to the tree with a rope, and cut the limb as far as I could reach with a sharp knife. As it was, I gashed my thigh with the knife before I was at work very long. This set was the second laying of the birds to nest number two, and are very similar in coloration.

My fifth and last set was taken on May 1st, and the eggs are exquisitely marked. The nest was built in a bunch of moss, in a Live Oak tree, about fifteen feet from the ground; the nest contained three eggs and were fresh. This set is the second laying of the birds to set number three, and the eggs are also very similar, but much handsomer—in fact the handsomest set I have yet taken of this Warbler.

The nests all agree in materials, and workmanship,—being built of fine grass, weeds,

snake skins, feathers, and lined with the flower of the moss; in one of the nests there is a quantity of cotton. The nest is built in a bunch of moss, and rests on a bed of the same.

All of these eggs were taken from three pairs of birds, which were the only ones found in a radius of several miles.

[Two of the sets of eggs of *D. dominica* referred to by Mr. Wayne are now before me and may be described as follows:

April 14, 1888. Four eggs. Ground color grayish-white, in some running to a pinkish white, spotted with lavender-gray, and burnt umber. The markings are almost all near the larger ends, and form wreaths around the broadest diameters. One of the eggs has a large blotch of burnt umber which produces an odd effect. They measure .71 x .53; .71 x .53; .69 x .53; .69 x .53.

April 11, 1888. Three eggs. Grayish-white ground color, spotted with lavender-gray and burnt umber. The markings form indistinct wreaths around the centres of the eggs. They measure: .65 x .51; .66 x .49; .60 x .49.—J. P. N.]

### A Series of Eggs of *Oroscoptes montanus*.

BY J. P. N.

The eggs of the Sage Thrasher (*Oroscoptes montanus*) are very beautiful, and can be distinguished at a glance from those of the Mockingbird (*Mimus polyglottus*). The ground color of the eggs of the latter is much lighter than those of *O. montanus* which approached more nearly to the color of eggs of *M. carolinensis*, although not so dark. It is of a rich greenish blue, which is not given in any of the plates of Ridgway's *Nomenclature of Colors*. It varies in intensity in the different sets.

Their markings are said by Mr. Ridgway (in his *Manual of North American Birds*) to be of a clove brown, and no doubt some of the specimens in the National Museum have spots of that color, but none of those in the series described below are so marked. They have spots of a bright reddish brown also not figured in the plates of the *Nomenclature of Colors*. The markings are heavier near the larger ends. There are also a few traces of plumbeous. In shape they vary from an ovate to a short ovate.

Set I. May 26, 1888. Fort Klamath, Oregon. Nest in a low bush. Composed of sticks, lined with bark. Three eggs: .90 x .72; .89 x .72; .84 x .70.

Set II. June 10, 1886. Ogden City, Utah. Nest in sage bush. Four eggs: .95 x .69; .96 x .70; .95 x .68; .95 x .69.

Set III. June 10, 1886. Ogden City, Utah. Nest in sage bush. Four eggs: .93 x .67; .97 x .69; .95 x .69; .98 x .71.

Set IV. May 23, 1888. Fort Klamath, Oregon. Nest in bush. Composed of sticks, lined with bark. Four eggs: .93 x .72; .93 x .72; .95 x .72; .90 x .71.

Set V. May 26, 1888. Fort Klamath, Oregon. Nest in bush. Composed of sticks, lined with bark. Four eggs: .87 x .71; .94 x .71; .99 x .75; .92 x .72.

Set VI. May 26, 1888. Fort Klamath, Oregon. Nest in bush. Made of sticks, lined with bark strips and hair. Three eggs: .97 x .74; .85 x .68; .92 x .69.

Set VII. June 10, 1886. Ogden City, Utah. Nest in sage bush. Four eggs: .94 x .73; .92 x .70; .86 x .75; .94 x .70.

Set VIII. July 2, 1885. Near Fort Custer, Montana. Collected by Captain Charles E. Bendire, U. S. A. "Nest in a medium sized sage bush, about eighteen inches from ground. Composed of small twigs, coarse grasses, and lined with finer material of some root. Bighorn River bottom, north of fort. Eggs contained good-sized embryos. Fully identified." Five eggs, the ground color darker than any others in the series, and the markings heavier: .96 x .71; .98 x .73; .95 x .72; .96 x .70; .96 x .70.

### Nesting of *Otocoris alpestris strigata*.

BY J. P. N.

In *The Auk* for April, 1886, (Vol. III, p. 166.) Mr. A. W. Anthony described the finding of the first nest of the Streaked Horned Lark (*Otocoris alpestris strigata*) of which we have any record. He found the nest on May 21, but he does not give the year. He stated however, that his observations extended from February, 1884, to June, 1885, so that it must have been one of these years. He further told us that most of them were made in the vicinity of Beaverton, in the eastern part of Washington County, Oregon.

Mr. Anthony continues: "A nest found May 21, was built in a hole about three inches below the surface of the ground. It was composed of dry grasses and fine roots, lined with fine dry roots and a few horse hairs. It contained three fresh eggs. The bird was flushed from the eggs after dark, and I suppose must

have been unable to find her way back, for although I watched the nest for several days she was not seen to go near it again."

The next observer who has recorded any facts concerning the nesting of this species is Dr. J. C. Merrill, F. S. A., who commenced the publication of his valuable and interesting paper on the "Birds of Fort Klamath, Oregon," in *The Auk* for April, 1888, (Vol. V, p. 139.) Dr. Merrill collected skins and eggs in that locality from September, 1886, to August, 1887, and in the July, 1888, number of *The Auk*, (Vol. V, p. 259,) he gives his experience with the nesting of this species:

"Though within a limited area the Larks were very common, and the nesting site of each pair could easily be located within a few yards, it was only after many hours of very thorough and careful search and watching that on May 30 a female was seen to leave her completed nest. On June 4 this contained two eggs but was deserted, a horse having stepped on one edge and crushed it down, but fortunately without breaking the eggs. These measure .79 x .61 and .81 x .62, and bear a general resemblance to eggs of the other forms of this species, but having none of these at hand for comparison as this is written I will not describe them at length here. I believe these are the only eggs of *strigata* as yet collected, and the second set found. This nest was placed at the base of, and partially under a raised clod of earth; a low weed concealed it from above, and it was admirably hidden; the rim was flush with the surface of the ground, and in composition and construction it was like Montana nests of *arenicola*, but was perhaps rather deeper than the average of these."

On June 17, Dr. Merrill also found another nest, containing three young birds.

After Dr. Merrill's return to the East he very kindly procured for me the services of a competent collector at Fort Klamath, who was engaged in taking skins for Mr. William Brewster, and who made a collection of eggs for me last spring in that locality. When they arrived I was delighted to find among them a set of four eggs of *Otocoris alpestris strigata*. They were taken June 1, 1888. The nest was sunken in the ground, and was a very thin structure, made of grasses. As the collector unfortunately did not preserve it, I am unable to give any further description of its materials than the above, which is taken from the data.

In general appearance they bear a strong resemblance to eggs of the other sub-species of *O. alpestris*. Two of them have an olive buff

ground color, while the other two run into a light greenish tint. All four are thickly speckled with olive brown. They measure: .83 x .59; .81 x .60; .85 x .58; .85 x .59.

### "Food of the Great Northern Shrike."

BY HORACE G. SMITH, JR., DENVER, COL.

As information on this point has been asked for by the readers of the O. & O. a few notes from Colorado will not be out of place.

Two species of Shrike are found at Denver—the one *Lanius borealis*, the other his cousin the White rumped Shrike. (*L. ludovicianus excubitorides*).

The former occurs as a winter resident—the latter as a summer resident.

Though I have examined the stomach contents of few specimens, I have found that small winter birds form no small desideratum in their bill of fare. As your correspondent says, this may be partly owing to a scarcity of insect food at this season, for in the fall when the Shrikes first arrive, and as long as insects can be found they feed upon them.

I have found the indigestible portions of grasshoppers, beetles, and small birds all in the same specimen.

When I first saw the plate in Audubon's "Birds of America," representing a Shore Lark captured by a Shrike I was somewhat surprised that so large a bird should fall a victim to him, but since then I have had several opportunities to observe his actions towards this species, and in fact this is the only bird I have actually seen him capture.

In cold weather—especially if snow is on the ground—Shore Larks and Longspurs gather in large flocks on the fallow fields, grown up to rank weeds, and in such localities one or two Shrikes may usually be seen perched upon tree or fence. Suddenly one flies across the field, low over the feeding flock, singles out his victim, strikes and carries him in his claws to some convenient perch. But this species is not the only one preyed upon in this locality.

Some authors have said that owing to his small size and harmless appearance he gains the confidence of his victims and they suspect nothing until the final capture is effected.

While this is doubtless correct to a certain extent, my own observations go to show that the small birds soon learn to know this "wolf in sheep's clothing" as their enemy. I have

referred to this in a former volume of the O. & O. in the case of Cassin's Purple-finch and have observed it among Western tree sparrows, Juncos, Goldfinches and other winter birds.

I call to mind an instance of a common Goldfinch chased by *Borealis* in which the pursued sought safety in flight over a treeless country.

Several times the little Goldfinch was overtaken by his foe but eluded him by expert dodging.

This continued until both were out of sight and I know not how it ended.

In winter the small birds usually band together in mixed flocks, usually containing several species, and the collector is often guided to them by the appearance of one or more Shrikes which hang around in the vicinity.

Some writers in the O. & O. have mentioned the singing of this species and indeed he has a very pleasant song, especially if heard when woods are bare and other songsters are for the most part silent.

The White rumped Shrike also has a number of pleasant notes which much resemble those of the Mocking bird.

I believe the food of *this* species is almost entirely insects, though I once saw one which had captured a small lizard, common on the plains.

The White rump is the only species which I have observed impaling insects on thorns.

The barb-wire fences in this locality are very useful to him and it is not uncommon to find beetles and grasshoppers in such positions.

### Breeding of the Upland Plover on Cape Cod.

BY M. K. BARNUM.

In the September *Ornithologist and Oölogist* Mr. J. C. Cahoon expresses himself as "not positive" that the Upland Plover breeds on Cape Cod.

It may be of interest to him and other readers of the "O. & O." to know that the Upland, or "Grass Plover" as it is there called, is abundant on Nantucket Island and breeds there. I have in my collection a nice set of three eggs taken near Siasconset, Nantucket, July 18, 1880 from a deserted nest in a newly mown hayfield. The eggs were added and I think the bird had deserted the nest on account of the grass being cut, leaving the nest so exposed that the eggs could be seen twenty yards away.

A few days ago some car repairers, working near the Erie R. R. car shops here, caught a

full grown, healthy ruffed grouse which was feeding on grain which had fallen from crippled cars. About three hundred yards distant is a wooded hill and the bird must have come down into the railroad yard to feed. But why it should do this at this season is more than I can tell, and it is still more difficult to understand why the bird allowed itself to be caught. —*Salamauca, N. Y.*

### A Curious Habit of the Chimney Swift.

C. E. HOYLE.

In studying the habits of the Chimney Swift (*Chaetura pelagica*) I have noticed a very peculiar one that I have never seen recorded. Thinking that it would be of interest to the readers of the O. & O. I will describe it.

The Chimney Swift is a very close incubator and has to be forcibly disturbed before it will leave its eggs. I have noticed that almost invariably upon being so disturbed they would drop one or two feet below the nest, to the side of the chimney, and after getting firmly fastened, they would slowly raise their wings over their backs until the tips almost touched, and then suddenly jump or spring backward and upwards, at the same time beating the *back* of their wings against the opposite side of the chimney, producing a heavy muffled sound. They repeat this until as near the top of the chimney as they dare come when they again drop and repeat as before. The way I explained it was, that it was an attempt to terrify the disturber of its home.

### Remarkable Eggs of the Field Sparrow.

BY J. P. N.

During the past season I received a large and beautiful series of sets of eggs of the Field Sparrow (*Spizella pusilla*) from North Carolina. One of the sets contains an egg which is so large that it seems worthy of having its size placed on record. It measures .79 x .55, and in shape and coloration is an exact counterpart of the two other eggs comprising the set, which are of normal size (.68 x .51.)

And in this connection it may be said that unless one has seen a large series of eggs of this species it is difficult to imagine how great their variation is in size, shape and coloration.

## A List of the Birds of Colorado.

BY CHAS. F. MORRISON.

[All Rights Reserved.]

29. *Dafila acuta* (Linn). Pintail. A transient visitant passing north to breed, and winters in Central America. During July and August, 1881, I found this species quite common at Lake Desmit, Wyom, which leads me to believe that it breeds there. Many species of ducks do so, but as I was not there in time for the nest and eggs I cannot say with certainty. Eggs six to twelve.\*\*

30. *Anas sponsa* (Linn). Wood Duck. I found this duck at Fort Lewis, where it no doubt breeds, although I found no nest. Abundant about the head waters of the Rio La Plata at an elevation of 9,500 feet. Often breeds far from water but this is not the rule.

31. *Aythya americana* (Egt). Redhead. Transient visitant; not rare. Nests in British America, and perhaps northern Montana.

32. *Aythya vallisneria* (Wils). Canvas-back. Reported by Anthony as a transient visitant; rare, by Breuninger as a summer visitant. Whether the last named gentleman has taken its nest I do not know, but if it does breed it is rarely, and then only in the mountains where many of the *Anatida* often make a vertical migration to the mountain lakes to breed. Such cases are not uncommon with many of our species.

33. *Aythya marila neartica* (Stejn). American Scaup Duck. Transient visitant; tolerably common in western portion of the state. Reported from eastern Colorado by Capt. P. M. Thorne, U. S. A. Breeds far north.

34. *Aythya affinis* (Eyt). Lesser Scaup Duck. Transient visitant; much more common than the preceding, and reported from both eastern and western Colorado. Like the other it goes far north to breed but many stop in Montana. It also retires farther south in winter.

35. *Aythya collaris* (Donov). Ring-necked Duck. Transient visitant; and I judge, rare, as Drew is the only member upon whose list I find it. It was observed by Chas. E. Aiken\* some years ago. Breeds in high northern latitudes.

36. *Glauionetta clangul americana* (Bonap). American Golden-eye. Anthony marks this as both a summer, and transient visitant; very

abundant, by which it would seem to breed a fact not surprising although the species, as a rule, goes well north to bring forth its young. Its eggs have not been taken, to my knowledge, in the state.

37. *Glauionetta islandica* (Gmel). Barrow's Golden-eye. This species might almost be called a resident in south-western Colorado. I can record its breeding in Dolores county, and have taken them all through the winter in the ponds below Ft. Lewis, near what is called the "Big hill," on the road to Farmington, New Mexico. Anthony, however, on his list of the birds near Denver marks it a transient visitant; Drew's list gives it as a summer visitant, breeding at 8,000 feet. Bunning also, in his list of "Birds of Larimer County," enters it as a summer visitant.

38. *Charitonetta albeola* (Linn). Buffle-head. Transient visitant; common. There is every reason to believe that the Buffle-head may be found breeding in Colorado, in the mountains, although I have no record of its so-doing as yet, however, I think it will yet be recorded from the lakes and ponds at high altitudes, as I have seen them, late in April, long after the bulk have passed north.

39. *Histrionicus histrionicus* (Linn). Harlequin Duck. Mr. Drew reports this duck. In his paper on the "Birds of San Juan County" he enters it as "common; said to breed," and in his other paper,† gives it as breeding "from 7,000 to 10,000." For my part I believe it breeds in both the San Juan and La Plata counties, as I have had a duck described to me by ranchmen, as breeding, which I can only refer to this. I have often seen it through the winter below Fort Lewis, on the Ute reservation, together with *G. islandica* (Gmel). I know of no eggs having been taken.

40. *Oidemia americana* Sw. & Rich. American Scoter. Entered by Drew upon Prof. Ridgway's authority, I know of no other record.

41. *Erismanura rubida* (Wils). Ruddy Duck. Summer resident; breeds "from 7,000 to 10,000 feet" (Drew†). Also reported by Smith (Love-land) and Capt. Thorne, U. S. A., from eastern Colorado.

42. *Chen hyperborea* (Pall). Lesser Snow Goose. Transient visitant, tolerably common. Drew gives it at 7,500 feet in winter.

43. *Anser albifrons gambeli* (Harth). Am-

\*\*By a transposition of paragraphs by the printer, on page 148 of the October issue, the wrong species was described under No. 29.

\*See Pr. Bost. Soc. XV; 1872, p 210.

†B. N. O. C. VOL. 4. 1881. p. 142.

†Drew on the Vertical range of Birds in Colorado AUK. VOL. II, No. 1. JAN. 1885.

erican White-fronted Goose. Transient visitant, Brenninger reports this species. Breeds in high latitudes, retires to Mexico in winter.

44. *Branta canadensis* (Linn). Canada Goose. Transient visitant, tolerably common through the State. Drew gives its breeding range at 10,000 feet, but whether he found it breeding in the state or not I do not know, however, it would not be surprising to find that it does so, rarely. A few spend the winter in the southern part of the state. Nests on the ground, and in large communities in trees, a fact I somewhat doubted until 1877, when I found them in northern Wyom. and southern Montana, but they have since deserted both these breeding places, owing to the country being so rapidly settled, and I do not know of one of their nesting places at present.

45. *Branta canadensis hutchinsii* (Sw. & Rich). Hutchin's Goose. Transient visitant; tolerably common. (Anthony). A few are seen in early winter until a severe cold snaps sends them farther south. Arrives early in March and does not linger with us.

46. *Branta bernicla* (Linn). Brant. A rare accidental visitant. Observed by Capt. Thorne in south-eastern Colorado.

47. *Olor buccinator* (Rich). Trumpeter Swan. Anthony writes "A swan was shot on the river some few years ago that I think was this species." Brenninger enters it in his list as a transient visitant.

48. *Ajaia ajaia* (Linn). Roseate Spoonbill. In a letter from Mr. T. Marten Trippe, of Howardsville, Colorado, dated June 17th, 1888, he writes, "A Rosy Spoonbill was captured at Silverton (Colorado) the other day, it was caught alive but died in a day or two. It was a female, in fine spring plumage," Silverton is in San Juan county. It is a fact worthy of note to find this species so far out of its usual habitat. I enter it as a rare, accidental visitant.

49. *Plegadis guarauna* (Linn). White-faced Glossy Ibis. Reported by Drew at 7,000 feet. No other record. Breeds?

50. *Tantalus locinator* Linn. Wood Ibis. Anthony says, "I think I saw a bird of this species on the river during the summer of '82." This would hardly be evidence enough to add it to this list, but Brenninger under date of April 15th, '86 writes that he took "one Wood Ibis" on that date, Drew also records it upon Mr. Ridgway's authority, I enter it therefore as a summer visitant; rare.

51. *Botaurus lentiginosus* (Montag). American Bittern. Summer visitant; tolerably common. Observed by all the members. Begins

laying by middle of May. Nest upon the ground in marshes and peat bogs. All I have found were of nothing but grass and a few dried weeds, mostly in open places. A nest found in Massachusetts was in a peat meadow, near bushes and in high coarse grass. I stepped in the nest without discovering it, breaking one egg and badly cracking a second, the third was whole when my companion Mr. E. H. Thompson\* who was following me, happened to look down and saw the egg, for nest there was none to speak of. As we were youngsters then, he had first choice as the finder. This of course gave me the cracked specimen as my share. I have it yet in my collection but never look upon it without feeling a little of the old soreness come back to me, which I felt for a long time, as a bitterns nest was to us a rarity in those days. To think I was so near that nest, and had the chance of first seeing it, thereby, according to our rules, giving me two of the three eggs, was a thing I have not yet entirely recovered from, although I have a large series of these eggs now, still, I would part with them all, sooner than that one poor, cracked, end-blown specimen.

52. *Ardea herodias* Linn. Great Blue Heron. Summer visitant; common. The bulk of this species goes farther north to breed, but it can still be called a common breeder. Nest in trees, upon the ground, or in bushes as the occasion requires. Eggs pale greenish-blue. Reaches 5,000 feet.

53. *Ardea candidissima* Gmel. Snowy Heron. A "summer visitant; tolerably common." Little is known of the occurrence of this species in the state. Anthony is the only member who has observed it.

54. *Nycticorax nycticorax narius* (Bodd). Black-crowned Night Heron, Summer visitant; rare. Tolerably common during migration. Breeds throughout its range.

55. *Nycticorax violaceus* (Linn). Yellow-crowned Night Heron. Quoted by Drew upon Mr. Ridgway's authority. Rare.

56. *Grus americana* (Linn). Whooping Crane. Reported by Smith of Loveland, and by Mr. Ridgway. Also by Mr. Aiken† as migratory; occasional.

57. *Grus canadensis* (Linn). Little Brown Crane. Given by Drew as breeding from 5,000 up to 7,500 feet, and in autumn reaching 14,000 feet. Also observed by Capt. Thorne in eastern Colorado. Probably winters in the state.

\*At present making explorations in Yucatan.

†Pr. Bost. Soc. XV. 1872, 209.

Abundant in migration (Aiken), but this no doubt refers to the nest.

58. *Grus mexicana* (Müll). Sandhill Crane. Summer visitant; (Brenniger.) Rare. There seems to be some doubt among the members as to the identity of this and the preceding species. It would be well for those in suitable localities to look up the matter carefully and by a comparison of skins, come to a definite conclusion. The eggs of this species are larger than those of the preceding. And in coloration are not distinguishable from those of *G. americana*.

59. *Rallus virginianus* Linn. Virginia Rail. Reported by Brenniger, Drew, Anthony and Smith of Loveland. Summer visitant; rare. Nest upon tussocks in swampy places, of grasses. Eggs from six to ten, of a handsome creamy-white, spotted with reddish-brown and a few fainter ones of lilac, those last appear to be beneath the shell, or as if heavier spottings had been washed off leaving the lilac exposed.

60. *Porzana carolina* (Linn). Sora Rail. Reported by Brenniger as a summer visitant; breeds at 7,000 feet. No record of its nest having been taken. Also observed by Capt. Thorne in eastern Colorado.

61. *Gallinula galeata* (Licht). Florida Gallinule. The only record I have found is that of Allen & Brewster\* who "Saw one in the flesh taken May 9th." It should be looked for, as it no doubt breeds, and far more common than is at present supposed.

62. *Fulica americana* Gmel. American Coot. Summer visitant; tolerably common, as a transient visitant, very abundant. Breeds abundantly in the sloughs and ponds, in the San Luis valley, north-eastern Colorado, and every suitable place. Eggs eight to eleven.

63. *Phalaropus lobatus* (Linn). Northern Phalarope. Transient visitant; common. Found in various localities throughout the state. Nests well to the north.

64. *Phalaropus tricolor* (Vieill). Wilson's Phalarope. Transient visitant; common. Its nest and eggs should be looked for as it very likely breeds in the northern, or mountainous portions of the state, and perhaps in south-eastern part.

65. *Recurvirostra americana* Gm. American Avocet. Summer visitant; common. Breeds in suitable places throughout the state east of the Rockies, rare on the western slope.

66. *Himantopus mexicanus* (Müll). Black-necked Stilt. Summer visitant; common in

western part of state, tolerably common in eastern part. Breeds at 8,000 feet according to Drew.

67. *Philohela minor* (Gmel). American Woodcock. Transient visitant; rare. Reported by Anthony and Smith. Anthony\* found a specimen in a gun store, which he learned was shot on August 12, 1885. He also learned that a second specimen had been shot in the last week in Oct. of the same year. They were taken almost within the city limits, and our informant stated that many others were seen, but as *Gallinago delicata* is also common in the locality, we prefer to think he confounded the two species.

68. *Gallinago delicata* (Ord). Wilson's Snipe. Transient visitant; common. Not common on the western slope of the mountains. I found but one specimen in La Plata county.\* Anthony is my authority for making it a transient visitant; however, I found it in winter and Mr. Aiken has reported it as wintering. Breeds at 10,000 feet. (Drew), if so it must be recorded as a resident.

69. *Macrorhamphus scolopaceus* (Say). Long-billed Dowitcher. Reported by Drew, Thorne, and by Allen & Brewster as the Red-breasted Snipe, the last named gentlemen giving the western variety, which is the Colorado bird. *M. griseus* may possibly occur in Capt. Thorne's locality, (Fort Lyon), but I cannot think so, as its most western point is much farther east. Mr. N. S. Goss enters the western species on his Kansas list, which would go to prove that *griseus* is not to be found in Colorado, while *scolopaceus* is even found on the Atlantic coast. Breed far north, even to Alaska.

70. *Micropalama himantopus* (Bonap). Stilt Sandpiper. Reported by Capt. Thorne in eastern Colorado. Transient visitant; rare?

71. *Tringa maculata* Vieill. Pectoral Sandpiper. Transient visitant; common. Breeds north. Found at 10,500 feet in autumn, (Drew).

72. *Tringa fuscicollis* Vieill. White-rumped Sandpiper. Reported by Capt. Thorne, from eastern Colorado. Migratory; common on the plains but rare or wanting entirely in the mountainous portions of the state. Breeds in British Possessions.

73. *Tringa bairdii* (Coccos). Baird's Sandpiper. Summer visitant; common, breeds abundantly in all suitable localities up to 8,500 feet. Arrives in April and nest building is finished by last of May. Eggs three and four,

\*B. N. O. C. Vol. VIII, No. 4, Oct., 1883, p 198.

\*Some Additions to the Avi-fauna of Colorado, Auk, Vol. III, No. 2, p. 284-286, 1886.

\*See O. & O. Vol. 12, No. 7, July 1887.

they are very variable in coloration and would have to be described from a large series. The general ground color is of a buffish-white, spotted, sometimes blotched, with umber, different shades of brown, and chocolate, generally thickest at the larger end, but nearly as often these markings are at the small end, or about evenly distributed over the entire egg. This bird ranges to 14,000 and 15,000 feet after the breeding season is over.

74. *Tringa minutilla* Vieill. Least Sandpiper. Transient visitant; common. Not known to breed. Arrives by middle to last of April, only a few seen in May in southern portions, but they linger longer in the vicinity of the mountains, where they may yet be found to breed.

75. *Tringa alpina pacifica* (Cooper). Red-backed Sandpiper. Transient visitant; rare. But little is known of the occurrence of the bird in the state, Mr. Ridgway's is the only record, and upon his authority entered in this list and that of Drew. A little more careful investigation will no doubt bring it to light when probably it will not be found to be rare.

76. *Ereunetes pusillus* (Linn). Semipalmated Sandpiper. Transient visitant; not common. Noted by Drew at 7,000 feet in spring and autumn. Also reported by Capt. Thorne from eastern Colorado, and Allen & Brewster "Saw fresh specimens at Aikens, killed in May" at Colorado Springs. *E. occidentalis* Lawr. should occur, but has not yet been reported.

77. *Limosa fedoa* (Linn). Marbled Godwit. Transient visitant; not common. No record of its breeding although it may do so.

78. *Totanus melanoleucus* (Gmel). Greater Yellow-legs. Transient visitant; common where there is water. Reported by Drew, Smith of Loveland, and Thorne in eastern Colorado.

79. *Totanus flavipes* (Gmel). Yellow-legs. Transient visitant; common. Observed by all the members. Breeds far north, returns in August, and remains with us a time in the fall. Drew gives it at 7,000 feet in summer but questions its breeding at this elevation.

80. *Totanus solitarius* (Wils). Solitary Sandpiper. Summer visitant; common. Breeds at 10,000 feet. (Drew) Mr. Allen\* saw it in August. Why the name of Solitary is given to this species I cannot see, unless it is because they are not as gregarious as the rest of this family, I have seen them in large flocks, and in

company with other waders, although they do not seem to invite said company. They often are found in wooded country where no other waders are to be seen, perhaps this is why it has thus been named, and not for its being found singly, or in pairs, for this is the exception and not the rule.

81. *Symphemia semipalmata* (Gmel). Willet. Summer visitant; tolerably common. I found this species rare at Fort Lewis, but in the fall, during the rainy season it would appear from its breeding places in the mountains and associate for a few days with a flock of pigeons belonging to the post trader. I said for a few days, but I should have said until such time as the post trader could get his gun loaded, for many times in the fall have I heard the report of a gun and upon inquiry found he was "only shooting a few Jack Snipe" as he called them, I managed to secure a few specimens but only did so by keeping a sharp eye on the pigeons during heavy rains in September. Drew gives its breeding range at 7,000 feet, but it must breed as high as 12,000 in Southwestern Colorado, and as low as 5,000.

82. *Bartramia longicauda* (Bechst). Bartramian Sandpiper. Summer visitant; common. Most abundant during migration. Breeds upon open prairies and feeds principally upon grasshoppers and insects. A well-known bird to sportsmen, as they are considered a delicacy in the fall, when they get very fat, and juicy. I have never seen them about water, but among old dried parts of the prairie which have been overflowed during the rains.

83. *Actitis macularia* (Linn). Spotted Sandpiper. Summer visitant; common. Breeds from the plains up to 12,000 and possibly higher. I have found it common just before the fall migration about the ponds and lakes at 14,000 feet, and where the only trees are small clumps of the quaking aspen, the pines being at least a hundred feet lower. *Tryngites subruficollis* should be diligently sought for.

84. *Numenius longirostris* Wils. Long-billed Curlew. Summer visitant; common. Breeds abundantly in suitable localities. As I write there are three Curlews on the grassy flat in front of my house, not fifty yards from the door, they are very unsuspecting and I passed them within five yards as I came home. They every now and then rise on the wing, uttering their hoarse, unmusical cry, and after describing a few circles alight in the same spot. Upon examining the place I find many small mollusks upon the ground, upon which they are probably feeding, and this is no doubt the reason why they are so fond of this particular locality this morning. Found up to 7,500 feet.

(To be continued.)

\*Bull M. C. Z. Vol. III. No. 6, July 1872.

## Notes on Nebraska Birds.

W. EDGAR TAYLOR AND A. H. VANVLEET,  
PERU, NEBRASKA.

(—) *Chen caerulescens* (Linn). Blue Goose. This bird has been dropped from the A. O. U. Check List, but restored in Ridgway's new manual. Found on the Missouri river. Arrived about the first of October, and said to leave about the middle of December; some few staying all winter.

(159) *C. Hyperborea* (Pall). Lesser Snow Goose. Very abundant in rivers during migrations, and dies over in large numbers. Arrive from the first of March till the first of April; also from the first till the last of October.

(171a) *Anser albifrons* (Hartl). American White-fronted Goose. Quite common during spring migration. Arrive about the first of March.

(172) *Branta canadensis* (Linn). Canada Goose. Somewhat common during migrations, from the first till the middle of May; also from the first till about the last of October. Aughey says, "Very abundant in Nebraska and occasionally breeds here after the great mass has passed north in April, I have sometimes, later in the season, seen young ones along the Missouri." Parties frequenting the Missouri claim to have seen their eggs floating down this river in late spring or early summer. This goose is mentioned as migratory at Fort Sisseton, Dakota, by McChesney, and also in Kansas by Colonel Goss. We have not observed this bird as a summer resident, and think perhaps, the above statements are erroneous.

(172a) *B. canadensis hutchinsii* (Sw. & Rich). Hutchin's Goose. Probably may be found within the state, but, has not been distinguished from *B. canadensis*.

(180) *Olor columbianus* (Ord). Whistling Swan. Mentioned in the A. O. U. Check List as inhabiting, "The whole of North America, breeding far north." We have no positive evidence of it as a Nebraska bird.

(181) *O. luccinator* (Rich). Trumpeter Swan. A few are found all over the state in the spring from the first of April till May, and in the fall from September till October.

(190) *Botaurus lentiginosus* (Montag). American Bittern. Common summer resident in different parts of the state. Found here from the first of April till the middle of October. Generally found along the shallow waters of a bog, or reedy marshes in some open territory

near the rivers. Most abundant from the middle till the last of April. Mr. C. J. Pierson, a former student of the Normal, states that a specimen killed April 21st '85, contained in its stomach two ground mice, and a snake six inches long. Mr. VanVleet says, "The latter part of October, 1884, I observed a Bittern catch its breakfast of fish from a small stream in Furnas county. I first saw the bird as it emerged from the weeds and grass that overhung the stream. It moved very slowly and silently, raising its foot clear of the water at every step, and putting it down so carefully that it caused hardly a ripple. Near the middle of the stream it stopped, and extended its neck so slowly it could scarcely be seen move. This it did till its beak almost touched the water; when with the rapidity of lightning, it darted its head into the water and seized a fish about two inches long. It immediately returned to its hiding place, to repeat the same operation. This it did many times never failing to secure a fish.

(194) *Ardea herodias* Linn. Great Blue Heron. Occurs during spring and fall migrations. Quite likely breeds in the state. Residents claim that they arrive on the Missouri in numbers when the waters dry up, about the first of July, to catch the small fish. The dates given by Aughey partly confirms this statement. Said by some to nest on the prairies adjoining the river bluffs.

(196) *A. egretta* Gmel. American Egret. Aughey mentions seeing a single specimen on the Nemaha in Richardson county, extreme south-east corner of the state, but this is not confirmed by the dates given by Colonel Goss for Kansas, namely, "Arrives from the south in July and August; returns in September."

(197) *A. candidissima* Gmel. Snowy Heron. Aughey mentions seeing this bird twice.

(201) *A. virescens* Linn. Green Heron. Does not seem to be abundant. June 2nd, 1888, found a nest of this bird. Nest in the top of a dogwood; not less than twelve feet from the ground; wholly and loosely constructed of willow twigs. Eggs three in the nest and one on the ground broken, probably owing to the looseness of the nest; color between a pale blue and a glaucous green, very pale; form elliptical fusiform; the small end being hardly distinguishable from the larger end. Sizes of the egg, 42 x 29m; 40 x 29m.

(202) *Nycticorax nycticorax naevius* (Bodd). Black-crowned Night Heron. Seem to be common on the streams during migrations and have seen them in June. In a private letter,

Mr. A. J. Arnold, of Columbus, who has a collection of birds, says, "On the 25th of April ('88), a friend gave me a Night Heron, but I have seen four of these birds within the last five years." Mr. LeRoy Miller, a former student of the Normal, reports this bird in Webster county, where it is said to breed. Said to look backward at its pursuers when on its flight.

(204) *Grus americana* (Linn). Whooping Crane. Occasionally seen during spring and fall migrations.

(205) *G. canadensis* (Linn). Little Brown Crane. I have not seen this bird in Nebraska, but Ridgway gives it as, "Migrating south through western United States, east of the Rocky Mountains to Mexico."

(206) *G. mexicana* (Mull). Sandhill Crane. Common during spring and fall migrations, and mentioned by Aughey as collected in August, July, June and September.

(208) *Rallus elegans* Aud. King Rail. Aughey mentions seeing this bird in southern Nebraska. His record dates from May till October. Probably breeds in the state.

(212) *R. virginianus* Linn. Virginia Rail. Common during the migrations and probably sometimes breeds in the state.

(214) *Porzana carolina* (Linn). Sora. Aughey mentions seeing this bird once in state, near Dakota City, September, 1869. We have not observed it, but as it is found and breeds in Kansas, Iowa and Dakota, probably exists in the state.

(216) *P. jamaicensis* (Gmel). Black Rail. Aughey mentions seeing two in Richardson county in September 1873.

(219) *Gallinula galvata* (Licht). Florida Gallinule. One mentioned by Aughey as sent from Beatrice in September 1872.

(221) *Falica americana* Gmel. American Coot. Common summer resident and abundant during migrations. Arrives about the first of April. One kept in a box in our laboratory never refused to fight when an opportunity was given. Frequently when discovered they make no effort to escape till caught, or else content themselves by simply hiding the head till picked up. Mr. T. A. Leger, a student of the Normal, speaks of capturing this bird in Seward county, and taming it. It delighted in catching, and eating, young chickens which approached too near the cage. Mr. G. A. Coleman, a former student of the Normal, in speaking of a trip to Lehigh's Lake, about three miles from the Missouri, says, "As we looked up the lake, we could see that the water was literally covered with American Coots. \* \* \*

On top of a number of these houses, (muskrat's), coots were sitting. We were much engrossed in studying their actions, as they would sit for a few minutes perfectly still, and then suddenly slide off into the water, diving as they did so, remaining under for a minute or more, with nothing visible except the tips of their tails. Then they would as suddenly rise, and with a splutter and splash be off again. Very graceful are they as they glide smoothly along, turning their heads from side to side, their white bills flashing in the sun light in strong contrast to their glossy blue coats. They arrive here the last of March and nest in April. Though I have often found their nests, I have as yet been unable to secure their eggs. The nests are built in the tall weeds and rushes which grow in shallow muddy places in ponds and sloughs on top of the broken down old growths that form a sort of platform just above the water. It is a deep hollow nest composed of bitten-off stems of weeds and rushes."

(224) *Phalaropus tricolor* (Vieill). Wilson's Phalarope. Has been found in Nebraska from the last of April till sometime in September. Probably breeds in the state.

(225) *Recurvirostra americana* Gmel. American Avocet. Found over the state in July, August and September. This bird will probably be found in the state as early as the first of May, and perhaps breeds sparingly, as it is known to breed in Kansas and Dakota.

(228) *Philohela minor* (Gmel). American Woodcock. Somewhat common during migrations. Given by Aughey as breeding in the state. Has been found from July to September or October, but a careful search throughout the state would probably show its presence much earlier in the spring.

(230) *Gallinago delicata* (Ord). Wilson's Snipe. Common during migrations. Has been killed as early as April 13th, and Aughey records it for May, June, August, September and October. Mr. C. J. Pierson, a former student of the Normal, says, "When flushed these birds fly in a zigzag course which renders shooting them very difficult. The hunter may stand for many minutes within a few yards of them and not see them, so nearly are they the color of the earth and weeds. They live in marshy places."

(131) *Macrorhamphus griseus* (Gmel). Dowitcher. Mentioned by Aughey as "abundant during its migrations," who records specimens examined in August, September and October.

(232) *M. scolopaceus* (Say). Long-billed Dowitcher. Baird mentions this bird as taken

near Omaha. This, probably is the species mentioned by Aughey as *M. griseus*.

(234) *Tringa canutus* Linn. Knot. Occasionally seen in Nebraska. (Aughey).

(239) *T. maculata* (Vieill). Pectoral Sandpiper. Somewhat common during migration. Have been in April, May and June.

(240) *T. fasciicollis* Vieill. White-rumped Sandpiper. I have occasionally seen this bird in Nebraska. (Aughey).

(241) *T. bairdii* (Coues). Baird's Sandpiper. Common during migrations. Probably arrive about the first of April.

(242) *T. minutilla* Vieill. Least Sandpiper. Abundant during migrations. Arrives in April, September and October. Baird mentions two specimens collected August 20th.

(246) *Ereunetes pusillus* Linn. Semipalmated Sandpiper. Found in the state during migrations. Arrives about the first of May. Aughey and Baird, each mention seeing specimens in July.

(249) *Limosa fedoa* (Linn). Marbled Godwit. Common and said to breed in the state. Has been found from the first of May till the last of September. Probably these birds may be found within the state after and before the time given.

(251) *L. haemustica* (Linn). Hudsonian Godwit. Not on record as a Nebraska bird, but is given as a rare migrant in Kansas, Iowa and Dakota. Probably occasionally may be found within the state in the month of May.

(254) *Totanus melanoleucus* (Gmel). Greater Yellow-legs. Very common during migrations. Arrives in April, May and June. Again found within the state on return migration during September and October. Aughey mentions one specimen as collected in August.

(255) *T. flavipes* (Gmel). Yellow-legs. Abundant during migrations. Arrives in April, May and June. Also found within the state in September and October.

(256) *T. solitarius* (Wils). Solitary Sandpiper. Quite common during migrations and many remaining during the summer and breeding. Probably arrive as early as the first of April. The stomach of a specimen examined May 5th, contained worms and small insects.

(258) *Synophemia semipalmata* (Gmel). Willet. Not mentioned as a Nebraska bird, but breeds in Dakota, is found in Iowa, and Colonel Goss says, "probably breed in western part of Kansas." Probably a careful search would not only determine the species as a Nebraska bird, but find it breeding within the state.

(261) *Bartramia longicauda* (Bechst). Bartramian Sandpiper. Exceedingly abundant during migrations, and many breeding within the state. Arrives about the first of May and September.

(262) *Tryngites subruficollis* (Vieill). Buff-breasted Sandpiper. Somewhat rare in Nebraska. Probably found in May and September.

(263) *Actitis macularia* (Linn). Spotted Sandpiper. Common during migrations. Breeds in the state. Arrives about the first of May and September.

(164) *Numenius longirostris* Wils. Long-billed Curlew. An occasional summer resident and common during migrations. Arrives about the middle of April or first of May, and September. Formerly much more abundant in eastern Nebraska than at present.

(265) *N. Hudsonicus* Lath. Hudsonian Curlew. "Rare in Nebraska, Have seen it but twice and obtained no specimens." (Aughey). This bird has not come under our observation.

(266) *N. borealis* (Forst). Eskimo Curlew. Seen during migrations. Arrives about the middle of April or first of May, and October.

(270) *Charadrius squatarola* (Linn). Black-bellied Plover. Said to have been found sparingly during migrations, appearing in greater abundance during fall migration rather than in the spring. I have not discovered it.

(272) *C. dominicus* Mull. American Golden Plover. Abundant during migrations. Arrives in April, May, September and October.

(273) *Argialitis vocifera* (Linn). Killdeer. Abundant from the first of March till the last of September. The following are taken from the notes of the Normal Science Society as recorded by Mr. C. P. Pierson, "The Killdeer is very cunning in its manner of defending its young. I once came upon a pair with two young birds, when both endeavored to entice me away, by pretending they were crippled. When I picked up one of the young and it uttered a pitiful cry, the parents redoubled their efforts, coming very near to me, alighting on the ground, spreading their wings and tails, and fluttering in a seemingly helpless manner. They would walk off dragging one leg or wing. After putting down the young bird the old ones followed for considerable distance, frequently alighting to go through their deceptions. Most of the time they uttered a pitiful scream."

(174) *A. semipalmata* Bonap. Semipalmated Plover. Not uncommon during spring and fall migrations. Found within the state in May

and September. Aughey records two specimens as examined in June, 1875.

(277) *A. melodia circumcincta* Ridgw. Belted Piping Plover. Common in Nebraska and breeds here (Aughey). The A. O. U. Check List gives this bird for "Missouri river region," but we have failed to observe it.

(281) *A. montana* (Townsend). Mountain Plover. Reported as abundant in western Nebraska. No record of the bird in the eastern part of the state. Arrives in May and September, and frequently remains and breeds.

### Nesting of the Golden Eagle.

BY HARRY R. TAYLOR, ALAMEDA, CAL.

In the latter part of February 1888, I repaired to Sargents Station, Santa Clara County, Cal. to spend some pleasant weeks of recreation. In a wild, hilly region where the live-oak grows abundantly and not a mile from San Benito county, was my headquarters, and with a good saddle-horse at my disposal and the Gabilan Mountains looming up in the distance I thought my chances for securing eagle's eggs and other rarities were excellent.

On February 28th I saddled my sure-footed black horse and galloped off over the hills in search of "chicken-hawk's" nests or any other kind which might be available. The special object of my ride, however, was to try and find the nest of a Golden Eagle (*Aquila chrysaetos canadensis*) which I had observed last May in a certain locality in the hills. Two or three days before I had seen this noble bird on the bald top of a little mountain, or big hill, where it remained for over an hour walking about and occasionally disappearing behind the mountain's crest.

On this hill-side, somewhat lower down, was a patch of live-oaks where I thought the eagle might have its nest. So toward this steep place I traveled, with as much haste as the nature of the country would permit. Without finding any hawk's nests on the way, though once fooled into climbing after an old battered Magpie's nest, I and my steed reached the place of the oak trees. Contrary to my expectations I failed to find the nest here, and was about to mount my horse and climb to the top of the mountain for a view when I heard a sound of rushing air like the terrible approach of some death-dealing eyelone, and immediately the king of American birds, or it might have been the queen for aught I know, swooped

down the mountain side in pursuit of some species of falcon. The big eagle and its smaller playmate sported in the air for a moment, not thirty feet over my head, and then went off in different directions. Unfortunately I watched the falcon instead of the eagle and before long I could not see either of them.

Anyway I knew the direction the eagle had taken and I concluded to look carefully in all the trees down in the Canyon, but first gave myself the pleasure of a view from the summit of Bald Top. I hunted without success for the great bird's eyrie in every large tree in the gulch below. Disappointed again, I still kept up the search. Much farther off I saw some trees which looked big enough to hold the nest and these I determined to examine.

I had about looked into all the trees when I saw a big nest on a high limb of a large tree and my heart's beating was almost audible so excited was I, and on the side of the nest was a white feather! That settled the question certainly, for me, and a sight of the head of a Golden Eagle peering enquiringly over the edge the next moment removed the last doubt I might have had. I then frightened the bird from the nest and it flew off a short distance, circled a little and was lost to sight over a hill.

The tree, a live-oak was not a hard one to climb, under the circumstances, and I lost no time in getting to the nest. It contained but one egg, nearly pure white, so I scrambled down again, very much elated indeed after seeing my first eagle's egg in a nest. Feeling by this time that the hour had arrived when nature's demands must receive attention I struck off for home and dinner, to return another day for the full set of eggs. On the way back I passed the eagle which was making a bee-line for the nest.

On the first of March, three days later, I filled my fish-basket with cotton and started off after this set of eggs. As I neared the nest I observed an eagle sailing majestically far above me, like some great air-ship bound for an unknown port. Coming up to the nest, it seemed unoccupied, so I began the ascent of the tree forthwith. When within six feet of the great mass of sticks I was surprised to see the eagle fly off. As I gazed into the nest my eyes were pleased by the sight of two splendid eggs and the last one the bird had laid seemed to me surpassingly beautiful. The first egg laid was almost pure white, or a bluish white, having a very small splash of brown on the large end. The other egg was not quite so long and heavily marked on a white ground with spots and blotches of

rich reddish-brown and lilac. The marking becomes confluent on the larger end where the brown seems to over-lie the lilac. The entire surface of the egg is marked, though much lighter toward the smaller end. The nest was built of oak-sticks and was large, measuring about five by four feet on the top.

The nest proper, in the centre, was a nicely rounded hollow composed mostly of old grain stalks and oak leaves with a little moss. Stuccoed into one side were two large soap roots which the eagle perhaps thought ornamental. On one side lay a half eaten squirrel. While lost in contemplation of the big nest and my rare prizes inside of it I had forgotten all about the owner, when I suddenly became aware of some presence near me, and looking over my shoulder I saw the eagle hovering not two feet away. I gave vent to a startled, terror-stricken "hi! hi!" and struck at it wildly with my hat, at which it flew off far over the hill, probably nearly as badly frightened as I was myself. It did not return after that and I departed with the set of eggs in my basket. The nest was about forty feet from the ground and on another limb, about twelve feet below, was another nest, evidently a very old one. Doubtless the tree has been used as a nesting place by eagles for half a century.

### Nesting of the Blue-winged Yellow Warbler at New Haven, Conn.

BY H. W. FLINT, NEW HAVEN, CONN.

For several seasons I have felt a consuming desire to procure a set of eggs of this warbler *Helminthophaga pinus*, and when, after much persistent watching, in June, 1887, I was enabled to trace a pair home, only to find the nest occupied by five interesting young, my vexation can be better imagined than described.

However, my determination to have a set of eggs was only strengthened by this partial success, and as the past season drew on I watched almost daily the several pairs of birds that had been located earlier in the spring, but as in previous years heard only (by the hour at a time) the aggravating song of the male as a reward for my persistence, so that finally through repeated failures to find the nest I lost no small amount of the zeal possessed early in the season and gave the birds little or no attention when in my rambles specimens were noted.

On June 11th, as I was passing a scrubby

hillside (where a male had several times been seen) and was again saluted by his energetic note, I determined to make one more effort, but it must be confessed with very little hope of success. Cutting a chestnut sprout I proceeded to beat the bushes in a sort of zigzag course up the hill. The sun was hot, the mosquitoes thick, and I had walked about ten miles, and the male, uttering his note unconcernedly from the top of a neighboring Oak, seemed to say that this was to be another case of persistence misapplied. I began to think that I did not need a set very badly when just in front of me appeared a female evidently very much excited and chipping sharply.

Whence she came was a puzzle, but my mind was at once made up to examine every inch of the ground if necessary, as I felt sure the nest must be near, but after nearly a half hour's search I had found nothing, and expectations that were decidedly above par a short time before were somewhat lower now, although the female continued to utter her sharp chip near by. Determining to pursue a different course of action I walked off a few rods and sat down within hearing, the bird's note soon became less anxious, the male descended from his perch on the oak and together they proceeded slowly down the hillside still chipping, finally the note of the female grew fainter, less frequently, and suddenly ceased. Taking out my watch I waited five minutes (hours it seemed) and then rising to my feet hurried in the direction from whence the last note had proceeded. On arriving there I was unable to find my bird for some time but finally did so by nearly stepping upon the nest, which was placed at the foot of a small briar, constructed entirely of Oak leaves, and so cleverly hidden by a growth of tall grass that had not the bird been flushed it would not have been noticed. It contained five eggs, pure white, and quite glossy, sparingly marked and specked with blackish and brown.

The birds came within a few feet of me while the eggs were being packed and expressed their opinion of the robbery in a very vehement manner.

### A Series of Eggs of *Sitta Pygmæa*.

BY J. P. S.

Set I. May 29, 1886. Estes Park, Colorado. Nest in bottom of hole in a dead tree. Eight eggs, white, speckled with brick-red. The markings vary in intensity on the different

eggs: .63 x .47; .61 x .45; .59 x .48; .64 x .49; .63 x .47; .63 x .48; .60 x .48; .63 x .48.

Set II. May 1, 1888. Fort Klamath, Oregon. Nest in a dry tree, in hole bored by the birds. Lined with feathers and wool. Eight eggs, white, speckled with brick-red. The markings are heavier and closer together near the larger ends: .60 x .48; .58 x .45; .59 x .46; .60 x .47; .59 x .46; .61 x .47; .59 x .48; .62 x .47.

Set III. May 3, 1888. Fort Klamath, Oregon. Nest in deserted Woodpecker's hole, lined with fur, etc. Six eggs, white, speckled with brick-red: .62 x .44; .58 x .44; .61 x .44; .57 x .46; .57 x .46; .58 x .45.

Set IV. May 10, 1888. Fort Klamath, Oregon. Nest in dry stump, in hole bored by the birds. Lined with rabbit's fur. Seven eggs, white, speckled with brick-red: .59 x .45; .61 x .46; .59 x .45; .60 x .44; .58 x .44; .59 x .46; .60 x .45.

Set V. May 9, 1888. Fort Klamath, Oregon. Nest in dead stump, in hole bored by the birds. Lined with fur, feathers and wool. Nine eggs, white, speckled with brick-red. The specks are larger than on any others in the series, and the eggs are more rounded in form than is usual for this species: .51 x .46; .51 x .46; .55 x .45; .53 x .45; .51 x .46; .52 x .46; .53 x .46; .52 x .44; .53 x .45.

Set VI. May 18, 1888. Fort Klamath, Oregon. Nest in knot-hole, lined with wood and feathers. Eight eggs, white, heavily speckled with brick-red: .60 x .46; .59 x .45; .60 x .46; .59 x .47; .60 x .46; .59 x .45; .59 x .46; .60 x .46.

Set VII. May 12, 1888. Fort Klamath, Oregon. Nest in cottonwood tree, in hole bored by the birds. Seven eggs, white sprinkled with brick-red. The markings are heavier at the larger ends. Eggs quite pointed for this species: .57 x .44; .59 x .43; .59 x .43; .59 x .44; .57 x .42; .59 x .44; .58 x .43.

Set VIII. May 11, 1888. Fort Klamath, Oregon. Nest under loose bark on dead tree. Lined with moss and feathers. Seven eggs, white, speckled with brick-red. The markings are heavier, and closer together at the larger ends: .61 x .45; .60 x .45; .66 x .45; .61 x .45; .59 x .46; .63 x .44; .60 x .44.

Set IX. May 18, 1888. Fort Klamath, Oregon. Nest in knot-hole. Lined with fur and soft feathers. Five eggs, white, speckled with brick-red: .55 x .45; .57 x .45; .58 x .45; .59 x .45; .58 x .45.

The eggs of the Pigmy Nuthatch (*Sitta pygmaea*) do not present as much variation as those of others of the same genus.

## Editorial.

The O. & O. is mailed each issue to every paid subscriber. If you fail to receive it, notify us.

### LOCAL.

While it is in the province of this magazine, to devote its attention to nature, when we notice it imposed upon, [especially good nature], we shall not hesitate to protest.

Recently in the monopolistic course of events, the Old Colony Railroad absorbed the Boston & Providence line, and one of the alluring inducements for its permission was the great benefit to the public. Hardly had the scheme been consummated, when the travelling public were subjected to an intolerable nuisance.

A passenger, now, in attempting to board a train is repeatedly met by a locked gate and forced to make a trip around the train. It is claimed that it is done as a matter of safety.

A few mornings since, at a station just out of Boston, we personally saw a number of ladies and children cross the track, in order to be on the other side, just ahead of the approaching train. We hope that the public will take the matter in hand and give this corporation to understand that *convenience* is of more importance than *brass buttons and uniforms*.

If any one is injured while trying to follow the bewildering announcement "to cross the track to the open side," Justice will make a swift stroke.

## CORRESPONDENCE.

### Right You Are.

EDITOR O. & O.

Dear Sir: I have noticed in the September issue of your magazine the criticism on an extra partial endorsement by Prof. Ballard of a dealer in specimens of Natural History.

Your exceptions are well taken. Probably the dealer referred to, wrote the advertisement himself and paid for it per line the same price as the rest of us. That Prof. Ballard was informed about it, is positive, as a letter from the writer's publishing company says, "The matter in all cases is subject to Mr. Ballard's approval."

I am particularly uncomfortable because I was obliged to pay (\$6.60) six dollars and sixty cents for the few lines I was foolish enough to put into the book, "Three Kingdoms," expecting fair treatment instead of misrepresentation.

ANOTHER DEALER.

## Brief Notes.

A lady recently brought us several small birds—among them the Maryland yellow throat, Black-throated Blue warbler, Oven Bird and Kinglet. They were picked up at the Statue of Liberty in New York harbor. To use her words "there were about three bushels found that morning." During the migration large numbers are attracted by the light, and killed by flying blindly against the structure. A gentleman recently while in New York had occasion to call on several of the large "Feather Dealers" and at one place was shown a quantity of mixed skins. The dealer informed him that they were from the Statue of Liberty and that he had *thirty-six cents per dozen*. Now comes the question who is the *Chinaman* that put them up. Certainly so far as our experience goes nothing but pauper labor could be induced to work at that price:

Oh Liberty so dear in name,  
Why should a statue to thy fame  
Kill off our birds by scores?  
Better by far, Majestic Dame,  
Send it back from whence it came,  
Than slaughter more.

Now hold your tongue, you silly man,  
While I answer, "as woman can,"  
In killing off your birds by scores  
'Tis only keeping in fashion's van,  
True copy of nature that I am;  
Say no more.

In preserving a specimen of the Leather-back Turtle last fall, we witnessed a peculiar case of poisoning. A slight cut on the first joint of the middle finger, on the second day assumed a purple hue, and considerable local inflammation appeared. The finger became swollen; and purple spots appeared. They would last for an hour or so and disappear to appear in other parts of the same finger, the phenomena passed down the finger and into the other three, and finally disappeared altogether; no gathering occurred. The trouble seemed to be on the surface and the treatment resorted to was the use of iodine. In twenty years experience in Taxidermy it was the first case of what appeared to be a poisoning that we have noticed. Our attention was recalled to it by a neighboring taxidermist informing us that he had just recovered from a similar case.

The law in Massachusetts requires that a full record shall be kept of every sale of poison, imposing a heavy penalty for failure to do so. Taxidermists and collectors absolutely require to use arsenic in some form. In its place, it is safe and proper, but society will jump on to the person who uses it *carelessly or criminally*.

A gentleman related a recent experience of a friend in the Maine woods. While some ways from camp his bird dog suddenly acted in a surprising manner, it bristled up, backed and skulked with tail between its legs, it got as closely in as it was able, almost upsetting its owner. Then with a sudden impulse cleared a six foot stump and disappeared in the direction of camp. While the sportsman was wondering at the action, up popped a bear within a few feet, an extra large one, a glance was sufficient, and another one of God's nimble creatures went wild. The same six foot stump was cleared and there

was a streak in the direction of camp. The story goes that the man reached camp while the dog went beyond—was lost, fell into the hands of strangers and was sold by them. Several days after while returning home the sportsman saw his dog. Whistling to him, was recognized, and the dog was recovered in a half starved condition. This reminds us that a well-known writer for the O. & G. while collecting in an adjoining county, on several occasions came suddenly upon bears. From his account we believe that he only fired once, and that was at a very large one after it had disappeared over a hill. If we are mistaken, we shall be pleased to have an account of the affair.

We are forced to conclude that dropping Entomology from the O. & G. was not a financial success. Several subscribers who were interested in that department were lost, and very little effort was noticed on the part of those who favored the change, to refill the ranks.

Some time since we received from the author, Mr. Wm. T. Hornaday, *Chief Taxidermist, NATIONAL MUSEUM [SMITHSONIAN INSTITUTION]* Pamphlet No. 22. In it is an appeal for specimens of animals in the flesh, during cold weather. THE NATIONAL MUSEUM should stand first in the hearts of the American Naturalist, and any effort that can be made to further the plans of its management should be esteemed a duty to American Institutions.

During our wanderings we stepped into the office of Mr. L. S. Foster, publisher of THE AUK. Mr. F. is not a professional Taxidermist but the prominence of his private collection of birds at his place of business, made us feel quite at home. From what we saw, together with the geniality of the host, makes us surmise that "Foster's" is a dropping in place for the scientific boys, when down town.

A fine specimen of the Pine Martin was shot by Mr. E. A. Stephens while in Michigan. It is about two-thirds the size of our Fisher. General color brown, while on the breast is a beautiful golden hue. They are tree climbers and said to be good ornithological collectors. While they may be plenty in the west, it is the first one that has been brought to us since we established in Boston.

Mr. Wm. Richardson has just returned from a collecting trip through Mexico. He went in the interest of the BRITISH MUSEUM, at the close of his trip, which was very successful, he was taken down with "The fever" and prostrated for several weeks, losing forty pounds in weight, and still shows the effect. On a former trip to South America he visited the Gold regions, a very dangerous locality, and nearly lost his life from the effects of a "supposed" snake bite. He is a young man scarcely out of his teens but has backbone and grit that does credit to New England blood. We have several specimens of the Fen de Lance serpent taken by him at Martinique in 1886. They are ugly looking creatures. The number of converts they made to the Prohibition party caused us to remove them to our attic storerooms.

Careful observers are becoming more and more alarmed each year at the decrease in our shore birds. The ruthless manner in which they are slaughtered "for the table" bids fair for extermination. A visit to the game stalls during the open season would be an eye opener to our legislators. Peeps by the

barrel [That when picked scarcely exceed in size "The Humming bird on a nutshell" on the bill of fare, at a well-known resort just out of Boston where *sportsmen oft do stroll*] to appease the cultured appetite. It is no wonder that some of our naturalists are anxious to secure a few specimens for study before they are *non est*. The Wood Duck are becoming rare, while the Passenger Pigeon is almost unknown. Woodcock do not fly from every hillside and every covey of quail is marked. It might be well to allow no one for the next ten years to shoot a game bird except by having a special permit and then only a limited number, but of course this cannot be, it would pinch the wrong toe.

Place him in his little coffin,  
With screws the cover tightly bind;  
There will be no more collecting,  
No more birds nests will be find.

Why this ending, do you ask us?  
Why this closing of his fun?  
We will tell you gentle reader,  
His papa bought a cheap priced gun.

In drilling eggs, remember that the smallest possible hole is desirable. It is also very important that they should be perfectly blown, for if any of the contents remains it is liable to disfigure the egg and render it subject to the attacks of insects. Eggs have been ruined by keeping them in cigar boxes during warm weather. The evaporation of the gum by the heat, forms a sticky deposit on the egg that is very hard to remove.

When Cupen's Oölogy is exhausted it will be too late to wake up to its merits.

The American Naturalist was established in 1867. In the introduction in its first number we find—"In laying before our readers this first number of a popular scientific monthly, we commence a publication in which we shall endeavor to meet the wants of all lovers of nature." In becoming of age last March those who have watched its career can truly say: It strikes into manhood, having strictly followed the inspiration of its first utterance.

With the March number of the O & O. of the current year we issued a cut of the nest of the Parula Warbler, described by Mr. Wm. Brewster. If any of our subscribers failed to receive it, we will furnish it upon being notified.

Two White Pelicans suddenly discontinued their migration flight down the Mississippi in Oct. and are now at our office. It would seem that the day must come when birds of that size, presenting such a tempting shot, taking their flight over a thickly settled country, must be exterminated. Some three years since, a party informed us that he had taken a contract to furnish a *thousand at one dollar each*. We are glad to say he was not a taxidermist nor a naturalist; they were wanted, for *plumage*.

Fine specimens of the Bald Eagle, old birds with pure white heads are by no means easily obtained. In our section of the country nine out of ten that we receive do not show maturity.

Orrin T. Gray, Esq., one of Hyde Park's [Mass.] leading citizens, says, I believe that taxidermists and naturalists should be granted the privilege to collect birds at all seasons, under proper regulations.

Frank L. Pushaw, Esq., of Canton is also in full accord with the same sentiments.

Both of these gentlemen will find that the naturalists in their district will endorse them, when the occasion presents. We welcome all expressions of interest in their behalf. The Massachusetts Naturalists have no firmer friend than W. W. Castle, Esq., Wellesley. He places himself on record in their behalf, every time.

Mr. Harry Austin's record of Woodcock shooting on Grant Musquodoboit, Nova Scotia;

August 1, 1884, 16 Woodcock.		
" 1, 1885, 14	"	1 Snipe.
" 1, 1886, 21	"	3 "
" 1, 1887, 10	"	

August 30, 1886 Col. Clark and Mr. Austin, at the same place, shot 33 Cuck and 11 Partridge.

The transactions of New York Academy of Science, Nos. 3, 4, 5 and 6, in one Vol. (vii.) are an exceedingly interesting series, and which we are most pleased to receive. Containing Prof. Trowbridge's observations upon the "Mechanism of Flight in Soaring Birds" and the discussions relative thereto. Notes of Prof. Horder upon same subject and by Prof. Allen on the "Structure of Birds in relation to Flight." Together with papers upon other subjects of great interest. The publication should be in the hands of all progressive naturalists. Published by the Academy. Herman LeRoy Fairchild, Secretary, New York.

We take pleasure in acknowledging the receipt of a reprint from Mr. Walter E. Bryant, announcing the discovery, by him, of a new subspecies of the Song Sparrow, from Comodon, Southern California.

This subspecies, Mr. Bryant has called

*MELOSPIZA FASCIATA RIVULARIS*,

Bryant's Song Sparrow was described from thirteen specimens, taken between March 11, and April 16, 1888.

Mr. Bryant claims for this bird a place between *M. f. montana*, and *M. f. fallax*.

This species is of more interest, since the Song Sparrow has not heretofore been included in the lists of Lower Californian birds.

## The Ornithologist and Oologist.

We have received the above monthly and are pleased to call the attention of those of our subscribers who are interested in bird life, to it. We find it exceedingly bright, with a large list of contributors and correspondents from various sections of the country, and readable with satisfaction by those who find scientific publications generally dull and heavy. Its articles are from field naturalists who ignore the prosaic and pedantic style, and, in plain yet interesting manner, write intelligible accounts of their researches or discoveries. We think any who are interested in the life and habits of our American birds will be pleased with it. We shall always welcome it in our exchange list.—*The Courant* [Wellesley].

Lovers of birds will find the September number of the *Ornithologist*, published by our townsman, Mr. Frank B. Webster, both instructive and interesting. The continued article on the "Shore Birds of Cape Cod," is especially valuable to sportsmen.—*Norfolk County Gazette* [Hyde Park.]

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No. 12.

## A Day's Experience.

BY R. H. C.

It is always interesting and instructive, to read of the experiences of other collectors, but as they invariably describe their successful trips; I think that one in which my ardor was drowned out, for the time being, as thoroughly as rain and the wet blanket of adverse circumstances could possibly do it, might interest, if it would not instruct some of the readers of the O. & O.

From the first of Jan., 1888, I began to inquire for the location of a certain heronry, where the Night herons were reported to breed in immense numbers. After a great deal of diligent inquiry, the place was located. So at four o'clock on the morning of May 30, after dreams in which herons, nests, eggs, swamps, climbing irons and guns were mixed as the ideas of one in the iron grip of the god Bacchus, my friend and myself, started on our seven mile tramp, to where the poor *N. grisea naevia* guarded the treasure laid for our especial benefit. The weather had been threatening all the morning and just before we reached the cedar swamp, in which the heronry was located, it began to rain. We took shelter for a while under a tree, but as the rain showed no signs of abating, we concluded there was no time like the present, and we might as well get our eggs and go home as soon as possible. So we struck into the woods, in what appeared to be the most favorable place and began our search for the herons, that were said to occupy the whole swamp. For four or five hours we hunted those cedars, now wading in water half way to our knees, then falling over prostrate tree trunks rendered slippery by the rain. Then one leg would suddenly go into a hole, as far as nature would allow one leg to go. Until finally we saw a nest. What an exhilarating effect the sight of a long sought for nest or bird can

have on the low and water-soaked spirits of the tired collector. Water, mud, rain, everything was for the moment forgotten as we made for that nest. But alas! for the enchantment that distance lends, for, on being reached, it proved to be the architecture of perhaps the great grandparents of the present generation of herons, as were at the least twenty others that were in the vicinity. We happened to think then that we did not want any herons eggs, so we struck a bee line for the road, as we thought. I do not know how far we travelled but we did not find the road. Finally, however, we struck a cart path, and as there is an end to all things we naturally inferred there was to that path, although which end was the nearer home was another thing. When we reached a road, which we finally did, we turned by mutual consent to the left and started for—nobody knows where, but we didn't find that out until we had travelled quite a distance in the wrong direction. The first pointer we had that we were wrong was when we sighted a weather vane. I stopped there and said, I don't know where I am! do you? "No I don't" was the answer and what was worse we did not know how to find out without asking or travelling until things began to look more natural. After some debate we chose the former. So swallowing the difficulty with the best grace possible we asked the first man that came along if he knew a place anywhere around there called B. He laughed and, pointing in the direction from which we had come, said it was about six and one-half miles straight ahead. We thanked him very dryly and turned our steps homeward. That six and one-half miles would forcibly remind one of their hotel bill at the end of their vacation, long and hard to foot.

To sum up that morning's account we had got one Prairie Warbler (*Dendroeca Discolor*), one Black-poll Warbler (*Dendroeca Striata*), one Canadian Flycatching Warbler (*M. Canadensis*), wet through, tired out, and sick in experience.

At this time the Prairie Warblers had mated and were nearly ready to build and the Black-polls were in the midst of their migration. The Canadian Flycatching Warbler I consider rare in this locality although it may be otherwise.

The Herons, that no doubt built their nests in this swamp in years past, had probably transferred their building site, on account of persecution, to another swamp about five miles distant, in which I hope to be more successful next year.

Red-bellied Nuthatches have been very common this fall. In years past (as far as my experience goes) they have been uncommon in this locality. The first day of Oct. this year, I noticed quite a number of individuals. They kept arriving in greater numbers until the last of Oct. when they were exceedingly abundant (that is for nuthatches). From that time they have been decreasing up to date, Nov. 15.

#### A Philadelphia Collection of Eggs of the Mniotiltidæ.

*Mniotilta varia*. Black and White Warbler. Nine sets of five eggs, one set of four. Total: ten sets.

*Protonotaria citrea*. Prothonotary Warbler. One set of eight, fifteen sets of seven, twenty-one sets of six, sixteen sets of five, three sets of four. Total: fifty-six sets.

*Helonwa swainsoni*. Swainson's Warbler. Two sets of four, seven sets of three. Total: nine sets.

*Helminthothenus vermicorus*. Worm-eating Warbler. Two sets of five.

*Helminthophaga pinus*. Blue-winged Yellow Warbler. One set of five, one set of four, one set of three. Total: three sets.

*Helminthophaga chrysoptera*. Golden-winged Warbler. Two sets of five, two sets of four. Total: four sets.

*Helminthophaga ruficapilla*. Nashville Warbler. One set of five, one set of four, one set of three. Total: three sets.

*Helminthophaga celata lutescens*. Lutescent Warbler. One set of four, one set of three. Total: two sets.

*Parula americana*. Blue Yellow-backed Warbler. One set of seven, seven sets of five, twenty sets of four, eight sets of three, two sets of two. Total: thirty-eight sets.

*Dendroeca aestiva*. Yellow Warbler. Twenty-one sets of five, thirty-six sets of four, three sets of three. Total: sixty sets.

*Dendroeca aestiva morcomi*. Western Yellow Warbler. One set of five, two sets of four, seven sets of three. Total: ten sets.

*Dendroeca cerulescens*. Black-throated Blue Warbler. One set of three.

*Dendroeca coronata*. Yellow-rump Warbler. Two sets of five, one set of four, two sets of three. Total: five sets.

*Dendroeca auduboni*. Audubon's Warbler. One set of four.

*Dendroeca maculosa*. Black and Yellow Warbler. One set of five, forty sets of four, two sets of three. Total: forty-three sets.

*Dendroeca pennsylvanica*. Chestnut-sided Warbler. One set of five, eleven sets of four, two sets of three. Total: fourteen sets.

*Dendroeca striata*. Black-poll Warbler. Nine sets of five, five sets of four, one set of three. Total: fifteen sets.

*Dendroeca blackburnia*. Blackburnian Warbler. One set of four.

*Dendroeca dominica*. Yellow-throated Warbler. One set of four, one set of three. Total: two sets.

*Dendroeca chrysoparia*. Golden-cheeked Warbler. Four sets of four.

*Dendroeca virens*. Black-throated Green Warbler. Eight sets of four.

*Dendroeca pinus*. Pine Warbler. One set of five, ten sets of four. Total: eleven sets.

*Dendroeca discolor*. Prairie Warbler. One set of five, nine sets of four, two sets of three. Total: twelve sets.

*Siurus auricapillus*. Golden-crowned Thrush. Five sets of five, five sets of four, five sets of three. Total: fifteen sets.

*Siurus naevius*. Small-billed Water Thrush. Two sets of four.

*Siurus motacilla*. Large-billed Water Thrush. One set of six, six sets of five, two sets of four. Total: nine sets.

*Oporornis formosa*. Kentucky Warbler. Three sets of four.

*Geothlypis macgillivrayi*. Macgillivray's Warbler. One set of three.

*Geothlypis trichas*. Maryland Yellow-throat. Twelve sets of four, one set of three. Total: thirteen sets.

*Geothlypis trichas occidentalis*. Western Yellow-throat. Five sets of five, one set of four. Total: six sets.

*Icteria virens*. Yellow-breasted Chat. One set of five, fifty-three sets of four, nine sets of three. Total: sixty-three sets.

*Icteria virens longicauda*. Long-tailed Chat. One set of four, one set of three. Total: two sets.

*Myiodioces nitratus*. Hooded Warbler. fifteen sets of four, one set of three. Total: sixteen sets.

*Myiodioces pusillus pileolatus*. Pileolated Warbler. One set of four, one set of three. Total: two sets.

*Myiodioces canadensis*. Canada Flycatching Warbler. One set of five.

*Setophaga ruticilla*. American Redstart. One set of five, nineteen sets of four, four sets of three. Total: twenty-four sets.

RECAPITULATION: Total number of sets: four hundred and seventy-one. Total number of eggs: 1926.

### Ornithological Reminiscences.

ARTHUR H. HOWELL.

Mr. Langille has truthfully said, "To the student of nature, the identification of even the most established facts is ever a fresh surprise. No matter how fully Wilson, Audubon, or the more recent ornithologists may have reported our birds, my acquaintance with each species has been almost as delightful a novelty as if I had been the first to discover and describe it."

Though as yet only a young ornithologist, I have spent many a pleasant hour with "our birds in their haunts," and a few reminiscences of my acquaintance with some of them may be of interest.

One which has puzzled me some, interested me exceedingly, and now that I know his character, has become one of my favorites, is the White-eyed Vireo. Jumping about in a swamp near Canarsie, L. I., in 1887, we were finding Yellow Warbler's nests in profusion. My companion noticed (as we supposed) one near the ground and pensile, but which, on looking in for him, I found was no Warbler's nest at all, for it contained one pure white egg, spotted sparingly with black.

The owner soon appeared, scolding vehemently, but having no gun, we failed to identify it. Visiting the spot a few days later, (May 25) my friend took the nest with a set of four eggs, and obtained a better view of the bird, but not being acquainted with the species, we were in doubt as to its identity. Of course we knew it was a Vireo and were inclined to label it as the Blue-headed (*V. solitarius*).

In the summer of the same year, at Lake Grove, in the middle of the Island, I found the species (known by its song and general appearance) to be abundant and very familiar, leaving the swamps and thickets, and coming even into

the door yard to deliver his song. I shot one which had the markings of the White-eyed, but a slate-colored iris. This puzzled me still more, and it was not until this spring (1888) when I shot a typical White-eye and found a nest which I identified fully, that I concluded that the species was *Vireo noveboracensis*.

The nests were almost precisely alike in structure and position, except that one was in a swamp and the other on high ground—in a catbrier hedge along the side of a public road, hung pensile, three feet from the ground, woven on to a horizontal fork of a small twig, they are made of shreds of bark and a few very fine straws, held together in the former case by red and white down (from the swamp) and in the latter case by green moss and spider's nests. Each was lined with a few horsehairs. The shreds of bark, which hang loosely on the outside, give them a whitish and rough appearance, quite different from the compact, reddish-colored nest of the Red-eye.

But that which pre-eminently distinguishes this species, is its song, so wholly different from that of any of the rest of its family, that one would never suspect the relationship.

It is usually translated as chick-a-re'r-chick," but is subject to much variation. I should write it, "ch-baa'-ch-re-chick," and I have heard it with three notes added, like "chu-chu-chu," in a so much lower and different tone that I could hardly believe it came from the same bird, only it followed the song instantly—in the same breath.

Probably every naturalist has experienced to some extent the wonderful effect which the songs of certain birds have on the mind of the hearer. Thus a certain note of the songster now under consideration—"cheep-chu-twenty"—the last syllable delivered with a peculiar slide, has a most pleasing and enlivening effect on my mind. If I am dull it brightens me up, if I feel a little lazy, it tells me to get up and go to work, and every time I hear it, a streak of mirth comes over me, and I feel like repeating it after him, to let him know I hear and appreciate his effort.

Besides his own unique and pleasing powers of song, this Vireo is a most wonderful mimic. Several times have I been deceived by him, thinking a certain tree contained several different members of the feathered tribe, all delivering their notes or songs at once, but I failed to discover anything but a little White-eyed Vireo. In one instance, I distinguished in this rapidly uttered medley the notes of seven of his associates. The "meow" of the

Catbird, the chatter of the Wren, the Golden Woodpecker's "chee-ah," the "pib-pib" of the Robin, the (too familiar) "chirp" of the English Sparrow, the "pip" of the Song Sparrow, and the "cu-cu" of the Wood Thrush, were all present and quite distinctly uttered.

\* \* \* \* \*

Out for a tramp on a warm May morning, I stopped to rest by the side of a little pond in a lonesome hollow. On either side of the pond were pines and cedars, and in these evergreens was a pair of Warblers, singing—first one, then the other, "zwee-zwee-zwee-zwee-zwee-zwee" in a low, minor tone, and on the ascending scale. I was all attention in a moment, and after peering among the branches for some time I finally caught sight of one of the singers: I couldn't help exclaiming (whether audibly or not, I don't remember) "Ain't he a beauty!" and the next moment I fired and soon had him in my hand, to examine at my leisure. I think many will agree with me when I say that the Prairie Warbler, for such it was, is one of the daintiest and most entertaining of his family.

During the whole of last spring and on into the summer, they were very common, and I had ample opportunity for studying their habits. They arrived about the first of May; the last specimen noted was on Sep. 17, the last one heard singing on Sept. 3.

They prefer dry, upland ground, particularly the unfrequented bushy pastures, but are often seen about the orchard and door yard, and are quite unsuspecting of danger, allowing a near approach. Their diet is probably strictly insectivorous, gleaning mostly from the foliage of the trees, both evergreen and deciduous.

I hunted long and patiently for a nest, but my search was not rewarded, and I had to give it up with the determination to try again another season.

\* \* \* \* \*

I will conclude these reminiscences by telling how I found my first Hawk's nest. Perhaps some other collectors have pleasant recollections of that momentous period in the history of their collecting trips, and I am sure the story would be very interesting if related.

I was disappointed in finding first sets of Crow's eggs, so on May 21, having an hour or two to spare, just at sunset I started for the pines with the intention of making a rapid canvass of the ten acres included therein, in search of second litters from the ovaries of *Corvus*. (I may merely state that I didn't get any that time, though I collected a set of five on the 30th.

Almost as soon as I entered the pine thicket, I saw a good sized bird, which I supposed to be a Hawk send away through the trees. Says I to myself, "Lookout for a Hawk's nest, my boy!" and sure enough, on going in the direction from which she flew, I saw a nest about 25 feet up. I ascended rapidly and viewed with delight the five beautifully marked round eggs which it contained. I had obtained a long desired privilege, that of seeing a set of Hawk's eggs in their natural surroundings.

While I was packing the eggs in my hat, the birds appeared on the scene, and in their excitement, dashed quite close to my head, uttering a shrill squeal—"cha-cha." They would start from some distance away, and head directly towards me, gaining speed as they came, and keeping time with their squeals to the beating of their wings, but they were careful to change their course after approaching within a few feet of me.

The only weapon I had with me was my 38 calibre collecting shot-gun, but I thought I would try it on them. A charge of No. 2 shot had no apparent effect. No. 8 was all I had left (except "dust") so the next time one of them sailed along, I "blazed away," and was surprised as well as delighted to see him fall.

I thought at first it was a Sparrow Hawk but a close comparison with the description proved it to be a Sharp-shinned, and on dissection to be a male.

Lake Grove, Long Island.

## The White Ibis in South Carolina.

WALTER HOXIE.

On the 2d of July the Wood Ibis came; while watching the flock I thought I saw one among them that was pure white. In the evening I took to looking over my record and found that the same thing had occurred in 1885, a single White Ibis seen among a flock of Wood Ibis. In this case I noted "wings tipped with black."

Still further back (June 30, 1884) I procured an Ibis which I could not then identify. It was plainly a young specimen, dull brown above and white beneath and on the rump. While freshly killed a peculiar reddish flush overspread the whole plumage, being discernable on the dark parts as well as the white. The specimen measures 26 $\frac{3}{4}$  inches, the wing 12 inches.

This corresponds very closely with Ridgway's description of the young plumage of *Guara alba* and cannot be anything else. He however, does not mention the rosy flush except in the adult bird.

## A List of the Birds of Colorado.

BY CHAS. F. MORRISON.

(Continued.)

85. *Numenius hudsonicus* Lath. Hudsonian Curlew. Transient visitant; rare. I took one specimen on the Arkansas river, eight miles east of Fort Lyon early in May, 1888. This is the only record I know of. There were three others which flew over the prairie to the north-west upon my shooting the specimen obtained.

86. *Numenius borealis* (Forst). Eskimo Curlew. Reported by Capt. Thorne from eastern Colorado. Transient visitant; common?

87. *Charadrius squatarola* (Linn). Black-bellied Plover. Transient visitant; rare. Anthony writes "A single bird in my collection is the only record I know." This was bought at a market,\* the seller saying it was brought in a few minutes before. I can add one more record, that of Smith of Loveland, who observed it near there.

88. *Charadrius dominicus* Müll. American Golden Plover. Entered upon Mr. Ridgway's authority. A transient visitant, only occurring in autumn and winter, leaving for the north very early in the spring. The bulk of these birds retire to South America to winter, a very small number stopping in the southern U. S.

89. *Egialitis vocifera* (Linn). Killdeer. This widely distributed species is as common here as in other parts of N. A. Breeds abundantly. Its habits are well-known and need no comment here.

90. *Egialitis montana* (Townsend) Mountain Plover. Summer visitant; common. This is another bird which, strictly speaking, has no right to its name, it not being a mountain species at all, but of the plains. It is found up to 9,000 feet, but not in the mountains, except in the parks and tablelands, which it reaches by following the streams, as many of this family do.

91. *Colinus virginianus* (Linn.) Bob-white. Resident; tolerably common. Although somewhat out of the range given in the A. O. U. code, this species is found as above. Anthony records it. Capt. Thorne reports it from eastern Colorado, and Brenninger has it on his list with the remark "probably escaped from captivity." It is very probable that it will yet be found common by observers in the eastern part of the state, where *C. v. texanus* (Laur) may also be found.

92. *Callipepla gambeli* (Nuttall). Gambel's Partridge. Resident in southwestern part of state; rare. Imported from California at various places near Denver and Fort Collins, where from all accounts it is thriving.

93. *Dendragapus obscurus* (Say). Dusky Grouse. This, the finest of all our grouse, for eating purposes, is resident in the mountains, and common. In spring it is hard to find, but the last of August when the young are of good size, they are found in flocks of one or two families, in the many pockets and gulches of the mountains and foot-hills, feeding upon wild cherries and various berries. Then it is shot in large numbers and although there is not much sport in killing them at this time, still, when stuffed and roasted there is no grouse equal to it.

About the last of Sept. or first of Oct. they disappear from low altitudes and seek the highest peaks where it feeds upon the myriads of grasshoppers frequenting these places, soon after this they separate and only individuals are found during winter, when they keep near timber line and then their principal diet is the cones of the pines, and buds of various trees found here. Nest on ground, generally at the foot of tree or under bushes. Eggs "eight to twelve?" I have never taken its eggs but have seen several nests after the young had left.

94. *Bonasa umbellus umbelloides* (Dougl.) Gray Ruffed Grouse. Reported by Drew in his list as occurring at 7,000 feet, Mr. Allen gives it as occurring, but it must be recorded as rare. I have not seen it myself in this state and but one single bird in Wyoming, in the Big Horn range. Further north however, in Montana, I found it much more common, but do not believe it is really common in the United States.

95. *Lagopus leucurus*. Swains. White-tailed Ptarmigan. Resident, common above, or near timber line the year round. Breeds from 10,000 to 14,000 feet. I think this is nearly the extent of its vertical range, although it may come lower in very severe winters.

96. *Tympanuchus americanus* (Reich). Prairie Hen. This is entered in Drew's list as occurring from the plains up to 5000 feet. Upon what evidence I do not know. Mr. Allen found it as far west as middle Kansas as long ago as 1872.\* It may have pushed its way to the eastern border of Colorado in sixteen years, although there are no records that I know of, but the wonderful western march of this species, which has been written of in every

\*See "Auk" Vol. III, No. 2, p. 284-286, 1886.

\*SEE BULL. MU. COMP. ZOOLOGY VOL. III, NO. 6, P. 181, July 1872.

ornithological publication for the past twenty years, has been almost imperceptible if it has not yet reached this state. Perhaps, however, Drew has mistaken *Tympanuchus pallidicinctus* (Ridgw), for this species, which ought, and no doubt will be found along our southern border. I let it remain pending further developments.

97. *Pediocates phasianellus columbianus* (Ord). Columbian Sharp-tailed Grouse. This variety I found at Fort Lewis, tolerably common. Although the A. O. U check-list does not give that portion of Colorado any of the Grouse except *D. obscurus*. The Columbian Sharp-tailed is supposed to only be found in the northwestern United States, and southwestern Colorado does not come in here surely. The next variety is said to be found only on the eastern side of the Rocky Mountains, while La Plata county is on the Pacific slope. This must extend its range somewhat. It is a resident and breeds. The young are found running about in June, and by the middle of August are of good size, when good shooting is to be had upon the mesas, which are covered with a heavy growth of scrub-oak. I have found this to be the best shooting, from a sportsmen's point of view, in the west, because it is found in such heavy coverts.

98. *Pediocates phasianellus campestris* Ridgw. Prairie Sharp-tailed Grouse. Resident; common. Found in great abundance on the plains in the northern half of the state, not as common in southern portion. Dr. Coues states\* upon the authority of Capt. Hartley, formerly of the 22d Regiment, the fact [?] that the Sharp-tailed Grouse will fly into a cultivated field, while the Prairie Hen enters on foot. This would be an interesting fact were it true, but in my experience I have not found it so. It will fly, or walk into the fields of ranchmen with no preference for either style of locomotion. In winter I have shot numbers of them from the tops of grain stacks early in the morning, where they came from their nests the night before. Under these circumstances they fly, alighting upon the top of the stacks, but I have always trailed them into the gardens in the fall, without the help of a dog, their footprints being plainly discernable in the dry alkaline dust.

99. *Centrocercus urophasianus* (Bonap). Sage Grouse. Resident, and common in the dry artemisia tracts of northeastern and southwestern Colorado. Breeds abundantly and frequents these localities the entire year. The

largest of our Grouse, and one that is now well-known. It feeds upon insects, leaves of the greasewood and fresh young blades of grass, as I have proved by examination of stomach. I have not found them very fond of grasshoppers but have taken a handful of a small black, hardshelled bug from them. Perhaps in the vicinity of Forts Felterman and McKinney, Wyo., they are found in greatest abundance. I have seen thousands of them in a day's ride between these two places. At Fort McKinney I observed a singular sight which will go to show the strength and power of a full-grown Cock. I copy from my notes of the Birds of Wyoming. "On June 12th 1884, ten miles north of McKinney, I observed a large black hawk make several swoops against the side of a large hill where it appeared to struggle with something, wishing to investigate I turned my horse in that direction and arrived just in time to see the hawk arise a few feet from the ground with what appeared to be a very large bird, which it dropped upon seeing me. The Hawk rose high in air, and as it did so another bird rose heavily and flew directly over me. I watched its flight and after passing me a couple of hundred yards it fell to the earth with a heavy plunge, I quickly rode up and found the largest Sage Cock I had ever seen. It was dead. Dismounting I picked the dead bird up and found the feathers of the back completely gone and the flesh one mass of cuts and bruises, I took it home to weigh it and to further examine its injuries. It weighed just nine pounds and three quarters. Upon washing the back it was found that the Hawk had torn the flesh so badly over the rump that the entrails were partially drawn through. Even after this, the noble bird had flown over six hundred yards, and then gave up the life it had struggled so hard for. That bird's flesh was never eaten, I buried it out of respect for its noble struggle." "The Hawk I could not identify and although it kept circling above me while in the vicinity, it would not come within range of my "Parker."

100. *Melcagris gallopavo mexicana* (Gould). Mexican Turkey. Resident and common in certain localities in Southwestern Colorado. I found this bird abundant on the Rio los Pinos, which runs through the Ute reservation. I was first made aware of its presence in the state by some sent me by a friend. Afterwards I spent ten days there and was surprised to find them so common. Drew enters the true *gallopavo* as a resident but does not state whether he observed it himself or not. If he

\*Birds of the Northwest, p. 419, 1874.

noted it in San Juan county it is undoubtedly the Mexican variety. I believe the true Wild Turkey is not to be found in the state, although probably it was in earlier days. The birds I have seen were the exact counterpart of those I have from Texan localities. Ornithologists having reliable records of the occurrence of *M. gallopavo* in Colorado will confer a great favor by communicating with the writer.

(To be Continued.)

## A Series of Eggs of the Black and White Warbler.

BY J. P. S.

The eggs of the Black and White Warbler, (*Mniotilta varia*), while exhibiting considerable variation in size and markings, yet have an individuality of their own which enables one to select them from those of any other Warbler.

In describing the following series of their eggs now before me, they are arranged in the order of the degree of heaviness of their markings. Thus Set I has the smallest and lightest markings, and Set X the largest and darkest.

Set I. April 18, 1888. Iredell County, N. C. Nest at foot of huckleberry bush. Bird on nest. Five eggs, incubation begun. White, thickly speckled all over with hazel. Near the larger end the spots are larger and closer together, where they form an indistinct wreath. There are also a few spots of lilac-gray in the wreath: .65 x .54; .61 x .54; .63 x .53; .64 x .53; .64 x .52; .65 x .53.

Set II. May 2, 1888. Iredell County, N. C. Nest under fallen limb in pine woods. Bird on nest. Five eggs, incubation begun. Creamy white, speckled and wreathed with fine dots of hazel. The wreath is composed of innumerable dots and yet they are not confluent. On two of the eggs there are a number of dots of lavender-gray in the wreath; .65 x .51; .63 x .51; .60 x .50; .65 x .49; .64 x .50.

Set III. May 25, 1888. Buncombe County, N. C. Nest of leaves, grasses etc., lined with hair and fine grass; situated under a small bush. Bird flushed. Four eggs, fresh. Creamy white, sprinkled and speckled cinnamon-rufous. Near the larger ends they are wreathed with minute dots of the same color, very close together, but not confluent. In the wreaths are also dots of lavender-gray, but they do not show unless closely looked for: .65 x .50; .63 x .50; .62 x .49; .64 x .52.

Set IV. April 23, 1888. Iredell County, N.

C. Nest at foot of pine sapling. Bird at nest. Five eggs, incubation begun. White, speckled with cinnamon-rufous. At the larger ends the markings form wreaths, and here there are also many dots of lavender-gray. The eggs are much narrower and more pointed than any of the other set in the series; .69 x .48; .69 x .49; .69 x .49; .69 x .49; .67 x .48.

Set V. June 4, 1882. Monroe County, Penn. Nest under roof of a stump at a fence. Birds seen. Five eggs, fresh: White, speckled with bay. The markings are much heavier at the larger ends, where they form indistinct wreaths. There are also some spots of lavender-gray in the wreaths: .67 x .52; .68 x .53; .67 x .53; .64 x .52; .66 x .51.

Set VI. April 20, 1887. Iredell County, N. C. Nest against a small bush, on the ground. Five eggs, fresh. White, with faint creamy tint, speckled and spotted with chestnut. Four of the eggs are wreathed near the larger ends, but the other has most of the specks at the smaller end. All of them are quite pointed: .70 x .50; .69 x .51; .69 x .51; .66 x .51; .69 x .51.

Set VII. April 23, 1888. Iredell County, N. C. Nest on ground, at foot of small bush. Bird on nest. Five eggs, incubation begun. Creamy white, heavily spotted (for this species) with bay and lilac-gray. There are no wreaths on this set, but the spots are larger and thicker near the larger ends: .64 x .53; .62 x .53; .62 x .52; .62 x .52; .62 x .52.

Set VIII. June 20, 1883. Near Taftsville, Vermont. Nest of strips of rotten wood and leaves, lined with hair, moss, and roots; on the ground, under an overhanging stone in a hemlock woods. Quite a quantity of rotten hemlock wood was used as a foundation for the nest proper. The female, when flushed, acted much like a Ruffed Grouse in her endeavors to draw the collector's attention away from her nest, from which she was flushed. Five eggs, fresh. Creamy white, spotted and wreathed (near the larger ends) with chestnut and lavender-gray. Large eggs, and quite pointed, for this species: .72 x .54; .72 x .54; .70 x .54; .70 x .53; .69 x .54.

Set IX. May 28, 1888. Near Taunton, Mass. Nest on ground. Bird seen to fly from nest. Five eggs, fresh. Creamy white, thickly speckled and spotted with hazel and lavender-gray: .67 x .54; .65 x .54; .65 x .54; .65 x .54; .66 x .53. (No wreaths on this set).

Set X. April 29, 1887. Iredell County, N. C. Nest on ground, at foot of small bush. Bird on nest. Five eggs, fresh. White speckl-

ed and spotted with bay and lavender-gray. (The latter color is confined to the wreaths, which are near the larger ends.) These are the largest eggs in the series, and are indeed quite phenomenal for this species: .77 x .57; .76 x .57; .76 x .56; .74 x .56; .75 x .56.

### Albinos.

BY GEO. G. CANTWELL, MINNEAPOLIS, MINN.

It has been my good fortune to secure during the last season several birds that were partially subject to this strange feature.

On April 13th I collected a ♂ Rusty Grackle with two large patches of white on its breast, one is in the form of a half circle about three-fourths of an inch long, by one-fourth of an inch broad, and is situated on the lower part of the throat in the form of a beautiful necktie. The other patch is more or less round, about an inch wide, and is situated on the right breast where the bend of the wing nestles in the feathers, so when the wings are folded these white feathers lay over it.

I secured it more by luck than anything else. I was out for a stroll with a friend who had a small caliber rifle with him; he wanted to get some kind of a bird that would skin easy, as he was not very apt in that line, so I pointed him out a black bird in a tree near by and told him that would make an easy specimen, and asked him to let me try my skill at shooting, which he did, and I luckily killed it, which proved to be my first Albino bird.

Another was a Fox-colored Sparrow collected April 18, having the two first wing quills, and the primary coverts of the left wing clear white, otherwise the specimen was normal. It was a ♂ also.

I also secured on May 3, a ♂ Cow Bunting with a light yellowish patch on the right side of the neck about the size of a dime.

But the best specimen of an Albino that has ever come to my notice, is to be seen in the window of Mr. H. Krueger's gun store of this city, in the shape of an almost pure Albino Mallard which was killed by H. Rippe on Oct. last near this place.

The general color is a pure snow white with the exception of a few traces of brown on the breast, and light gray marking on the back, the top and sides of head are the normal color of a ♀ Mallard, the wings show slight greenish reflections in the proper place, the tail is also slightly mottled with dark. I was unable to find out the sex, but think it is a female.

### Nesting of the Broad-winged Hawk in Chester County, Penn.

BY FRANK L. BURNS, BERWYN, PENN.

Although much has been written in regard to the nesting of the Broad-winged Hawk (*Buteo pennsylvanicus*) there seems to be a general demand for more information on the subject. As has already been remarked by a writer to the O. & O. "the habits of a bird vary greatly in different localities." This Hawk is a rare summer resident, rarely found breeding in this County. Mr. T. H. Jackson noted three well authenticated sets taken there during the past thirteen years, of one, two and three eggs (Vol. XII, No. 7, O. & O.) I would add a set of four taken by Mr. Wayne Baugh, of Tredyffrin Township, in 1884. This is probably the finest clutch of this species ever taken in the county.

On the 4th of May of the present year while walking along an old cartroad, which ran through a belt of chestnut timber, a Hawk flew from an old Crow's nest about twenty yards ahead, and perched on a tree at no great distance. Not having my climbers along I returned in the evening. Now I felt dubious about this nest; I remembered climbing to it one hot day two years ago, and on reaching it (accompanied by a small army of mosquitoes) I was disgusted to find it empty, and at the touch, clouds of dust filled my eyes and settled on my perspiring face and neck. However I climbed once more, and was pleased to find one richly marked egg. It would be well to remark here, that when about half way up I heard a mournful half whistle, half whine, which was repeated at regular intervals until I descended. At first I thought it must be a Swallow, but as it was repeated, and remembering certain notes on the Broad-winged Hawk in Vol. XIII, No. 2, O. & O., I concluded I had found the nest of that species.

On the 7th the nest contained two eggs, the female flushed at my approach. On the 11th the female was shot as she left the nest, and the three eggs secured. At this the final climb, the male betrayed his presence in a near-by tree (for the first time) by the snapping of his beak (which sounded similar to the drumming of a Downy Woodpecker) but kept well hidden. The nesting place was surrounded from South to Northeast by at least a quarter of a mile of Chestnut growth, of from twenty to seventy feet in height; while the nearest opening and pasture field on the east, was only sixty yards

away. The nest was in a crotch, exactly thirty-eight feet from the ground. The eggs measure  $1.94 \times 1.62$ ,  $1.88 \times 1.62$ , and  $1.89 \times 1.63$  inches; and in markings, Mr. Jackson's description of the set of three taken by himself in 1887 might almost describe (this set also, egg for egg). The female bird measures thirty-five inches in extent and fifteen inches in length.

### Nesting of the Pigeon Hawk.

BY H. R. TAYLOR.

As the eggs of the Pigeon Hawk (*Falco columbarius*) are very seldom found I wish to record the taking of a splendid set on April 6th, 1888.

I first saw the nest late in May, one year ago, when it contained three young birds ready to fly. It was on a steep mountain-side on the large stock ranch of my friend J. P. Sargent, in Santa Clara Co. Cal., on a ledge of a precipitous bluff about thirty-five feet high.

While near the nest last year the old bird was astonishingly fearless and would swoop down close to my head, uttering ear-piercing cries. These angry demonstrations, while they made me somewhat apprehensive of damaged eyes, afforded an excellent opportunity for jotting down a description of the falcon.

When I visited the nest this season the bird flew off as I came up, and winged its peculiar flight across the canyon, when it settled quietly on the hill-side.

My friend R. C. Sargent adjusted the end of a rawhide lariat to my body and as soon as the rope had been passed round a small shrub, which grew above, I swung over the edge, and was slowly lowered toward the nest.

As the nest was rather in from the face of the cliff I found it difficult to get a foot-hold, but when I did at last, I saw that it was composed simply of pieces of friable rock, and in it to my delighted surprise were five eggs. I soon had them stowed away and was speedily and safely lowered to the bottom.

Audubon, it will be remembered, found several nests of this bird in Labrador, each with five eggs. The nests were on the top branches of low fir trees and only from ten to twelve feet from the ground.

The eggs of this set proved to have large embryos, but with patience I succeeded in blowing them. They are heavily marked with a light brown, so heavily that in one or two the ground color is entirely obscured.

### A Series of Eggs of Swainson's Warbler.

BY J. P. N.

On June 5 and 6, 1885, Mr. Arthur T. Wayne found the first two nests of Swainson's Warbler (*Helonæ swainsoni*) of which we have any record. They were both taken near Charleston, South Carolina, and were then considered to be very rare eggs. Since then, however, a great many nests have been found, and it would be safe to estimate their number at over one hundred. All of them have been found by three collectors, Mr. Arthur T. Wayne in the vicinity of Charleston, S. C., and Messrs. T. D. Perry and George Noble, near Savannah, Georgia. In view of the great success that these gentlemen have had, it is odd that no one ever found the eggs of this bird before 1885, when Mr. Wayne first discovered them.

The eggs are always three or four in number, and more commonly the former than the latter. They are white, with a faint bluish tint, that is only perceptible when they are compared with a pure white. In this connection it may not be improper to remark that Mr. Ridgway is in error when he states in his *Manual of North American Birds*, p. 485, that the eggs of this species are "1-3,  $.75 \times .58$ , white, usually plain, but sometimes speckled or spotted with lilac or pale brown." Less than three eggs would be an incomplete set for this species, and they are almost always unmarked. It is true that Mr. William Brewster has three eggs that have faint markings, but they are the only ones that I have heard of out of upwards of twenty or more sets.

They vary greatly in size and shape, as the following description of nine sets now before me will illustrate:

Set I. May 30, 1887. Chatham County, Georgia. Collected by George Noble. Bird seen. Nest placed in bunch of canes four feet from the ground. Three eggs:  $.70 \times .55$ ;  $.70 \times .55$ ;  $.72 \times .56$ .

Set II. May 24, 1888. Chatham County, Georgia. Collected by T. D. Perry. Bird on nest. Nest of leaves in compact layers, lined with fine dry moss. In myrtle bush, two and a half feet from the ground. Three eggs:  $.74 \times .55$ ;  $.73 \times .55$ ;  $.69 \times .54$ .

Set III. July 4, 1888. Berkeley County, South Carolina. Collected by Arthur T. Wayne. Nest in canes, four feet from ground, in large dense swamp. Made of dry leaves and cane leaves, lined with pine needles and a little

moss. Four eggs: .72 x .58; .71 x .58; .75 x .58; .72 x .59.

Set IV. May 20, 1888. Chatham County, Georgia. Collected by George Noble. Bird flushed. Nest in small gall bush, three feet from ground. Composed of dry leaves, loosely put together. Three eggs: .83 x .53; .84 x .53; .80 x .57. (A long and quite pointed set for this species).

Set V. May 17, 1886. Berkeley County, South Carolina. Collected by Arthur T. Wayne. ♀ shot. Nest in canes, five feet from ground, in a muddy place. Four eggs: .79 x .62; .78 x .59; .79 x .59; .74 x .59.

Set VI. May 22, 1887. Chatham County, Georgia. Collected by T. D. Perry. Saw birds. Nest in gall bush, on edge of swamp, and over a pool of water. Three eggs: .80 x .60; .77 x .59; .79 x .60.

Set VII. May 12, 1887. Chatham County, Georgia. Collected by T. D. Perry. ♀ on nest. Nest of dead leaves laid in layers, and lined with pine needles and dead moss. Placed in canes five feet from ground. Three eggs: .68 x .52; .68 x .54; .69 x .54. (The smallest eggs in the series.)

Set VIII. May 10, 1888. Chatham County, Georgia. Collected by George Noble. Bird on nest. Nest in a small myrtle bush, two feet from ground. Made of dry leaves, lined with pine needles. Three eggs: .77 x .60; .74 x .58; .75 x .57.

Set IX. June 27, 1888. Chatham County, Georgia. Collected by T. D. Perry. Bird on nest. Nest in top of canes, four feet from ground. Composed of dead leaves, laid in layers, lined with pine needles and dry moss. Three eggs: .78 x .58; .76 x .59; .75 x .58.

The eggs of this species are the only ones of any of the Warblers that are unmarked.

### Change of Breeding Habits of Red-winged Blackbird.

BY LYNDS JONES, GRINNELL, IOWA.

My earliest recollections of any thing like ornithological work are associated with the semi-pensile nest of *Agelaius phoeniceus* that we found abundant among the flags in marshy places in which this prairie country abounded. I recall no instance of a nest being found elsewhere than among the flags up to 1880.

In 1880 came an inundation of enterprise in the shape of ditching, by which the sloughs were drained, and the flag growth lessened year

by year, until now almost none are found. It was also noticed that the birds decreased in numbers.

In 1885 was the minimum of breeding birds, and in 1886 nests began to appear in unusual places, such as heavy grass, growths of weeds, and even the brush on the hilltops. Very few nests were seen in the lowlands; the preference seemed to be a sidehill. In 1888 nests were as frequent in the brush on the hilltops as in weeds or grass, and some were found in trees above six feet up.

Instead of the semi-pensile nests among the flags were nests built and placed in much the same manner as those of the Black-throated Bunting (*Spiza americana*). The difference in material used now and formerly is no more than one would expect in going from a marsh to upland.

I am aware that it is considered no very great rarity among eastern collectors to find nests of this species in trees. But here the change has been decided. The migration was from marsh to upland, and the nest from basket to platform foundation.

When the brush and weeds disappear, as they surely will, where then will the Blackbirds build?

### Nesting of the White-eyed Vireo in Chester County, Pa.

BY J. P. NORRIS, JR.

It has been my good fortune to find four nests of this bird (*Vireo noveboracensis*) in Chester County, where it is rather scarce.

The first nest was found May 25th, 1887, and had just been completed. Returning a week later, I found it contained four eggs of the Vireo and one of the Cowbird.

This nest was suspended from a limb of a small bush one foot from the ground, in a small clump of bushes in a swampy meadow. The nest is purse-shaped, as in fact all the four nests I found were, differing in that from those of the Red-eyed Vireo (*V. olivaceus*) which are cup-shaped. It was composed of bark, pieces of cocoon shavings, moss, etc., lined with fine strips of bark. Moss seems to be invariably used in the construction of their nests, while I have never seen any in a nest of the Red-eyed Vireo. This set measure .67 x .53; .74 x .54; .73 x .56; .77 x .56.

Nest No. 2 was found May 29th, 1888, just finished, and was left until June 5th, when four

eggs were taken from it. The bird was seen and fully identified. It was two feet from the ground, suspended from the limb of a small tree, well hidden. It was on a sort of plateau, or elevated piece of level ground, covered with trees and bushes, and having a considerable slope on each side. At the bottom of one side was a small stream. It was within an eighth of a mile where the first set was taken, in 1887. The nest was similar to the other. The eggs measure .74 x .55; .73 x .57; .73 x .55; .74 x .57.

Nest No. 3 was found May 30th, 1888, completed, and was left until June 5th, when it contained four eggs of the Vireo and one of the Cowbird. It was in a low, swampy woods near Dilworthtown, and was suspended from the limb of a small tree one and one-half feet from the ground, and was similar in construction to the former ones. The eggs measure .64 x .49; .69 x .50; .73 x .51; .71 x .50.

Nest No. 4 was found June 18th, 1888, and was, I believe, the second laying of the same parents as set No. 2, as the nest was not more than twenty-five yards from the situation of that one, and the eggs were found thirteen days after the former ones. It was suspended from a limb of a small sassafras bush, on a steep wooded bank above the stream previously mentioned. It was not more than a foot from the ground. The eggs are quite large for this bird and measure .75 x .58; .76 x .58; .75 x .56.

The eggs of this species are usually smaller than those of *A. olivaceus*.

### Some Additions to the Avifauna of North Carolina and also to that of Raleigh, N. C.

BY C. S. BRIMLEY.

Last winter Prof. G. F. Atkinson published in the "Journal of the Elisha Mitchell Scientific Society" a "Preliminary Catalogue of the Birds of North Carolina" in which 252 species and sub-species are enumerated as occurring in the State. Since that time the list has been increased to 259 as follows:—

*Columbigallina passerina* (Ground Dove). Recorded as accidental in Buncombe Co. by J. S. Cairns (vide O. & O. Vol. 12, No. 1, 1888), and omitted from the list by an oversight.

*Porzana jamaicensis* (Black Rail). Mr. Cairns tells me a pair bred near Weaverville in 1887. Mr. McLaughlin also records it from Statesville.

*Circicola riparia* (Bank Swallow). A single

specimen taken by H. H. Brimley near Raleigh, April 25, 1888 out of a large flock of other swallows. Careful search failed to detect another, though the one taken was easily distinguished from the Roughwings by its smaller size and the white under parts.

*Turdus aliceae* (Gray-cheeked Thrush). Two males taken Oct. 2, 1888, two more on Oct. 5, and a female on Oct. 12, by C. S. Brimley near Raleigh, add this bird to the Avifauna of N. C. The hybrid "*Helminthophila cucobronchialis*" taken on Sept. 6, 1888 by H. H. Brimley near Raleigh may also be reckoned in some sense as an addition to the list.

Besides the above we have taken the following at Raleigh, which though not new to the State are new to this locality as to us.

*Broad-winged Hawk* (May 23, 1888, two ♀'s), previously taken by J. L. Busbee.

*Wilson's Warbler* (May 17, 1888, one ♂) previously taken by J. L. Busbee.

*Least Bittern*, set of 3 eggs taken June 8, and ♂ killed Sept. 11.

*Blue-winged Warbler*, ♀ taken Aug. 21, ♂ taken Sept. 4.

*Bewick's Wren*, ♂ taken Oct. 27, in company with another bird of the same species which escaped me.

Now let us hear if other North Carolina collectors have increased their lists during the past year (1888).

### Breeding Habits of the Mountain Plover.

BY WM. G. SMITH, LOVELAND, COLORADO.

Amongst the earliest of our feathered friends to arrive in spring is the Mountain Plover (*Podasocys montanus*). It is never very numerous, yet always to be met with on the prairies, and about one pair to a quarter section of land is about the average of distribution. They are very tame, and upon approaching them they rarely fly, but their powers of running are something marvelous for so small a bird. They can outrun a person who is walking.

Although many breed in this vicinity, I have never been able to find their eggs. The male is always on the alert and acquaints his partner to take charge of them, and they do not keep together at all times, but possibly within trailing distance. It is very easy to catch the young birds, if one is not too old or lazy to run, as they never try to hide as most young birds do. I found three sets of eggs on June 1st while

travelling by wagon when crossing the great Laramie Plains, in Wyoming Territory. They were all placed within fifty yards of the much frequented roadway, and each time I saw the female sitting on the eggs. The old birds are very white which contrasts with the dark ground and causes them to be easily seen. The eggs (two in number) were left on the first approach of danger, when she glides through the grass, and does not expose herself until well away from her eggs, and then commences to feign lameness, which I never saw carried to such perfection by any other bird. I was fooled once into thinking the bird was in a fit, as it laid on its side, apparently in strong convulsions. It was within six feet of me, and I was about to pick it up, when I saw a young bird close to my feet apparently about two days old.

As soon as the young are hatched, which I have always found to be two, each old bird takes care of one.

### Food of the Great Northern Shrike.

BY JOHN C. CAHOON.

In the September O. & O. I find two articles, one by Mr. Benj. F. Hess, and the other by Mr. C. C. Maxwell, regarding the food of the Great Northern Shrike.

While both of these gentlemen are certain that the food of the Great Northern Shrike, in their locality in the winter consists principally of English Sparrows, their knowledge seems to be derived wholly from the fact of seeing these shrikes pursue and kill the sparrows. It does not prove that because a shrike pursues, kills, and mutilates a sparrow or other small bird, that it must necessarily eat it. The fact of finding many birds impaled on thorns, or caught in the fork of a tree branch, shows that many that are killed are not used for food purposes.

Mr. Maxwell says, "The winter in Oswego County is severe enough to drive all the bugs and worms out of sight and no doubt the shrikes were driven to eating English Sparrows by hunger, but they did it, nevertheless." All entomologists know that bugs and other insects can be found in the bark and stumps of old dead trees, under logs, etc., when every thing is frozen up. I have shot shrikes in the most severe winters, and found their stomachs filled with insects and other matter (no birds).

How and where they procured the insects I cannot say, but if they can get them in one locality that's frozen up why not in another?

Even was a shrike seen eating a bird that is no proof that its next two or more meals will consist of bird meat. In my opinion the only sure way of determining the principal food of the shrike, or any bird, is by a close examination of the contents of their stomachs.

N. B.—Shot a Great Northern Shrike at East Brewster, Mass., Oct. 17th. Stomach contained parts of a Snow bird and one large white worm.

### The Cuckoo and Tent Caterpillar.

BY HENRY HALES.

The Tent Caterpillar has been very numerous in Northern New Jersey this summer, too much so for the farmers to keep them in check. At the same time the Black-billed Cuckoo was also very abundant, much more so than I ever remember, I noticed them carry on a deadly warfare on the tent caterpillar. In one instance I saw the Cuckoo perforate a tent, pull out and swallow five large caterpillars in succession, and I have noticed them many times, engaged in the same useful business. Those who so often condemn the birds for not destroying this pest would do well to observe a little closer as this is not the only species that feeds on them. When small and smooth many species relish them, but when they get large and hairy they have not so many enemies; while the Cuckoo swallows them entire, some smaller birds skin off their rough coat before swallowing them. It is possible the numbers of cuckoos here, has been encouraged by the profusion of the tent caterpillars.

### Eggs of *Spizella pusilla arenacea*.

BY J. P. N.

During a trip to Texas, in the spring of 1888, my friend Mr. G. B. Benners was fortunate enough to find two nests of the Western Field Sparrow (*Spizella pusilla arenacea*). Each nest contained four eggs, and one of these sets he has kindly given me. As I am not aware that they have been previously described I desire to place on record their description. The nest was in a small live oak tree, two feet from the ground. The eggs have a light greenish white ground color, and they are speckled with bay. They measure .71 x .53; .72 x .53; .72 x .54; .72 x .52. In size and general appearance they cannot be distinguished from eggs of *S. pusilla*.

### Nesting of the Yellow-breasted Chat in 1888 near Raleigh, N. C.

BY C. S. BRIMLEY.

In this locality these birds nest chiefly in thickets and briar patches, and less often in scattering bushes on hillsides. The nest is composed of grass or weed stems, the bottom being almost entirely of dead leaves, and the whole is lined with fine grass, never with horsehair or feathers.

The nest is placed in a suitable bush, briar patch or bunch of reeds from two to six feet from the ground, the usual height being about three feet. The birds commenced to lay May 16th and the last nest was found June 25, containing a full set of 4. Early in the season the set is almost invariably four, later on sets of three begin to appear, and late in June, three are more often found than four. Considering the abundance of the species, comparatively few nests are found; a briar patch containing several pairs often fail to reveal a single nest to the most diligent search. The nests that are found are always in such easy places to find that one wonders at not finding many more.

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### Seven Eggs of the Willet Laid in One Nest.

BY J. P. N.

On May 9th, 1887, seven eggs of the Willet (*Symphemia semipalmata*) were found in one nest in Northampton County, Virginia. In all probability they were laid by two birds, as four eggs is the almost invariable number for this species.

The same collector informs me that he has found five and six eggs in a single nest, but never before seven. Is not this the largest "set" of this species on record?

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### Odd Nesting Site of a Field Sparrow.

BY J. P. NORRIS, JR.

On June 30th, 1880, I found a nest of the Field Sparrow (*Spizella pusilla*) in Chester County, Pennsylvania, in a Hawthorn hedge, eight feet from the ground.

The nest and eggs (three in number) were in no respect remarkable, but what caused the birds to build in such a high situation is a mystery.

### Occurrence of the White-throated Warbler (so-called) at Raleigh, N. C.

BY C. S. BRIMLEY.

A ♀ specimen of the hybrid between *Helminthophila pinus* and *H. chrysoptera*, referable to the form formerly known as the White-throated Warbler (*leucobranchialis*) was taken here by my brother on Sept. 6, 1888. The bird was killed in mixed woods, being at the time in the company of a large quantity of other Warblers, and was not supposed to be anything out of the way until after its capture.

The bird was of a mixed bluish and greenish above, the rump being without any bluish tint; the loreal strip was black and there were black traces about the auriculars. Under parts were mostly white except the forepart of the breast which was yellow; throat and neck below white, chin yellow. The crown, forehead and wingbars bright yellow as in *chrysoptera*. Measurements L. 5, W.  $2\frac{9}{16}$ , T.  $1\frac{5}{8}$ , E.  $7\frac{1}{6}$ , Sept. 6, 1888, ♀.

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### Yellow-headed Blackbird in Connec- ticut.

E. K. COLBRON.

Last July I shot a female Yellow-headed Blackbird from a flock of Red-winged Blackbirds in the marshes near Stamford, Conn., which I believe to be an unusual occurrence.

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### Addition to the List of the Shore Birds of Cape Cod.

BY JOHN C. CAMOON.

I wish to add Baird's Sandpiper (*F. bairdii*) to my list of The Shore Birds of Cape Cod. A young ♂ of this species was shot on Monomoy flats, August 30th of the present year, by Mr. Sanford of New Haven, Conn. This is the first instance of its occurrence, to my knowledge, on Cape Cod.

October 9th I shot a Red Phalarope in a small fresh water pond near Salt Meadows, and on November 2nd a second one in a channel between the flats and the outer beach. This bird is a rare visitor to our Cape Cod coast, and I have never before seen one in the autumn.

### Editorial.

The O. & O. is mailed each issue to every paid subscriber. If you fail to receive it, notify us.

WE DO NOT CONTINUE SENDING THE O. & O. AFTER A SUBSCRIPTION HAS EXPIRED, EXCEPT BY REQUEST. AS A MAJORITY OF THE SUBSCRIPTIONS EXPIRE THIS MONTH WE HOPE FOR A LIVELY RESPONSE.

In presenting this our closing number of Vol. XIII, we add another service stripe and are again reminded of the flight of Old Time. Of our success in endeavoring to establish the O. & O. in the friendship of the American Ornithologist we must leave it to them to judge.

Has it been of practical assistance to them in the advancement of their knowledge of Bird Life? If so, then those who have labored feel repaid.

We who sit at the desk and guide the reproduction of the relations of you who are in the field wish you one and all the compliments of the season.

May you live long and be happy.

Again we are called upon by a friend and supporter of the O. & O. to publish a warning to our readers in regard to the transactions of a certain collector. The writer claims that two sets of rare eggs, which the collector *claimed to have taken himself*, were bought, one by a friend and the other by himself. A careful investigation and comparison showed them *both to be spurious*. He also sends a list of other eggs sold under an alias. In the past, we have declined to publish the names and details of similar cases, when apparently the perpetrators well deserved to be made examples of, but may be compelled to in the future, we have frequently received sets of eggs wrongly identified, but have always found the senders innocent and eager to be corrected. It is very natural that such mistakes should occur, but when they have been pointed out, to *repeat it with dishonest intentions* is an outrage.

We know that there exists to-day in the hands of prominent ornithologists, a list of names of several, that it only requires a trifle of additional proof to cause them to be shown up to the public. *Should that course be pursued they would be placed emphatically on a retired list.* The honest collector, who we know to be in the majority, has nothing to fear from an honest mistake, but let the dishonest one take warning.

### ORNITHOLOGIST AND OOLOGIST.

Camden, N. J. Oct. 1888.

Mr. F. B. Webster:—

Dear Sir,—Having received the Ornithologist and Oologist for the past two years, it gives me pleasure to speak of it in the highest terms. I know of no publication of its scope and character, so well adapted to the wants of those interested in the matters on which it treats. Although I am not an Ornithologist in a strict sense, but only a lover of birds in general, I do not see how anyone at all interested in birds or their habits, can afford to be without it. It is one of the most readable books of the kind I have yet seen, and in typographical appearance, paper, and general make-up, it has no superior.

Yours truly,

CHAS. A. BLAKE,

Member of the Academy of Natural Science, and  
American Entomological Society.

### Our Exchanges for 1888.

THE AUK, [a quarterly,] L. S. Foster publisher, New York City. The official organ of the American Ornithological Union. It is devoted to the study of bird-life from a scientific standpoint and is an ornament to American literature. We heartily recommend it to our readers,

THE FOREST AND STREAM, New York City, [a weekly] devoted to the entertainment of American sportsmen. During the present year considerable space has been devoted to Natural History and discussions of many topics of interest to ornithologists.

WADE'S FIBRE AND FABRIC, Boston. A record of new industries in the cotton and woolen trades. Published by Jos. M. Wade, [formerly editor and proprietor of the ORNITHOLOGIST OOLOGIST] we daily expect that friend Wade will introduce an Ornithological column.

THE SCIENTIST, Fitchburg, Mass, [Publication discontinued.]

THE CANADIAN ENTOMOLOGIST, London, Ontario, Canada. [monthly] This magazine numbers among its contributors, some of the first entomologists in the country, and deserves a place on the table of every student of this much neglected science.

THE AGASSIZ COMPANION, Wyandotte, Kansas, Will H. Plank, editor and publisher, 50 cents per annum. We wish this publication success. We notice that it is publishing a series of articles on entomology by Louis Leighton.

TRANSACTIONS OF THE NEW YORK ACADEMY OF SCIENCE. Edited by Herman LeRoy Fairechild. [previously noted]

PLAIN TALK, [monthly] 9 Spencer street, N. Y. "For boys and girls from nine to ninety."

THE HOOSIER NATURALIST, [monthly] Valparaiso, Ind.

OOLOGISTS EXCHANGE, [monthly] Sharon, Wis.

THE STAMP WORLD, [monthly] Lake Village, N. H.

GEOLOGICAL AND SCIENTIFIC BULLETIN, [monthly] Houston, Texas.

OTTAWA NATURALIST. The transactions of the Ottawa Field Naturalist Club, Ottawa, Canada.

WEST AMERICAN SCIENTIST, [monthly] San Diego, Cal.

BOOK CHAT, [monthly] 5 Union Square, New York City. Devoted to informing the public of new and current publications. We recommend all publishers to make themselves known to Brentano's, publisher.

THE UNIVERSAL TINKER, [monthly] 294 Broadway, New York. Devoted to the interests of amateur mechanics, and is the only publication of its class in the country.

### BRIEF NOTES.

A Baltimore Oriole, bright and happy, flitted into our yard at Hyde Park, Nov. 18. He was not molested and has our best wishes for his journey South. Snowy Owl seen at Crescent Beach, Mass., about November 25. Richardson's Owl, taken at Brockton, Mass., and a Hawk Owl at Middleboro, both on November 29.

A heavy flight of Killdeer Plover has been attracting considerable attention. They appeared the 28th of November at Nantucket, Chatham, and other points on Cape Cod, and in scattering bunches made their way all along the coast up to Essex. They were driven in by the storm and seemed in no hurry to depart. Killdeer have been of late quite scarce in this locality, and the question is, where did they come from?

They were offered in the Boston market at one dollar a dozen, but when it was found that "those taxidermist chaps" were after them, the price rapidly advanced.

At the last meeting of the Boston Scientific Society, Mr. F. A. Bates called attention to the effect of the great gale of Nov. 25 upon birds. The killdeer plover, a bird formerly quite common in New England, but of late years exceedingly rare, was found by sportsmen along the South Shore by the hundred. Quantities of them were killed and exposed for sale in the

markets at exceedingly reasonable prices. The birds were in good condition, showing that they had not been without food for a very long time, but they were nevertheless very hungry, and easily approached by sportsmen. The habitat of these birds at the present season is nowhere to the north of the Carolinas, so that, if from those regions, they were brought hundreds of miles in a comparatively short time. But the storm did not so affect even Florida as to make certain that the birds were from this locality. Traces of food in the stomachs of some of the birds may, when critically examined, afford evidence of the origin of this extraordinary visitation of birds, about which so little is known at present.—(*Boston Transcript*.)

"Information is requested on the occurrence of the Killdeer Plover on the coast north of Boston during or after the storm." [The stomachs of these birds, upon dissection, were found to contain remains of insects, principally Coleoptera.] [Ed.]

We read in the Good Book of certain fortunate individuals who were furnished with quail daily, but were not aware that some of our city friends were being speedily provided for. The day before Thanksgiving, Mr. Henry J. Thayer, while at the breakfast table, noticed a grouse in his back yard. Getting his gun he shot the bird and resumed his meal. Mr. Thayer's residence is at Cambridgeport.

A fine specimen of the Red Phalarope in full plumage was shot on May 15th, 1888, at Marshfield, Mass.

We congratulate that English glass eye dealer on the beautiful reproduction of part of the trade mark originated by A. L. Ellis & Co., of Pawtucket, R. I. some eight years ago. We do not think this attempt at appropriation will affect the sale of goods of Mr. Thomas Hurst's manufacture.

### CORRESPONDENCE.

The question of the rights of Naturalists and Taxidermists seems to be receiving considerable attention at present in your columns, and as you request correspondence from all, I will say a few words.

Ornithologists in this state are restricted from taking any nests or eggs whatever or any birds except game birds, only, the Law states that "any incorporated society of natural history in this state may designate any proper person of the age of eighteen and upwards, to whom a certificate may be granted, permitting the holder thereof to collect birds, their nests or eggs for scientific purposes only."

This is all very well, but are we to wait an indefinite length of time for some society (to whom we may be unknown) to "designate" us? I, for one, would like to know something of the method of procedure in obtaining this certificate—whether one must be a member of the society, or if not, to whom we must apply.

If the granting of permits is carried on as we, through reading of the "O. & O." under-

stand it is in Massachusetts, we of New York surely, have little prospect of being successful in our efforts to carry on our studies within the bounds of the law.

Then another question, are there no naturalists under eighteen years of age? Let some of our older and experienced friends speak, and tell how young they began to have a liking for scientific pursuits, and how well they would have succeeded if shut off from all opportunities for their studies in their youthful years.

As was stated in one of your editorials, "many a farmers boy is today an enthusiastic naturalist," and if they are excluded from the privileges granted to those a few years older, they will either break the laws, or be so discouraged as to give up the study, or if enthusiastic and patient enough to wait till they attain to the required age they may thus be compelled to lose some of their very best opportunities for gaining the desired knowledge.

True, there is a prevailing dislike for the "small boy," and doubtless many of them do abuse their privileges, but it seems to me that *anyone* who is willing to accede to the demands of the law and collect for scientific purposes only, should be permitted to do so.

Awaiting information and advice, I am

Yours respectfully,

ARTHUR H. HOWELL.

Lake Grove, Long Island.

### Mocking Bird at Newport, R. I.

EDITOR OF O. & O.:—

While sketching along the Cliff Walk at Newport, R. I., a week or so ago (Nov. 2.) I was much surprised to see a mocking bird among the shrubbery. When first seen, it was perched upon the roof of a rustic arbor and singing in a low tone.

As I remained perfectly still, it was not alarmed, but when I made a sudden movement, it flew to a thicket near by, and the white of the tail, and wing-bars was very conspicuous. At one time I was not further than ten feet from the bird, and there can be no room for doubt as to the species.

Yours truly,

HARRY GORDON WHITE.

Haverhill, Mass.

EDITOR OF O. & O.

Dear Sir,—

It is mine to report the occurrence, in this vicinity of two rare birds.

The first, a Red-bellied Woodpecker (*Centurus carolinus*) Ridgw. 372, identified by Will

P. Chase and John P. Chase of this place, June 2nd, 1885.

The second, a Yellow-bellied Woodpecker (*Sphyrapicus varius*) Ridgw. 369, found with a nest of four young in an orchard apple-tree, June 5th, 1886.

These birds have never been taken in this county, (to my knowledge) before or since the dates given.

The avi-fauna of Orleans County is now in preparation and promises to show, when completed, the names of over two hundred well authenticated birds.

Respectfully,

NEIL F. POSSON.

Medina, N. Y.

EDITOR O. & O.—

Will you inform me whether the Arctic Tern in flying, hold the legs straight out behind, in the manner of most water fowl, or does it draw them up and forward in the manner of the domestic pigeon? W.

"From my observation of the Albatross and the larger gulls which always fly with their feet extended, I believe that the Tern do the same." JAMES CLARK.

"It is my opinion that Tern draw their feet up when flying." JOHN C. CAHOON.

Perhaps those engaged in observing the moonlight flights of birds across the disc of a telescope can decide this—also, please, do they ever wink at you while crossing? EDITOR.

EDITOR OF O. & O.—

Mr. Frank Lyon of this place has an Albino chipmunk which was captured near here. When first seen it was on a rail fence and was captured by putting an umbrella over it. It is pure white and has pink eyes. When I saw it, it had just been captured and ate readily from the hand, Mr. Lyon says it is now quite tame and sometimes chirps like a common chipmunk. ALDEN LORING.

Owego, New York.

EDITOR OF THE ORNITHOLOGIST AND OÖLOGIST:—I wish to express through the columns of your valuable magazine my sympathy with and appreciation of the manner in which you are standing up for the rights of the working taxidermist and naturalist of this country.

In your editorials of August and September you have written good plain English and I for one, as a taxidermist and ornithologist am very much pleased to see these matters stirred up.

Keep right on, friend editor, in the track you are pursuing, hang to the truth and I am sure that at the end of 1888 there will be the most glorious sunset that has ever yet shone upon the O. & O.—*Taxidermist*.

JANUARY, 1888.

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# Ornithologist



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 FRANK B. WEBSTER,  
 409 Washington St., Boston, Mass.

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### BRISTOL ORNITHOLOGICAL CLUB,

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### Magazine of Ornithology.

UNDER THE EDITORIAL MANAGEMENT OF

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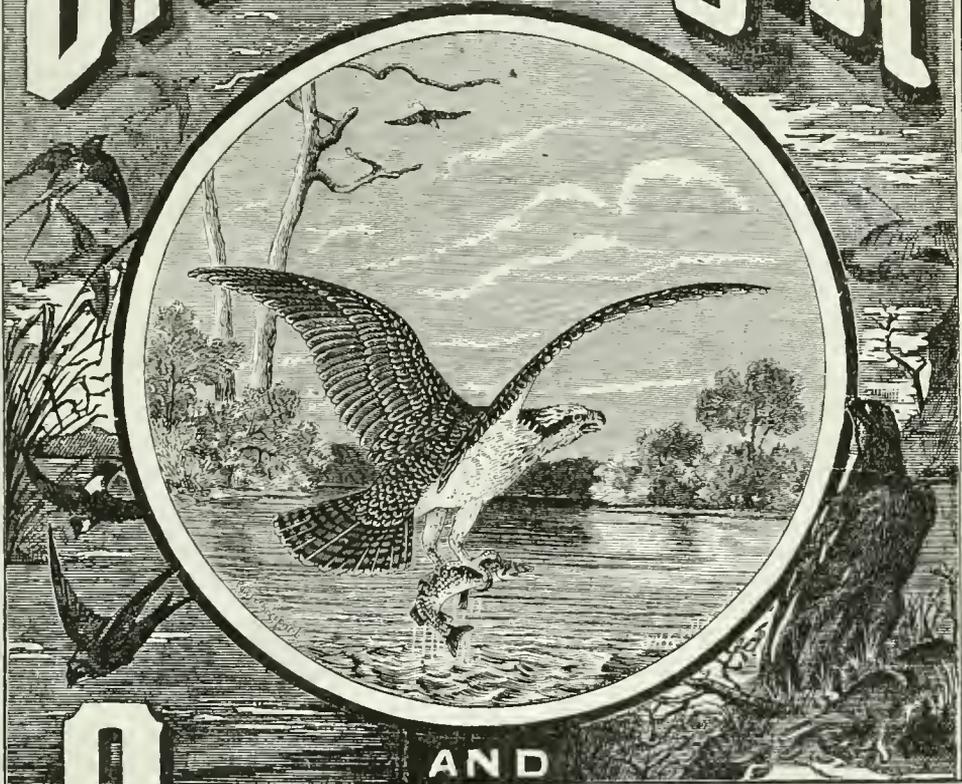
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VOL. XIII.

NO. 7.

# Ornithologist



AND

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Established 1875.

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VOL. XIII.

NO. 8.

# Ornithologist



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A MONTHLY

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Packard's Guide to Study of Insects,	5.00
Coues' Key to North American Birds,	7.50

ALSO, A FULL LINE OF

BIRDS, BIRD'S SKINS, BIRD'S EGGS AND CURIOSITIES,

TOOLS AND NATURALISTS' SUPPLIES.

### FRANK B. WEBSTER,

409 Washington St., Boston.

# Up the Amazon!

## SOUTH AMERICA.

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On the 20th of December William Smith sailed for Para; from there he will proceed to Santarem. It is the intention of Mr. Smith to collect all objects of interest to Naturalists, such as:

### **BIRDS' SKINS, BIRDS' EGGS, INSECTS, MINERALS AND SHELLS.**

Announcement and list of goods received will be published in this magazine. All persons who are interested, by sending their address, will have special notice of arrivals.

Anyone wishing any particular object, by giving immediate notice, will have first choice. We shall expect to hear from Mr. Smith in about three months, and should no unlooked for event occur to prevent, he will remain there an extended time.

 For any particulars address

**FRANK B. WEBSTER,**

**409 Washington St., - - Boston, Mass.**

OR,

**JAMES M. SOUTHWICK,**

258 Westminster St., Providence, R. I.









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