

*Helminthosus  
vermicorus*

SBv 97419 (8)

**The Worm-eating Warbler in Ontario.**—On the morning of May 28, 1908, I took a male Worm-eating Warbler (*Helmitheros vermivorus*) in a maple woods with a chestnut ridge, about three miles west of London, Ont. My attention was attracted by what seemed to be the notes of a Chipping Sparrow, delivered very rapidly but with a tone a trifle more musical than is the case with the sparrow. After some search we found him sitting still about fifty feet up, and with a glass I could see a warbler's bill and could tell that it was flesh-colored, although the light was too poor to show anything more. A lucky shot brought him down and I had the pleasure of picking up the first Worm-eating Warbler recorded for Canada.

In thinking the matter over I remembered having heard a similar, but not identical, song about a week before, ten miles further west, but was unable even to see the author of the note, and since then I have been told that this warbler was accurately described by a boy living not far from where mine was taken, so that it is possible more than one have been about. Three or four years ago Prairie Warblers were reported and taken in several places throughout the Province where they had not been seen before, and it is possible that this year may see an occurrence of Worm-eating Warblers which will parallel that of the other species.—  
W. E. SAUNDERS, London, Ont. **Ann 26. July-1908 p. 377**

CAPTURE OF THE WORM-EATING WARBLER IN MASSACHUSETTS.—On September 19, 1881, I shot in some low moist woods in Cambridge, a fine female Worm-eating Warbler (*Helmitherus vermicorus*). This is the first capture of this bird in Massachusetts. The only previous note of its occurrence in this State on record is that of Mr. W. A. Stearns, who says he saw one at Easthampton, Mass. (see New England Bird Life, p. 111).—HENRY M. SPELMAN, Cambridge, Mass.

Bull. N. O. C. 6, Oct, 1881, p. 246

*Helmitherus Vermicorus*  
worm-eating warbler (male) taken  
at Salem Willows April 16 1902.  
noticed for several days around an  
artificial pond on the grounds of Abner C. Goodell  
esp. specimen now in the cabinet of the  
Peabody Acad of Science  
John H. Sears.

[note by J. H. Sears.  
He shot the bird]

Some Birds of Rare or Accidental Occurrence in New England. H. A. Purdie

2.

2. *Helmitherus vermivorus*. WORM-EATING WARBLER. — Mr. Shores shot a male at Suffield (Hartford County), Conn., August 22, 1874. This is, I think, its most northerly record in the Atlantic States yet noted.

Bull. N. O. C. 2, Jan., 1877. p. 21

THE WORM-EATING WARBLER (*Helmitherus vermivorus*) BREEDING IN SOUTHERN CONNECTICUT. — June 10, 1879, Mr. W. R. Nichols found a nest of this species on the side of a ridge sloping toward the east into Lake Saltonstall, near New Haven. The nest resembled those already described, and contained four young and one egg. It was identified by the capture of the sitting bird. This is, I believe, the first known instance of its nesting in Connecticut. While collecting with Mr. Nichols, June 16, 1879, in the same section of country, we saw a pair of these birds which must have nested there, although we were unable to find the nest. — GEORGE WOOLSEY, *New Haven, Conn.*

3.

Bull. N. O. C. 5, April, 1880, p. 116.

Nesting of the Worm-eating Warbler (*Helmitherus vermivorus*) in Southern Connecticut. — One of our most trustworthy collectors, Mr. Harry W. Flint, formerly of Deep River, but now of New Haven, Conn., took a nest of this rare species at New Haven, June 7, 1885, containing five eggs. He writes that "the nest was on the ground, and composed almost wholly of leaves, and lined with red rootlets; it was not roofed over, but the leaves of the *Kalmia*, near the roots of which it was placed, almost hid it from sight. Indeed, it was so clearly hidden that when I took my eyes off it to follow the bird, it required fully a minute to find the nest again, although I had not moved." It was on a hill-side, in a very secluded and dark spot in deep woods.

The nesting of this species at New Haven was noticed by Mr. George Woolsey in "Bulletin N. O. C., Vol. V, p. 116. — [No. H. SAGE, Portland, Conn. Auk, 2, July, 1886. p. 306"

General Notes

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General Notes  
Notes from Connecticut,  
E. H. Barnes, Bridgeport, Conn.

The Worm-eating Warbler is a regular summer resident; I have found them in about every swampy or partly inundated wood, especially if with a rank growth of skunk cabbage. Twenty-five miles inland in the valleys I have also found them rather common, and breeding in the same situations and in *kalmia* thickets, generally not far from a brook or standing water. Auk X, Jan. 1893. p. 90.

The Rough-winged Swallow, <sup>breeding</sup> in Connecticut and other notes. [1900]

I also found a single male Worm-eating Warbler (*Helmitherus vermivorus*) singing in the same locality on June 23, and secured him on the 24th.

[Gales Ferry side of  
Thames River]

Required Helen Hays, Jr.  
Laguard, Mass.

Auk, XVII, Oct., 1900, p. 389.

Evidences of Carolinian Fauna in Hudson Valley.

E. P. Bicknell.

At Riverdale, where, unless otherwise stated, the following observations were taken, the Carolinian Fauna is well represented by the regular occurrence of such characteristic species as *Helmitherus vermivorus*,

Bull. N. O. C. 3, July, 1878, p. 129.

Evidences of Carolinian Fauna in Hudson Valley,  
from observations made at Riverdale, N. Y.

E. P. Bicknell.

**Helmitherus vermivorus.** WORM-EATING WARBLER. This species is not uncommon during the summer, usually arriving the second week in May (May 2, this year); and, in 1876, I knew of at least five pairs that reared their broods in the immediate vicinity. In the previous year I secured a nest with complement of five eggs, partially incubated on June 13, and have found young birds able to fly on the 27th of the same month. In very young birds, scarcely able to fly, the olive of the adult is only apparent on the remiges, the remainder of the plumage being of a general brownish and deep buffy suffusion, very similar to the color of dead leaves, especially on the breast, and rendering their detection when among the leaves of their favorite haunts very difficult. Does not this adaptation of color to environment in the case of these helpless young appear to be an instance of protective mimicry?

Bull. N. O. C. 3, July, 1878, p. 129-130.

Arrivals of Mig'y Birds, Spring-1886,  
Central Park, N. Y. City. A. G. Paine, Jr.

May 13, *Helmitherus vermivorus*, (639). Worm-eating Warbler.

O. & O. XI, Aug. 1886, p. 125

Dutcher, Rare Long Island Birds.

**Helmitherus vermivorus.** WORM-EATING WARBLER.—Two specimens are in the collection, one presented by Mr. C. H. Baxter who secured it at Newtown, Long Island, and the other by Col. Pike who shot it in the Valley Grove Woods, now part of Prospect Park, Brooklyn. Mr. Akhurst states that during his active collecting he secured several of these Warblers from Kings and Queens Counties. Col. Pike states that he has not seen this bird for many years and always considered it rare on Long Island.

Auk X, July, 1893 p. 276-7.

Auk, XIV, Jan., 1897, p. 100.

Records of Two Birds rare on Long Island, N. Y.

**Helmitherus vermivorus.**—This Warbler is not a lover of Long Island's woods. Reaching the northern line of his breeding range at about this latitude, and evidently following regularly a route which does not cross Long Island, his occurrence here is doubtless an exception. A specimen of the Worm-eating Warbler of the year was secured within the present limits of Brooklyn on Sept. 16, 1896. This bird was feeding in company with other Warblers in a low shrubby growth within the borders of a wood.—WILLIAM C. BRAISLIN, Brooklyn, N. Y.

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**Descriptions of First Plumage of Certain North Am. Bbs. Wm. Brewster.**

23. **Helmitherus vermivorus.**

"*First plumage.* Remiges, rectrices, primary coverts, and alulae as in the adult. Rest of the plumage, including the whole back, lesser, middle, and greater wing-coverts, buff, deeper below, more brownish on the back and base of the wing-coverts. Pileum with two badly defined stripes of grayish-brown, and a narrow streak of the same behind the eye. From a specimen in Mr. Henshaw's collection obtained near Washington in July, 1876."—R. R.

**Bull. N. O. C., 3, Jan., 1878, p. 23.**

*Helminthotherus vermivorus*. WORM-EATING WARBLER.

Commonly remains in song after its arrival until the second week of July. Sometimes singing ceases a little earlier than this; again, in other years, songs are to be heard into the third week of the month.

The second song-period of this Warbler I can speak of only from one season's experience. On July 10, 1881, several of these birds were silently inhabiting a small tract of woodland, their first season of song having passed; here, on August 14, and again on the 21st, they were found in fine plumage and in full song.

The songs of no other three birds known to me are more alike than those of the Worm-eating Warbler, the Chipping Sparrow, and the Slate-colored Snowbird. *Auk*, I, July, 1884, p. 210.

## Nesting of the Worm-eating Warbler.

BY SAMUEL B. LADD, WEST CHESTER, PENN.

After having devoted all my spare time the past season to my favorite *Helminthocheilus vermivorus*, Worm-eating Warbler, and having been even more successful than I had anticipated, I shall be glad and feel recompensed, if, in giving my fellow collectors a few points, I can assist them in taking their eggs in the future.

First, I found it a great help in tramping last fall over localities where these birds would be likely to breed, and noting places where old nests were found; the lining of the nests rendering their identity, as the birds when not disturbed would probably return to the same ground. Then I began looking for and watching them this spring, (about May 1st, is early enough) and when I found them apparently satisfied with their position, and not moving about uneasily in the tree tops, I was almost invariably right in my conjectures. The peculiar trill of the male is of little assistance, but the chirp of the female often will be, after their full complement is laid, and lead you to their home. I have found eighteen nests containing eggs and six nests with young this season, from May 24th to June 15th, inclusive.

I have observed that these birds are not confined necessarily to hill-sides, as was heretofore supposed, as I have taken three sets on level ground and in rather open places, with little shade. The experience of Mr. Thomas H. Jackson of this place, who has taken ten nests this year, corroborates this fact. I have found that without exception their nests are lined with *Polytrichum* or hair-moss. Sometimes fine grass and horse-hair are used as part of the lining. The body or outside of the nests are composed of leaves only, and they were placed at the foot of either a sapling or small bush on the ground.

The eggs make a beautiful series, owing to their variation in markings, size and shape; some being very faintly marked with light red-dish spots, mostly around the larger end, while some are very heavily blotched with lavender or a rich chestnut. The size ranges from .75 to .62 in length by .58 to .50 of an inch in width. Their shape varies from equal ended to quite pointed. The most remarkable set I have taken was on June 11th. After a hard and unsuccessful day's tramp, I heard a female Worm-eater chirping in an unusual place, and merely walked that way from habit, as I did not expect to find their nest in a spot with so little

shelter. However, after sitting on a stump near the bird for some time, and not caring to have her wake the neighborhood with her cries, as she did not seem to be inclined to lead me to her nest, I hunted the ground pretty thoroughly, and soon found the nest in an open space where one would scarcely think it worth the time to look. It contained a young Cowbird nearly full fledged, also a Cowbird's egg, which contained a partly formed but decaying embryo, with five eggs of the Worm-eating Warbler, which might well be called a dwarf set. They are perfect in their shape and in their coloration and size of markings; in fact, perfect, except that they contained no yolk. Their measurements were respectively, .46 x .36; .46 x .36; .45 x .37; .42 x .36, and .42 x .36.

One would naturally wonder how

## Brief Notes.

NESTING OF THE WORM-EATING WARBLER, (*Helminthocheilus vermivorus*), IN CHESTER CO., PA.—Though by no means a common resident with us, the Worm-eating Warbler is frequently met with in favorable localities. It frequents the most solitary parts of the woods, making but little noise that would attract the attention of passers by, and might easily be overlooked.

In such localities the nest may be looked for. Three of them found by the writer, two several years since and one on June 9th the present Summer (1885), were all located almost precisely alike, and all within a radius of a quarter of a mile. They were situated on steep, wooded hillsides, sunk into the ground, and so overhung and concealed by dry leaves as to make it impossible to detect them without the birds betraying the presence of the nest.

The nest found the present season contained five eggs of the Warbler, and one Cowbird's, all well advanced in incubation. The birds evinced great uneasiness at my presence, coming to within a few feet, and offering a good opportunity for identification without my being compelled to shoot them. The nest outwardly is constructed of dry leaves, noticeably those of the Beech, very loosely put together, then fine rootlets and stems, and finally the inside lining is made of the fine flower stalks of the Hair Moss—*Polytrichum*.

This last peculiarity existed in all three of the nests, and would, I think, alone be sufficient to identify the species. I would like to know the experience of other collectors with regard to this circumstance.

The eggs, five in number, are of a clear glossy white ground, spotted more abundantly toward the greater end with varying shades of brown, similar in size and shape to those of the Prothonotary Warbler, (*Protonotaria citrea*).—Thomas H. Jackson, West Chester, Pa.



moss, entirely concealing the sticks used in building. Eggs taken out of nest with small bag tied to the end of my fishing pole. Both birds showing flight." I did not wonder at the kites showing when I tried to blow the egg, as incubation was so far advanced that the young birds were nearly dry in the egg. They would have hatched in the next three days. I drilled a one-eighth inch hole in the eggs, and putting them in a box, hole downwards, I set the box on a bed of the "Texas Cutting Ant" and they finished the cleaning process during the next twenty-four hours. I have saved many sets of eggs of hawks and owls in this manner.

The set, as is usual, contained two eggs, measuring 1.85x1.47 and 1.79x1.43. Ground color was dirty white (probably stained,) and irregularly marked with spots and blotches of dull brown—in the smaller egg tending to form a ring around the smaller end. I have heard of a set of three being taken in the Colorado River bottoms, but can get no particulars. I have a record of thirteen nests having been found containing eggs or young, and in only one instance—a nest with three young—was there more than two eggs or young in the nest. Can it be that Audubon depended upon hearsay in stating that four to six was the number of eggs in a set? Very often the boys whom I employ to collect tell me that they have found nests of the Red-bellied Hawk with four or five eggs; those of the Turkey Buzzard with three to four eggs; and Swallow-tailed Kite with five eggs; but I notice when I require them to authenticate the sets taken for me, those large sets fail to appear. I have been making inquiries in other portions of the State about this species, and in a letter lately received from Mr. E. T. Dumble, Secretary of the Texas State Geological and Scientific Society, he says: "The Swallow-tailed Kite arrives here early in the spring, leaving late in the fall. *No nest has been observed with more than two eggs.*" The italics are mine.

The Swallow-tailed Kite is an abundant summer resident in Mr. Dumble's locality, Honston, Texas, and everywhere else along the timbered portions of the coast country, consequently he can be accepted as an authority.

I have made arrangements with collectors in three counties to collect the eggs of this Kite, and we will see what another year will bring forth.

[The above paper is of far more than ordinary interest and value. It gives the experiences of a practical collector who has given much time and thought to the subject, and who speaks from his own experience.

ere taken in this county the present year. S. B. Ladd, of West Chester, and his cabinet. The set of four has a glossy ground thickly spotted with a brown, so profusely laid on as to al-  
e the white. They are very large, liar shape, being nearly of the same h ends. They measure .58x.72; .59x .60x.71. The set of five are com- maller—giving the following dimen- .66; .55x.67; .52x.68; .52x.67; .53x.67. exquisitely marked—the greater end ickly covered with a rich brown as to eath, and the coloring also extends to

#### Nesting of the Worm-Eating Warbler near Leighton, Ala. 17.

On the 29th of April this year I was fortunate enough to find a nest of the above species containing five fresh eggs, and seeing but little in our oological papers concerning the nesting of this Warbler (*Helmitherus vermivorus*) I thought an account of it would be interesting to the readers of the O. & O.

I was on La Grange mountain looking for nests of the Black and Turkey Vultures, and having walked along the bluff some two miles was becoming rather discouraged at finding nothing, when happening to glance down I saw a small bird running along the ground with its wings outspread as if wounded. I knew at a glance that it had a nest, and therefore commenced looking for it; and seemingly examined every inch of ground for yards around no nest could I find. So I walked off a short distance and sat down, determined to wait until the bird returned. In a few minutes its distant chirp, chirp, was heard, and soon both birds were seen anxiously flitting from tree to tree and by degrees coming nearer. I sat very still and watched their every movement for some half hour or so, as it was about that length of time before the bird summoned up sufficient courage to alight on her nest. I walked quickly to the spot and there was the nest deeply imbedded in the dead leaves with which the ground was covered.

It was at the foot of a small bush on the hill-sides and could only be seen through one small opening from below. It was composed chiefly of dead leaves lined with fine grasses, and contained five fresh eggs thickly marked over the entire surface, but more heavily on the larger end, with two shades of brownish-red and obscure lilac on a pure white ground.

The Worm-eating Warbler is a very rare breeder in this locality, and indeed the above pair are the only ones I have seen here in the spring. Last year the fall migration of this species here was as follows: First one, a ♂ appeared in the swamp July 19th; next one seen on August 5th, a gradual increase from this date until the 10th; from 10th to 15th, height of season, decreasing in numbers from this date; last one seen on September 9th. F. W. M. Leighton, Ala.

Nesting of the Worm-eating Warbler

BY THOMAS H. JACKSON, WEST CHESTER, PA.

Although having repeatedly found the nest of the Worm-eating Warbler, (*Helminthoerhus vermivorus*), never until the present season have I been able to place in my cabinet perfect sets of eggs of this species.

Every collector knows how discouraging it is to find the nest of some rare bird containing a flourishing brood of young, or but little better, a set of eggs so far advanced in incubation as to make their preservation a matter of great difficulty. And yet from such specimens we are able to fix the time of nesting, approximately, and profit thereby another season.

Such was my intention the present year, and accordingly on the 21st of May, 1886, I visited a large tract of wood land adjacent to West Chester, Pa., that I knew was a favorite habitat of the Worm-eating Warbler. The timber growth consisted of Beech, Oak and Chestnut; the former predominating, and the trees were of small size. A running stream with numerous swampy places, overgrown with briar tangles and alder bushes, bounded the foot of the hill, which rapidly ascended from sixty to one hundred yards. From the table-land above the leaves had been swept by the wind over the brow of the hill, and lodged in heavy masses wherever a projecting rock or other obstruction intervened. Entering the wood land I commenced to work up the hillside, carefully examining every spot likely to offer a favorable shelter, and in a short time was rewarded by finding a nest. It was neatly imbedded in the ground under a bunch of leaves that had lodged against a hickory sapling, and which formed a sheltering arch over the nest. No eggs were in it, but it was evidently finished, as its beautiful lining of flower stalks of the *Polytrichum* had been added in readiness for them. Leaving the place I went round a spur of the hill not a hundred yards distant, to a steep bank facing the east, and in a position almost precisely similar, found another nest, also completed, but without eggs. The two nests were so much alike in every respect that a single description suffices for the history of both.

Eight days later on the 29th of May I again visited them both. Creeping quietly up to No. 1 I lay down within six feet of the nest. The female still sat upon it without apparent alarm, and only left it when I was almost near enough to touch her with my hand. She then flew to the ground, tumbling and fluttering in great distress, in her endeavors to lead me away from

the nest. The male also appeared on the scene at the first chirp of alarm, and both birds remained near by until I left. The nest contained five eggs—two of which showed considerable sign of incubation, although all of them had been laid within seven days. The ground color of this set is a dull white, thickly spotted at the greater end, and more sparingly over the body of the egg, with varying shades of rich brown, approaching in one egg a delicate shade of lilac, sprinkled in fine spots. The measurements of the set are as follows: .52x.68; .54x.68; .52x.65; .51x.67; .52x.65.

Nest number two at this time contained but three eggs, and the parent birds did not appear in the vicinity, so I did not disturb them, but again visited the nest on June 2d, and found the set of five completed with the female sitting. This set was perfectly fresh, both parents were around and showed the same signs of alarm as those at the first nest. Set No. 2 differ from No. 1 conspicuously in having a bright glossy surface and being much heavier in appearance. The spotting is similar, though more on the lilac shade. They measure .55x.65; .56x.65; .54x.68; .56x.68; .53x.64.

My third nest was found in a somewhat different situation from the last two. A road running through the edge of a wood, had from disuse become overgrown with small trees. The timber adjacent had been cut away, but a fringe of saplings had been left on the bank sloping up ten feet from the road. Deeply imbedded in this bank, under an overhanging Dogwood tree, the nest had a sheltered location. A few yards below a dense thicket of briar and alder overhung a clear stream of spring water, and from its dark recesses the notes of the White-eyed Vireo and Cardinal were constantly heard from their almost unpenetrable refuge. This nest also contained five eggs—slightly incubated. The markings on this set were lighter, and more generally diffused over the entire surface in fine points, and dots of a uniform light chestnut or brown. This set measures .57x.68; .57x.67; .57x.67; .56x.70; .55x.68. Set No. 4 was taken June 1st, in the adjacent county of Delaware. At this date they were almost ready to hatch. This set of eggs was much plainer than any of the others—incubation probably dimming the colors somewhat. The nest was located on a steep hillside near the summit, covered with a heavy forest growth. The fifth and last nest of the season was found on a steep east lying hillside, and contained a single young bird a few days old, on the 6th of June.

Two other sets of eggs of four and five re-

spectively were taken in this county the present season by Mr. S. B. Ladd, of West Chester, and are now in his cabinet. The set of four has a clear, white glossy ground thickly spotted with a rich reddish brown, so profusely laid on as to almost obscure the white. They are very large, and of peculiar shape, being nearly of the same size at both ends. They measure .58x.72; .59x.69; .58x.70; .60x.71. The set of five are considerably smaller—giving the following dimensions: .51x.66; .55x.67; .53x.68; .52x.67; .53x.67. They are exquisitely marked—the greater end being so thickly covered with a rich brown as to form a wreath, and the coloring also extends to

the smaller end with shade. They exceed Warblers I ever saw, with those heretofore.

From the foregoing this bird, together

under my notice, we

acteristic habits of the

1. It always nests in a steep hillside, in the shade.

2. A stream of water seems to be a desirable location.

3. The nest is imbedded in a flower stalks of the wood.

4. The usual nest is in a hole in the ground.

Nesting of the Worm-Eating Warbler near Leighton, Ala.

On the 20th of April this year I was fortunate enough to find a nest of the above species containing five fresh eggs, and seeing but little in our oological papers concerning the nesting of this Warbler (*Helminthoerhus vermivorus*) I thought an account of it would be interesting to the readers of the O. & O.

I was on La Grange mountain looking for nests of the Black and Turkey Vultures, and having walked along the bluff some two miles was becoming rather discouraged at finding nothing, when happening to glance down I saw a small bird running along the ground with its wings outspread as if wounded. I knew at a glance that it had a nest, and therefore commenced looking for it; and seemingly examined every inch of ground for yards around but no nest could I find. So I walked off a short distance and sat down, determined to wait until the bird returned. In a few minutes its distant chirp, chirp, was heard, and soon both birds were seen anxiously flitting from tree to tree and by degrees coming nearer. I sat very still and watched their every movement for some half hour or so, as it was about that length of time before the bird summoned up sufficient courage to alight on her nest. I walked quickly to the spot and there was the nest deeply imbedded in the dead leaves with which the ground was covered.

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The Worm-eating Warbler is a very rare breeder in this locality, and indeed the above pair are the only ones I have seen here in the spring. Last year the fall migration of this species here was as follows: First one, a ♂ appeared in the swamp July 19th; next one seen on August 5th, a gradual increase from this date until the 10th; from 10th to 15th, height of season, decreasing in numbers from this date; last one seen on September 9th. F. W. M. Leighton, Ala.

In Mr. Jackson's article on the Worm-eating Warbler AND OOLOGIST the last issue usual nest read: "the usual nest of every insect"

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The foregoing instances of the nesting of the Worm-eating Warbler together with others that have come under my notice, we may fix a few of the characteristics of this interesting Warbler.

ways nests on the ground, generally on the edge of the woods, near a stream of water, or an adjacent swamp, in a desirable condition.

The nest is invariably lined with the red hair of the Hair Moss, (*Polytrichum*),

usual nest complement is four eggs.

O. & O. XI, Oct. 1883, p. 156-157.

In Mr. Thomas H. Jackson's interesting and valuable article on the Worm-eating Warbler, (*Helminthocheilus vermiciformis*), in the October number of THE ORNITHOLOGIST AND OOLOGIST, a vexatious typographical error occurred in the last line of his paper; where he is made to say "the usual nest complement is four eggs," whereas it should read: "the usual nest complement is five eggs."

It should also be stated that in recording the measurements of this species Mr. Jackson gave the width first in every instance.

Oct 11  
1886  
A 176

## A Series of Eggs of the Worm-Eating Warbler.

No where else has the Worm-eating Warbler (*Helmitherus vermivorus*) been found breeding so abundantly as in Chester County, Pennsylvania; and singularly enough all the eggs of this bird which have been found there have been taken by Messrs. Thomas H. Jackson and Samuel B. Ladd; and it is to the labors of these very proficient and indefatigable collectors that oölogists have become well acquainted with eggs that were formerly exceedingly rare.

Mr. H. K. Jamison found two or three sets of eggs of this Warbler in the neighborhood of Manayunk, Pennsylvania; and Mr. Isaac S. Reiff has found a like number of sets in Bucks County, Pennsylvania; but with the exception of these all the recorded eggs of *H. vermivorus* that have been taken in that State were collected by Messrs. Jackson and Ladd.

It is not claimed that the series now before me, and described below, contains all their types of coloration and sizes, but it exhibits all but the rarest phases.

Set I. June 7, 1880. Chester County, Penn. Collected by Samuel B. Ladd. Nest made of dry leaves, and lined with hair moss, under a small bush. Four eggs, incubation begun. Light creamy white, profusely speckled with cinnamon-rufous and a few markings of pearl gray. Near the larger ends the specks are much heavier and closer together: .68 x .56; .67 x .56; .66 x .52; .63 x .55.

Set II. June 3, 1880. Chester County, Penn. Collected by Samuel B. Ladd. Nest made of dry leaves, lined with hair moss, on ground at foot of beech tree. Four eggs, incubation advanced. Light creamy white, profusely speckled with cinnamon-rufous and lavender-gray. At the larger ends the markings are much closer together: .68 x .54; .69 x .53; .70 x .55; .69 x .51. This set contains a Cowbird's egg.

Set III. June 5, 1888. Chester County, Penn. Collected by Thomas H. Jackson. Nest of dry leaves lined with hair moss, near the summit of a steep hillside, in thick, heavy timber, in a dark and secluded ravine, with stream of water flowing at base of hill. Mr. Jackson says: "The bird sat very close, and I could have caught her on the nest. The latter was entirely concealed, excepting in front, by a small laurel bush. The nest was bedded in a hollow scratched by the bird. A thick mass of dry leaves lay around, of which the nest

seemed to be a part until it was taken out." 18.  
Five eggs, incubation commenced. White, speckled and spotted with chestnut and a few specks of lavender-gray. On four of the eggs the markings are very much heavier at the larger ends, but on the fifth the markings are much lighter: .68 x .55; .68 x .55; .69 x .54; .68 x .53; .68 x .54.

Set IV. June 27, 1880. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on ground, under low bush. Three eggs, incubation slight. White, speckled with chestnut and a few markings of lavender-gray, the markings being heavier near the larger ends: .70 x .55; .73 x .56; .73 x .55. Two Cowbird's eggs were found with this set.

Set V. June 3, 1889. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves lined with hair moss, on ground, under a broken limb. Six eggs, incubation begun. White, speckled uniformly with hazel: .67 x .54; .65 x .53; .68 x .53; .68 x .53; .70 x .53; .69 x .53.

Set VI. June 6, 1887. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on level ground, at top of a hill. Five eggs, incubation begun. White, spotted with hazel all over the surface, but a little more heavily near the larger ends: .70 x .54; .71 x .55; .70 x .55; .71 x .56; .73 x .56.

Set VII. June 9, 1888. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, under fallen limb where leaves had drifted. Five eggs, incubation far advanced. White, speckled, more heavily at the larger ends, with hazel: .69 x .49; .70 x .51; .68 x .50; .69 x .50; .68 x .50.

Set VIII. June 7, 1889. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on ground under a poplar sprout. Five eggs, incubation commenced. White, speckled and spotted with hazel. At the larger ends the markings are heavier: .69 x .49; .65 x .48; .68 x .50; .65 x .49; .65 x .48.

Set IX. June 7, 1889. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, under a blackberry bush, in a slight cavity in the ground. Six eggs, incubation begun. White, uniformly spotted all over the surface with hazel: .73 x .51; .72 x .51; .71 x .51; .73 x .51; .73 x .52; .71 x .52.

Set X. June 5, 1889. Chester County, Penn. Collected by Thomas H. Jackson. Nest of

dry leaves, lined with hair moss, on a steep hillside sloping to a creek, beneath a tuft of laurel which overhung and partially concealed it. Mr. Jackson says: "The female was very tame, and allowed me to approach within two feet of the nest before leaving it, and then fluttered on the ground at my feet. The nest was situated on the side of a thickly-wooded ravine, with a thick growth of laurel and other undergrowth." Five eggs, incubation begun. Light creamy white, profusely speckled with chestnut, and a few specks of lavender-gray. Near the larger ends the markings are much heavier: .69 x .54; .70 x .54; .71 x .55; .69 x .54; .68 x .53.

Set XI. June 27, 1889. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on ground under a small bush. Four eggs, incubation begun. White, uniformly spotted all over the surface with hazel: .69 x .54; .66 x .54; .73 x .54; .69 x .53.

Set XII. June 30, 1889. Chester County, Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on ground under a small bush. Four eggs, incubation begun. White, thickly spotted and speckled with chestnut and a few markings of lavender-gray. Near the larger ends the markings are much heavier, and on one of the eggs they form an indistinct wreath: .66 x .50; .67 x .51; .66 x .51; .69 x .52.

Set XIII. May 10, 1889. Iredell County, North Carolina. Collected by R. B. McLaughlin. Nest of dry leaves, lined with hair moss, on ground on a steep hillside. This set is interesting on account of coming from North Carolina, and also as showing that the birds choose exactly the same materials for their nest in that State that they do in Pennsylvania. Four eggs, incubation begun. White, heavily speckled, principally at the larger ends, with chestnut, and a few markings of lavender-gray. On one of the eggs the markings are so close together at the larger end that they almost become confluent: .65 x .51; .65 x .52; .65 x .54; .65 x .52.

Set XIV. May 30, 1888. Chester County, Penn. Collected by Thomas H. Jackson. Nest of dry leaves, lined with hair moss, sunk into ground, on steep hillside, under a bunch of laurel. Four eggs, fresh. White, thickly speckled and spotted with hazel, and a few markings of lavender-gray. Near the larger ends the markings form wreaths on three of the eggs: .67 x .51; .66 x .54; .66 x .51; .67 x .51.

Set XV. June 3, 1889. Chester County,

Penn. Collected by Samuel B. Ladd. Nest of dry leaves, lined with hair moss, on ground under a bush. Five eggs, incubation commenced. Light creamy white, profusely speckled with hazel and a few markings of lavender-gray. Near the larger ends the markings are much heavier: .68 x .56; .70 x .56; .67 x .55; .64 x .52; .65 x .54.

Set XVI. May 30, 1888. Chester County, Penn. Collected by Thos. H. Jackson. Nest of dry leaves, lined with hair moss, on ground, under a small dogwood tree, growing on a hillside. In a very dark, rocky part of the woods, near a stream. Five eggs, incubation advanced. White, very heavily speckled, but principally at the larger ends, with chestnut and a few markings of lavender-gray. The markings are so close together that they are almost confluent: .77 x .55; .74 x .56; .72 x .55; .72 x .56; .73 x .56.

Set XVII. May 31, 1888. Chester County, Penn. Collected by Thomas H. Jackson. Nest of dry leaves, lined with hair moss. Mr. Jackson says: "The nest was situated on a steep hillside, in woods, at the foot of a small hickory tree about a hundred feet from a stream. The birds were very tame and showed great alarm at my presence." Six eggs, incubation begun. White, profusely speckled with chestnut and lilac-gray. Near the larger ends the markings are so heavy that they partially obscure the surface: .67 x .54; .65 x .55; .65 x .55; .66 x .56; .64 x .53; .69 x .53. J. P. N.

U. S. G. O. August, 1900. 81 118-119.

**Nesting of the Worm-eating Warbler (*Helminthorus vermicorus*)** in Virginia.—Although of late years the nest of the Worm-eating Warbler has been met with sufficiently often to dispel the obscurity which previous to 1869 rested upon the breeding habits of this bird, its discovery, especially in localities where it is not known to have been already found, is still a matter of considerable interest. While walking along an unfrequented road through the woods near Cobham, Albemarle County, Virginia, on May 19, 1884, my attention was attracted by the notes of a bird evidently in anxiety, and on looking for their source I found that they proceeded from one of these Warblers, which are not very rare in that vicinity in the spring. I remained quite still, and the bird, which came very close to me, finally betrayed the position of its nest by flying towards it. This was situated about fifteen feet from the road; placed as usual on the ground, which was covered with dead leaves. It was embedded in a slight depression, and was partially concealed by a diminutive plant which grew alongside. It was neatly but not elaborately constructed of dry leaves and catkins, and was lined inside with the small, flexible, reddish brown stalks of a small plant, its dimensions being approximately as follows: external width,  $3\frac{1}{2}$  inches; internal width,  $2\frac{1}{2}$  inches; external depth,  $2\frac{1}{2}$  inches; internal depth  $1\frac{1}{2}$  inches. It contained four freshly laid eggs, the appearance of which corresponded to the descriptions of other observers, their color being white, dotted with spots of various shades of light reddish-brown, running together at the larger end, and intermingled with a few spots of lilac. They measured respectively  $.66 \times .54$ ,  $.68 \times .54$ ,  $.67 \times .54$ , and  $.67 \times .54$  inches. As far as I have ascertained, the nest of this species has not before been definitely reported from any point south of the neighbourhood of Washington.—WILLIAM C. RIVES, JR., M. D. *Newport, R. I.* **Atk., 2, Jan., 1885. p. 103-104.**

*Notes from Manayunk, Phila.  
Ellwood & Ladd.*

**Worm Eating Warbler (*Helminthorus vermicorus*).** June 19th, while going through a high open part of the woods on Wissahickon Creek. I discovered a nest of this bird situated on the ground at the foot of a small laurel bush, and mid-way on the side of the hill. The bird sat on the nest until I was within three feet of it, when it fluttered along on the ground just out of my reach. The nest contained two eggs partly incubated. It was composed of pine needles, lined with thin narrow strips of grape-vine bark, and

was very pretty. There was no attempt whatever at its concealment, as I had a very good look at the bird there can be no mistake. These birds can be seen during the coldest day in Winter hopping around the lower limbs of trees, and are not shy, but will allow of a close approach. **1886. p. 7**

### Runt Eggs and Their Cause.

BY J. P. N.

Eggs of a smaller size than those usually laid by the species in question, are, if the difference is very marked, known as "runts." They usually occur in small numbers and are quite rare. It is seldom that more than one runt is found in one set of eggs, though a very notable exception to this rule will be referred to below.

Their cause seems to be twofold—either they result from exhaustion of the bird from laying an unusually large number of eggs, or they are the product of young females.

A set of eggs of Wood Thrush (*Hylocichla mustelina*) found near Milton, Mass., on May

26, 1883, has two of the eggs much larger than usual, measuring  $1.13 \times .94$  and  $1.09 \times .82$ , while the other two measure only  $.87 \times .63$ , and  $.88 \times .63$ , and are runts of the most pronounced type.

A set of eggs of Downy Woodpecker (*Picus pubescens*) collected near Nazareth, Penn., on June 8, 1882, has five eggs, four of which are normal size, while the fifth only measures  $.66 \times .54$ .

The most remarkable runt eggs which have ever been found are probably a set of five of the Worm-eating Warbler (*Helminthorus vermicorus*) found by Mr. Samuel B. Ladd near West Chester, Penn., on June 11, 1887, and described in THE ORNITHOLOGIST AND OSOLOGIST for July, 1887 (Vol. XII, p. 110). The average size of the egg of this species is about  $.68 \times .54$ , but Mr. Ladd's wonderful set measure  $.46 \times .36$ ;  $.46 \times .36$ ;  $.45 \times .37$ ;  $.42 \times .36$  and  $.42 \times .36$ . In shape and colorings they are perfect miniatures of the full-sized eggs of this Warbler. As they were the seventeenth set which Mr. Ladd took in the same locality they were probably the last effort of a female who had laid two previous sets, which she had been deprived of.

A runt egg of the Yellow Warbler (*Dendroica castrea*) measures  $.45 \times .35$  and is perfect in its shape and coloration.

O. & O. XII, Dec. 1887 p. 203.

ings very similar to the last. Measurements .72 x .54, .70 x .53, .72 x .55, .71 x .53, .72 x .55.

Sixth set, May 28th. Nest situated like the last. Six eggs, marked similarly to first set. Measurements .67 x .55, .67 x .55, .66 x .51, .64 x .53, .64 x .52, .70 x .55.

Seventh set, May 29th. Steep hill-side under small bush. Five eggs, markings similar. Measurements .68 x .52, .68 x .51, .68 x .51, .68 x .51, .67 x .50.

Eighth set, same date. At foot of chestnut sprout. Five eggs, markings similar. Measurements .71 x .53, .71 x .54, .69 x .52, .69 x .53, .74 x .53.

Ninth set, May 30th. Four eggs, marked chiefly around the larger end with reddish brown spots. Measurements .65 x .50, .67 x .52, .66 x .52, .66 x .53.

Tenth set, May 31st. Six eggs, and one egg of the Cowbird. A glossy white, with a wreath of dark brown and lavender spots, globular. Measurements .64 x .53, .64 x .54, .66 x .63, .68 x .54, .66 x .54, .66 x .54.

Eleventh set, June 6th. Five eggs, marked similar to fourth set. Measurements .71 x .55, .69 x .55, .68 x .53, .68 x .56, .69 x .51.

Twelfth set, June 6th, placed on level ground at top of hill. Five eggs, marked with bold blotches of lavender and reddish brown over the entire surface. Measurements .71 x .57, .72 x .58, .71 x .58, .76 x .57, .77 x .55. This set is now in the cabinet of Mr. J. Parker Norris.

Thirteenth set, June 7th. Four eggs and one egg of the Cowbird; lightly marked with reddish brown mostly around the large end. Measurements .67 x .53, .68 x .52, .68 x .52, .68 x .52. This set is now in the possession of Mr. Josiah Hoopes, of West Chester, Pa.

Fourteenth set, June 8th. Position of nest not peculiar. Five eggs marked chiefly around the large end, spots larger than common, and of a darker brown. Measurements .69 x .57, .71 x .57, .71 x .56, .71 x .58, .71 x .57.

Fifteenth set, June 10th. Six eggs, similar to first set. Measurements .70 x .55, .70 x .53, .70 x .54, .68 x .54, .66 x .55, .70 x .54.

Sixteenth set, same date. Placed under a low bush on level ground. Eggs like last set. Measurements .66 x .53, .75 x .56, .74 x .56, .72 x .55, .70 x .56.

Seventeenth set (dwarfs) described in the July number of the O. AND O. These eggs are smaller than those of the Humming-bird.

Eighteenth set, July 15th. Eggs four; in their markings very similar to those of the Rock Wren, (*Salpinctes obsoletus*). Measurements .72 x .56, .73 x .55, .75 x .56, .71 x .54.

343. Worm-eating Warbler [*Helminthoherus vermivorus*]. By Fred. T. Jencks. *Ibid.*, VI, p. 78.

1066. Der Wurmsänger, *Helminthoherus vermivorus* Bonap., Worm-eating Warbler. By H. Nehrling. *Ibid.*, No. 7, pp. 214-215.

Zoologische Garten, XXVI

Nineteenth set, June 19th. Nest on level ground at foot of oak sprout. This I consider my handsomest set. They are heavily marked on the large end only, with blotches of a heavy rich velvety chestnut, completely obscuring their ground color. Measurements .70 x .57, .72 x .57, .70 x .58, .72 x .58, .73 x .57.

Twentieth set, June 19th. Three eggs and one of the Cowbird, marked similar to the first set. The largest eggs yet found of this bird. Measurements .80 x .55, .79 x .56, .78 x .58.

Twenty-first set, June 23rd. Nest under a mere drift of leaves with no bushes near it, in sloping woods. Five eggs, markings not peculiar. Measurements .65 x .53, .66 x .54, .65 x .53, .66 x .53, .64 x .53.

Twenty-second set, same date. Nest under a fallen dead sapling; markings not peculiar. Measurements .66 x .57, .66 x .55, .66 x .55, .66 x .55, .66 x .56.

Twenty-third set, June 25th. Nesting and markings not peculiar. Four eggs, measuring .76 x .56, .76 x .55, .74 x .57, .73 x .53.

Twenty-fourth set, June 30th. Nest at foot of beech sapling. Four eggs. Excepting the dwarf set this is the smallest, measuring .64 x .49, .64 x .50, .65 x .48, .64 x .49.

Total number of eggs (barring the dwarf set) one hundred and eight. Average size about .68 x .54. These were all collected within a radius of twelve miles from West Chester.

O. & O. XII, Sept. 1887 p. 149-150.

*Helminthophila*  
*pinus*

*Helminthophila pinus*

E. Levington, Mass.

May 18/1893

The first larva I examined was found on the  
 edge of the needles and was found to be  
 one of the most perfect specimens I have  
 seen. It was of the size of a small  
 fly, with a body of a pale yellowish  
 color, and a head of a dark brown  
 color. The legs were of a pale  
 yellowish color, and the wings were  
 of a pale yellowish color. The  
 body was of a pale yellowish  
 color, and the head was of a dark  
 brown color. The legs were of a  
 pale yellowish color, and the wings  
 were of a pale yellowish color. The  
 body was of a pale yellowish  
 color, and the head was of a dark  
 brown color. The legs were of a  
 pale yellowish color, and the wings  
 were of a pale yellowish color.

examined

**Two Ontario Records.**—BLUE-WINGED WARBLER, *Helminthophila pinus*. September 2, 1906, I took a juvenile bird of indeterminate sex from a grape vine tangle, near the end of Point Pelee, Ontario. This form, I believe, the primal record for the species in Canada. The next day another bird, supposed to be the same, was shot but could not be found in the thicket. *Arch 25; July - 1906, p. 328.*

THE BLUE-WINGED YELLOW WARBLER (*Helminthophaga pinus*) IN MASSACHUSETTS. — Although this species has been recorded \* as a bird of the State, and the specimen cited is in the collection of the Boston Society of Natural History (the specimen was captured in Dedham by Mr. Emanuel Samuels and presented to the society by Dr. Cabot, recent writers on Massachusetts birds have seen fit to exclude it from their lists. I have just examined a fine male specimen of this species which was captured in West Roxbury, Mass., on May 17, 1878, by Mr. C. N. Hammond. It is now in the collection of Mr. John Fottler, Jr., of Boston. This makes the second recorded instance of its capture in the State.—RUTHVEN DEANE, *Cambridge, Mass.* Bull. N. O. C. 3, Oct., 1878, p. 188

Aug. XV, Jan., 1898, p. 57.  
The Blue-winged Warbler (*Helminthophila pinus*) in Eastern Massachusetts. — On the afternoon of May 15, 1897, while collecting among some scattered bushes and low trees on the edge of a swampy wood in the section of Boston known as Dorchester, near the West Roxbury and Hyde Park lines, I came across a bird of this species. When first seen the bird was sitting on the outer branch of a small bush about ten yards from me. While I was watching, it suddenly flew directly toward me for about ten or twelve feet after an insect, which it caught while on the wing, poisoning itself for a moment in the air and then returning to the same bush, immediately passing through to the other side where it was lost to view.

Although this species has been taken in West Roxbury and also in Dedham, it is a rare bird in Massachusetts and worthy of note.—FOSTER H. BRACKETT, *Boston, Mass.*

\* 2262. Blue-winged Yellow Warbler ♂  
E. Samuels Boston Mass  
(In W. S. Cou. Nov. Dec. U. S.)

Blue-winged Warbler (*Helminthophila pinus*) near Boston, Mass.— In the afternoon of May 29, at Waverley, Mass., I was walking in a meadow through which a brook flowed. The banks of the brook were thickly grown with trees and shrubs. From the border of this growth came the two-note song of this warbler, and it was repeated continuously during the hour or more I spent in the vicinity. I first saw the bird working his way through a tall bush, and while I watched him his preference seemed to be for the smaller trees and border shrubs. He was not shy, so I had excellent opportunity, sometimes from within three or four feet, to observe all his distinctive markings. I think there were two birds there, but I am positive of only one, an adult male.—GUY EMERSON, *Brookline, Mass.* Ank, XIX, July, 1902, p. 291.

**Blue-winged Warbler Once More Nesting at South Sudbury, Mass.**—On May 24, 1918, in a walk in South Sudbury in the Wayside Inn region, I came upon a Blue-winged Warbler (*Vermivora pinus*) singing. The location was within a mile of the nesting in 1909, recorded in 'The Auk,' Vol. XXVI, October, 1909, pp. 337-345. The bird disappeared after several repetitions of his song before I had secured a view of him. But there remained in my mind no uncertainty that I had heard the song of a Blue-wing. This assurance, however, was happily substantiated by Mr. Richard M. Marble, to whom I had mentioned the occurrence, who, visiting the locality on June 19 and again on July 2, both times found the bird singing at the same spot where I had heard him on May 26. Mr. Marble writes me that he regrets that he did not have time to look for the nest. But the fact of a male in song being present from May 24 to July 2, a period of forty days, would indicate with reasonable certainty that once more a pair of Blue-wings had nested in this region. The locality was quite different from that of 1909, being a rather dry extent of second growth in the rear of a sandy woodlot of white pines and a variety of deciduous trees, but well supplied with undergrowth. In this woodlot we have been accustomed to find year by year two or three Blackburnian Warblers (*Dendroica fusca*) singing throughout the month of May upon their arrival, and continuing in June on the testimony of other observers, giving assurance that the Blackburnian is a resident bird in this wood. The Blue-headed Vireo (*Lanius solitarius solitarius*) is also found year by year singing there much beyond the time of its migration. Both of these species were represented in song on May 24, June 19, and July 2 of the present year. Thus was had the unusual experience of hearing a Blue-winged Warbler sing with one ear and Blackburnian Warblers with the other, as probable nesting species. If the testimony presented may be accepted as furnishing reasonably reliable evidence of a nesting of Blue-winged Warbler in this locality in 1918, it may go on record as the second authentic occurrence in this region of Massachusetts, South Sudbury having the distinction of possessing both nestings within her borders.—HORACE W. WRIGHT, Boston, Mass.

Auk xxxv. Oct. 1918. p. 482-483.



Notes.

3.

During the first week in June, W. H. Lucas, at West Stratford, Conn., found the nest and four eggs of the Blue-winged Warbler; leaving it for two days to see if the set was complete, all the eggs but one had disappeared. The egg measured .69 x .48. White, with large brown and lilac spots.

◉ & ◉. XIV. Aug. 1889 p. 124

*Helminthophila pinus*.—This species was found to be generally common along the coast except at Bridgeport. It arrived at Stamford May 15, and was common until the 17th, one was seen at Bridgeport May 10, another on the 18th, and a pair found breeding June 14. At New Haven the first was seen by Mr. Flint May 14, and the species was common from the 16th through the month, many remaining to breed. It was first seen at Saybrook May 9, and was tolerably common until the first of June. At Seymour, about twelve miles northward of New Haven, the first was seen on May 9, and the species was common by the 14th, many remaining to breed. No birds of this species were observed at East Hartford, which is in the north-central part of the State. One was taken at Portland, May 13, but it is very rare there.

Auk, VI. April, 1889. p. 192.

General Notes.

Notes from Connecticut.

Four Lawrence's Warblers were within a radius of half a mile, three typical and one with the black obscured and the crown dull yellow-olive, as seen by Mr. C. K. Averill and myself. As did all the others, it sang precisely like the Blue-winged Warbler; but it was not secured, as we had no gun. One fine fellow frequented the growth on one side of a small piece of woodland until July at least, while on the other side and within a stone's throw a beautiful Brewster's Warbler spent the greater part of his time. The latter, after patient watching, revealed his mate, a Blue-winged Warbler, and a nest in course of construction. This was in the edge of a pasture bordering a lane and grove. It was poorly concealed in the dead grass at the base of a small shrub among scanty briars and the beginning of a scrub growth, and was plainly visible from any point several feet away. It was constructed as is usual with *Helminthophila pinus*. When seen again, June 14, it contained four eggs, two of which were Cowbirds, which were removed. Those remaining brought forth a pair of birds that, as they left the nest, could not be distinguished from normal young of the female parent, as would be expected, whatever the color of the male.

Auk X, Jan. 1893 p. 89-90.

General Notes

Note from Portland, Dec. 26. Inge, Portland, Conn.

*Helminthophila pinus* comes to us the first week in May, and is a regular, but rare, summer resident. While here, it does not wander far from a swampy spot grown up with alders, a few maples and an occasional oak and elm. A nest with four eggs, and one of *Molothrus ater*, was taken May 31, 1887.

Auk X, April, 1893. p. 208.

A male Golden-winged Warbler (*Helminthophila*  
<sup>chrysoparia</sup>) mated with a female Blue-winged Warbler  
(*Helminthophila penins*) at Bethel, Conn.

Jerse C. A. Meeker,  
Danbury, Conn.

See under Golden-winged Warbler

Evidence of Carolinian Fauna in Hudson Valley.

E. P. Bicknell.

at Riverdale, N. Y. [*Helminthophaga pinus*] regularly occurs.

Bull. N. O. C. 3, July, 1878, p. 129.

Evidence of Carolinian Fauna in Hudson Valley,  
from observations made at Riverdale, N. Y.

E. P. Bicknell.

*Helminthophaga pinus*. BLUE-WINGED YELLOW WARBLER. Common during the summer, and regularly breeding. Arrives after the first week in May (May 2, in 1878), and incubation commences by the last of the month.

Bull. N. O. C. 3, July, 1878, p. 130.

Arrivals of Mig'y Birds, Spring-1886.  
Central Park, N. Y. City. A. C. Paine, Jr.

May 17, *Helminthophila pinus*, (641). Blue-winged Warbler.

O. & O. XI, Aug. 1886, p. 125

Notes from Western New York.  
Maurice C. Blake, Hanover, N. H.

*Helminthophila pinus*.—One observed at Canandaigua by Mr. F. T. Antes on May 13, 1906, is the first Ontario County record.

Auk, 24, Apr. 1907, p. 224

Englewood, New York.

*Helminthophila pinus*

*H. pinus* now singing its summer song:-- we chi-chi-chi-chi chur chi-cher. I have only an indistinct recollection, which I want to confirm, of hearing the same individual sing both this and the rising and falling tse notes. (Letter of Frank M. Chapman, May 25, 1890)

Connecticut, June, 1893,

10

Song.

Connecticut, June, 1893.

*Hirundo lunifrons*

1.  $\text{c. s. c. c. c. c.}$   $\text{Z. Z. Z. Z. Z. Z. Z. Z.}$   
 These birds will sing typical
2.  $\text{H. H. H. H.}$ , This bird will sing typical <sup>but</sup> ~~the~~  
<sup>terminations in two of</sup>  
 single notes, and the <sup>first</sup> ~~first~~ <sup>second</sup> ~~second~~ <sup>third</sup> ~~third~~ <sup>fourth</sup> ~~fourth~~ <sup>fifth</sup> ~~fifth~~ <sup>sixth</sup> ~~sixth~~ <sup>seventh</sup> ~~seventh~~ <sup>eighth</sup> ~~eighth~~ <sup>ninth</sup> ~~ninth~~ <sup>tenth</sup> ~~tenth~~  
 $\text{Z. Z. Z. Z. Z. Z. Z. Z.}$
3.  $\text{Z. Z. Z. Z. Z. Z. Z. Z.}$  <sup>from</sup>  
 usual form several birds will  
 sing several from the note, at least  
 two or even three, sometimes by drawing  
 in a long breath before the note &  
 immediately sending it out again with  
 a heavy emphasis, at a distance the  
 terminal half of the long musical note  
 that of *H. lunifrons*.

Alone, note cliff or trip light & soft  
 unlike notes of *H. lunifrons*, *irrespirabile*  
 and *pygmaea*, even the *Brewsteri*, this  
 more like *cliffy*.

*Helminthophila pinus* (L.) Ridgw. BLUE-WINGED YELLOW  
WARBLER.

My data relating to the ending of the first song-period, in the case of those of our summer birds which earliest become silent, are less complete than I could wish; for experience had to teach me that observation which would discover the time when several species left off singing must begin before the middle of June.

The Blue-winged Yellow Warbler is perhaps the first of our summer birds to withdraw from the feathered choir. After its arrival in early May, scarcely a month elapses before singing has begun to wane; and it is not often continued after the middle of June. Absence about this time in several recent years has interfered with my observations, but attentive visits to favorite haunts of the species in the last week of several Junes failed to show that it had not then become silent. Sometimes, indeed, it appears to cease singing soon after the end of May; again it may continue intermittently nearly to the end of June, and I have recorded a few isolated dates of song in early July.

A supplementary song-period occurs in August, usually about the middle of the month; beginning, according to my records, August 5 to 15, and ending August 18 to 24. Though the true spring song is then recovered, it is largely superseded by a markedly different song, which seems to be especially characteristic of the later season.

I have heard both songs succeed one another from the same bird. Representing the spring-song as *Ce-c-e-e-ker-r-r-r-r*, the later song would compare somewhat as follows: *Ker-r-r-r-kik-kik-kik-kik*. An approach to this song is sometimes noticeable towards the end of June; and the only songs of the species that I ever heard in July were much like it. In one season its song was not infrequent during the spring.

At the time of the resumption of singing in mid-August, before the species has come into possession of its full powers, I have sometimes heard some singular vocalization from it—a series of low, disconnected notes, unrecognizable as being from this species, sometimes, however, ending with the sharp *Kik, kik, kik, kik*, of the later song. This song sometimes strikingly suggests that of the Nashville Warbler.

At the time of this strange vocalism I have found the species completing a renewal of plumage, but with many feathers still in active growth. A little later, when singing is regularly resumed, the bird appears in its new attire, which is of a silken beauty, with even fresher and brighter colors than in the spring.

In view of the fact that hybridization seems to be established among certain species of the group to which this Warbler belongs, the above noted variations in song and time of singing may be due to other than merely individual and seasonal causes.

the hole; incubation commenced. Here it was in this large mossy orchard that the Blue Yellow-backed Warbler was found and studied to advantage. We calculated that no less than twenty pairs were in the vicinity, as a number of the birds were constantly heard singing in the orchard and a cedar growth near, from which the *Usnea* also hung plentifully. Their nests varied in size and shape; some were deep and nearly concealed in the thick hanging moss, while others were shallow and globular and were much smaller in external appearance. They were generally

*Or. C. by L. to W. S. Aug. 1888 No. 115-116  
Bristol Co., Mass. 25.*

placed near the end of a limb or branch; the average height from the ground was about fifteen feet though cases have come under our observation of their nesting within three feet. Of seven nests found June 3d four contained sets of four each, while but one was found holding five, the others were incomplete sets. June 4th a nest was found fifteen feet from the ground containing four eggs, which were advanced in incubation, while June 6th a fresh set of the same number were obtained in a different locality. There are several mossy orchards and lone trees where these handsome Warblers breed in Bristol County, but none that can compare either in size or richness with the one in question. Two exceptional cases were noted this season in regard to the nesting habits of this Warbler; the first occurred June 3d as we were walking along a wood road bordered on the one side by an Oak grove and on the other by a young growth of scrub. My friend's quick eye espied a tiny smoothly woven nest of this bird in an Oak sappling about fifteen feet from the ground and close to the trunk, which contained two fresh eggs. There was no moss whatever on the tree with the exception of the cup shaped nest. This confirmed the belief which I had previously had that they bred apart from the trees or tree which contained the long flowing moss, but in eight years collecting this is the first case that has come under my observation. The second one was still more remarkable, for the bird forsook her usual retirement altogether and placed her nest not far from a house on the dead limb of an Elm tree, about twenty feet above the well traveled road, and four feet from the trunk. The dead limb was well covered with lichens and wood mosses, which entered largely into the composition of the nest. The lower part of the nest was all that contained any of the *Usnea*, a little being woven in with fine but dry stiff grass and horsehair. The opening was nearly concealed by the stiff wood moss, which was twice as thick at the top of the nest. This very curious nest contained but one fresh egg June 6th.

15-  
Blue-winged Yellow Warbler in New England.— Our knowledge of the nests and eggs of *Helminthophaga pinus* is limited to a very few examples, and although its presence in New England has been several times noted, and it has been affirmed to breed (see Am. Nat., VII, 629; this Bull., I, 73; *Ibid.*, II, 16; Merriam's Rev. Bds. Conn., p. 14), no mention has been made, that I am aware, of its nest and eggs having been actually taken.\* The presence of here and there an individual in the breeding season has rendered it a probable occurrence, and the present season has made this a certainty. My friend, Mr. Harry Merrill, of Bangor, Me., writes me that Mr. N. A. Eddy of that city met with its nest and eggs near New Haven in June last. The following data are supplied by Mr. Eddy himself:— The nest was found June 14, and at that time contained one egg. It was revisited June 20, when it contained four eggs, which were taken with the nest and the female parent was shot. The nest was situated in an old orchard, about half a mile from the coast of Long Island Sound. It was placed on the ground, in the grass, at the foot of a small bush. The nest is of a very loose structure, and is composed of oak leaves, built so as to form an inverted cone; within is a coarse lining of grape-vine bark, and this is again lined with fine grass and very fine pieces of grape-vine. The eggs are white, with small red spots forming a ring around the greater end. A few spots are also scattered over the whole surface. Before they were blown the eggs were of a flesh-colored tint. Their measurements are as follows: .65 X .50, .67 X .49, .63 X .48, .60 X .47. — T. M. BREWER, Boston, Mass.

\* Since this paragraph was in type, I learn that several nests have been taken by Mr. Clark, of Saybrook, Conn., and that one of its nests is in the possession of Mr. Purdie, though no description of any has been published.

Bull. N. O. C. 5, Jan., 1880, p. 48-49.

### 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

here a male had several times been was again saluted by his energetic I had walked about ten miles, and confessed with very little hope of uttering a chestnut sprout I proceeded rushes in a sort of zigzag course up the sun was hot, the mosquitoes I had walked about ten miles, and tending his note unconcernedly from a neighboring Oak, seemed to say as to be another case of persistence

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 birds 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 speckled 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.

O & O, XIII, Nov. 1888 p. 173

Begin  
later  
Shell

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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 birds 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.

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no rule, I cannot give the measurements.) They are more pyriform and the ground color is lighter, are marked and blotched with purplish red and a neutral tint. The markings look as though dashed on with a water color brush, more at the larger end. The nest was composed of twigs, dung, and grass, lined with horse hair and bird feathers. I found them common around Stockton and Kings River. They allow no other bird to share their tree; will drive the Woodpecker out of his hole and take it for their own. This I know to be a fact as a brother collector told me he had found a nest on the eggs of a Gairdner's Woodpecker.—*W. O. Emerson, Haywards, Cal.*

#### The Blue-winged Yellow Warbler.

I found a nest of the little *Helminthophaga pinus* last Summer and could scarcely credit my sight, as I recognized beyond question the little rare bird starting almost from under my feet from the coarse swamp grass—a new situation entirely to me for a nesting place of this species. It was a moist, spongy place, far back in the woods; the old Maples had been cleared off about two years before and coarse swamp grasses and weeds had sprung up among the sprouting stumps. The little bird fluttered off about ten feet and perched on a low spray quietly, not even a “chip,” and my first thought was a Maryland Yellow Throat, for it was in such a situation as I often find their nests; but no, the bird commences a series of the most grotesque gyrations imaginable in such a little creature—the tail drawn down and spread to its fullest extent, displaying to the utmost all the six white feathers therein, and thus indicating the species unmistakably—with low bowed head and drooping wings she stood and silently watched me as I exultantly clutched the tempting prize—the nest with its complement of five little spotted eggs.

The nest was built directly on the moist ground and its base was damp from the

contact. It was not unlike a Maryland Yellow-throat's nest except in being much more bulky, the base being chiefly leaves of Chestnut and Beach placed endwise in stead of circularly, as with most birds, and grapevine bark, being neatly lined with fine grasses. The eggs were quite fresh and rosy, showing that incubation had barely commenced at this time, June 16th, 1882.

It would be very difficult to tell what is the usual nest complement of this species, from my experience, for this is the fourth nest I have found containing respectively two, three, four, and five, when the birds ceased laying, though I thought in the case of the two that it was broken up by a violent storm that filled the nest with water and caused the birds to desert it.

One nest was built in the grass about four inches from the ground, another in a little clump of bushes about twelve inches up, another in a wild Rose bush about two feet from the ground, and this last one directly on the damp ground of a swamp; so it is equally difficult to declare what is their usual nesting place.

None of the others were in a swamp, and one was on a hillside at quite an elevation, the one with the set of two, which, as already stated, the birds deserted at this stage. One of the eggs is before me and measures  $.61 \times .49$  in., being very sparsely marked with a few minute dots scattered promiscuously over the whole shell, and a few larger spots, some quite dark and some very light near the large end.

I found a nest in a little thicket of wild Rose, June 15, 1871. The female was on the nest, where she sat very close till I almost touched her with my hand, when she fluttered slowly away as if disabled. I found incubation had commenced at that time, but had not progressed so far as to injure the eggs for the cabinet, and I have been measuring them and find the extremes to be about  $.62 \times .48$  in. No. 1, and  $.59 \times .50$  in. No. 2. In markings No. 1 is thinly spotted with minute dots, with no

resemblance to a ring, but the spots somewhat larger and a little more numerous at the large end, the ground color being a fresh rosy white, before being blown, and the markings light brown, nearly cinnamon. In No. 2 the spots are more numerous, forming a distinguishable ring near the large end, but the spots are very small and even lighter in color than those of No. 1. So far as my observation extends the eggs are usually less elongated than those of most of the Warblers and more sparsely marked.

It is stated that Dr. Brewer published in the Proceedings of the Boston Natural History Society for May, 1879, an account of the finding of a nest of this species at New Haven, Conn., by N. A. Eddy, adding that he believed it to be the only instance of its being taken in New England; but two of the nests alluded to above were taken long before that. The bird is in fact quite common here in the migrations, and the collector will hear their quaint song, if such it can be called, in every warm glade of any extent in our woods by the middle of May, about which time they first appear, May 5th, 1880, and May 12th, 1881, and perched on the summit of some small tree keep up their insect like note, repeating it, at intervals of two or three minutes, by the hour. A friend listening to it for a while very successfully imitated it by violently drawing in his breath through his closed teeth, and slowly breathing it out again in the same manner with a slight vocal sound at the same time. The birds become much rarer as the breeding season arrives, or else more quiet, the former I think, for I find them usually quite demonstrative when their nesting place is invaded, and that their note is changed to a more vocal one. But if the birds go further it is a mystery to me whither, for my ornithological friends only a few miles further north declare that they never find it. Mr. Sage once wrote me from Portland, triumphantly, "At last we have got it;" but when I saw their

specimen I found it the still rarer *H. leucobronchialis*. Since my first acquaintance with the bird, more than a dozen years ago, I have never failed to find them in considerable numbers every Spring. I have been sometimes amused at a remark in "Samuels' Birds of New England," which I have also seen copied by other authors, that he "once saw a small flock at Dedham, Mass., &c." Of all the solitary birds I never saw any more exclusively so than this species, and among the numbers I have seen I never saw a flock consist of more than a pair, male and female, and I have often hoped no author would credit the bird to Massachusetts again without some better authority than that.—*J. N. Clark, Saybrook, Conn. O. & O. VIII, May, 1883, p. 37 - 38.*

#### Is it Honest?

If we see a book offered for sale and we purchase a copy, and two or three years later another work is offered by the same author and we again purchase a copy and find in the second work twenty-five per cent of the matter and cuts that were in the previous work, "Is it Honest?" is it not a fraudulent transaction to the extent of the reproduced matter?

GOOD SHOT.—R. N. Denison secured at one shot, near the mouth of the Connecticut River, the middle of February, three Lapland Long-spurs, two Shore Larks and one Tree Sparrow.

WANTED TO KNOW. If the following named birds could be kept as cage birds, viz.: Canada Jays, Cardinal Redbirds, Golden Robins and Scarlet Tanagers.—*A Subscriber.*

JASPER'S BIRDS OF NORTH AMERICA.—In glancing over the above work we notice that the pair of Woodcocks have five young, that the Summer Redbird's beak is as red as the body, and that "Audubon's Birds of North America" are quoted, and that Dr. Coles is quoted very often. Can this account for the Doctor's endorsement of this work?

in her bill) finally began to move off in a new direction, working gradually through the shrubs to an open place where stood a Butternut tree, whose leaves hung black and dry from the effects of the sharp frost. I was not far from the nest, and after fifteen feet from the nest, and the bird soon became sufficiently accustomed to my presence to make several trips to it. The identification was as good as if I had shot the bird. As I have not been able to visit the spot since, I know nothing further of the history of this rare and interesting family. I trust they will have such pleasant memories of this moist, malarial spot, that they will visit it again next breeding season, although there may be a spark of selfishness in the wish. This is near the northern limit of the breeding place of *Helminthophaga pinus*. The other rarity was taken not over a mile from the first.

I happened to be in the country on the Fourth of July, when a lady said to me that she had a very beautiful bird's nest she would like me to see, and to my surprise brought out a nest I had never seen before, but had heard much about, one which in material and form stands apart from any of our birds' nests. A few pieces of the hanging gray lichen, found so abundantly on dead trees in damp places, were fastened at the upper end to a twig so as to hang closely together, the whole forming a mass about seventeen inches in length and about four in greatest thickness at the top and tapering to a

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JULY 1. My friend handed me a nest and four eggs, of the Blue-Winged Yellow Warbler, (*Helminthophaga pinus*). The eggs are somewhat smaller than the Maryland Yellowthroats; of a pure white background, with a few brown spots and lines around the larger end. The nest resembles that of the above mentioned species, except the lining which is entirely of grapevine bark, the ends of which stick up all around the inner edge of the nest.

Notes from Chester County, Pa. by W. H. <sup>19</sup>71

O. & O. IX, Nov. 1884, p. 138.

point at the bottom. The whole shape suggests a long tapering beard of some venerable specimen of the genus *Homo*. At or near the top the fibres were woven to form a pouch-shaped cavity in which was an egg of the Cowbird, which, by the way, often gets its egg in before the owner of the nest. The cavity was hardly over an inch in diameter and about two and one-half in depth.

I was much disappointed not to see the eggs, but the nest was a thing of beauty and the lady generously gave it up in the cause of science. It was found about the 1st of July in a hemlock tree on the bank of the Housatonic River, hanging from a low limb.

Brewer, Minot and Ingersoll have written interesting descriptions of this nest, which is that of the Blue Yellow-backed Warbler (*Parula americana*) G. S. K.

O. & O. IX, Sept. 1884, p. 111-112  
Averill, Jr., Stratford, Fairfield Co., Ct.

## Two Connecticut Rarities.

Although I have been in the fields but little this season, I have been fortunate enough to come across two birds' nests that I had never found before, although the birds were old acquaintances. I think them rare enough to be worth notice.

The first find was on June 15th, when, seated on a fence at the edge of a piece of swampy woods, a friend and I were watching a pair of Chestnut-sided Warblers that were flitting about in a tree overhead, in hopes that they would betray their nest. Suddenly we heard a sharp "chip" close by, and on looking around saw a little bird hopping along a twig of a barberry bush with an insect in its mouth. The Chestnut-sides were at once forgotten; for within a rod of us was a Blue-winged Yellow Warbler, (*Helminthophaga pinus*). Its mate was close by, and both being uneasy at our presence, kept up their single note of alarm.

For some time we sat motionless, looking at them, and they uneasily moving from bush to bush, not daring to go to the nest while two such suspicious looking characters were near. It was a trial of patience and the birds were beaten. The female (distinguished only by the insect

in her bill) finally began to move off in a new direction, working gradually through the shrubs to an open place where stood a Butternut tree, whose leaves hung black and dry from the effects of the sharp frost of May 30th. Suddenly she disappeared in the grass at the foot of the tree, where we found the nest on the ground, close to the trunk. The female left at our approach, half running and half flying along the ground. The nest was built—outside of dead beech leaves, inside of grapevine bark. Except a single horse-hair there were no other materials in it. It was not concealed well and contained five young birds that must have left the eggs about five days before.

I then took up a position on a rock, about fifteen feet from the nest, and the bird soon became sufficiently accustomed to my presence to make several trips to it. The identification was as good as if I had shot the bird. As I have not been able to visit the spot since, I know nothing further of the history of this rare and interesting family. I trust they will have such pleasant memories of this moist, malarial spot, that they will visit it again next breeding season, although there may be a spark of selfishness in the wish. This is near the northern limit of the breeding place of *Helminthophaga pinus*. The other rarity was taken not over a mile from the first.

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Averill, Jr., Stratford, Fairfield Co., Ct.

Notes from Chester County, Pa. by W. H. A. J.

### 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.

NESTS AND EGGS OF HELMINTHOPHAGA PINUS. — Mr. S. N. Roads, of West Chester, Pa., writes respecting two nests of this bird, the nidification of which is as yet none too well known. On the 12th of June, 1878, he found a pair of these Warblers showing unmistakable signs of having a nest, which latter he soon discovered, as he saw the male fly to it with a worm in his bill. It was built in the midst of a clump of tall swamp-grass, on the outskirts of a forest where there was a good deal of weedy undergrowth not over two feet high. The nest rested slightly on the ground, and was quite bulky for the size of the bird; the cavity was nearly three inches deep by two inches in width. The structure was composed externally of beech and oak leaves of the preceding year, which "seemed to have been carelessly strewn and stuck in as if to form a barricade around the brim." The lining consisted of fine strips of grape-vine and inner bark of the oak, together with some straws. This nest contained four young birds about two days old.

Mr. Roads shortly afterward procured two eggs from another nest which he found about a quarter of a mile from the same spot. These were pure white, dotted with red at the greater end, and were of just the size of those of *Chrysomitris tristis*, but less pointed. He also examined another set of eggs procured by a friend in the same vicinity. — ELLIOTT COUES, Washington, D. C.

Bull. N. O. C. 3, Oct., 1878, p. 194.

#### Nesting of the Blue-winged Yellow Warbler in Chester County, Pa.

The record of nests of this rare Warbler that have been found in Chester County is as follows:

Mr. Thomas H. Jackson has found three nests, one of which contained five eggs, the other two contained young birds.

Mr. Samuel B. Ladd has two sets of eggs in his collection, consisting of four and five eggs respectively, which were taken by Mr. Wm. Hall, near the Westtown school, this county.

Mr. Ladd found two nests himself this year, one of which contained three young Warblers, one Warbler's egg (which was nearly hatched) and one young Cowbird. The other nest was found June 10, and contained three eggs of the Warbler and one of the Cowbird. Both these nests were placed on the ground at the foot of a bush, in a clearing.

On May 29, 1889, I had the good fortune to find a nest of this Warbler.

I was looking through a good-sized and (in places) swampy woods, where two years before I had found a nest of the Maryland Yellow Throat (*Geothlypis trichas*) and which is a favorite nesting place for the Acadian Flycatcher (*Empidonax acadicus*) three or four pairs of which breed there every year.

I had been there for some time and not found anything at all, when suddenly a small bird, which I did not at first recognize, got up about two or three feet off from me. Putting my collecting box on the ground I got down on my hands and knees and began to look around carefully, tearing up the weeds, ferns,

etc., for I had no desire to repeat an experience I had last year with a Golden-crowned Thrush's nest, which I stepped on and broke the eggs.

For quite a long time I was unable to find any nest, having in the meanwhile made a bare spot of about fifteen feet square.

By this time I was beginning to get discouraged, and I walked back to where I had left my box. As I stooped down to pick it up I saw it was almost resting against a nest, which contained five eggs, and which I at once recognized as belonging to the Blue-winged Yellow Warbler (*Helmintophaga pinus*).

The nest is a beautiful structure. It is quite large, and is composed of leaves, grape-vine bark, and a few pieces of straw, and is lined with fine grass and horse-hair. It was placed on the ground between the forks of a small bush, on a piece of level ground about thirty-five yards from a stream of water, and at the bottom of a slight hillside in a rather open spot in the woods, not more than one hundred and fifty yards from a road.

While I was looking for the nest the female was joined by the male, and they both flew from branch to branch of the neighboring trees (usually at a considerable distance from the ground) uttering notes of distress. There can be no question as to the identification as I saw both birds plainly. On blowing the eggs I found that they contained small embryos.

J. P. Norris  
O & O. XIV

Nesting of the Blue-Winged Yellow  
Warbler in Delaware Co., Pa.,  
in 1890.

On the 27th of May, 1890, I started out with the hope of finding some Warblers' eggs. It had been raining very hard all the afternoon and evening of the previous day, and tramping through the wet woods was by no means a pleasant task. Every few minutes I would strike my head on a branch and a shower of rain drops would run down my neck.

For hours I tramped over hillsides in several woods without finding anything,—not a single nest save an old one of the Worm-eating Warbler. After I had been looking for four or five hours I heard a pair of Blue-winged Yellow Warblers acting as if they had a nest. I looked all over the hillsides where I heard them, and also at the top of the hill for at least twenty minutes without success. Then I thought possibly if I laid down for a time the female might return to her nest. It was tiresome work waiting, however, for the birds were very wary and disposed to regard me as an unwelcome intruder in their neighborhood. At last, however, all was quiet, and I resumed my search, this time entirely at the top of the hill (for I had about made up my mind that the nest was somewhere at the top of the hill) but still without success. This was rather discouraging as I had apparently looked thoroughly over every available spot where the nest might be.

There still remained a small piece of woods, however, divided by a fence from where I had been looking and on the edge of a large field. As a sort of forlorn hope I crossed this fence and had taken but four or five steps when I flushed the female, and, looking down, right at my feet was the nest, which contained five eggs.

It was placed at the foot of a small sapling, and the bottom of the nest rested on the ground, though not embedded in it. It was not more than fifteen yards from the field I mentioned before, and was a beautiful structure composed externally of leaves and grape-vine bark, lined with fine dried grass, and a little horse-hair. It was a trifle smaller than the one found by me last year (which also contained five eggs, which seems to be the usual number) although made of exactly the same materials. The eggs were quite heavily marked for specimens of this species, and were about five days incubated. As the set I found on the 29th of

May, 1889, was about seven days incubated it shows how very regular the birds are about laying. It seems to make little difference whether it is a backward spring or not the birds lay just the same and are apparently not in the least influenced by the weather.

A curious thing I have noticed about the Warblers' nests I have found, is their apparent preference for the edge of a woods rather than in the centre.

While I was packing up the eggs the birds made quite a noise, the female in particular coming to within five yards of me and uttering plaintive cries.

Although I was very wet and tired I felt well satisfied with the result of my day's tramp, for they are very rare birds in this locality.

J. P. Norris, Jr.

Philadelphia.

*23*  
A. S. O., 15, August, 1890, 9, 117.

### A Few Days Among the Blue-winged Warblers.

My experience of past years with this species (*Helminthophila pinus*), has been that on the last of May or the first of June, when I found a nest, the eggs were oftener heavily incubated than fresh, so the past season I thought I would start a week earlier.

I left the city on May 21st, my object being to locate the birds on their breeding sites and see if they had commenced nest building. I spent the afternoon of the 21st, all day of the 22d and 23d tramping over the country wherever I knew of a suitable site, and at the end of the third day I had an attack of the blues of the very worst kind.

The weather for the three days was raw and cloudy and I located only one pair of birds. I felt very badly over my poor luck and told my farmer friend who goes with me on all my egg tramps and knows as much about them as I do, but who is no collector, that I thought the birds had deserted their old breeding grounds, and that I did not think I would bother with them any more that season as I felt sure they were not there. He had more courage than I had, however, and said that he was not going to give up without another fight when I left him at the depot on Monday evening, where he had taken me to meet my train for the city. He told me that the first bright, sunny day he would look after them again and that I would hear good news from him before the week was out.

I did not have much hope of receiving the good news he promised, but imagine my surprise when on Friday of that week I received a letter telling me to come up on Saturday as he had found two nests.

On the evening of the 28th I took the train for my friend's place, he meeting me at the station when the train arrived.

tall grass, blackberry and raspberry. The Sunday before we had been over site and I thought it was impossible a nest to be there and we not find it, such must have been the case, for upon ing near it I sent my friend to examine od site for a pair to take up in, telling

I would examine the old one but with ope of success. I went the length of oking carefully into every place large igh to contain a nest and had nearly hed the corner of the fence and almost last vine when out hopped the little -wing. I stepped up to the vine, ed into the nest, counted the eggs, rub- my eyes, looked and counted again, ed my eyes, counted the third time yelled to my friend the number, *seven*. r packing them, we threw ourselves ne ground in the shade of a large oak talked the matter over, and we both e to the same conclusion that the nest t have been there when we looked for week before.

fter taking a half hour's rest and re- ling ourselves with a drink of cold g water, we started for another site, re we found a pair of birds. The on before this was a narrow strip of ground on the edge of a wood about ighth of a mile in length, overgrown bushes and vines of many different ls. We started in at the west end and going about half way we knew the s were there by hearing their song; hunted the whole length of the wood came to the conclusion that they had er hidden their nest so well that we looked it or else had not commenced it, when reaching the end of the wood ire a fence divided it from a clover field e was a small cluster of raspberry vines; ping over to them and looking on the ind I saw the nest with little or no ection; it contained two eggs. On e 3d my friend secured the nest with eggs.

while fresh for his cabinet and the six hatched; but about the time the G was sitting Mr. Briggs died, and in tiling the estate and when these gos were about half grown, they were shipped together, twelve in number. M. L. Rice, of Utica, Michigan, with agreement with Mr. Briggs, held a claim on them. The young goslings required any feeding but picked their living with the old Geese. We hear more about Mr. Rice's success, them in the future; but this article closes all of their history up to the present date.

James B. Purc  
Plymouth, Wayne Co., Michigan.

#### Nesting of the Cerulean Warbler

How well do I remember finding the first Cerulean Warblers' nest.

It came about in this manner: a pleasant day in May, 1890, while collecting skins at Greenwood, a suburb of St. Louis, on the Missouri Pacific Railroad and about one half mile from my home and while prying around in a small beautiful piece of forest through which winds a small creek which goes by the name of the river Des Peres, pronounced De Pere, I spied a small bird flying about in a tall but slender sycamore. At its first appearance I took the tiny bird to be a Vireo of some species, and sat down to watch its movements for awhile before shooting. Finally it disappeared, and I had just begun to be vexed at such stupidity in allowing the bird to escape, it made its appearance again, and I thought, something in its mouth; I shot it at such a great height I was not sure I had decided to wait awhile, and was rewarded with unmistakable signs of nest building. As I could see nothing of the nest, I concluded that the nest must be just below and so I left, intending to visit the nest again in about a week; but it was

After a drive of five miles and a good night's rest, on the 29th I was in good trim for work, and after breakfast we started out. The first thing to be done was to examine the two nests my friend had found, which were both in the same thicket about two hundred yards apart. The first nest contained four eggs of the Warbler and one of the Cowbird. When it was found it contained two eggs of the Warbler and the Cowbird. I did not disturb this nest as I was going to stay until the next day. The second nest was about half finished, but my friend declared that there had been nothing added to it since he found it, but on June 9th he took a set of five fresh eggs from it.

Our next find was a nest containing six fresh eggs in a small thicket on edge of a wood where I never found a pair before and have been hunting over the same ground for the past ten years. This was a grand surprise as I had never found a nest containing more than five eggs, but it seemed as if this was my lucky day and made up of surprises, for after packing the six little beauties safely in my box we started again and after a tramp of a half mile we entered a heavy wood; after tramping through it for some distance we came to a small stream of water and a clear spot containing about an eighth of an acre, with a few raspberry vines scattered about.

As we entered the clear spot what was our surprise to hear the notes of the Blue-wing above our heads. It took us but a moment to find the nest which contained three fresh eggs. I left them and my friend secured the nest and five eggs for me on June 2d. After leaving this nest and tramping another half mile or more we came to an old breeding site where for the past three years we have found a nest of this species. The site is a narrow strip of ground between the last furrow of a ploughed field and an old worn fence dividing the field from a large wood, covered

with tall grass, blackberry and raspberry vines. The Sunday before we had been over this site and I thought it was impossible for a nest to be there and we not find it, but such must have been the case, for upon coming near it I sent my friend to examine a good site for a pair to take up in, telling him I would examine the old one but with no hope of success. I went the length of it, looking carefully into every place large enough to contain a nest and had nearly reached the corner of the fence and almost the last vine when out hopped the little Blue-wing. I stepped up to the vine, looked into the nest, counted the eggs, rubbed my eyes, looked and counted again, rubbed my eyes, counted the third time and yelled to my friend the number, seven. After packing them, we threw ourselves on the ground in the shade of a large oak and talked the matter over, and we both came to the same conclusion that the nest must have been there when we looked for it a week before.

After taking a half hour's rest and refreshing ourselves with a drink of cold spring water, we started for another site, where we found a pair of birds. The season before this was a narrow strip of clear ground on the edge of a wood about an eighth of a mile in length, overgrown with bushes and vines of many different kinds. We started in at the west end and after going about half way we knew the birds were there by hearing their song; we hunted the whole length of the wood and came to the conclusion that they had either hidden their nest so well that we overlooked it or else had not commenced it yet, when reaching the end of the wood where a fence divided it from a clover field there was a small cluster of raspberry vines; stepping over to them and looking on the ground I saw the nest with little or no protection; it contained two eggs. On June 3d my friend secured the nest with five eggs.

On the afternoon of May 30th I visited the first nest spoken of. It contained five eggs of the Warbler that were cold, which led me to believe the female would have laid at least one more; but as the nest was placed in a bunch of grass and the cows had been tramping very close to it, I was afraid to leave it another day, and thinking a bird in hand was worth two in the bush I packed the eggs in my box and started for my home feeling well paid for my trip, bringing home one set of seven, one of six, one of five, and receiving the other three sets of five in good condition when the sets were completed.

On Sunday, June 12th, myself and friend went over the same ground and found the second nest of the pair from which I took the seven eggs. It was placed in a bunch of tall grass about 200 feet from the site of the first one and contained four eggs; incubation commenced. About 300 yards from this nest we found one containing four eggs that we overlooked on the 29th of May; incubation was far advanced. On our homeward trip we found the second nest of the last pair we found on the 28th about 50 feet from the old site, containing four eggs; incubation commenced. I do not believe in robbing a pair of birds of their eggs the second time; my object in going after them this time was to find out what their second clutch would consist of. I did it once before and never found but four eggs, and by this I am led to believe that they rarely, if ever, lay more. I hope to spend several more pleasant days looking after them the coming season.

I would be pleased to have other collectors give their experience with this species. To my mind it is one of the most interesting of the Warbler family.

Philadelphia. Isaac S. Reiff.

R. H. Carr reported a Scarlet Tanager taken at Brockton, Mass., on November 11, 1892.

#### A Comparison of the Nesting Habits of the Long-billed and Short-billed Marsh Wren.

The Short-billed Marsh Wren (*Cistothorus stellaris*) seems to be confined to certain sections for the nesting season. I know of but two places where they are to be found in numbers, and as these places are somewhat under thirty miles from my present residence, and, so far as I know, but one other oologist besides my brother and myself knows about them, the birds are disturbed very little and consequently congregate in considerable numbers every year. The Long-bills (*C. palustris*) are common almost anywhere.

The Short-billed usually has the first nest completed and eggs laid by the last of May and the Long-bills about a week later; as at that time of the year the grass is not very long, the nest is often built so that it almost touches the hummock from which the supporting grass grows, but I have never seen them actually on or in the hummock. As a rule it is built some distance from the ground, and one, containing seven eggs, was built in the top of the bunch of the grass—the tops of the live grass being woven in and forming part of the nest.

I have noticed that while both species build in wet meadows (in this case freshwater meadows) the Long-bills invariably build in the tall rank grass and near some river or brook, while the Short-bills are equally particular in choosing a shorter and much less rank kind of grass. When the first set is laid, the grass all over the meadows is rather short and not very rank, so that the nests may be anywhere and it is nothing but pure luck when one is found; but later in the season, when most of the grass is long and rank, the Long-bills stay wherever they happen to be, while those of the other species come from all parts of the meadows, and con-

On the afternoon of May 30th I visited the first nest spoken of. It contained five eggs of the Warbler that were cold, which led me to believe the female would have laid at least one more; but as the nest was placed in a bunch of grass and the cows had been tramping very close to it, I was afraid to leave it another day, and thinking a bird in hand was worth two in the bush I packed the eggs in my box and started for my home feeling well paid for my trip, bringing home one set of seven, one of six, one of five, and receiving the other three sets of five in good condition when the sets were completed.

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Philadelphia. Isaac S. Reiff.

U. S. G. Vol. 18, Jan. 1893 p. 6-8

The Interbreeding of *Helminthophila pinus* and *H. chrysoptera*.—On June 13, 1889, Mr. Samuel Robinson, who has collected with me here for the past fifteen years, noticed a male *Helminthophila pinus*, with food in its bill, fly and disappear at the foot of a small alder. A female *Helminthophila chrysoptera* soon appeared, also with food, and was lost to sight at the same spot as the other bird. On going to the locality five young birds flew from the nest and alighted on the bushes in the immediate vicinity. Both parent birds were soon feeding the young again. He shot the old birds and secured all the young, which, together with the nest, are in my cabinet.

The locality was ground sloping toward a swampy thicket and covered with a young growth of alders. A few maple trees were in the vicinity. The nest was on the ground at the foot of a small alder and partly concealed by overhanging ferns and weeds. It is composed externally of oak leaves and lined with grape-vine bark, no other materials being used.

The male (*pinus*) is a very bright specimen with white wing-bars, edged with yellow. The female (*chrysoptera*) is strongly marked with yellow below, the wing-bars being exceptionally rich with the same color.

The young, two males and three females, are all similar, and have the head, neck, chest, sides and back olive-green. Abdomen olive-yellow. Remiges like adult *pinus*. Two conspicuous wing-bars of light olive, edged with yellow.—Jno. H. Sage, Portland, Conn.

Ank. VI. July, 1889, p. 279.

General Notes.

On the Breeding of *Helminthophila pinus* with *H. leucobronchialis* at Englewood, New Jersey.—As additional evidence in this puzzling case, I desire to record the breeding of a typical male of *H. pinus*, with a non-typical female of *leucobronchialis*. The nest was found on the west slope of the Palisades at Englewood, New Jersey, June 12, 1892. It was placed on the ground in a small bushy opening in a piece of mixed woodland, and contained three eggs (one of which was broken) of the rightful owners and one of the Cowbird. In construction it agreed with typical nests of *pinus*. The eggs are similar to those of *pinus*, but are somewhat more heavily spotted than the average eggs of that species. The female was closely examined both while she was on the nest and in the bushes and trees near it. In coloration she was intermediate between *pinus* and *leucobronchialis*; the underparts were washed with pale yellow, the upper back was bluish, the rump grayish; the wing-bars were white. She was flushed from the nest three times, and on each occasion was at once joined by a typical male *pinus* which shared her anxiety. Frequently they were so close to each other that they were both in the field of my glass at the same time, and I thus had an excellent opportunity to compare them. The broken egg and the egg of the Cowbird were removed. On returning to the nest June 19, it was found to be deserted.

While interesting in itself and of importance as a fact in the history of the relationships which exist between these two birds, this record has no decisive bearing on the case, and it would be unwise therefore to attempt to draw inferences from it.—FRANK M. CHAPMAN, *American Museum of Natural History, New York City.*

Ank. 9, July, 1892, p. 302-3

THE SIGNIFICANCE OF CERTAIN PHASES IN THE  
GENUS *HELMINTHOPHILA*.

BY SPENCER TROTTER, M. D.

THE Mniotiltine genus *Helminthophila* has of late years presented some very interesting and curious features in the relations of certain of its species to one another and to several remarkable forms which have come to light in the past decade. In fact, in its earlier known history as a genus two forms appeared, one of which has only lately turned up again within our limits, while the other, if indeed it belonged with the genus, has long been relegated to the list of 'lost' or 'doubtful' species, a veritable myth, never having been seen since its first discovery, so that the genus has always figured in a rather eccentric light.

The group is highly characteristic of the Nearctic Region, consisting of eight well defined species, which pass under the general name of Swamp Warblers. Nowhere what might be called abundant birds, the *Helminthophilæ* still enjoy an extensive range over the continent, and are essentially migratory, as the insect nature of their food demands. The species fall into two subgroups, as regards their general form and pattern of color, and this corresponds pretty closely with the extent of their distribution.

*Celata*, *ruficapilla*, *peregrina*, *luciae*, and *virginia* form one section, small birds of a more or less uniform and quiet coloration, the two former being the most widely distributed species of the genus.

The Orange-crowned Warbler, *celata*, with its western variety *lutescens*, ranges over the entire continent from ocean to ocean, but is comparatively rare in the Eastern Province, being seldom met with. It winters southward, beyond United States limits into Mexico, and reaches high latitudes in the Northwest. The Nashville Warbler, *ruficapilla*, on the other hand, with as wide a range as *celata*, is far more abundant in the Eastern Province than in the West, and extends its migrations northward to the Arctic Basin on the east. The Tennessee Warbler, *peregrina*, is chiefly eastern in its distribution, breeding northward into high latitudes.

*Virginia* and *luciae* are restricted in their ranges, being characteristic of the Colorado Valley and Southern Rocky Mountain region.

The other section comprises *bachmani*, *chrysoptera*, *pinus*, and their curious allies, *lawrencei* and *leucobronchialis*; birds of striking coloration and of much more restricted ranges than the three plainer colored species of the former sub-group. *Bachmani* is exceedingly rare, having been taken but a few times in the Southern States. The Blue Golden-winged Warbler, *chrysoptera*, and the Blue-winged Yellow Warbler, *pinus*, are exclusively birds of the Eastern Province, the former ranging into Canada, though rarer in the Northern States, the latter scarcely if ever going beyond Massachusetts and Minnesota. Both winter south of our limits.

I have taken the liberty of thus hastily reviewing the genus for the purpose of bringing together as nearly as possible our present knowledge of the distribution of the several species. The history of the two forms *lawrencei* and *leucobronchialis* is already so well known to ornithologists that it need not be reiterated here, except to recall the very general belief of their hybrid nature.

The question naturally arises in the minds of most persons who have given any thought to the subject, What does the occurrence of such peculiar forms, taken in conjunction with other facts, signify? We are stepping into a somewhat uncertain region when we attempt to speculate on a subject of this character, but I believe that the only way in which we may hope to throw any light whatever upon such a subject is from an evolutionary standpoint.

The rise and decay of genera and species in the struggle for existence; the pressure of dominant groups upon smaller and less adapted races; action and reaction through environment;—these are the factors involved, and that have given rise to many apparently inexplicable phenomena.

A dominant group is characterized by the abundance of its forms, both in species and individuals, over wide areas, this being the index of its vigor and consequent ability to maintain itself against competitors, and its adaptability to varying conditions of environment. Rarity in species and individuals is indicative of degeneracy, the expression of the inability of the group to hold its own.

Hybridism under nature is a further expression of decay, the result of a growing rarity in the individuals of a species.

Of course a hybrid may be purely accidental, as I believe the case to have been with the cross between the Barn and the Cliff Swallow which I described some years ago, the result of a *mesalliance* between two individuals during the spring flights when numbers of both species are 'hawking' in the air together prior to nesting. But when we see crossing repeatedly performed the question of accident must be set aside and another means of solution sought.

Let us see how these principles will apply to the genus *Helminthophila*. Here we have a group of eight species, as has been cited above, none of which are as a rule very abundant, especially when compared with other birds, *e. g.*, certain species of *Dendroica*.

Recalling the distribution of the species, we find that each has a more or less definite area, but their habitats considerably overlap one another. That of the two sub-divisions noted, *celata*, *ruficapilla*, and *peregrina* are the most widely distributed, while *chrysoptera*, *pinus*, and their allies are much more restricted, and it is in this latter section that we find what is to my mind an evidence of decay. Strictly insectivorous, the *Helminthophila* have come in direct competition with other insectivorous forms, and among them the closely allied and dominant genus *Dendroica*, with its thirty odd well defined species, whose habits and nature closely resemble the Swamp Warblers in many ways. The pressure exerted by *Dendroica* would be very much greater in the East than in the West, owing to the greater preponderance of individuals and species in the former area; consequently the more restricted eastern species of *Helminthophila* would feel this competition keenly.

Many of the *Dendroica* pursue and capture their food in much the same manner as the *Helminthophila*, and in similar localities; more than this, the majority are expert fly-catchers, taking mature insects on the wing with much greater readiness and persistency than do the species of Swamp Warblers. A glance at the bills of the two will show which is the best adapted for diversified work.

And what has been the upshot of all this? Simply that these restricted species of *Helminthophila* are succumbing to more wide-spread and better adapted forms, and their decrease in num-

bers, though not directly apparent in all the species, is expressed by the curious phenomena which have lately come under our notice. *Bachmani* is exceedingly rare, for aught we know on the verge of extinction, though it still exists in favorable localities in the vast swamps of the Southern States.

The mythical *carbonata* might have been the last of another form,—who can tell? Audubon gave it a place in this genus.

*Chrysoptera* and *pinus* yet remain fairly abundant but forced apparently to cross with each other, and the resulting forms, *lawrencei* and *leucobronchialis*, without doubt recross with the parent species.\* Further, we find evidence that *pinus* has undoubtedly gone over to the strange genus *Oporornis* and contracted an alliance there.†

These are the facts, and we are left to draw our own conclusions in the best way possible. Genera and species rise up, increase and become dominant only to break down again under the pressure of other and better adapted forms. What the other genera of the Mniotiltidæ may have been in the past we can only surmise.

Those that now possess but one or two species may, and very likely have, possessed more and been dominant in their time. A change in habit under pressure and consequent structural modification would be of immense advantage, and finally result in one or two well adapted species forming a well defined genus. Such may have been the history of *Mniotilta*, *Protonotaria*, and others, and such may be the future of these *Helminthophila* who now, as it seems to me, show unmistakable evidence of break-down after a long and severe struggle against better adapted forms.

This or ultimate extinction are the only alternatives.

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\* Brewster, Wm. Bull. Nutt. Ornith. Club, Vol. VI, Oct. 1881, p. 213.

† Langdon, Frank W. Bull. Nutt. Ornith. Club, Vol V, Oct. 1880, p. 208, plate, iv.

Objectionable Names of Birds ... Ridgway.

*Helminthophaga pinus* is the accepted name of a Warbler which, so far as known, (and it is very intimately known to the writer,) frequents chiefly, if not exclusively, deciduous woods. The name *pinus* implies pinicoline habits, and is therefore "glaringly false."

Bull. N. O. C. 5, Jan., 1880, p. 37

710. *The Blue-winged Yellow Warbler*. By J. N. Clark. *Ibid.*, pp. 37, 38.—Its nesting in Southern Connecticut, where "it is quite common in the migrations."

O. & O. Vol. VIII

O. and O. 321. *Blue-winged Yellow Warbler* [*Helminthophila pinus*]. *Its Nesting Habits, etc.* By Fred. T. Jencks. *Ibid.*, VI., p. 57.

O. and O. 321. *Blue-winged Yellow Warbler* [*Helminthophila pinus*]. *Its Nesting Habits, etc.* By Fred. T. Jencks. *Ibid.*, VI., p. 57.

366. *Dendroica pinus in Winter*. By James H. Frisvold. Framingham, Mass., Dec. 5, 1881. *Quar. Jour. Bos. Zool. Soc.* I

1067. *Der Blaufügelige Buschsänger, Helminthophaga pinus Baird.* *Blue-winged Yellow Warbler*. By H. Nehrling. *Ibid.*, No. 12, pp. 364-366. *Zoologische Gärten*, XXVI

1096. *Nesting of the Blue-winged Yellow Warbler*. By Thos. H. Jaedson [=Jackson]. *Ibid.*, p. 102. *Warbler Nests*, vol. 1 No. 7. 31

Lawrencei

*Helminthophila lawrencei*.—Three beautiful specimens of this bird were taken. Mr. Flint took a female at New Haven May 21, and Mr. Hoyt obtained a female at Stamford, May 23, and a male May 25. The yellow of the under parts of the female taken by Mr. Hoyt approaches the gamboge-yellow of *H. pinus*, and is much brighter than that on the corresponding parts of Mr. Flint's specimens.—LOUIS B. BISHOP, M. D., *New Haven, Conn.* **Auk, VI. April, 1889. p. 193.**

*Lawrencei Warbler.*

I also have the following list of Lawrence's Warbler (*Helminthophaga Lawrencei*), none of which have been reported: May 12th, 1886, ♂; May 23d, 1888, ♀; May 25th, 1888, ♂.

Wm. H. Hoyt.  
Stamford, Conn.

G & O. XIV. Mar. 1889 p. 44

General Notes

*Notes from Portland, Jno. W. Sage, Portland, Conn.*

One example only of *H. lawrencei* has been taken, a male, May 14, 1887. The yellow below is not as bright as in some specimens that I have seen from New Haven and Stamford.

**Auk X, April, 1893. p. 209.**

General Notes.

*Connecticut Notes.*

On the 12th of July, while looking for *Helminthophila*, I took an adult female *H. lawrencei*. The bird is in every way like the female *H. pinus* excepting that the throat patch and stripe through the eye, which in the male *H. lawrencei* are black, are in this specimen dusky olive-green. The specimen is quite similar to the one taken by Mr. H. W. Flint in New Haven several years ago.

The young in first plumage which this bird was attending when shot were in every respect typical *H. pinus*. The male parent was not found but I feel confident that it was *H. pinus*, as the young were well feathered and showed clearly the well defined black lores of the latter.—CLARK GREENWOOD VOORHEES, *New York City.* **Auk XI. July. 1894 p. 259-60**

Notes from Connecticut,  
Louis B. Bishop, New Haven, Conn.  
Auk, XXIII, July, 1906, p. 345.

*Helmintophila lawrencei*. On May 31, 1905, while collecting with Mr. H. W. Beers and Mr. J. C. A. Meeker, I secured in East Haven, Conn., a male *H. lawrencei* having the full black chin. As it was undoubtedly a breeding bird we searched the vicinity carefully for the female and nest but without result, and absence from town prevented my looking for the young later that summer.

Believing some of the young might return to that neighborhood this year I revisited it on May 24, and collected another male within 300 yards of where the other was taken. This bird has the feathers of the chin yellow; the extreme upper throat black at base tipped with yellow; and the lower throat black, each barb of each feather being narrowly edged with yellow, these giving a brownish effect. In other respects it resembles the bird taken last year, except that the wing-bars are more yellow, and shows the plumage that might be expected if, as I believe, it was the young of that bird with a female *H. pinus*. Fourteen others of this genus examined within half a mile of this spot the same morning were all Blue-winged Warblers.

### Connecticut.

*Vermivora lawrencei*. LAWRENCE'S WARBLER.—On May 20, 1909, I collected an adult male less than two hundred yards from where those recorded in 'The Auk' for 1906, Vol. XXIII, p. 345, were taken. This bird closely resembles that taken May 24, 1906, but the black of the throat is purer. The capture of three males at the same place in different years would tend to show that this phase of plumage is hereditary.

On June 4 of the same year, while collecting with Mr. Herbert K. Job in Woodmont, I obtained another typical male Lawrence's Warbler. After about two hours' search a female Blue-winged Warbler (*V. pinus*) was flushed from a nest containing 4 of her eggs and 2 of the Cowbird (*Molothrus ater*) about thirty feet from the tree where the male Lawrence's was shot. As no others of this genus were noted within a quarter of a mile I have no doubt these birds were mated. The nest, eggs and location were typical of *V. pinus*, as was to be expected. All are now in my collection.—LOUIS B. BISHOP, *New Haven, Conn.*

Auk 27, Oct-1910 p. 463-464.

A Third Specimen of Lawrence's Warbler.—While collecting in a piece of low, swampy woods at Rye, Westchester Co., N. Y., on Aug. 31, 1888, I shot a Warbler, which, on the identification of Prof. J. A. Allen, proved to be a Lawrence's Warbler (*Helminthophila lawrencei*). This bird, an adult male, is in excellent plumage. In comparison with the specimen in the American Museum of Natural History, taken at Hoboken, N. J., the throat patch is a more intense black while the black stripe through the eye is broader, being of exactly the same extent as in *H. chrysopiera*. In its actions it resembled *H. pinus*, though, of course, I did not wait long to study its actions. The stomach contained very small beetles and larvae.

This is the third specimen of this bird to date.—CLARK G. VOORHEES, New York City.

*Auk*, V, Oct., 1888, p. 427.

Notes concerning certain birds of  
Long Island, N. Y.

by William C. Brewster, M. D.

*Helminthophila lawrencei*. At Cold Spring Harbor, Long Island, May 8, 1902, a specimen of Lawrence's Warbler was secured. Nothing except its peculiar coloring was noted as distinguishing it from numbers of other warblers feeding in the same trees with it. The specimen is a male, and seems perfectly typical. This is the first recorded instance of its occurrence on Long Island.

*Auk*, XX, Jan., 1903, p. 53.

Capture of Lawrence's Warbler on Staten Island, N. Y.—At Richmond, Staten Island, N. Y., on May 11, 1907, I found a Lawrence's Warbler (*Helminthophila lawrencei*) on some dead bushes out in a dry field. Its black throat and cheeks, sharply contrasted with the rich yellow of its breast and crown, rendered it particularly conspicuous among the other warblers present. Fortunately I was able to verify my observation by shooting the bird, which proved to be a male, of typical color, with two white bars on each wing, washed with yellow, and somewhat wider and more confluent than is usual with the Blue-winged Warbler.—JAMES CHAPIN, New Brighton, N. Y.

*Auk*, 24, July, 1907, p. 343

**Breeding of Lawrence Warbler in New York City.**—It is with pleasure that I am able to place on record some notes of the breeding of Lawrence Warbler (*Helminthophila lawrencei*). This is, I believe, the twelfth individual of this species to be recorded, and the first instance of its breeding, the other eleven birds being migrants.

The discovery of the nest was first made by Dr. Wiegmann early in June of the present year, and many of the following notes are from his observations.

**Occurrence.**—On May 15, 1903, Dr. Wiegmann observed a Lawrence Warbler in the New York Zoological Park, and on June 6 of last year I made a note of this species in my journal, but the glimpse I had of the bird was so brief that I then recorded the identification as not sufficiently certain for publication. The bird was first observed in the Park on May 18 of this year, and almost every day thereafter until June 16.

**Plumage.**—The individual Lawrence Warbler under consideration was exactly like the type specimen of Herrick as described in Ridgway's 'Birds of North and Middle America' (U. S. Nat. Mus. Bull. No. 50, Part II, p. 452) except that the gular patch of black extended over the entire chin. The bird was in finest plumage, the markings of the throat and lores being jet black. The wing bars were white with just a tinge of yellow when seen in a favorable light at short range.

**Habitat.**—The bird's breeding place in the Zoological Park was in an open hardwood growth, near one of the Society's buildings, hardly a stone's throw from the Bird House.

**Song.**—This resembled very closely the dreamy *zrec-e-e, zwee-e-e-e* of the Blue-winged Warbler (*H. pinus*). An acute ear, however, could detect that the first phrase was a typical *chrysoptera* syllable, while the second was a perfect *pinus* syllable, thus: *shree-e-e, zwee-e-e-e*, the first syllable penetrating and somewhat harsh, the second long-drawn, dreamy and wheezy.

**Habits.**—Very similar to *pinus*. The male Lawrence Warbler was mated with a typical female Blue-winged Warbler. The nest was placed on the ground among a thick layer of dead leaves, and was arched over and almost concealed from view by sweet-brier vines. It was a well-made cup of dried leaves lined with strips of cedar bark. On June 13 there were six vigorous young birds in the nest, all in the typical nestling plumage of *H. pinus*, showing no traces of the black markings of *H. lawrencei*. Within five minutes after our arrival, both parents appeared, carrying mouthfuls of green cut-worms. The birds were very tame, allowing us to approach within eight feet without showing fear. At other times the birds were within a yard of the observer. Both parents kept up the sharp chips of warning to the young. The young birds left the nest in safety on June 16, and though search has been since made, they have not again been observed.

It is hoped that this interesting and rare species, whether it be a hybrid or, as I half suspect, a species in the process of making, will make the Zoological Park its home for a third year. It has seemed to us that when the identification is as certain as in this instance, the interests of science may best be served by permitting the bird to breed unmolested, rather than by simply adding a twelfth skin to our collections, and by so doing, put an end to all hope of future observations of the bird or its offspring. I wish that ornithologists would do likewise more often in the case of extra-limital records of species where the identification of the living bird is certain.—C. WILLIAM BEEBE, Curator of Ornithology, New York Zoological Park. *Auk*, XXI, July, 1903, p. 387-388.

CAPTURE OF A SECOND SPECIMEN OF HELMINTHOPHAGA  
LAWRENCEI.

BY HAROLD HERRICK.

IN 1874 I had the pleasure of publishing in the "Proceedings of the Academy of Natural Sciences of Philadelphia" (p. 220, pl. xv) a description of a new species of *Helminthophaga* that I had just been fortunate enough to unearth. It has remained unique up to the present time, and although its friends have stoutly maintained its validity, the "hybrid" theorists have sorely tried their faith; therefore I am more than pleased to be able to set the matter permanently at rest by announcing the capture of a second specimen of *Helminthophaga lawrencei*. The specimen, oddly enough, was secured by Mr. Lawrence himself, who sends it to me with a letter of explanation, from which the following is an extract:—

"I obtained the specimen of *H. Lawrencei* last fall from a dealer, who called my attention to it as having a black throat, differing in that respect from any species he had ever before met with. He said it was sent to him last spring from Hoboken, N. J., with a miscellaneous lot of Warblers. I think the acquisition of a second specimen of this species should put at rest all doubt of its validity."

This specimen agrees precisely with the type, with this slight exception, that the type is an adult male, probably in the second or third year, while the bird under consideration is unquestionably a yearling male, and still has the immature yellowish tips to the coal-black feathers of the throat-patch. A slightly similar effect is seen in the yearling males of *Dendroica virens*. I cannot better describe it than by republishing the description of the type.

"Upper parts and rump olive-green, a shade darker than in *pinus*. Wings bluish-gray, with two white bands, the upper not so clearly defined as in *pinus*. Tail bluish-gray, with the three outer tail-feathers with most of the web white, also a small white spot on the end of the fourth feather. Crown and under parts, from breast to vent, orange. A broad black patch extends from the bill through and behind the eye. Chin, throat, and forepart of the breast black. A yellow stripe, commencing under the bill, extends back between the black eye- and breast-patches, and increases in width upon the shoulder. Length, 4.50; wing, 2.50; tail, 2.00. Measurements from the mounted bird."

The measurements of the two birds are as nearly identical as is possible when one bird is mounted and the other a skin. Of its habitat, the plumage of the female, and its nesting peculiarities, we can only conjecture, but it seems not unreasonable to presume that its habitat is similar to that of its near congener, *H. pinus*, and that New Jersey may some day produce its nest and eggs, as it has already produced the only two known specimens of the bird.

The female, I believe, will be found to be not unlike that of *H. pinus*, and a close inspection of supposed specimens of the latter bird now in collections may develop some interesting facts.

In conclusion it may be well to add, what by inadvertence I omitted when the description was first published, namely, that for the correct delineation of the bird in the plate I am indebted to Mr. Robert Ridgway, of the Smithsonian Institution, to whom I take this opportunity of tendering my thanks.

An Interesting Specimen of *Helminthophila*.—Mr. E. Carleton Thurber, of Morristown, New Jersey, has kindly sent me for examination a *Helminthophila*, which differs considerably from anything that has been hitherto described, and which is apparently a hybrid between the hybrid *H. lawrencei* and the typical *H. pinus*. It is most like the adult male *H. pinus*, the wing- and tail-markings and general coloring, both above and beneath, being essentially the same. But across the jugulum there is a broad band of heavy black spots, and the black eye-stripe, short and well defined in *pinus*, is in this bird narrowed to a mere line anteriorly, and posteriorly extends to the auriculars, over a portion of which it spreads, forming a dusky or blackish patch more or less broken or overlaid by a plentiful mixture of yellow. The black-spotted space on the jugulum is widest in the middle, narrowing gradually as it approaches the sides. Its greatest width is rather more than one-quarter of an inch. The spots are sub-terminal, all the feathers being tipped, and many of them edged as well, with the rich yellow of the underparts generally. This, of course, tends to conceal the black, but it cannot be entirely concealed by any arrangement of the feathers, and when they are disarranged ever so slightly it is a conspicuous feature. Its effect is not unlike that seen in young autumnal males of *Dendroica virens*, which have the black of the throat and jugulum more or less similarly overlaid with yellow.

In briefer terms, this interesting bird may be said to be about intermediate in color and markings between typical *pinus*, with its short, narrow eye-stripe and uniformly yellow underparts, and the so-called *H. lawrencei*, which has a broad, black patch extending from the bill through and behind the eye, and the chin, throat, and forepart of the breast solidly black. It forms an important link in the chain of evidence supporting my theory\* that *H. pinus* and *H. chrysoptera* frequently interbreed, and that their offspring perpetuate a variously-characterized hybrid stock by breeding back into one or the other parent strains. That this is the only possible way of accounting for the now almost complete series of intermediate specimens connecting the obviously distinct species *H. pinus* and *H. chrysoptera* is to my mind certain, despite the able argument to the contrary lately published† by Mr. Ridgway.

Mr. Thurber tells me that the specimen just described, was shot about May 15, 1884, two miles from Morristown, and exactly four and one-half miles from the place where the type of *lawrencei* was obtained. The sex was not determined, but it is undoubtedly a male. The collector, Mr. Frank Blanchet, has also taken another hybrid of the '*H. leucobronchialis*' type in the same locality [as above recorded by Mr. Thurber].—WILLIAM BREWSTER, Cambridge, Mass. **Auk**, 3, July, 1886, p. 411-12.

\* Bull. Nutt. Orn. Club, Vol. VI, 1881, pp. 218-225.  
† Auk, Vol. II, 1885, pp. 359-393.

Recent Additions to North American  
Avifauna, J. A. Allen,

7. *Helminthophaga lawrencei*, Herrick, sp. nov. LAWRENCE'S  
WARBLER.—Proc. Acad. Nat. Sci. Phila., 1874, 220, pl. xv. New  
Jersey.

**Bull. N. O. C.** 5, April, 1880, p. 89

*On the Relationships of H. leucobronchialis and H. lawrencei.* Brewster.  
*Helminthophaga lawrencei*. . . See under  
*H. leucobronchialis*. Oct.  
**Bull. N. O. C.** 3, ~~1880~~, 1881, p. 218-225

**Lawrence's and Brewster's Warblers and Mendelian Inheritance.**—In any discussion of the status of Lawrence's and Brewster's Warblers it is well to bear in mind that the facts, including the much greater abundance of Brewster's, are in accord with Mendel's Law of Heredity, supposing both forms to be hybrids between *Helminthophila pinus* and *H. chrysoptera*. I have written out an hypothetical explanation of the case along these lines, signaling the two most prominent varying characters of the birds, namely, color of underparts and presence or absence of black throat patch. Familiarity with Mendel's Law is taken for granted, and I would refer anyone to whom it is not familiar to an excellent article on the subject by W. E. Castle in Volume XXXVIII of the Proceedings of the American Academy of Arts and Sciences, January, 1903.

Let W stand for "white below"; w stand for "absence of white," *i. e.*, "yellow."

Let P stand for "plain throat"; p stand for "absence of plainness," *i. e.*, "black throat."

Then *H. chrysoptera* is pW; *H. pinus* is Pw; PW (the pure dominant) is Brewster's Warbler; pw (the pure recessive) is Lawrence's Warbler. *H. chrysoptera* × *H. pinus* is pWPw, but in plumage PW, Brewster's Warbler. All the first generation hybrids will be Brewster's Warbler in plumage. In the next generation there will be pure Golden-winged Warblers, pure Blue-winged Warblers, pure Brewster's Warblers, and pure Lawrence's Warblers; also mixed birds of the first three forms, but none of the last form, which, being recessive, comes to light only when pure. The original hybrids then (which will be all Brewster's in plumage) must be fertile with one another or with the parent species for any Lawrence's to occur; and if they are perfectly fertile Lawrence's must still remain a small minority. After the first generation the proportion of plumages of birds with mixed parentage should be: 9 Brewster's, 3 *chrysoptera*, 3 *pinus*, 1 Lawrence's. See Table.

In plumage		In plumage	
PWPW	Brewster's	PWPw	Brewster's
pwpw	Lawrence's	PWpW	"
PwPw	<i>pinus</i>	PwPW	"
pWpW	<i>chrysoptera</i>	pWPW	"
Pwpw	<i>pinus</i>	PWpw	Brewster's
pWpw	<i>chrysoptera</i>	pWPw	"
pwPw	<i>pinus</i>	pwPW	"
pwpW	<i>chrysoptera</i>	PwpW	"

9 Brewster's, 3 *chrysoptera*, 3 *pinus*, 1 Lawrence's.—JOHN TREADWELL Nichols, New York City.

**Ask 25, Jan. 1903, p. 86.**



Portland, Conn. June 10<sup>th</sup> 89.

Dear Mr. Brewster:

Took another of your long named Warblers today. It is pure white below and shows no trace of yellow on the back. Crown + wing bars very bright yellow.

All my other specimens show yellow below and above but as this is my fourth consecutive year

in capturing these birds  
perhaps it will (to)  
have a change in plumage.

Its so late in the  
season that it must  
have been breeding.

My man worked the  
ground thoroughly but  
found no nest. We  
shall give the locality  
further investigation.

With regards,

Sincerely  
W. K. Sage

~~Portland, Conn. June 16/89~~  
Portland, Conn. June 16/89

Dear Mr. Brewster:

If I don't  
go to Rocton soon will  
send the leucos as you  
suggest - its typical, sure.

They are getting so common  
here that another season  
we will take pity on you  
and ask them to go a little  
farther north. They have  
a bad habit of settling in  
a Brewster Caw.

Since writing the other  
day I have found something

in capturing these birds  
perhaps it will to  
have a change in plumage  
particularly interesting  
the interbreeding of Hel-  
pinus + Chrysoptera

On June 13<sup>th</sup> my man  
noticed a ♂ pinus with  
food in its bill fly & disappear  
at the foot of a small alder.  
A ♀ Chrysoptera soon  
appeared, also with food &  
was lost to sight at  
the same spot as the  
other bird. On going to  
the locality five yg. birds  
flew from the nest & alighted  
in the bushes. Both parent  
birds were soon feeding  
the yg. again. He shot  
the old birds & secured all  
the yg. together with the nest.

The young are all similar  
shave the head, neck - chest.  
sides & back olive - green -  
Abdomens pale or olive -  
yellow. Two wing bars  
of light olive edged with  
yellow.

Shall have you see  
the whole family sometime  
Too bad these youngsters  
were not white below.  
June 4<sup>th</sup> I found the  
♂ pinus must have  
nearly put my foot on  
the nest.

The old birds are both  
beautiful specimens.  
The ♀ shows much yellow  
below.

in capturing these birds  
perhaps it will do  
have a change in plumage.

Have sent a little <sup>in</sup> the  
account to Mr. Allen for <sup>at</sup>  
July "bank":

June 14<sup>th</sup> I heard <sup>the</sup>  
chrysoptera or leuco, singing <sup>at</sup>  
(my pet theory on song of leuco  
leuco - is not good) shape <sup>by</sup>  
to get more young birds  
before the season is over.

How would it do to  
put wire netting over  
their favorite ground <sup>to</sup>  
so get a corner on these <sup>large</sup>  
birds.

Sincerely,  
W. H. Sage

S. E. MEYERS,  
President.

1896.

J. A. RICHARDSON,  
Cashier.

UNITED STATES DEPOSITORY.

**YALE NATIONAL BANK**

New Haven, Conn. - May 20 1890

W. William Brewster

My Dear Sir

You will probably  
recollect having a specimen of H. leucobrochis  
sent you by my boy which I collected  
in 1888, not being familiar <sup>at that time</sup> with the  
species I labelled it ♀ H. pinus (after dissection)  
as it was taken under circumstances  
promising it to mate with a ♂ pinus taken  
at the same time & nearly the same  
moment, now what I am driving at  
is this, my identification of sex was  
doubted by you at the time and I  
write you at this time to state that  
on May 17<sup>th</sup> (last Saturday) I took  
another H. leuco, evidently mated with  
a ♂ pinus, which, ~~which~~ upon dissection  
proves to be a ♀ with eggs fully formed  
and I have them preserved in alcohol  
I am very much pleased by this

in capturing these birds  
perhaps it will to  
have a change in plumage.

Have sent a little the  
account to Mr. Allen for st  
July "duke":

June 14<sup>th</sup> I heard the  
chrysoptera or leuco, singing but  
(my pet theory on song of  
leuco)

S. E. MERWIN,  
President.

196.

J. A. RICHARDSON,  
Cashier.

UNITED STATES DEPOSITORY.

**YALE NATIONAL BANK**

New Haven, Conn. 189.

as it will go far toward establishing  
the correctness of my earlier specimen  
in regard to sex. personally I have  
never had the slightest doubt of its  
being a ♀ but the scarcity of the ♀  
specimens has always perplexed me

I have already found three nests  
of pinus and am almost sure  
that one of them is owned by  
♀ pinus + ♂ leuco. I have also taken one  
juv ♂ leuco this season (May 12<sup>th</sup>)

The ♀ of the species of which there is now  
no doubt is much less white than the  
♂ and grades toward ♀ pinus as also  
does the specimen of 1880

Yours Ornithologically,  
J. W. Elwha  
of Yale Natl Bank

QUARTERLY BULLETIN  
OF THE  
NUTTALL ORNITHOLOGICAL CLUB.

Vol. I. APRIL, 1876. No. 1.

DESCRIPTION OF A NEW SPECIES OF HELMINTHOPHAGA.

BY WM. BREWSTER.

HELMINTHOPHAGA LEUCOBRONCHIALIS. Pl. 1\*

Adult male: summer plumage. Crown, bright yellow, slightly tinged with olive on the occiput. Greater and middle wing coverts, yellow, not so bright as the crown. Superciliary line, cheeks, throat and entire under parts; silky-white, with a slight tinge of pale yellow on the breast. Dorsal surface,—exclusive of nape which is clear ashy—washed with yellow, as are also the outer margins of the secondaries. A narrow line of clear black passes from the base of the upper mandible, through and to a short distance behind the eye, interrupted however by the lower eyelid, which is distinctly white. No trace of black on the cheeks or throat, even upon raising the feathers. Bill black. Feet, dark brown. Dimensions—length, 5.19; extent, 7.83; wing, 2.45; tarsus, .71; tail, 1.86; culmen, .53.

It will be seen from the above description that this bird resembles most closely the Golden-winged Warbler, (*Helminthophaga chrysoptera*.)

The entire absence of black or ashy on the cheeks and throat, the peculiar character of the superciliary line, and the white lower eyelid, present however differences not to be reconciled with any known seasonal or accidental variation of that species. The restricted line of black through the eye gives the head a remarkable similarity to that of *Helminthophaga pinus*, but the semblance goes no farther.

The specimen above described was shot by the writer in Newtonville, Mass., May 18, 1870. It was in full song when taken and was flitting about in a thicket of birches near a swampy piece of oak and maple woods. As nearly as can be remembered it did not differ much in either voice or actions

\* The original of our plate was drawn and colored by Robert Ridgeway, Esq., of the Smithsonian Institution, and presented by him to Mr. Brewster.

Recent Additions to North American  
Avifauna. J. A. Allen.

6. *Helminthophaga leucobronchialis*, Brewster, sp. nov. WHITE-THROATED WARBLER. — Am. Sportsman, V, 33, Oct. 17, 1874; Bull. Nutt. Orn. Club, I, 1876, 1, plate. Massachusetts.

Bull. N. O. C. 5, April, 1880, p. 89

from *H. chrysoptera*. The first notice of this specimen appeared in the "American Sportsman," vol. 5, p. 33. To speculate on the probable home or range of a bird so little known would be at the present time idle. Whether it must be placed in the same category with the unique *Euspiza Townsendii*, *Regulus Cuvieri*, etc., or like *Dendraca Kirklandii*, will turn up occasionally in the future at different points, or still again as in the case of *Centronyx Bairdii*, will be found in large numbers, time alone can decide. Every fixed species of bird is probably common somewhere. There is always some well stocked reservoir however restricted in area, from which the choicest rarities emanate, but to locate this avian well-spring is not seldom an undertaking of difficulty.

As previously remarked the differences in coloration in the present bird from any of its allies are so great, and of such a nature, as to render any theory of accidental variation exceedingly unlikely, while hybrids—at least among the smaller species of undomesticated birds—are of such shadowy and problematical existence that their probable bearing upon the present case is hardly worthy of consideration.

It is not a little remarkable that another species\* in the same genus as this, and one too apparently quite as strongly characterized, should have been brought to light at so nearly the same time.

Bull. N. O. C. I, April, 1876, p. 1-2.

THE COMMON BUZZARD HAWK (*BUTEO VULGARIS*) OF EUROPE IN NORTH AMERICA.

BY C. J. MAYNARD.

Late in the autumn of 1873 I received a box of bird skins from Mr. J. D. Allen, of Paw Paw, Mich. They consisted mainly of Hawks, among which was a specimen that instantly attracted my attention, for it was quite peculiar in its markings. The skin was evidently that of a *Buteo*, but I could not make it agree with any of the plumages of the species which had come under my observation. This was the result of a hasty examination, for being extremely busy at the time I laid it one side for further comparison.

Later study upon it proved as nearly as possible, without

\* *Helminthophaga Lawrenceii*, Herrick. Proc. Acad. Natural Science, Phila., 1874, pl. 15, p. 220.

Recent Additions to North American Avifauna. J. A. Allen.

6. *Helminthophaga leucobronchialis*, Brewster, sp. nov. WHITE-THROATED WARBLER. — Am. Sportsman, V, 33, Oct. 17, 1874; Bull. Nutt. Orn. Club, I, 1876, 1, plate. Massachusetts.

Bull. N. O. C. 5, April, 1880, p. 89

Helminthophila leucobronchialis

From Hudson, Mass.

By Samuel J. Wilson, May & June 1858.

Bull. N. O. C. July, 1879, IV pp. 184-5.

**The Breeding of Brewster's Warbler near Boston.**—On May 19, 1907, in the Arnold Arboretum, near Boston, Mass., I heard a bird song which I supposed at first was that of a Golden-winged Warbler. Upon investigation, I found the bird on a low birch tree, feeding and singing by turns. To my surprise, though, it had the broad yellow wing-bars, bluish gray back, and yellow crown which I had expected to see, there was only a narrow black line through the eye, and an entire absence of black on the cheeks and throat, the entire under parts being silky pearl-white. Though I was entirely unfamiliar with Brewster's Warbler in life, I had seen stuffed specimens and had read with much interest the latter-day discussions of its relation to Golden-winged and Blue-winged Warblers. A few days later I was allowed to see, through the kindness of Mr. Walter Deane, Mr. Brewster's specimens of all three species, *Helminthophila pinus*, *Helminthophila chrysoptera*, and *Helminthophila leucobronchialis*, among which was the type specimen of *leucobronchialis* taken by Mr. Brewster in Newtonville, Mass., on May 18, 1870. The resemblance between the type specimen and the bird in the Arboretum, as I remembered it, was absolute, except that there was a very slight wash of yellow on the breast of the type specimen which I had not observed on the living bird. Interest in the Arboretum bird quickly spread and it was soon seen by many other observers, all of whom agreed that it was a Brewster's Warbler; the first record for Massachusetts, I understand, since the taking of the type specimen thirty-seven years ago. On June 8, a thorough search of the vicinity was made by several of our more expert local ornithologists, and the female, nest, and five eggs were discovered, the nest being located, I believe, by Mr. C. J. Maynard. The nest is on the ground, at the foot of a tiny elm tree situated among other low trees and shrubs, and is within six or seven feet of the main driveway through the Arboretum. Across the driveway at this point is a spring and the beginnings of a small brook. In the structure of the nest are interwoven brown leaves with upturned stems, after the fashion of the Blue-winged Warblers as stated in Mr. Chapman's 'Handbook of the Birds of Eastern North America.'

A number of interesting circumstances are to be noted: first, the female has blackish areas on the throat and cheeks, shaped like those on a Golden-wing, but has also a still blacker, narrow line extending through the eye; second, a pair of Golden-winged Warblers has been known to breed in the Arboretum, in the immediate vicinity of the present nest, for a number of years; third, this year the Golden-wings seem to be absent.

Of course the most intense interest centers in the expected young, and it is to be fervently hoped that so accident will befall to prevent the successful hatching of the eggs and rearing of the young birds.—HELEN GRANGER, Cambridge, Mass. *Auk*, 24, July, 1907, p. 343-344

**An Intergrade between *Helminthophila pinus* and *H. leucobronchialis* captured in Hyde Park, Mass.**— This bird, a male, was discovered by me on the morning of June 13, 1907, on a hillside covered by a dense growth of low oaks and birches, in the town of Hyde Park, Mass. I was drawn to the bird by his song, which was identical with that of the Golden-winged Warbler, being sometimes composed of three notes, *zee, zee, zee*, sometimes of four, and once only of two. I thought likely that it might be breeding here, but I could find no trace of the nest, so I decided to return in the afternoon and shoot the bird if it could be found, in order that a proper examination and record of it might be made.

I returned about three o'clock and shot it near the place where I had seen it in the morning. The description and measurements of this specimen are as follows:

Crown yellow, with a few dark feathers. Back and wings greenish yellow, some of the wing feathers being bluish gray edged with greenish. Tail bluish gray above, the three outer pairs of feathers partly white.

like those of *H. chrysoptera*.<sup>1</sup>—WALTER FAXON, *Lexington, Mass.*

***Helminthophila leucobronchialis* (Brewst.) in Lexington, Mass.**— On the 14th of June, 1907, while walking in company with Dr. Winsor M. Tyler through a hillside pasture sloping down to a wooded swamp in the town of Lexington, Mass., I came upon a male Brewster's Warbler in full song. This bird was often scrutinized by Dr. Tyler and myself at short range and with the aid of powerful glasses, from this time forth up to the end of June, about which time it stopped singing and disappeared from view. It wore the pure, unadulterated *leucobronchialis* dress, revealing not the slightest trace of yellow on the lower parts, even when seen at close quarters and by the aid of the most favorable light. Its crown was bright yellow, lores black, this color continued behind the eye as a short, thin postocular streak (as in *H. pinus*). Back gray (as in *H. chrysoptera*). Wing-patch yellow, indistinctly divided into two bars. Lower parts silk-white, purest on the chin and throat.

There were two male *H. chrysoptera* in the immediate neighborhood — so near that all three could be heard singing at the same time. The Brewster's Warbler had two different songs, absolutely indistinguishable from two of the songs of the Golden-winged Warbler. The first of these

<sup>1</sup> See Note by Helen Granger, in the July number of 'The Auk,' p. 343.

Both wings and tail light gray underneath. Two yellow bars on each wing, not so broad as in *H. chrysoptera*. A black line through the eye; sides of neck a little whitish; chin, throat, breast, sides, and belly decidedly yellow, this color being strongest on the breast. Some bluish gray feathers on the upper back and wings. Eyes hazel. Bill black. Tarsi and feet greenish black. Length, 5.05 in.; extent, 7.75; wing, 2.40; tail, 1.90; tarsus, .75; middle toe, .50; bill, .40. This specimen is now in my collection.—H. G. HIGBEE, Hyde Park, Mass.

**Additional Notes on the Brewster's Warbler in the Arnold Arboretum, Jamaica Plain, Mass.**<sup>1</sup>—The five eggs hatched June 15; the young left the nest June 22, after remaining in the nest but seven days. This tallies exactly with what I observed in a nest of *Helminthophila chrysoptera* in Arlington, Mass., in 1897: the five eggs hatched June 8, the young quit the nest June 15.

An agent was sent from the Museum of Comparative Zoölogy on the 22d to collect the young birds and the two parents, but he was forbidden by the authorities of the Arboretum to shoot any of them. The nest is now in the Museum (No. 5083). The parent birds in this case were, as far as I could see, a normal male *H. leucobronchialis* without any yellow below, and a female *H. chrysoptera* (essentially), the only abnormal mark that I could detect on her being a blackish line bounding the gray cheek patches above and separating them from the white superciliary streaks. The five eggs, it may be noted, were dark-spotted near the larger end and appeared like those of *H. chrysoptera*.—WALTER FAXON, Lexington, Mass.

**Helminthophila leucobronchialis (Brewst.) in Lexington, Mass.**—On the 14th of June, 1907, while walking in company with Dr. Winsor M. Tyler through a hillside pasture sloping down to a wooded swamp in the town of Lexington, Mass., I came upon a male Brewster's Warbler in full song. This bird was often scrutinized by Dr. Tyler and myself at short range and with the aid of powerful glasses, from this time forth up to the end of June, about which time it stopped singing and disappeared from view. It wore the pure, unadulterated *leucobronchialis* dress, revealing not the slightest trace of yellow on the lower parts, even when seen at close quarters and by the aid of the most favorable light. Its crown was bright yellow, lores black, this color continued behind the eye as a short, thin postocular streak (as in *H. pinus*). Back gray (as in *H. chrysoptera*). Wing-patch yellow, indistinctly divided into two bars. Lower parts silk-white, purest on the chin and throat.

There were two male *H. chrysoptera* in the immediate neighborhood—so near that all three could be heard singing at the same time. The Brewster's Warbler had two different songs, absolutely indistinguishable from two of the songs of the Golden-winged Warbler. The first of these

<sup>1</sup> See Note by Helen Granger, in the July number of 'The Auk,' p. 343.

was the familiar *zee, zee, zee, zee* of *chrysoptera* varied at times by docking one or two of the last notes. The second song may be represented thus: — *ti-ti-ti-ti-ti-ti, zee*, the preliminary notes (sometimes increased to as many as eight) delivered rapidly and without any of the buzzing quality of the long, higher, final note. This song also was indistinguishable from the second song of the Golden-winged Warbler.

Let us now compare the song of this bird with what has hitherto been recorded concerning the song of Brewster's Warbler. The type specimen (Newtonville, Mass.) was singing the first song of *chrysoptera* when it was shot (*test.* Brewster and Maynard). The Arnold Arboretum bird recorded by Miss Granger in the last number of 'The Auk,' usually sang the same song (*zee, zee, zee, zee*) but on one occasion it was heard singing the second song, described above, several times in quick succession (Miss Granger, *in litt.*). The intergrade between *H. pinus* and *H. leucobronchialis* shot by Mr. Higbee in Hyde Park, Mass., on June 13 of this year (see Mr. Higbee's note above) sang the first, ordinary song of *chrysoptera*. In brief, the few observations on the song of Brewster's Warbler in Massachusetts disclose no differences between it and the Golden-wing. Connecticut observers, on the contrary, find that in that State Brewster's Warbler sings sometimes like *chrysoptera*, sometimes like *pinus*, while Mr. Eames (Auk, VI, 309) and Mr. Sage (Auk, X, 209) aver that at times it utters notes peculiar to itself. But are Mr. Eames and Mr. Sage familiar with the second, less often heard song of *chrysoptera*? If not, the "peculiar" notes may prove to be those of the Golden-wing.

In this connection it may be worth while to complete the account of the musical repertory of *H. chrysoptera*. One bird, observed last June, varied his score by combining the first and second songs into one long and varied melody; — *zee, zee, zee, zee, ti-ti-ti-ti-ti-ti-zee*; another, discovered by Dr. Tyler near the Lexington Golf Links, sang in addition to songs 1 and 2, a third peculiar song, two long-drawn notes, *zee, zee-e-e-e*, the second note higher than the first and delivered with a quaver. This song No. 3 singularly suggested the ordinary song of *H. pinus*, though the relative pitch of the first and second notes was reversed.

On one occasion we heard the second song given when the bird was on the wing, and modified by that rapturous delivery which goes with the flight songs of birds. The author of this song was probably the Brewster's Warbler, though the proximity of two Golden-wings at the time made this a little uncertain.

It was my intention to secure the Brewster's Warbler at last, but I delayed shooting so long in the hope of finding through him his mate, nest, or young, that he eluded me by lapsing into silence.

This is the fourth specimen of Brewster's Warbler in Massachusetts. The other records are, Hudson, May or June, 1858, ♂, Sam'l Jillson, now in the collection of Williams College (Purdie, B. N. O. C., IV, 184); Newtonville, May 18, 1870, ♂, the type, W. Brewster (Amer. Sportsman, V, Oct. 17, 1874, p. 33); Jamaica Plain, May 19, 1907, ♂, Helen Granger

(Auk, XXIV, 343). Of these the type specimen (in Mr. Brewster's collection) has a very faint tinge of yellow on the breast, the others showed no trace of yellow on the lower parts. Then there is the specimen recorded in this number of 'The Auk,' Hyde Park, Mass., June 13, 1907, ♂, H. G. Higbee, which is midway between *H. pinus* and *H. leucobronchialis*, heavily washed with yellow from the base of the bill to the under tail coverts. — WALTER FAXON, Lexington, Mass. *Auk*, XXIV, Oct. 1907, p. 443-446.

RECORD OF ADDITIONAL SPECIMENS OF THE WHITE-THROATED WARBLER (*Helminthophaga leucobronchialis*).— In this Bulletin, Vol. III, p. 199, Mr. William Brewster describes the fifth then known specimen of the above-named Warbler. I can now announce three more, and allude to what I presume is a fourth:—

1. A very typical example shot by Mr. Samuel Jillson, in Hudson, Mass., in May or June, 1858. By considerable correspondence I traced this specimen to the collection of Williams College, Williamstown, Mass. Prof. P. A. Chadbourne, without hesitation, very kindly sent it to me for examination. The under surface is clean, silky white, with no trace of yellow anywhere; back pure ashy. It was labelled "*H. pinus*, male." This capture antedates all but the Philadelphia Academy specimen, and is the second Massachusetts occurrence.

2. A male is in possession of William W. Coe of Portland, Conn., taken there May 22, 1875, which I have been able to handle by his obligingly loaning me the bird. This one departs from what we consider type specimens in the amount of yellow on both the upper and under parts. There is a broad band or blotch of this color on the breast, with a slight suffusion on the chin and the rest of the ventral aspect. The whole dorsal plumage, from the crown, is faintly washed with the same tint. Compare this and next with Mr. Brewster's account of E. I. Shores's Suffolk, Conn., specimen, above alluded to.

3. At date of penning these data the following comes from my friend J. N. Clark, at Saybrook, Conn.: "Took a fine male *H. leucobronchialis*, May 30 [1879];— an exceptional specimen, with a patch of bright yellow across the breast from the bend of wings. Thought it was *pinus* when I fired; notes and habits the same." Mr. Clark's is the fourth for Connecticut.

4. The "Daily Democrat" (newspaper) of Grand Rapids, Mich., of June 1, 1879, under the caption "A New Bird," thus alludes to a Warbler shot by Mr. Gunn in Ottawa Co.: ". . . the new bird belongs in what is called the genus *Helminthophaga*; it presents five distinctive points of specific difference to that of its nearest congener, the golden winged warbler (*Helminthophaga chrysoptera*), the chief point of difference being the absence of the black throat which is a characteristic peculiarity of the golden wing, the throat in the new species being white, the chin is pale yellow, a faint line passing down on either side as far as the check. The check patch which forms a prominent marking in the golden winged warbler, is entirely absent. The sub-maxillary stripe is not to be seen, and the lores are merely dusky; but the most peculiar feature in the coloration of the specimen is the bright yellow breast, this color extending as far down as the abdomen and over the flanks. The specimen is a female, and yet it exhibits a golden crown patch equal in intensity to that of the male golden wing. Mr. W. A. Gunn secured this new bird, May 25th while collecting in a patch of underbrush near the edge of a heavy pine forest. He deserves great credit for so valuable an addition to the avifauna of the State and in honor to his capturing it and being the first to present it to public notice, it is named *Helminthophaga Gunnii* by Dr. Gibbs, to whom it was submitted for classification." Allowing for slight individual variation, have we not here a ninth White-throated Golden-wing, or does "*H. gunnii*" hold its own?— H. A. Purdie, Newton, Mass. Bull. N. O. C. 4, July, 1879, p. 184-186.

Near Boston, Mass.

Brewster's Warbler.— Thursday, May 14, 1908, I saw a Brewster's Warbler, a male singing, in the Arnold Arboretum near Boston, Mass. At the time he was singing the regular three-syllabled song. He is in the same part of the arboretum as last year, and is, to all appearances, the same bird.

He was seen the following day by Mr. Charles F. Faxon.— JAMES L. PETERS, Jamaica Plain, Mass. Auk 25, July-1908 p. 320.

**Brewster's Warbler (*Vermivora leucobronchialis*) in Lexington, Mass.**— In 'The Auk' for October, 1907, I recorded a Brewster's Warbler found during the summer of that year in a swamp in Lexington, Mass. In the decade that has since elapsed, this bird has been found established in the same swamp every summer except that of 1909, when no search was made for it. In 1910 and 1913, Dr. W. M. Tyler and I made a careful study of this hybrid and its relations with the Golden-winged Warbler (*V. chrysoptera*) and the Blue-winged Warbler (*V. pinus*). The results of our observations were published by me in the Memoirs of the Museum of Comparative Zoölogy, Vol. XL, Nos. 2 and 6, January 1911 and August, 1913. The persistence of this hybrid form in the same locality through so many consecutive years is in itself well worthy of record; I wish, too, to summarize the knowledge acquired relative to the matings of these birds and the duration of the nestling period.

In the season of 1910 there were two pairs of which the males were Golden-wings, the females Brewster's; one pair of Golden-wings; and one unmated male Brewster's. The issue of one of the heterogeneous pairs, Golden-wing and Brewster's, were all Brewster's Warblers, of the other, a mixed brood of Golden-wing and Brewster's. The pair of Golden-wings produced Golden-wings only.

In 1912 a male Golden-wing mated with a female Brewster's.

In 1913 a male Golden-wing mated with a female Blue-wing, a male Brewster's with a female Golden-wing. The progeny of the first pair were all Brewster's, of the second pair one Golden-wing plus several Brewster's.

In 1914 a male Brewster's mated with a female Golden-wing; their nest was not discovered till June 16, the day the young left it.

In 1917 a male Brewster's mated with a female Golden-wing. Here are six cases of the mating of Brewster's Warbler, each time with a Golden-wing, and one case of a Blue-wing mated with a Golden-wing. Observe that all previously published accounts of the pairing of Brewster's Warbler have been records of the union of this form with either a Golden-wing or a Blue-wing (see my paper in Mem. Mus. Comp. Zoöl., Vol. XL, No. 2, p. 71).

It is worthy of note that the numerous Golden-winged and Brewster's Warblers seen in this locality during these years have without exception exhibited an absolute purity of plumage in spite of the constant crossing of the two forms. In other words, no plumage intermediate between the Golden-wing and Brewster's has cropped out.

Duration of the nestling period: in 1897 the five eggs in a nest belonging to a pair of Golden-winged Warblers (Arlington, Mass.) hatched June 8, the young left the nest June 15. In 1910 the five eggs of a Brewster's Warbler mated with a male Golden-wing hatched June 8, the young left the nest June 17. In 1917, the five eggs of a Golden-wing mated with a male Brewster's Warbler hatched June 21, the young left the nest June 29-30. The life of the young birds in the nest therefore covers from seven to ten days.

The spring of 1917 was without precedent in its backwardness. *V. chrysoptera* did not arrive until May 19. This is latest date for the arrival of this bird in my records of twenty-eight years, the average time of arrival being May 11-12, the earliest, May 3 (1905). This will account for the phenomenally late breeding of the 1917 birds given above.

Several other localities in the town of Lexington are the home of Golden-winged Warblers, but none of them have ever yielded a Brewster's Warbler. In the adjacent towns I have twice seen a Brewster's Warbler: in Concord, May 19, 1912 (Faxon, Mem. Comp. Zoöl., Vol. XL, No. 6, p. 312, footnote 1), five miles from the Lexington swamp, and in Waltham, May 31, 1915, two miles from the Lexington locality.—WALTER FAXON, *Lexington, Mass.*

*Auk. Vol. XXXIV. Oct. 1917. pp. 481-482.*

**Concerning Brewster's Warbler.**—Additional notes on Brewster's Warbler in the July Auk (pp. 481 to 482) by Walter Faxon have much interest. In reading them I notice that he has not touched on one aspect which may not be clear to those unfamiliar with the laws of alternative inheritance.

Supposing, as we do, that where as Brewster's Warbler is the dominant, Lawrence's is the recessive hybrid, it could not be obtained from a cross in which one of the parents was a pure-lineage bird of either species, as the white under parts of *Vermivora chrysoptera* or the lack of throat patch of *pinus* would dominate in every such case. The comparative abundance of *chrysoptera* in the region under discussion makes it probable that the Golden-wings observed mated were pure.

Judicious shooting of *chrysoptera* over the *leucobronchialis* locality would probably induce sufficient *leucobronchialis* interbreeding, so that we would have the final chapter in this interesting colony; an heroic measure perhaps, but doubtless more specimens are frequently taken with less return to science. To interfere with *pinus* would be unwise, as the sporadic occurrence of that species in the Golden-wing's range places it in the position of the goose that layed the golden eggs.—J. T. NICHOLS, *New York, N. Y.*

*Auk*, XXXV, Jan., 1918, p. 82.

THE WHITE-THROATED WARBLER (*Helminthophaga leucobronchialis*)  
IN CONNECTICUT. — Through the kindness of Mr. Charles M. Carpenter  
of Providence, R. I., I have lately had the pleasure of examining a speci-  
men of this recently described Warbler, which was shot by that gentle-  
man at Wauregan, Conn., May 25, 1875. The locality was a wild hill-  
side covered with scrub-oaks and a sprinkling of young pines. Mr.  
Carpenter's attention was first drawn to its presence by its song, which at  
the time he mistook for that of the Golden-winged Warbler (*H. chrysop-  
tera*), though he thinks that it differed in being somewhat higher and  
shriller. The sex of this bird was not determined by dissection, but it is  
unquestionably a male. It agrees closely in every particular with my  
type of the species, as does also Mr. Wood's specimen, which I have like-  
wise seen at Philadelphia. Indeed, it would be difficult to select three  
individuals of any species which vary so little *inter se*. The olive-green  
wash which is spread over the upper parts, with the exception of the  
nape, where an area of unmixed bluish-ash forms a narrow collar, is a  
marked feature in all three specimens, though the silky white of throat,  
cheeks, and lower eyelids, with the narrow restricted black line through  
the eye, may be regarded as the most salient points. The validity of this  
distinctly characterized species must now be regarded as established, but  
further facts relating to its habits and distribution remain to be elicited  
by future investigation. — WILLIAM BREWSTER, Cambridge, Mass.

Bull. N. O. C. 3, April, 1878, p. 49.

Portland, Conn., May 14, 1900  
I saw a beautiful spec-  
if Hel-leuco this morning.  
J. H. B.

THE WHITE-THROATED WARBLER (*Helminthophaga leucobronchialis*)  
IN CONNECTICUT. — Through the kindness of Mr. Charles M. Carpenter  
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Bull. N. O. C. 3, April, 1878, p. 49.

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Mr. William Brewster  
Concord  
Mass.

CAPTURE OF A FIFTH SPECIMEN OF THE WHITE-THROATED WARBLER (*Helminthophaga leucobronchialis*).—I am indebted to Mr. E. I. Shores for the opportunity of examining a specimen of the White-throated Warbler, which was taken by him at Suffield, Conn., July 3, 1875. It is an adult male in very worn plumage. In every essential particular it agrees well with my type of the species, though exhibiting certain peculiarities of coloration not found in any of the three specimens which I have previously examined. These differences are such as might be expected to occur in a series sufficiently large to present the range of individual variation, and do not tend to establish any closer connection with either of the allied species. The most marked departure from the type is presented by the coloration of the under parts. The entire pectoral region is washed with pale yellow, which extends down along the sides of the abdomen nearly to the tail. This coloring proves upon examination to be a merely superficial tipping to the feathers. In a good series of *H. chrysoptera* before me several specimens occur which are marked in a nearly similar manner, though in none of them does the yellow wash extend so far down upon the sides. With this latter species it seems to be a purely individual phase of coloration, dependent neither upon age nor season. Several young males in newly completed autumnal dress do not show the slightest trace of its presence, while a young female in full plumage is quite distinctly tinged across the breast. The spring specimens most strongly marked are all apparently very adult birds.

Another point of difference, scarcely to be expected when the unusual amount of yellow beneath is taken in consideration, is found in the restricted area of the yellow marking upon the wing-coverts. In the type specimen the wing-bands are nearly confluent, and present the appearance of a single broad yellow band upon the wing, while in Mr. Shores's specimen they are widely separated. This, however, seems to be mainly due to the imperfect condition of the plumage, whereby the darker bases of many of the greater coverts are exposed. No further differences worthy of note occur, and the salient characters of white cheeks and eyelids, narrow restricted black line through the eye, etc., are all strongly presented. Mr. Shores's specimen makes the fifth that has already been brought to light, and is the second reported from Connecticut.—WILLIAM BREWSTER, Cambridge, Mass.

Bull. N. O. C. 3, Oct., 1878, p. 179-200.

Another Example of *Helminthophaga leucobronchialis* from Connecticut.—Through the kindness of Mr. Harry W. Flint, of Deep River, Conn., I have the pleasure of examining a specimen of this Warbler killed by him, May 18, 1880, at Deep River. It shows a slight suffusion of yellow under each eye and on the sides of chin, and the pectoral region is washed with the same color, which extends over the abdomen nearly to the tail. The wing-bands are very much restricted, and the white is tinged with yellow. This is, I believe, the thirteenth known example and the fifth reported from Connecticut.—Jno. H. SAGE, Portland, Conn.

[I am indebted to Mr. Sage for an opportunity of examining the specimen above mentioned. It differs from the type, as well as from all the other examples which I have seen, in having the yellow of the forehead partially obscured by a superficial mark of greenish-olive, in the unusual restriction of the wing-bands, and in the generally immature appearance of the plumage. These characteristics are just what we should expect in the female of *leucobronchialis*, and I doubt not that the collector's mark of ♀ is correct.—WILLIAM BREWSTER.] Auk, I, Jan., 1884, p. 91.

Another Example of *Helminthophaga leucobronchialis* from Connecticut.—Mr. Harry W. Flint has kindly presented me with a specimen of this Warbler which he killed at New Haven, Conn., May 19, 1885. It is a male, and shows a slight suffusion of yellow under each eye and on the chin, as well as a light bar of the same color across the breast; rest of underparts white. The wing bars are very much restricted, and the white is tinged with yellow, and there is a spot of the same color on the back.—Jno. H. SAGE, Portland, Conn.

Auk, 2, July, 1886, p. 304.

Notes on *Helminthophila leucobronchialis*.—On May 26, 1888, I captured a male *Helminthophila leucobronchialis* which from comparison with the original description appears to be typical. Length 4.80, spread 7.60 inches. The testes were 5-16 inch long. The stomach contained insects only. Attracted by a new song, I found it among the branches of an apple-tree close by. Apparently it was alone. During the half-hour I watched it, it alighted in the apple-trees in the orchard it was in every time but one, then, for a moment only, on a small hickory. The locality was dry, all the neighborhood being scrubby pasture with very little woodland.

On May 29 I heard this song again, and soon found the bird among the branches of a gigantic and solitary hickory in a high, dry, scrubby pasture-lot. It was extremely shy, but was unwilling to leave the spot. On the 31st I again saw it, feeding and singing in the same tree, and equally shy. Patient watching during three hours revealed nothing more than occasional short and apparently inquisitive flights to several hickory saplings growing about a hazel thicket in the edge of a bushy tract adjoining this pasture. Its errand there seemed to be more with an eye to something below in the bushes than for the sake of feeding. June 3, after ascertaining the bird's presence, I secreted myself and waited. Several times did it come in my vicinity, but only casually as it were, never evincing the least alarm; yet it certainly made the rounds of the aforementioned saplings more frequently than before. At last with more eagerness than usual it descended, and disappeared in the bushes (an unusual occurrence) where it apparently took possession of its nest, as in less than half a minute thereafter an *H. pinus*, the first I had seen in the neighborhood, flew hastily from about the same place. This occurred at about sunset, and between that and dark *leucobronchialis* did not again appear in sight. I had previously had it in view, or could hear its song, almost continuously. On several days following I searched this thicket thoroughly, as it seemed, and once succeeded in flushing a *pinus*, but could not even then find its nest. In company with *pinus*, *leucobronchialis* cautiously approached and surveyed me for a short time, then departed with no apparent misgivings. At all other times *leucobronchialis* was near by and always reconnoitred the track of my careful search when I had moved to some distance, then, apparently satisfied, pursued its avocations as before.

I was not able to visit the spot again until June 17, and neither then nor since have I found this *leucobronchialis*, but I did find a brood of several young being fed by an *H. pinus*, possibly the result of a union between the two. These two birds were the only ones of the genus which I had at any time detected in the locality.

During this time I had seen four other *H. leucobronchialis* (i. e. six in all, this season), and in widely separated localities, as follows:

June 1, one was seen for a moment only in a hickory tree whence it flew into an adjoining alder swamp. It was never seen afterward.

June 4, one in the edge of a dry woodland was watched some time, but never seen again, although upon a subsequent visit some time was spent in hunting for it.

June 10, two were seen by a friend and myself. One, among the branches of the taller trees in a pasture-lot adjoining a dry wood, was again seen June 19 and July 7, this being the latest date I have heard its song or seen the species. The other was seen about one hour later in a similar situation, but fully three-quarters of a mile from the first. I saw this one again June 22. It was always in full song, otherwise I might never have detected it.

The peculiarities of the species are numerous, especially its song, so that, aided by my field-glass, identification was perfectly satisfactory to me in each instance. Moreover, its leisurely movements in conspicuous places always gave good opportunity for study. By actual count all these birds with the exception of the one shot May 26 were seen in hickory trees seven times to three in trees of all other species combined. Its flight on many occasions was protracted to at least 400 feet, always, when so continued, to a tree towering far above the surroundings.

I have heard of one other *H. leucobronchialis* taken in Connecticut this year, at Stamford by a Mr. Hoyt.—EDWIN H. EAMES, *Seymour, Connecticut.*

Ank, V, Oct., 1888, p. 427-28.

Saybrook, Conn.



Notes from Portland, June 26, Sage, Portland Conn.

Mr. Brewster's long-named Warbler, *Helminthophila leucobronchialis*, would seem to be a regular summer visitant, as we have taken it now for seven successive years. It appears by May 10, and is in full song until the middle of June.

Continued experience leads me to think that the song of this puzzling bird is not, as has been stated, any criterion by which to distinguish it. Sometimes they sing exactly like *chrysoptera*, again like *pinus*, and often have notes peculiar to themselves. A trained ear may find the bird, but it needs the eye to properly identify it.

At the present writing I am not inclined to believe *leucobronchialis* a hybrid, but hope to have more to say on this subject at another time.

Auk X, April, 1893. p. 203-9

## General Notes.

Notes from Portland.

All of the Warblers referred to inhabit similar ground, and, with the exception of *lawrencei*, are occasionally taken the same day. It is safe to say that *chrysoptera* is common here, then in order of abundance come *leucobronchialis* and *pinus*, *lawrencei* being extremely rare.—JNO. H. SAGE, Portland, Conn.

Auk X, Apr. 1893 p. 209

## General Notes.

*Helminthophila leucobronchialis*.—On July 1, 1893, I found an adult *H. leucobronchialis* with two young in a small tract of alder swamp and woodland of North Haven, Conn. They were little disturbed at my presence, and I watched them carefully for some time. The adult fed both young at short intervals, leaving little doubt of its relationship to them. On July 4, they were still in the same locality, and I collected all three. Possibly the remainder of the family had been killed, as a careful search on both days through the adjacent country failed to disclose any other member of the genus *Helminthophila*.

Decomposition was so far advanced before I could prepare the adult that I was unable to determine its sex. The fact that it never sang while I was watching it, together with the generally dull color of its plumage, lead me to think it a female.

Unfortunately both of the young were still principally in the olive, downy plumage of nestlings, but enough of the final feathering had appeared on the throat, breast, and upper parts to make it certain that one, and probable that the other, would have become a typical specimen of *H. pinus*. The wing-bars of the young differ, being in the most mature specimen narrow and almost white, and in the other broader and light yellow. The plumage of the young would seem to indicate that the missing parent was an *H. pinus*.

These specimens, I think, tend to confirm the theory of Mr. Ridgway that *H. leucobronchialis* is not a valid species, but merely a leucochroic phase of *H. pinus*.—LOUIS B. BISHOP, M. D., New Haven, Conn.

Auk XI, Jan. 1894 p. 79-80

1032. [*The White-cheeked Warbler, Helminthophila leucobronchialis.*] By J. N. Clark. *Ibid.*, No. 6, p. 43.—Record of a specimen seen (but not taken) at Saybrook, Conn., "in the spring of 1880." *Rare Notes Nat. Hist. Ct.*

New Haven, Conn.

*Vermivora leucobronchialis*. BREWSTER'S WARBLER.—Although I have collected near New Haven some twenty males of this phase of plumage of *V. pinus*, not until May 23, 1910, did I discover one without trace of yellow on back or lower parts. A rather interesting fact is that while practically all the others had the song of *V. pinus* this bird had that of *V. chrysoptera*, and had the wing bars of the latter.

What I believe is the first young bird to be recorded showing this phase of plumage is a young male which I collected in New Haven on September 12, 1907, in first winter plumage. On this the yellow below is much paler than in typical *H. pinus* and fades into white on the throat and sides of the neck.

Auk 27, Oct. 1910 p. 463.

HELMINTHOPHAGA LEUCOBRONCHIALIS IN NEW YORK. — While collecting, Aug. 24, 1879, in a low swampy thicket composed of alders, small maples, etc, I shot a specimen of *H. leucobronchialis*. It was in company with several other species of Warblers. It was an adult male, and resembled Mr. W. W. Coe's specimen, cited by Mr. H. A. Purdie in the last number of the Bulletin, in having the band of yellow across the breast and very slight suffusion of the throat, it differing from other specimens in having the wing bars *whitish*, whiter even than in *H. pinus*. The back is that of a typical *H. leucobronchialis*. — A. K. FISHER, M. D., *Sing Sing, N. Y.*

Bull. N. O. C. 4, Oct., 1879, p. 234.

TWO MORE SPECIMENS OF *Helminthophaga leucobronchialis* FROM SING SING, N. Y.—While collecting with Mr. Eugene P. Bicknell, on Croton Point, among some small pines, July 24, 1881. I shot a specimen of the above-named Warbler. We were attracted by a flock of small birds flitting through the pines, composed of Chickadees, Yellow Warblers, Black-and-White creepers, and Blue-winged Yellow Warblers. While following these up we got a glimpse at this bird and killed it as it flew to the ground in pursuit of an insect. This specimen differs from others in having a black auricular patch. Sex not absolutely determined, as the bird was badly shot, but it was apparently a female.

On August 3, 1881, I shot another specimen, in some low bushes bordering a stream, near where I procured a specimen August 24, 1879.\* It resembled that specimen in having a yellow pectoral band, but, unlike it, the wing-bands were normal; yellow, not white.—A. K. FISHER, M. D., *Sing Sing, N. Y.* **Bull. N. O. C.** 6, Oct., 1881, p. 2457.

Capture of two more Specimens of *Helminthophila leucobronchialis* at Sing Sing, New York.—On August 11, 1883, I killed two specimens of the so-called White-throated Warbler (*Helminthophila leucobronchialis*). The under parts of both specimens are much more deeply suffused with yellow than is the case in any of my other three specimens; in fact, the yellow on one is evenly distributed over the entire under surface, but is not so deep as in *Helminthophila pinus*.—A. K. FISHER, M. D., *Sing Sing, New York.* **Auk**, 2, Oct., 1885, p. 376.

Brief Notes from Long Island.—The spring of 1892, peculiar in many respects, has brought a number of rare birds to Long Island. On May 16, at Parkville, Queens County, I secured a typical male of Brewster's Warbler (*Helminthophila leucobronchialis*). So far as I can find out, this form has never before been taken on Long Island, though found occasionally in New Jersey and the Hudson River valley. I had no opportunity to observe its habits, as it was migrating with other species in the tree tops, and I shot it at once for identity. *Arthur B. Howell, Brooklyn N. Y.*

**Auk** 9, July, 1892, p. 306.

[From The Auk, Vol. II, No. 4, October, 1885, p. 378.]

Capture of two more Specimens of *Helminthophila leucobronchialis* at Sing Sing, New York.—On August 11, 1883, I killed two specimens of the so-called White-throated Warbler (*Helminthophila leucobronchialis*). The under parts of both specimens are much more deeply suffused with yellow than is the case in any of my other three specimens; in fact, the yellow on one is evenly distributed over the entire under surface, but is not so deep as in *Helminthophila pinus*.—A. K. FISHER, M. D., *Sing Sing, New York.*

[From The Auk, Vol. II, No. 4, October, 1885, p. 378.]

Evidence Concerning the Interbreeding of *Helminthophila chrysopetra* and *H. pinus*.—On July 4, 1885, while collecting specimens in a piece of woods underlaid by a scattering undergrowth, I came upon a female Golden-winged Warbler busily engaged in collecting insects. As I stood watching her she flew to a neighboring cedar tree and commenced to feed a young bird. I immediately shot and killed the latter as the female flew away. The noise of the discharge started another young bird from some bushes near by, and as it flew the female flew and alighted near it. Just as I was on the point of firing they started, and I succeeded in wounding the female only and had to follow and kill her with a second shot. On my return to the place where I first shot at her, I could not find the young one, nor did a careful search disclose it. In advancing for a nearer shot I had a good opportunity of seeing the young bird: it closely resembled its mother in appearance and had no yellow on the breast, whereas the one killed was the exact counterpart of the young of the Blue-winged Yellow Warbler, with its yellow breast and white wing-bars.

In all probability the father of this interesting family was a specimen of *Helminthophila pinus*.—A. K. FISHER, M. D., *Sing Sing, New York.*

A Specimen of *Helminthophila leucobronchialis* in New Jersey.—A fine male was shot on May 11, 1883, at Maplewood, Essex Co., N. J., feeding in tree-tops on the blossoms of the oak tree. This, I believe is the first specimen for this State.

Not being able to satisfactorily identify the bird I sent it to Mr. E. P. Bicknell, whose remarks on the subject I give, as follows: "The specimen of *Helminthophila leucobronchialis* from Maplewood, New Jersey, is similar to an adult male taken by Dr. A. K. Fisher, at Sing Sing, N. Y., August 29, 1879, and recorded in B. N. O. C., IV, 4, 234. As I recall Dr. Fisher's specimen, the present one differs chiefly in having the yellow breast-band less pronounced, both in color and outline. The wing-bars are narrow, conspicuously separated, and, as in Dr. Fisher's example, whiter than in many individuals of *H. pinus*. The specimen shows one peculiarity which I do not remember to have observed in others, or to have seen recorded, namely, a distinct bleaching of the ashy-blue of the dorsal surface on the rump and proximal tail-coverts. Carried a few steps farther this tendency would have given us a *Helminthophila* with a white rump! This bird is the first for New Jersey. Mr. Brewster alludes to a specimen from Nyack, "New Jersey" (B. N. O. C., VI, 4, 2191). The specimen referred to, however, was from Nyack, Rockland Co., New York, the error in the record being obviously from some mishap in publishing. But Nyack, N. Y., is within a few miles of the New Jersey State line."—C. B. RICKER, *New York City*. *Auk*, 2, Oct., 1886, p. 378.

*Helminthophila leucobronchialis* in New Jersey.—A specimen of this hybrid was killed about ten miles from this place by Mr. Auguste Blanchet in the latter part of May, 1859. The entire dorsal plumage is tinged with greenish-yellow; the throat and cheeks are pure white, very lightly tinged with yellowish; upper breast grayish; breast yellow, extending toward the crissum; a small black line through the right eye, a large grayish patch behind the left; wing-bars yellow. The whole plumage resembles somewhat that of the female *H. chrysoptera*, but the grayish on the breast is not so deep.—E. CARLETON THURBER, *Morristown, N. J.*

*Auk*, 3, July, 1886, p. 411.

*Helminthophila leucobronchialis* in New Jersey.—May 15, 1887, a fine male specimen of this bird was shot near this place. It differs from the type in having a spot of lemon yellow on the breast and being washed lightly with the same color on abdomen and back.—E. CARLETON THURBER, *Morristown, N. J.*

*Auk*, 4, Oct., 1887, p. 349.

**Additional Captures of *Helminthophila leucobronchialis*.**—The specimens below recorded were taken at Englewood, N. J., in a densely thick eted, low, wet woods.

1. (Now in Coll. Dr. A. K. Fisher, No. 2646, ♀, May 15, 1886.) Rump and intercapulars as in *H. pinus*; wing-bars intermediate between *H. chrysoptera* and *pinus*. A yellow pectoral band and a slight suffusion of same color on the underparts.

2. (Coll. F. M. C., No. 903, ♀ ad., June 26, 1887.) Immediately after the capture of this specimen I was attracted by the voices of young birds, and a search revealed, almost directly overhead, four young being fed by a typical male *pinus*. For between four and five hours this family was closely watched, and the non-appearance of a female during that period renders it possible that the missing parent was the captured bird. Three of the young were taken, all typical of *pinus*, the fourth escaped me.

Taking into consideration the fact that the female is in worn breeding plumage, the abdomen being denuded of feathers, it may be said to agree with the type of *leucobronchialis*. Why not consider these typical birds as the ultimate result of a union between *pinus* and *chrysoptera*, achieved by series of unions between the original hybrids with themselves or either of the parent species, in which both black and yellow are finally eliminated?

If this be true the intermediate specimens should outnumber the typical ones, and we have recorded, therefore, twenty-one birds approaching *pinus* and *chrysoptera* more or less closely and but eight agreeing with *leucobronchialis* as originally described.

3. (Coll. F. M. C., No. 932, ♂ im., July 31, 1887.) Dorsal surface and wing-bars as in *pinus*, with an extremely faint grayish cervical collar. Breast yellow, a flush of the same appearing on the white of the throat and abdomen. Taken within less than one hundred feet of the place where No. 903 was secured. The migration of *pinus* had not yet commenced, and this bird, which was undoubtedly born in the vicinity, would answer admirably as the missing fourth bird of the brood before mentioned.—FRANK M. CHAPMAN, *American Museum Natural History, New York City*

*Auk*, 4, Oct., 1887, p. 348-349.

Notes on Birds in vic. of Englewood,  
N. J. by F. M. Chapman.

12. *Helminthophila leucobronchialis*. BREWSTER'S WARBLER.—The capture of three specimens of this puzzling hybrid has been before recorded.‡

**Auk, VI. Oct., 1889, p. 304.** | † **Auk, IV, 1887, p. 348.**

The Song of *Helminthophila leucobronchialis*.—At Englewood, New Jersey, on May 11, 1890, I saw and positively identified an apparently typical individual of *Helminthophila leucobronchialis*. Being fortunately without a gun I was spared the temptation of shooting, and during the ten or fifteen minutes which the bird was under my observation I had the pleasure of hearing it sing many times, even seeing it open its bill in the act of song. This song exactly resembled the rising and falling *tse* notes of *H. pinus* but was slightly weaker than the average song of that species.—FRANK M. CHAPMAN, *American Museum of Natural History, New York City.* **Auk, VII. July, 1890, p. 291.**

On Two Birds New to Louisiana.—In a small collection of birds recently purchased from C. S. Galbraith by the American Museum of Natural History, are two species which have not been before recorded from Louisiana; they are:—

*Helminthophila leucobronchialis*.—(Am. Mus. No. 54815, Mandeville, La., Spring of 1891. Collector C. S. Galbraith. Sex not determined but the example is evidently a male.) So far as pattern of marking is concerned this specimen agrees with *Helminthophila pinus*. In coloration it is midway between *pinus* and typical *leucobronchialis*, that is, the underparts are white with a patch of yellow on the breast and more or less of this color on the chin and abdomen, while the upper parts are bluish with a greenish wash. The tips of the wing-coverts are more heavily marked with yellow than in normal specimens of *pinus*, a fact not in strict accord with Mr. Ridgway's theory of dichromatism in this puzzling group. (Cf. Man. N. A. Birds, p. 456, footnote.) If with Mr. Ridgway we assume this specimen to be a "leuochroic" example of *pinus* we should not expect that a diminution of yellow on the abdomen and back would be attended by an increase of yellow on the wing-coverts. **Auk, 8, July, 1891, p. 315**

By F. M. Chapman

CAPTURE OF A SECOND SPECIMEN OF HELMINTHOPHAGA LEUCOBRONCHIALIS.—In the first number of the Bulletin for the year 1876, Mr. Wm. Brewster described a new species of *Helminthophaga* (*H. leucobronchialis*), which he obtained in Newtonville, Mass., on May 18, 1870. He says in his article, "Whether it must be placed in the same category with the unique *Euspiza townsendi*, *Regulus cuvieri*, etc., or, like *Dendroica kirtlandi*, will turn up occasionally in the future at different points, or still again, as in the case of *Centronyx bairdii*, will be found in large numbers, time alone can decide." It is with pleasure, therefore, that I can announce the capture of a second specimen of this species, so new to Ornithology, and particularly also because it was taken in a locality so far distant from where the first one was obtained. The specimen under consideration was shot by Mr. Christopher D. Wood, on the afternoon of May 12, 1877, in an apple orchard near Clifton, Delaware County, Pa. It proved to be a male, and answered to the description given by Mr. Brewster. It is, without doubt, a veritable specimen of *H. leucobronchialis*, and goes to prove the species a good one. It was first called to my attention by Mr. Wood himself, who told me that he had shot a specimen of *H. leucobronchialis* near Clifton. He afterwards showed me the bird, which he had been comparing with the plate of the former specimen, and found it to be identical. Whence these rarities come, whether they are abundant in certain sections, and the characters of the females, are matters not yet known; yet it is more than likely that at no very distant day both the present species, as well as *Helminthophaga lawrencei*, may prove to be nearly if not quite as abundant as the other species of the same genus.—SPENCER TROTTER, *Philadelphia, Pa.* **Bull. N. O. C. 2, July, 1877, p. 79-80.**

*Helminthophila leucobronchialis* in Maryland.—An adult male specimen of this Warbler was shot at Belville, Md., not far from Washington, D. C., on the first of May, this year, by Mr. A. H. Thayer, who brought it to the National Museum for identification. The bird was secured in exchange for the National Museum collection (Museum register No. 150,120). It is a very typical one, absolutely without any trace of yellow on the breast or abdomen, but with rather more black on the post-ocular streak than is shown in the plate accompanying the description of the type, and considerably more than in the specimen shot by Mr. Wm. Palmer near Washington, May 8, 1885 (No. 105,684). Some of the feathers of the cheeks are black, a feature not shown in the type, nor in the above-mentioned example collected by Mr. Palmer. The back is clear ashy gray, with the faintest possible tinge of yellow in the interscapular region. The crown and wing bands are bright yellow, as in the type.—CHAS. W. RICHMOND, *Washington, D. C.*

*Helminthophila leucobronchialis* in Pennsylvania.—A specimen of this bird was taken, August 31, 1887, in the central part of Chester Co., Penn., on the edge of a dense swamp. It differs from the type in being more washed with yellow below, and olive above. Dr. Fisher (to whom the bird was sent for identification) writes that it closely resembles his specimen from Englewood, N. J. (See Auk, IV, p. 348).—WITMER STONE, *Germentown, Pa.*

Auk, V, Jan. 1888, p. 115-116.

NOTE ON HELMINTHOPHAGA GUNNII, GIBBS.—The bird described in the Grand Rapids "Daily Democrat" of June 1, 1879, as a new species of *Helminthophaga*, for which the above name was proposed, has been recently forwarded to the Smithsonian Institution for examination; and having had the privilege of inspecting the example in question, it gives me great pleasure to offer a few remarks concerning it. In the first place, it may be stated that Mr. Purdie's surmise (see his article in the July number of this Bulletin, Vol. IV, p. 185), that the specimen might be merely a variation of *H. leucobronchialis*, Brewster, is correct. The specimen collected by Mr. Gunn, and named after that gentleman, is in all essential respects like the type of *H. leucobronchialis*, (which, through the courtesy of its owner, I examined several years ago,) except that the breast has a large, well-defined patch of bright gamboge-yellow, while the upper parts are much less brightly colored, both the yellow of the crown (especially posteriorly) and the bluish-gray of the nape, back, and wings being obscured by a wash of olive-green. The yellow wing-patch is also more restricted than in the male. The yellow breast-patch, which is very abruptly defined anteriorly against the pure white of the jugulum, does not extend back to the flanks and abdomen, but is strictly limited to the middle of the breast, the sides of which are deep bluish-gray, almost as dark as the back. The upper part of the throat (not the chin) is strongly tinged with pale yellow. The measurements are as follows:—wing, 2.40; tail, 2.10; bill, from nostril, .35; tarsus, .65; middle toe, .42.

This being, as Mr. Purdie remarks, the seventh specimen thus far collected, the validity of *H. leucobronchialis* may be considered as established beyond question. The variations in plumage and the sexual differences of coloration appear to be nearly the same as those of *H. chrysoptera*, but there seems to be a frequent tendency to assume more or less of a yellow tinge beneath, especially on the breast, which is rarely to be noticed in *H. chrysoptera*, although sometimes slightly indicated in that species. It is not unlikely that there may be specimens of this species in the possession of collectors who have mistaken them for individuals of *H. chrysoptera*, and in view of this probability it would be well for those having the latter in their collections to examine them critically. The species, in all stages, may be readily distinguished by the entire absence of black or dull gray on the throat (only the bases of the feathers being sometimes grayish), and by the absence of the dusky-gray or black auricular patch.—ROBERT RIDGWAY, *Washington, D. C.*

Bull. N. O. C., 4, Oct., 1870, p. 233-234.

Occurrence of *Helminthophila leucobronchialis* in Virginia. — I have to announce the capture of this Warbler by myself on May 15, near Fort Meyer, Arlington, Alexandria Co., Va. It was moving quickly in the underbrush in a low wet wood, and at the moment when shot was hanging back downwards, in the manner of *H. chrysoptera*. I heard no note, as I shot it as soon as possible, thinking it was a Golden-winged Warbler, which is very rare here. This is, I believe, the fourteenth specimen that has been taken, but the first south of New York. The specimen, which is a male, agrees closely with the description of the type as given in No. I, Vol. I, of the 'Bulletin of the Nuttall Ornithological Club,' except that it has more olive mixed with the yellow on the crown. The specimen is now in the National Museum Collection, No. 104,684, and is the first one that it has received.—WILLIAM PALMER, *Smithsonian Institution, Washington, D. C.* *Auk*, 2, July, 1886, p. 304.

*Additions to the Avifauna of District Columbia* 34  
during 1885.

White-throated  
Warbler (*Helminthophila leucobronchialis*), noted by Mr. William Palmer  
in 'The Auk' for July,

Hugh M. Smith  
*Auk*, 3, Jan., 1886, p. 139 Washington, D.C.

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 (*leucobronchialis*) 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. 2½, T. 1½, E. 7½, Sept. 6, 1888, ♀. O. & O. XIII, Dec. 1888 p. 189

On Two Birds New to Louisiana. — In a small collection of birds recently purchased from C. S. Galbraith by the American Museum of Natural History, are two species which have not been before recorded from Louisiana; they are:—

*Helminthophila leucobronchialis*.—(Am. Mus. No. 54815, Mandeville, La., Spring of 1891. Collector C. S. Galbraith. Sex not determined but the example is evidently a male.) So far as pattern of marking is concerned this specimen agrees with *Helminthophila pinus*. In coloration it is midway between *pinus* and typical *leucobronchialis*, that is, the underparts are white with a patch of yellow on the breast and more or less of this color on the chin and abdomen, while the upper parts are bluish with a greenish wash. The tips of the wing-coverts are more heavily marked with yellow than in normal specimens of *pinus*, a fact not in strict accord with Mr. Ridgway's theory of dichromatism in this puzzling group. (Cf. Man. N. A. Birds, p. 486, footnote.) If with Mr. Ridgway we assume this specimen to be a "leuchoic" example of *pinus* we should not expect that a diminution of yellow on the abdomen and back would be attended by an increase of yellow on the wing-coverts.

*Auk*, July, 1891, Vol. VIII, p. 318.

*Additions to the Avifauna of N. Carolina  
and also that of Raleigh, N. C.*  
C. S. Brimley.

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.

O. & O. XIII, Dec. 1888 p. 187

A THIRD SPECIMEN OF HELMINTHOPHAGA LEUCOBRONCHIALIS. — Last winter, while working among the Warblers (*Sylvicolidae*), in the collection of the Philadelphia Academy of Natural Sciences, I discovered among them a specimen of the White-throated Warbler (*Helmintophaga leucobronchialis*, Brewster), which, according to some writing on the bottom of its stand, had been in the dark for nearly fifteen years. The writing was this: "J. C., 20 October, 1862," and also what I made out to be, "Not from Bell," which was much blurred. The "J. C.," which means John Cassin (for it is his handwriting), shows that he once possessed or had something to do with the specimen, but how it ever escaped his notice and found its way into the collection of the Academy without being discovered I cannot see. The other is, I suppose, the date of its capture; and it is curious that it should have been taken so long before the one which for several years was the only known representative of the species. No label was attached to it designating the locality where it was procured, its sex or species; but by careful comparison with Mr. Brewster's description, as well as with Mr. Wood's specimen, I can safely say that it is a genuine specimen of *H. leucobronchialis*, and still further proves the validity of the species. As the first two were males, and as this specimen closely resembles them, I judge it to be a male also. A paper which I wrote on this specimen was read before the Academy, at a recent meeting, and will be published in their Proceedings.

I may further add that I have searched the Reports and record of donations to the Academy from 1862 to 1875, without finding any reference to this specimen. — SPENCER TROTTER, Philadelphia, Pa.

Bull. N. O. C. 3, Jan., 1878, p. 44.

SOME LIGHT ON THE HISTORY OF A RARE BIRD. — In the Bulletin for January, 1878, I mentioned the fact that a third specimen of the White-throated Warbler (*Helmintophaga leucobronchialis*, Brewster) had been found in the collection of the Philadelphia Academy of Natural Sciences. In the paper I stated that there was no label attached to the bird, designating its species, sex, or the locality where it was procured; but that on the bottom of its stand was written, "J. C., 20 Oct., 1862," and also what I made out to be, "Not from Bell," which was much blurred. Further, the history of the specimen was involved in obscurity.

I wrote to Mr. N. T. Lawrence of New York, concerning the bird, and shortly afterwards, having called on Mr. Bell, the well-known ornithologist, Mr. Lawrence wrote me as follows:—

"I asked Mr. Bell if he remembered at any time procuring a specimen of *H. chrysoptera* which differed in any way from the normal specimens. He said that when his attention was called to your last article in the Bulletin, he recalled the fact that somewhere about 1832, in the spring of that year, at Rockland, N. Y., he shot, as he supposed, a young male Golden-wing, but at the time remarked to his brother, who was collecting with him, that the bird was highly plumaged, but lacked the black of the throat, hence he took it to be a young male. His attention was first attracted to the bird by a note he had never heard before, and one of Bell's specialties in his younger days was his accuracy in determining different species by their notes. He also said he kept the specimen a long time, thinking it an unusual form of the Golden-wing, and finally sold it to a man in Philadelphia; therefore, I think in all probability the bird you found at the Academy is the identical one Bell procured over forty years ago. He said he intended to question his brother the next time he saw him, in regard to it; so if I hear anything more on the subject I will let you know."

From the above extract from Mr. Lawrence's letter, it seems there is strong reason for believing that the bird discovered in the Academy's collection is the self-same one shot by Bell at Rockland, N. Y., in 1832; and on the almost obliterated words, "Not from Bell," or, as Mr. George N. Lawrence says might be, "Note from Bell," hung the history of the specimen. The sentence, "J. C., 20 Oct., 1862," is, I think, explainable. Mr. Cassin, having charge of the Academy's ornithological collections, like Mr. Bell supposed the bird to be an abnormal form of *H. chrysoptera*, wrote his initials on the bottom of its stand, and also the date of deposit in the Academy, and set it aside among the specimens of that species. I think this fact is of much interest, as throwing light on a specimen of a species as rare as *H. leucobronchialis*, and also as showing its close relation to the Golden-winged Warbler (*H. chrysoptera*). — SPENCER TROTTER, Philadelphia, Pa.

Bull. N. O. C. 4, Jan., 1879, p. 69.

Nesting of *Helminthophila leucobronchialis* in Connecticut.—My collector, Mr. Samuel Robinson, found here June 24, 1894, a nest of this puzzling Warbler containing four eggs, but did not disturb it. The next day I visited the spot and started the female from the nest a number of

times. Her mate was *H. chrysoptera* in normal plumage. He flew to the female occasionally and was quite tame. At this time, when swinging in an apple-tree near by, the drawling note peculiar to this species was so faint as to require close attention to hear it. My first idea was to leave the eggs and have them hatch, then watch the young and so try to settle the perplexing question about these birds, but the nest was so close to a cattle-path in the swamp that it was liable to be destroyed by the animals when passing to and fro after water, they having already nearly stepped in it. I finally waited until the 23d of the month and took the nest and eggs and secured both birds. After the female was shot, and the male was unable to find her, his song changed and was as loud and sharp as in early spring. The nest was on the ground among thick alder bushes on the edge of a swampy thicket. It was composed externally of dry leaves and a few pieces of coarse grass, and lined with delicate strips of grape-vine bark. The eggs are white, finely and sparsely speckled with reddish brown, the dots being more conspicuous about the larger end, forming in one egg a noticeable ring. This female *leucobronchialis* is nearly as bright in color as the males. The chin, breast and abdomen are marked with yellow, the breast strongly so. Wing-bars yellowish white. I have now found Brewster's Warbler here for nine successive years, the specimen referred to above being the only female. The large series in my collection shows many variations.—JNO. H. SAGE, Portland, Conn.

ON THE RELATIONSHIP OF *HELMINTHOPHAGA LEUCOBRONCHIALIS*, BREWSTER, AND *HELMINTHOPHAGA LAWRENCEI*, HERRICK; WITH SOME CONJECTURES RESPECTING CERTAIN OTHER NORTH AMERICAN BIRDS.

BY WILLIAM BREWSTER.

Since my original description of the White-throated Warbler (*Helminthophaga leucobronchialis*) appeared, specimens have slowly multiplied until, including the two announced by Dr. Fisher in the present number of the Bulletin,\* there are now no less than twelve known examples. Until recently there has been no apparent reason for doubting the validity of the species, which has been generally accepted, and even heartily endorsed by several prominent ornithologists. But not long since Dr. Edgar A. Mearns and Mr. Eugene P. Bicknell sent me some puzzling specimens which, at the time, I was obliged to consider aberrant individuals of *H. pinus* and *H. chrysoptera*, but which nevertheless raised certain suspicions affecting *H. leucobronchialis* and *H. lawrencei*. These suspicions are now confirmed by the examination of a fine series, belonging to Dr. A. K. Fisher, which throws a flood of light on the whole subject. I am indebted to Dr. Fisher's kindness for permission to make use of this material in the present investigation.

Before entering into the details of the evidence before me it may be well to emphasize some of the prominent characters which respectively distinguish *H. pinus*, *H. chrysoptera*, *H. leucobronchialis*, and *H. lawrencei*.

BREWSTER on *Helminthophaga leucobronchialis*. 219

*H. pinus*. Above yellowish-olive; wing-bands white; lores and post-ocular spot black; cheeks, throat, and under parts generally, rich yellow.

*H. chrysoptera*. Above bluish-ash; wing-bands yellow; throat, with a broad head-stripe, embracing the lores, cheeks, and auriculars, black (ashy in the female). Under parts white tinged with ashy on the sides.

*H. leucobronchialis*. Upper surface, including wing-bars, as in *chrysoptera*, but with the back and wings tinged with olive-green; head-stripe restricted as in *pinus*; throat, cheeks, and under parts silky-white, unlike either *pinus* or *chrysoptera*; breast more or less strongly washed with yellow.

*H. lawrencei*. Throat and head-stripes black, the latter embracing the cheeks and auriculars, as in *chrysoptera*; wing-bands white, and general coloring yellow or olive-green, as in *pinus*.

From the above summary it will appear that neither *leucobronchialis* nor *lawrencei* possesses any important original characters. The former borrows its ashy back and yellow wing-bars from *chrysoptera*; its restricted eye-stripe from *pinus*;— while the differential value of its white throat and under parts is materially affected by the usual presence of more or less yellow on the breast. *Lawrencei* has absolutely no peculiar markings or coloration; it simply unites the black throat and broad head-stripes of *chrysoptera* with the white wing-bands and general coloring of *pinus*. In either case there is simply a peculiar combination of borrowed characters. Let us see how constant these combinations are.

No. 1,208 (Dr. Fisher's collection, ♀? Sing Sing, New York, July 24, 1881) is in every way similar to the type of *leucobronchialis* save that the lores are more broadly black and the black of the post-ocular spot spreads backward and downward, embracing nearly the whole of the auricular region.

No. 1,235 (Dr. Fisher's collection, ♂, Sing Sing, August 3, 1881) differs from the type of *leucobronchialis* only in having a broad patch of pale yellow on the breast. A large proportion of the specimens previously reported have also exhibited this same peculiarity.

No. 605 (Dr. Fisher's collection, ♂, Sing Sing, August 24, 1879) exhibits a faint wash of lemon-yellow on the throat, while a broad space across the breast is deep gamboge-yellow, and the wing-bands are pure white.

No. 2,620 (author's collection, ♀? adult, Nyack, New Jersey, May, 1878; presented by Eugene P. Bicknell) has the chin decidedly yellow; the throat, cheeks, and a small space on the

\* See beyond, under "General Notes."—EDM.]

abdomen white; the remainder of the lower parts gamboge-yellow; the wing-bands white; the nape ashy tinged with green; the occiput, back, and wings as purely olive-green as in *H. pinus*.

No. 1,210 (Dr. Fisher's collection, ♀ adult, Sing Sing, July 24, 1881) is entirely pale greenish-yellow beneath; the back is similar to that of *pinus* but the nape is decidedly ashy and the wing-bands as clearly yellow as in *chrysoptera*; the dusky brown eye-stripe is restricted to the lores and post-orbital spot.

Of the above specimens, No. 605 is perhaps the most important; with its white wing-bars, ashy back, and yellow breast and throat it very equally combines the respective characters of *leucobronchialis* and *pinus*. Nos. 2,620 and 1,210, approach *pinus* even more closely; but the former has the white throat and cheeks of *leucobronchialis*; and the latter an ashy nape, yellow wing-bands and generally pale coloring beneath. No. 1,208 shows a significant variation in the other direction, the extension of the black eye-stripe indicating an increased affinity with *chrysoptera*. No. 1,235 is apparently similar to Gibb's type of *H. "gunnii,"* afterwards referred to *leucobronchialis* by Mr. Ridgway (this Bull. IV, p. 233). Taken as a whole, the series perfectly connects *leucobronchialis* with *pinus*, as well as showing an extension of the former toward *chrysoptera*. This fact being established, the question immediately follows, How can these aberrant birds be accounted for? Before attempting to answer this let us take up *H. lawrencei* and examine a few more specimens.

I have before me a female *Helminthophaga* (No. 4,667, author's collection, Highland Falls, New York, July 7, 1879, presented by Dr. Mearns) which has the crown yellow; the back and wings dull ashy tinged with olive-green; the wing-bands yellow; the cheeks and throat ashy; the chin, sides of throat, and remainder of the under parts heavily washed with greenish-yellow. Making due allowance for the fact that its plumage is excessively worn and faded, this specimen presents nearly the relative characters that would be looked for in the female of *lawrencei*; the throat and cheek-markings are those of *chrysoptera* (female), while the remainder of the plumage is colored nearly as in *pinus*; the wing-bands however are yellow, instead of white, and the back is not purely olive-green: but these variations are closely parallel to those which occur in *leucobron-*

*chialis*, and, reasoning from that analogy, it seems quite as consistent to refer the present example with yellow wing-bands to *lawrencei* as the specimen No. 605, with white wing-bands, to *leucobronchialis*. Assuming this to be granted, we will next consider a young bird (No. 4,668, author's collection) of which the individual just described was ascertained to be the parent. Although in process of change, the fall plumage is fortunately sufficiently developed to afford some important points: the gray first plumage of the under parts is replaced across the breast and along the sides by patches of *bright yellow feathers*, while the sprouting second plumage of the throat is *pure white*; the lores are black, but the few second feathers which appear on the auriculars are, like those of the throat, *white*.\*

It may with confidence be stated that this individual would have developed a fall plumage characterized by black lores, white throat, and yellow breast and sides, a condition, in short, nearly similar to No. 605. Now the only way of accounting for the parentage of such an offspring is to assume that the female, No. 4,667, had mated with a male of either *H. pinus* or *H. chrysoptera*; for had the male been either *lawrencei* or *chrysoptera*, the black throat and cheek patches would inevitably have been reproduced.

A nice muddle, certainly! But let us see how all the facts in the several cases look when more closely associated. We have found: (1) That the prominent characters of *leucobronchialis* and *lawrencei* are not original, but are essentially borrowed from their allies, *H. pinus* and *chrysoptera*. (2) That the characters of *leucobronchialis* are inconstant, and that this supposed species intergrades with *pinus*. (3) That the characters of *lawrencei* are also inconstant, and that *lawrencei* interbreeds with some unknown ally—presumably *H. pinus*, producing offspring that resemble aberrant specimens of *leucobronchialis*.

The inference to be drawn from all this can scarcely be doubtful. Race affinities will not explain the peculiar characters of either *leucobronchialis* or *lawrencei*, for the region over which all the known specimens have occurred is everywhere occupied by either one or both of the species to which they are most intimately related. Nor can they be considered as either immature

\* Specimens of young *chrysoptera*, in precisely the same stage, have the throat and cheek-patches distinctly indicated by black or ashy pin-feathers, according to sex.

or abnormal examples; the former hypothesis being decidedly negated by the fact that all the early plumages of both of their affines are known to be widely different; while the latter is made untenable by the number of essentially similar specimens that have come under our notice. Only one possible solution remains:—that they are *hybrids* between *Helminthophaga pinus* and *H. chrysoptera*. And in support of this view an additional fact may be pointed out; viz., that nearly all the known specimens have been taken within an area where *both these species breed, either together, or in close proximity*. The very different combinations of markings and coloring in the two hybrid forms, as restricted, is unquestionably due to a reversal of the parents in each case. That is, one of them is produced by the union of *H. pinus* ♂ with *H. chrysoptera* ♀; the other by that of *H. chrysoptera* ♂ with *H. pinus* ♀. Just which combination produces either must for the present remain a matter of conjecture. The logical inference is, perhaps, that "*leucobronchialis*" is the offspring of *H. pinus* ♂ with *H. chrysoptera* ♀, for in the case of No. 4,668 we have seen that the black throat and cheek-patches, characterizing *lawrencei* equally with *chrysoptera*, were eliminated by an assumed cross with the male of *pinus*. But additional facts must be forthcoming before this part of the question can be regarded as settled.\*

Before leaving the Golden-winged Warblers it may be well to dwell a moment on the general bearings of the facts adduced, for it must be evident to all that they have a wider significance than simply showing that *pinus* and *chrysoptera* interbreed, producing so-called "*leucobronchialis*" and "*lawrencei*." They also show that these hybrid offspring—at least the females, as in

\*On a former occasion (this Bulletin, Vol. II, pp. 66-68) I bestowed a compound specific name on a hybrid Grouse, thereby adopting a custom followed by certain European ornithologists, notably Mr. Robert Collett of Christiania, Norway. Since that time, however, correspondence with my friend Mr. Ridgway has convinced me of the inadequacy of this form of nomenclature. As Mr. Ridgway pointed out, the hybrid in question was derived from parents of different *genera*, and hence a due regard for accuracy would have demanded the compounding of the *generic* as well as specific titles; the result, it is needless to say, would be an absurdly cumbersome title. As this objection will frequently be met with, and, moreover, in view of the fact that such specimens are in the majority of cases of exceptional and abnormal significance, I fully agree with Mr. Ridgway that a distinctive name is not called for. The Smithsonian specimens of hybrid origin are labeled with the names of both parents connected by the sign +, a method that fully meets the requirements of such cases.

the case of No. 4,667—reproduce with at least one, and probably either of the parent species; if not—as is by no means impossible—with each other. But the case is not without precedent. As long ago as 1847, Dr. Samuel George Morton, in the course of an essay on the subject of hybridity\* cited several well-authenticated instances of the interbreeding—often in a wild state—of various European Finches. A yet more remote alliance, given on the authority of M. Vieillot, was that of a Canary and a Nightingale, the single egg resulting from their union proving, however, infertile. Among his conclusions the following are especially pertinent to the above connection:

"1. A latent power of hybridity exists in many animals in the wild state, in which state, also, hybrids are sometimes produced.

"2. Hybridity occurs not only among different species, but among different genera; and the cross-breeds have been prolific in both cases.

"3. Domestication does not cause this faculty, but merely evolves it."

The Rev. John Bachman subsequently took the matter up† and supported the negative side of the question, but while he severely criticised Dr. Morton's views we find him admitting (p. 169), "That in a very few species a progeny has been produced that was incapable of propagating with the half-breeds,—in other words, that the hybrid male was physically incapable of having offspring with a hybrid female; hence the latter had to resort to the full blood of either species, and thus the intermediate breed returned to one or the other of the original species."

In the latter fact we doubtless have the explanation of such aberrant specimens as Nos. 1,210 and 2,620, which unmistakably exhibit a slight and otherwise unaccountable trace of hybrid parentage; and similarly it is not unlikely that the yellow breast of occasional specimens of *chrysoptera* may be due to a taint of *pinus* blood. The impaired sexual vitality—granting, for the

\* "Hybridity in Animals and Plants considered in reference to the Question of the Unity of the Human Species." American Journal of Science and Arts, 2d Ser., Vol. III, 1847, pp. 203-211.

† An Investigation of the Cases of Hybridity in Animals on Record, considered in reference to the Unity of the Human Species. Am. Journ. Sci. and Arts, 2d Ser., Vol. V, 1848, pp. 168-197.

sake of argument, that it is always impaired in such cases — of the original hybrids, would soon be restored by this breeding back into one of the parent stocks, and the descendants would hence stand a good chance of being numerous, while it would certainly require the succession of many generations to wholly eliminate the traces of their mixed ancestry. And if this state of affairs exists in one genus of birds, why may it not be looked for in others? There are some puzzling instances of the occasional cropping out of respective characters among allied but apparently perfectly distinct species which cannot be explained by any of the known laws of geographical variation. The possibilities opened by this field are bewildering, but for the present we are safer to lay them aside and apply the direct analogy furnished by the case of the *Helminthophaga* to a few obviously similar ones.

Until very recently there was not a single established example of hybridity among North American *Passeres*, and many of our leading ornithologists were incredulous as to its occurrence in a state of nature save among the Grouse and some of the Swimming Birds, while no one seems to have considered the possibility of its explaining some of the standard puzzles\* that have been handed down to us by Audubon and other of the earlier ornithologists. But Mr. Trotter's hybrid Swallow (described in Vol. III, pp. 135, 136 of this Bulletin) gave us an undoubted instance, and now we have startling evidence that some of the *Helminthophaga*† have been regularly contracting misalliances under the very noses of the scientists who were insisting that such things could not be. Who can say where this entirely irregular state of affairs will be found to end? Cuvier's Kinglet, with its *vermillion* crown-patch bordered by *black stripes*, its *black eye-stripe* and *white wing-*

\* From a review in a recent number of "Nature" I learn that Mr. Seebohm in his late work on the *Turdida*, forming Vol. V, of the "Catalogue of the Birds of the British Museum," has lately recognized hybridity as accounting for certain obscure Old World species; but up to the time of placing the present article in the printer's hands I have been unable to obtain a copy of his book or to ascertain the precise nature of his investigations.

† Mr. Ridgway has lately shown (this Bulletin, Vol. V, p. 237) that *Helminthophaga cincinnatiensis*, Langdon (originally described in Jour. Cin. Soc. Nat. Hist., July, 1880, pp. 119, 120, Pl. VI — description and plate reproduced in this Bulletin, Vol. V, pp. 208-210, Pl. IV) perfectly combines the characters of *Helminthophaga pinus* with those of *Oporornis formosa*. If, as seems highly probable, he is right in considering it a hybrid between these species, it affords another striking example of the tendency of *H. pinus* to seek alien connections.

*bands*, very closely reproduces the prominent characters of *Regulus calendula* and *R. satrapa*; the Carbonated Warbler similarly combines the *black crown*, *streaked back* and *double wing-bands* of *Dendroica striata* with the general coloring of *Perisoglossa tigrina*, and possesses no individual characters which might not have been derived from such a parentage; *Aegiothus brewsteri* is very nearly intermediate between *B. linaria* and *Chrysomitris pinus*; and there are still others among the doubtful or "lost" species which show strong traces of a hybrid origin. But for the present we rest the case here: the bars are down; the gate stands open; "he who runs may read."

Bull. N. O. C. <sup>Oct.</sup> 8, ~~1881~~, 1881, p. 218-225.

Mr. Ridway concurs, and says "it differs from *T. vinaceo-rufa* in much deeper general coloration, the very different color of the crissum (rufous instead of purplish vinaceous), and much larger size, especially the bill."

*T. ruficauda* seems to be a rare species, as there is no specimen in the National Museum or in that of the American Museum of Natural History, New York. It is described as being quite dark above ("brunneo-ardesiaca"), with the hind neck plumbeous; below and on the neck rosy wine color; a spot under the eye and a line behind the eye, violet-black, bordered with white; sides of the neck golden-violet; wing-coverts "ardesiaci"; quills blackish, tail short, outer tail-feathers "fusco-ardesiaci," with a black spot across the middle, the end broadly rufous.

NEW YORK, September 15, 1885.

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### HELMINTHOPHILA LEUCOBONCHIALIS.

BY ROBERT RIDGWAY.

WITHOUT having any new evidence to present concerning this perplexing bird in the way of additional specimens, I would like to offer for consideration a hypothesis which it seems to me affords a more plausible explanation of certain aspects of the case than that which suggests hybridism between simply *H. chrysoptera* and *H. pinus* as sufficient to account for the variable 'aberrant' series which has been referred to *H. leucobronchialis*, together with those which represent the so-called *H. lawrencei*.

It has been stated that *H. leucobronchialis* and *H. lawrencei* possess no important original characters. This is certainly true of the latter, which is very obviously a hybrid of the above-named species; but it is not true of the former, which in its pure white throat, in very striking contradistinction to the deep gray or black throat of one and bright yellow throat of the other alleged parent, certainly does possess one very important original character, which it is impossible to conceive can be derived from the crossing of the two species in question.

A supposed strong point which has been urged against the validity of *H. leucobronchialis* as a distinct species, is the circumstance that typical specimens constitute a small proportion of all those obtained, and the suspicious circumstance that each individual of the aberrant majority inclined, in one respect or another, toward *H. pinus*. Only seven of the twenty-two examples which have been recorded (including those of '*H. lawrencei*,' which must be considered in this connection), or not quite one-third, are true *H. leucobronchialis*; but when, instead of taking two elements into consideration (i. e., *H. pinus* and *H. chrysoptera*) we add a third (*H. leucobronchialis* itself), the disproportion becomes far less significant.

In no other way than by assuming that *H. leucobronchialis* is a distinct species, which itself hybridizes with its allies, can we account for the origin of the puzzling series of specimens which have so prejudiced the claims of the bird under consideration to specific rank; and I feel convinced that Mr. Brewster expressed the exact truth when he stated (*cf.* Nuttall Bulletin, III, p. 99) that "the validity of this distinctly characterized species must now be regarded as established," and I feel equally satisfied that the hypothesis of hybridism which he subsequently advanced fails to settle the case as affecting *H. leucobronchialis* itself, however well it may answer for the 'aberrant' specimens which have been wrongly referred to it.

Regarding the very close resemblance between certain specimens of *H. leucobronchialis*, Mr. Brewster observes: "Indeed, it would be difficult to select three individuals of any species which vary so little *inter se*." I have myself seen only the type and the Virginia specimen in the National Museum collection; but I can affirm that the two are as nearly counterparts of one another, so far as details of plumage are concerned, as any two specimens, of any species, that have ever come under my observation.

The following classification of all the specimens\* hitherto recorded of both *H. leucobronchialis* (in its widest sense) and '*H. lawrencei*,' expresses my views as to their nature and origin. The arrangement is of course purely hypothetical, but at the same time admits of a much more satisfactory solution of the problem which Mr. Brewster has so carefully discussed than

\* A few may possibly have been overlooked.

the theory which supposes *the entire series* to be hybrids of *H. chrysoptera* and *H. pinus* alone, or of their progeny *inter se*.

#### I. TYPICAL SPECIMENS OF *H. leucobronchialis*.

CHARACTERS. — Throat and cheeks pure white; postocular black or dusky streak very narrow, not involving the auriculars; breast white, or but very faintly tinged with yellow; wing-patch, or bands, yellow.

- (1) The type, an adult ♂ from Newtonville, Mass., May 18, 1870. (*Cf.* Brewster, Bull. Nutt. Orn. Club, I, p. 1, pl. i.)
- (2) An adult ♂ shot by Christopher D. Wood, near Clifton, Delaware Co., Penn., May 12, 1877. (*Cf.* Trotter, Bull. Nutt. Orn. Club, II, pp. 79, 80.)
- (3) An adult ♂ in the collection of the Philadelphia Academy of Natural Sciences, supposed to have been shot by J. G. Bell at Rockland, N. Y., in the spring of 1832. (*Cf.* Trotter, Bull. Nutt. Orn. Club, III, p. 44; IV, p. 59.)
- (4) An adult ♂ shot at Wauregan, Conn., May 25, 1875, by Charles M. Carpenter. (*Cf.* Brewster, Bull. Nutt. Orn. Club, III, p. 99.)
- (5) An adult ♂ obtained at Suffield, Conn., July 3, 1875, by E. I. Shores. (*Cf.* Brewster, Bull. Nutt. Orn. Club, III, p. 199.)
- (6) An adult ♂ in collection of Williams College, Williamstown, Mass., obtained at Hudson, Mass., in May or June, 1858, by Samuel Jillson. (*Cf.* Purdie, Bull. Nutt. Orn. Club, IV, p. 184.)
- (7) An adult ♂ shot near Arlington, Va., May 15, 1885, by William Palmer, and by him presented to the National Museum (museum register No. 104,684). (*Cf.* Palmer, Auk, II, p. 304.)

#### II. PRESUMED HYBRIDS OF *H. leucobronchialis* AND *H. pinus*, OR OF THE FORMER WITH THE CROSS BETWEEN *H. pinus* AND *H. chrysoptera* (= '*H. lawrencei* HERRICK').

CHARACTERS — Throat white, sometimes faintly tinged with yellow; breast yellow; gray of upper parts tinged with olive-green.

##### a. *Wing-band, or patch, yellow.*

- (1) An adult ♂ taken at Portland, Conn., by William W. Coe, May 22, 1875. Has "a broad band or blotch" of yellow on the breast, while "the whole dorsal plumage, from the crown, is faintly washed with the same tint." (*Cf.* Purdie, Bull. Nutt. Orn. Club, IV, p. 184.)
- (2) An adult ♂ taken at Saybrook, Conn., May 30, 1879, by J. N. Clark. Has "a patch of bright yellow across the breast from the bend of the wings." (*Cf.* Purdie, l. c.)
- (3) A young bird (sex unknown) taken by Dr. E. A. Mearns at Highland Falls, N. Y., July 7, 1879 (Coll. W. Brewster, No. 4,668). Specimen number 4 under *H. lawrencei* (No. 4,667, Coll. W. Brewster), said to

be the parent of this specimen. (*Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 221.)

(4) An adult (?), sex not stated, obtained at Sing Sing, N. Y., August 3, 1881, by Dr. A. K. Fisher. Resembles specimen No. 8 (No. 605, Coll. A. K. Fisher), but has the wing-bands "yellow, not white." (*Cf.* Fisher, Bull. Nutt. Orn. Club, VI, p. 245.)

(5) An adult ♂ (?) obtained in Ottawa Co., Mich., May 25, 1879, by W. A. Gunn. Whole breast bright gamboge yellow, with a sharply defined, truncated anterior outline, but posteriorly extending farthest along the median line, to the upper part of the abdomen; cheeks and chin tinged with light yellow; upper part washed with olive-green. Type of "*H. gunni* Gibbs." (*Cf.* Gibbs, 'Daily Democrat,' a newspaper of Grand Rapids, Mich., June 1, 1879. — Purdie, Bull. Nutt. Orn. Club, IV, p. 185. — Ridgw. ib., p. 233.)

(6) An adult ♂ taken at Sing Sing, N. Y., August 3, 1881, by Dr. A. K. Fisher (collector's No. 1235). Has "a broad patch of pale yellow on the breast." (*Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 219.)

(7) An adult ♀ taken at Sing Sing, N. Y., July 24, 1881, by Dr. A. K. Fisher (collector's No. 1210). Entirely pale greenish yellow beneath; the back is similar to that of *pinus* but the nape is decidedly ashy, and the wing-bands as clearly yellow as in *chrysoptera*; the dusky brown eye-stripe is restricted to the lores and post-orbital spot." (*Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 220.)

*b. Wing-bands white.*

(8) An adult ♂ collected at Sing Sing, N. Y., August 24, 1879, by Dr. A. K. Fisher (collector's No. 605). "Exhibits a faint wash of lemon yellow on the throat, while a broad space across the breast is deep gamboge yellow, and the wing-bands are pure white." (*Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 219.)

(9) An adult ♀ (?) collected at Nyack, N. J., in May, 1878, by Eugene P. Bicknell; No. 2620, Coll. W. Brewster. "Has the chin decidedly yellow; the throat, cheeks, and a small space on the abdomen white; the remainder of the lower parts gamboge yellow; the wing-bands white; the nape ashy tinged with green; the occiput, back, and wings as purely green as in *H. pinus*." (*Cf.* Brewster *l. c.*)

*c. Wing-bands mixed white and yellow.*

(10) An adult ♂ killed at New Haven, Conn., May 19, 1885, by Harry W. Flint. It "shows a slight suffusion of yellow under each eye and on the chin, as well as a light bar of the same color across the breast . . . the wing-bars are very much restricted, and the white is tinged with yellow, and there is a spot of the same color on the back. (*Cf.* Sage, Auk, II, p. 304.)

III. PRESUMED HYBRIDS OF *H. leucobronchialis* WITH *H. chrysoptera*.

CHARACTERS. — Entirely white beneath (except on sides), as in *H. leucobronchialis*, but with black auriculars of *H. chrysoptera*.

(1) An adult ♀ (?) obtained at Sing Sing, N. Y., July 24, 1881, by Dr. A. K. Fisher (collector's No. 1208). *Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 219.)

(2) An adult ♀ (?) obtained at Sing Sing, N. Y., July 24, 1881, by Dr. A. K. Fisher. (*Cf.* Fisher, Bull. Nutt. Orn. Club, VI, p. 245.)

IV. PRESUMED HYBRIDS BETWEEN *H. chrysoptera* AND *H. pinus*  
(= '*H. lawrencei* HERRICK').

CHARACTERS: Black or gray throat and auriculars of *chrysoptera*, with rest of head and the lower parts yellow, as in *pinus*; upper parts olive-green as in *pinus*. Wing-bands yellow or white.

*a. Wing-bands white.*

(1) The type, an adult ♂, obtained at Passaic, N. J., May, 1874, by Harold Herrick. (*Cf.* Herrick, Pr. Phil. Ac. Nat. Sci. 1874, p. 220, pl. 15.)

(2) An adult ♂ from Hoboken, N. J., taken in the spring of 1876. (*Cf.* Herrick, Bull. Nutt. Orn. Club, II, p. 19.)

*b. Wing-bands yellow.*

(3) An adult ♀ taken at Highland Falls, N. Y., July 7, 1879, by Dr. Edgar A. Mearns (No. 4667, Coll. W. Brewster). This specimen presents nearly the characters that would be looked for in the female of *lawrencei*; the throat and cheek-markings are those of *chrysoptera* (female), while the remainder of the plumage is colored nearly as in *pinus*, the wing-bands, however, are yellow, instead of white, and the back is not purely olive-green." (*Cf.* Brewster, Bull. Nutt. Orn. Club, VI, p. 220.)

Ank, 2, Oct., 1886, p. 359-363.

When three eggs had been laid the female was killed, a few feathers found near the nest suggesting a cat as the probable murderer. The male, however, remained in the vicinity for several weeks, singing at times continuously for an hour or more; but apparently becoming discouraged at the non-appearance of his mate, he finally disappeared. Not another bird of this species was observed until May, 1884, when a pair was seen in the same garden and observed constructing a nest in a rose bush. Here they were undisturbed until their young, four in number, were nearly ready to leave the nest; these young were then taken and successfully raised in confinement. April 17, 1885, a Mockingbird, presumably the male, was seen in the same locality; later its mate appeared. The male was frequently heard singing, and although the nest was not found, young birds were seen, and there is little doubt that this time they succeeded in raising their brood. So far as I have been able to ascertain the birds have not been observed in the locality since this last-mentioned occurrence.

16. *Harporhynchus rufus*. BROWN THRASHER.—An individual of the species was taken January 31, 1885.

17. *Thryothorus ludovicianus*. CAROLINA WREN.—A bird of this species was observed by me September 20, 1885, in a low wet wood, and presumably the same individual was frequently seen or heard in the same locality until November 20, when an examination showed it to be a male of the year. I have also records of single birds observed on April 24, 1886, and September 22 of the same year.

18. *Parus bicolor*. TUFTED TITMOUSE.—August 19, 1888, I secured a male of the year of this species. On at least two previous occasions I have seen or heard single individuals in the same wood in which the one above recorded was captured.

19. *Polioptila cærulea*. BLUE-GRAY GNATCATCHER.—Mr. John G. Bell, the well known naturalist-taxidermist, informed me during a recent visit I had the pleasure of making him that he had taken an individual of this species near his home at Piermont, N. Y., in March—the year he could not remember.

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NOTES ON THE BLUE-WINGED WARBLER AND  
ITS ALLIES (*HELMINTHOPHILA PINUS*, *H.*  
*LEUCOBRONCHIALIS*, *H. LAWRENCEI*,  
AND *H. CHRYSOPTERA*) IN CONNEC-  
TICUT.

BY EDWIN H. EAMES.

I TAKE pleasure in recording my experience with a few of the *Helminthophila* in southern Connecticut during the season of 1889, inasmuch as their matrimonial affairs have become in-

trically involved and highly perplexing. The geographical seat of the trouble seems to be centred in the small State of Connecticut and the country adjoining on the north and west.

Our little favorite *Helminthophila pinus* is probably as abundant in the southern part of this State, and in the river valleys northward to Massachusetts, as in any other part of its range, it extending its way still further north to a point as yet but poorly defined.

Of *H. chrysoptera* but little can be said, as it is properly considered a rather rare bird here, and our yearly records are but few, usually less than half a dozen.

The beautiful *H. leucobronchialis* is much (?) more common than the latter, and is eagerly sought after by most of our collectors, latterly with good success, considering its former (supposed) rarity. The section of country above accorded to *pinus* seems to be the metropolis of this species, or else we have here more enthusiastic collectors. The same is also true of *H. lawrencei*. My observations last year served to acquaint me with its traits of character and style of song, so that on the 6th of May I was prepared to recognize the song of *leucobronchialis*, when I heard it. It was a typical bird, and was first heard and then seen in an apple tree whose branches almost touched a house. It was so tame at first that I could almost catch it in a hand net, and although it was several times disturbed, showed no desire to feed in other than apple trees.

My earliest record of *H. pinus* was made on the following day, but on the 9th they were surprisingly common, as at one time (midday) I distinctly heard seven singing at one time, and could see five by merely turning around. During a walk of a few hours that day I counted 60, which was considerably short of the actual number seen. Judging from a few I shot and from others I critically examined, and from their songs, they were all males, the first female not appearing until the second day following. I have never before seen as many in the same length of time, but for years have considered them common, even fifteen miles north of Bridgeport.

The only *H. chrysoptera* I have seen this season was a male I killed on May 14, in full song; I killed also a male *H. leucobronchialis* on the same morning, also in full song. One bright male *H. lawrencei* found its way into my collection, May 16, after

favoring me with its song and a little of its shyness for an hour or two. This bird was in a small but dense swamp, and kept among the higher branches in the centre, with occasional forays to the edge.

May 17 I badly wounded a third *leucobronchialis*, which was not secured, although I closely marked where it fell. It was well marked with yellow on the fore-breast and a paler wash elsewhere except on the lower throat which was pure white; otherwise it was typical.

May 21 I saw another *leucobronchialis* which was beyond my reach, being under the immediate protection of a guardian of the City water works. Having obtained his permission to shoot it, the following morning it fell a prey to my desires, and proved to be a very handsome specimen of this form. Not until June 11 did I take another, which proved to much resemble *pinus*.

Mr. C. K. Averill, Jr., of this city, found a *leucobronchialis* early in June, he being attracted to it by its song. Two days later he failed to find it. June 24 I accompanied him to the place and we soon had the pleasure of watching the bird at shorter range than I think has fallen to the lot of others, *i. e.*, three to ten feet, for so long a time that our patience gave out with the daylight. Previous to this it was necessary to watch his actions at a greater distance, as he (for it proved a male) was feeding young, how many we never ascertained, probably but one.

It came to the same conspicuous clump of bushes and briars many times, with from one to five minutes intermission, each time with one or more small green worms, about three quarters of an inch long, first reconnoitring, then cautiously approaching, and again hastily leaving a part of this clump of bushes not over two feet in extent. We failed to discover the identity of the object of its cares, but I have reason to believe it was a young Cowbird. The rest of this brood was being fed by the only *H. pinus* (a female) to be found in the neighborhood. These young were, I thought, a little too demonstrative when parental attention was bestowed upon them. At this date they could fly well, and gleaned much food for themselves. They showed a marked general similarity to the young of *pinus*. I shot this male *leucobronchialis* August 8 and also one of the young, carefully observing that the others were similar to the one killed, which was altogether too familiar with the adult bird to allow a possibility of doubt concerning its male parent.

In this, as in many other species of our smaller birds, such an affection is shown for the haunts occupied during the nesting period that they rarely leave them until after moulting, or even till the commencement of the fall migration. In the above case I never failed to find the birds within the bounds of a two-acre tract of land.

Some of the characteristics of these species and varieties may be of interest, and I will confine myself to the past two years' observations in Bridgeport and Seymour.

On their arrival, which occurs in the second week of May, they (*lawrencei*?) show a great fondness for orchards, chiefly apple, feeding among the blossoms in a manner so leisurely as to be very unlike that of other Warblers, being expressive of a serene content. In numberless instances I have known single birds to remain in one tree upwards of an hour, and then seem to regret leaving it for another.

From the 15th to the 20th of May they become settled for the season in well-defined haunts, which may be broadly said to be adjoining woods in a clearing on which is much 'scrub,' or perhaps a three to five years' growth of 'sprouts,' with some grass, briars, etc. This frequently, but not always, adjoins swampy ground. They are rarely to be found in deep woods, except on the edge, where they spend much time among the higher branches.

When the nest of *H. pinus* contains eggs, it is difficult to find, as the male ranges over quite an area. The nest is as conspicuous and bulky as a Maryland Yellow-throat's. It is variously situated—in the edge of a thicket, at the foot of a brier, etc., or quite as often in a clump of golden-rod (*Solidago*). I have seen one nest, with young, placed on a bog in the edge of swampy woods. This bog was surrounded by eight inches of water.

Normally the nest rests but lightly on the ground, and measuring about four and a half inches deep externally, depends largely on surrounding grasses for concealment, fallen leaves being inconspicuous about it. The full complement of four or five eggs has generally been completed by June 1, and I have seen young ready to leave the nest by June 10.

I have been strongly impressed with the necessity of learning the songs of these birds, inasmuch as a large share of my success hangs on this very point. In all, the *z* sound is a strong feature and very characteristic.

The song of *H. chrysoptera* consists normally of four notes—*three-e-e, zwee, zwee, zwee*—the first, about two notes higher than the following three, being slightly prolonged. It is varied somewhat at times, with the second note like the first; again it is reduced to three, two, or even a single note. The song will immediately attract attention from its very oddity. By some it is considered harsh, but to me it has a soft penetrating quality unexcelled, this effect being heightened by the uncertain source of the song.

Seven birds, typical of *H. leucobronchialis*, expressed their good spirits by precisely the song of the preceding (*H. chrysoptera*) except in one trifling point. Another, with a bright yellow breast-patch, had, in addition, a few original variations of its own. Still another, with a close resemblance to *H. pinus*, repeated songs of *H. chrysoptera* only, but they were all harsh and disagreeable in comparison. This bird was shot almost within a stone's throw of the supposed nesting site of *H. leucobronchialis* spoken of in 'The Auk' (Vol. V, pp. 427-428). A perfectly typical bird repeated but one style of song. This surprised me greatly, it being precisely the same as the common song of *H. pinus*. I heard this many times on two different occasions before shooting the bird, and it was always the same. But one more bird, with a faint greenish yellow color on the back, a strong patch of yellow on the breast, and a wash elsewhere on the under parts, used the latter song exclusively.

The only *H. lawrencei* I ever knowingly listened to, as before mentioned, favored me with its song for nearly two hours, and during the several hundred repetitions, it never varied in the least particular from the characteristic song of *H. pinus*, its song consisting of two drawing notes, *see-e-e-e, zwee-e-e-e*, with a very decided *z* sound. The first series is somewhat higher pitched than the last and hardly as long continued. To this, in *H. pinus* only, is sometimes added a third note of about the same length as the first, and very similar. Occasionally the first note only is uttered. When there are three, the second is sharply and quickly given. Another song quite often heard is strikingly similar to that of the Nashville Warbler, but still retains enough of its own peculiar sound to make identification positive in every case. Of several other songs, none of which are commonly heard, one is best represented by *zwee-e-e, kik, kik, kik, kik*.

The following were characteristic of certain birds only and noted to be the same on several different occasions. One bird regularly repeated the trill of the Chipping Sparrow after its own, with no variations unless slightly shortened. Two others were often heard to repeat a song reminding me strongly of one of the Parula Warbler's, but they repeated their own much more frequently than this.

During the height of the season *H. pinus* may be heard repeating its song with great regularity from four to five times per minute, by the hour, with scarcely a break. This is to be noticed during the extreme heat of midday just the same as at other times, its search for insects being at the same time uninterrupted. I have quite often heard them during hard showers, not an occasional repetition merely, but with a persistent regularity. This applies to *H. leucobronchialis*, and presumably to *H. chrysoptera* as well, except that in the two latter only two or three repetitions per minute is the rule. Nearly two entire songs of the latter can be rendered in the time occupied by *H. pinus* for one. In many of these birds there is a tendency to extreme shyness upon the slightest attempt at familiarity, and often without any provocation, as I have many times been made aware. On many occasions my best endeavors have been unequal to the task of closely scrutinizing the author of any of these songs unless I had the patience to watch him from one to three hours, and even then a field glass would be necessary to see him clearly.

Even *H. pinus* may be called rare by those who possess excellent eyesight, provided they have ears poorly trained, and I will venture the assertion that nine out of every ten birds will escape them. I have more than once seen proof of this in those who were desirous of becoming well acquainted with the species.

— Auk, VI. Oct., 1889, p. 305-3

LIST OF THE BIRDS OF FULTON COUNTY,  
KENTUCKY.

BY L. OTLEY PINDAR.

FULTON COUNTY lies in the extreme southwestern corner of Kentucky. Nearly all the notes from which this list is composed

Helminthophila leucobronchialis.

The Coloration and Relationships of Brewster's Warbler.—Brewster's Warbler (*Helminthophila leucobronchialis*) is invariably described as having a white breast more or less strongly washed with yellow; this tinge being reduced to the minimum, but still always present, in so-called typical examples.

I hope to prove that in pure plumage this bird has the under parts absolutely white, and that the slightest trace of yellow in the breast-feathers brands a specimen as intermediate between *leucobronchialis* and *pinus*. It is well known that these extremes are connected by a perfect chain of intermediates, and that the frequency of occurrence of these intermediates is, if we count them all as *leucobronchialis*, in inverse ratio to the purity of their coloring. (A fact, by the way, which points strongly to the belief that *leucobronchialis* is a mere variation of *pinus*.)

Whitish-breasted and more or less golden-winged examples of *pinus* are, comparatively speaking, not rare, but the *leucobronchialis* end of the gradation is meagerly represented by specimens—so meagerly, in fact, that ornithologists have apparently failed to get a clear idea of what it really is. Now since this gradation is from a bright-yellow-breasted, green-backed, toward a pure-white-breasted, gray-backed bird, the assumption that it certainly stops just short of attainment of the latter extreme would be absurd, even if there were no specimens to contradict it. There is, however, at least one such specimen. A Brewster's Warbler which I shot at Beltsville, Maryland, in May several years ago, and which is now in the Smithsonian collection, has all the white of the under surface exactly as pure and ashy, and the gray of the back as clear and as sharply defined against the yellow crown, as the best examples of *H. chrysoptera*. Of course a discrimination between pure white and very slightly tinged white can only be made by experts, and it was as experts that my father and I, both of us artists, examined this specimen with a view to testing this very point. When the bird was fresh, there was no slightest trace of yellow in its breast, on or below the surface of the feathers; but this purity of coloring has been marred by a most unfortunate accident. The breast was torn in skinning, and grease has exuded on to the feathers,

The Auk' for October, 1910 (XXVII, an article by Julia Wingate Sherman on re numerous inaccuracies in the account, and correct them as far as possible.

Warbler about Boston dates from 1907. In the Arnold Arboretum by Miss Helen Auk, XXIV, 1907, p. 343), and was substituted, Auk, XXIV, 1907, p. 444) with a female ferring to this pair, writes: "Mr. [C. J.] drawing of the female and young, which male showed an extensive, nearly black patch in the wing."

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This description seems to be a rather good one of a female *Helminthophila chrysoptera* in very high plumage.

It has always been believed that the females in the Arboretum in 1907 and 1908 were *chrysoptera*, and I see no reason why either of these birds or the one in Roslindale should ever be regarded as anything else.—JAMES L. PETERS, Jamaica Plain, Mass. *Auk* xxviii July 1911 p. 370-371.

making a patch of buff-colored stain that would be mistaken for the prescribed yellow wash by any but a very close observer. This, however, might perhaps be removed with turpentine.

When it has been proved that Brewster's Warbler does, as was to be expected, achieve a perfectly pure coloration, it is obvious that the description of true Brewster's Warbler should be taken from a bird thus purely colored. For, granted that it is sometimes entirely white-breasted, it would be exactly as rational to take as a type a strongly yellow-tinged specimen, or one from any point in the gradation toward *pinus*, as one with a faint, concealed yellow wash.

The extreme form is of course the best representative of this obscure race; and the form best representing the race is, except in the narrow technical significance of the word, most *typical*.

There is another point which does not seem to have received due consideration in discussion about Brewster's Warbler. It is the fact that, though the bird is most generally believed to be a hybrid between *pinus* and *chrysoptera*, and the gradation between the former and pure *leucobronchialis* is cited as corroborative of this theory, there are absolutely no intergrades between pure *leucobronchialis* and *chrysoptera*. Until such specimens are found, the evidence in favor of this view is at best extremely incomplete. On the other hand, there are several points that tell against it, and one of the most important of these is the existence of Lawrence's Warbler. This bird is very evidently a hybrid between the two common species already mentioned, and is itself extremely rare, as such a hybrid would naturally be.

Typical specimens are nearer in general aspect to *pinus* than to *chrysoptera*, though they have the black head-markings of the latter; and the remarkable parti-colored bird shown at a recent meeting of the A. O. U. is intermediate between *lawrencei* and *chrysoptera*; while none of these shows any affinity with any plumage of *leucobronchialis*, which has always a light throat and a narrow black eye-line.

It seems scarcely possible that two species of Warbler should produce together two perfectly distinct types of hybrid. If it depended on which species furnished the male parent, one type of offspring could only be much commoner than the other if one combination of parents were much commoner or more prolific, which in this case seems very unlikely.

All this leads one to believe that Brewster's Warbler is either a distinct species whose normal habitat has yet to be discovered, but whose hybrids with the Blue-winged Yellow have frequently been found, or that it is an independent color-phase of the latter species.

This last explanation seems to me by far the most plausible of all.—  
GERALD H. THAYER, *Manadnock, N. H.*  
*Auk*, Oct., 1902, pp. 401-2.

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Helminthophila leucobronchialis.

**Brewster's Warbler.**—In 'The Auk' for October, 1910 (XXVII, pp. 443-447), there appeared an article by Julia Wingate Sherman on Brewster's Warbler. As there are numerous inaccuracies in the account it seems best to point them out and correct them as far as possible.

The history of the Brewster's Warbler about Boston dates from 1907. In that year a male was seen in the Arnold Arboretum by Miss Helen Granger on May 19 (Granger, Auk, XXIV, 1907, p. 343), and was subsequently found breeding (Faxon, Auk, XXIV, 1907, p. 444) with a female Goldenwing. Mrs. Sherman, referring to this pair, writes: "Mr. [C. J.] Maynard sent me a water-color drawing of the female and young, which he made at the time. This female showed an extensive, nearly black throat patch, also a large yellow patch in the wing."

The next year the male Brewster's was seen on May 13 (Peters, Auk, XXV, p. 320), near the same place as the year before. On June 8 I found the nest within a few yards of the spot where the pair was located in 1907. At the time the nest contained five naked young. About the same time the nest was discovered by Mr. George Nelson of the Agassiz Museum and was later taken by him for the Museum. There can be no doubt that the owners of the nest were a male *Helminthophila leucobronchialis* and a female *H. chrysoptera*, as both birds were seen about the nest. About five days after I found the nest the young disappeared, just how will never be known.

A few days after the disappearance of the young birds a nest was found across the road and was believed by Mrs. Sherman and others who did not know of the first to be that of *leucobronchialis*. So far as I am aware the determination of the ownership of the nest was based entirely upon the identification of the female, which was described in 'The Auk' by Mrs. Sherman as having "a dark dusky throat-patch, not clearly defined at its base, but blended into the pale gray of the upper breast. . . . The black line through the eye was broader and extended back farther than did that on the Brewster of the preceding year. She differed also in showing two yellow wing-bands." This description applies perfectly to the female of *chrysoptera* and as there was a male of this species singing not far from the nest in question it is not at all unlikely that he was the owner and not the *leucobronchialis*, as one might be led to believe.

In 1909 and 1910 the straight male *chrysoptera* was the only bird to be seen; in the Arboretum no female was seen or nest found in either year.

Mrs. Sherman describes (*l. c.*, pp. 444, 445) a pair of Goldenwings which bred in Roslindale in 1910. The male was a typical *chrysoptera*; the female, which had been identified as *leucobronchialis*, had much the same plumage as the one she had just described (see above), but differed in having "the dusky throat patch lighter in color. It bore the same character in being darker towards its center and directly under the bill. The one in 1908 had a nearly black throat patch, mottled slightly in appearance. The black line through the eye was narrower and paled on a pale gray cheek. The white line above the eye was uniform in width. . . . The white line below the eye was shorter. The whole tone of the back was more olivaceous. Two bright yellow wing-bars divided by an olive or dark band on the wing. The entire underparts were washed with yellow which showed quite bright on the middle of the breast in a good light. The crown was bright dandelion yellow running into bronzy yellow on the back of the head."

This description seems to be a rather good one of a female *Helminthophila chrysoptera* in very high plumage.

It has always been believed that the females in the Arboretum in 1907 and 1908 were *chrysoptera*, and I see no reason why either of these birds or the one in Roslindale should ever be regarded as anything else.—JAMES L. PETERS, Jamaica Plain, Mass. *Auk*, xxviii, July, 1911, p. 370-371.

chrysoptera

Helminthophila chrysoptera

Eastern Massachusetts.

1889 Mass.

May 14 Waltham. - Five ♂♂ and two ♀♀ in the Warren runs. Three ♂♂ and

one ♀ were in second-growth birches and oaks near a springy  
alden run when chump cabbage covered the ground. I saw the ♀ and  
one ♂ in this run, the ♀ once on the ground. The ♂♂ sang usually  
in the tops of the oaks. They were very tame but restless, rarely  
remaining more than a minute in one place and often taking  
long flights. A third ♂ was singing in the top of a large white oak  
where he was feeding, also, among the opening leaves at the ends  
of the upper branches. The fourth ♂ haunted what I consider the

One grounded

most typical place for this species, a springy run covered with  
dense thickets of blueberry, ~~and~~ Andromeda caliculata and alders  
with chump cabbage growing abundantly beneath and a few  
young elms sprinkled irregularly about, none of them more  
than 20 ft. high. This ♂ regularly made the rounds of his  
little domain (two or three acres) by flying from elm to elm  
alighting and singing a few times in the top of each and  
finally pitching down into the thickets where he kept silence  
for several minutes. His song was absolutely unlike anything  
that I ever heard from this species before. I took it down on  
the spot as follows: Ti-ti-ti, ti-ti-ti-c-c-c-c. It was all on nearly

Typical haunts

the same key the last two syllables, <sup>perhaps</sup> falling slightly. It had  
little of the usual buzzing or hissing quality. I heard it at  
least a dozen times and finally shot the bird in the act  
of singing. His coloring & markings were perfectly normal.  
Dwight shot a ♂ that had the chin white and a pectoral  
yellow spot. Heard one ♂ sing Tsee, dee-dee-dee-dee. The others

Abnormal song

gave only four notes. Heard the chirp of both sexes. It is  
alike in both, very sharp and metallic, closely similar to the  
chirp of the Indigo Bird. It is sometimes followed by a rather  
prolonged descending twitter <sup>between</sup> ~~something~~ like that of Minioptila & Spizella.  
The ♂ with the peculiar song had a mate which I shot in the  
same tree, a young one. This ♂ visited wild apple trees in blossom-

Chirp

Helminthophila chrysoptera

1889 Mass.

Melrose Highlands - Mr. Purdie tells me that Bradford Torrey has found several nests at Melrose Highlands. He (Mr P.) also knows of a nest that was taken at Medford a few years since. Mr. Worthington tells me that this Warbler is found at Dedham. He saw the first this year on May 12 when Purdie also noted two ♂♂ at Frammingham

Distribution

May 30

Belmont - One in the old ground near the head of the "Cotton run", a ♂, singing in a solitary, small black oak standing in an opening near a swamp with sprouts of one year's growth springing up on every side. Song; tee, dee-dee-dee-dee (four "final" syllables). As usual the bird was very tame. Mr. J. Dwight Jr. shot a ♂ lower down in this run about ten days ago.

Distribution

Song

June 4

Wellesley Hills - Three ♂♂ heard singing during a walk of perhaps three miles. All were in similar places, about runs grown up to sprouts of two or three years of age the ground wet and springy with stumps cabbage & ferns in places. All three birds sang in isolated small clump but one sang also in the top of a huge white oak fully 80 ft. above the ground.

Habits

1890

May 17

Waltham & Lincoln - Visited a number of good localities in these towns but found only one bird, a ♂ singing in oak scrub on the hillside west of the Larch swamp on the turnpike in Lincoln. I have seen no others this year & Faxon has found only four or five in all thus far. There are none in the Warren runs in Waltham. From these facts I conclude that the bird is unusually scarce.

Scarcity  
in May, 1890

Massachusetts,

*Helminthophila chrysoptera*

1894.

May 20. Concord. Presently I saw a yellow cap and black-throat in the midst of a cluster of blossoms and out hopped a beautiful little Golden-winged Warbler. He was probing the blossoms with his needle pointed bill and an Oriole in the same tree was similarly employed. The Warbler sang a few times.

Aug 21 The Golden-wing was a male with full black throat and apparently fully perfected autumnal plumage. He uttered a low rasping chirp not unlike that of an Indigo Bird and seemed to avoid the pines, working chiefly out the extremity of oak branches where he hung back downward like a Chickadee. I saw him find and eat several good-sized hairless caterpillars one of which he extracted from a rolled up leaf wrapped about with caterpillar silk.

Helminthophila chrysoptera.

Arlington, Mass.

1897.            This morning I walked over Arlington Heights with Dr.  
June 6.        Walter Faxon. Mr. Ralph Hoffmann accompanied us as far as the  
Wren Orchard. After leaving the Orchard Dr.Faxon took me to  
a number of nests, the most interesting of which was that of  
the Blue Golden-winged Warbler. The nest was deftly hidden  
in a bed of young Golden-rod (probably *Solidago rugosa*, Mill.),  
and as we parted the plants around it, we discovered the fe-  
male bird sitting on her eggs. We watched her for some time  
as she crouched closely on the nest and looked up at us. We  
were stooping right over her. Presently she flew off a short  
distance and we saw five little white eggs finely speckled at  
the larger end. It was a rare and beautiful sight. We drew  
the plants about the nest again, watched the bird for a while  
as she hopped about on a neighboring tree and then walked on.  
We did not see the male on this visit. Dr.Faxon said that it  
was about time for the male to stop singing, after which it  
is much harder to find him.

Walter Deane.

Birds of Ontario Canada,  
by James H. Fleming.  
Part II. Land Birds. Hypothetical List.  
Auk, x x 1 v Jan. 1907, p. 88.

26. *Helminthophila chrysoptera*. GOLDEN-WINGED WARBLER.—Two taken at Hamilton;<sup>2</sup> one in the Holman collection was no doubt taken here.

<sup>2</sup> McIlwraith, Birds of Ontario, 1886, 253.

**A Male Golden-winged Warbler (*Helminthophila chrysoptera*) Mated with a Female Blue-winged Warbler (*Helminthophila pinus*) at Bethel, Conn.**— On June 11, 1905, Robert Judd, H. C. Judd and myself were walking through a patch of second growth when our attention was attracted by the sharp chipping of two birds, which we found to be a male *Helminthophila chrysoptera* and a female *Helminthophila pinus*.

After nearly two hours of searching and watching I flushed the female *pinus* from the nest, which contained five young about two days old. During this time both birds were very much excited. These two birds were the only *Helminthophila* seen or heard in the vicinity.

The nest was placed on the ground in a bed of leaves at the foot of a bunch of chestnut sprouts and was concealed by a few grasses. The grass was not as thick as is usual in typical nesting sites of *H. pinus*. The male *chrysoptera* frequently flew into this bunch of chestnut sprouts while we were watching the two birds.

June 16, Robert Judd and myself again visited the nest and found the young birds had left it. Both of the old birds were around and were very much excited.

After watching them for some time we found one young bird which the female was feeding. This was apparently the only young there was left and it was in typical plumage of young *H. pinus*. We caught the young bird, and among the Chewinks, Yellow-breasted Chats, Indigo Buntings, Field Sparrows, etc., that were attracted by its cries of distress, was a male *H. pinus*, who was promptly driven off by the male *H. chrysoptera*. This was the only male *pinus* seen near the nest at any time. We gave the young bird his liberty again and watched the two old birds for some time. The male was not seen to feed the young bird, but he flew uneasily from bush to bush, chipping frequently.

On account of thunder storms and heavy rains we were unable to make any further observations until June 23. On this date neither the old birds nor young could be found, although we searched thoroughly for several hours. Possibly the young were destroyed by the heavy rains, or some predatory mammal may have finished them. A further search on June 25 and July 9 also failed to show any trace of them.— JESSE C. A. MEEKER, Danbury, Conn. Ank. XXIII, Jan., 1906, p. 104.



Distribution of New England Birds.-  
A Reply to Dr. Brewer. H. A. Purdie.

The Golden-winged Warbler (*Helminthophaga chrysoptera*), is a species that Dr. Brewer still denies can be considered as breeding regularly, or in numbers, in any portion of New England. As far back as June, 1869 (Am. Nat., Vol. III, p. 497), and again in 1870 (Samuel's Orn. and Oöl. of New England, revised edition, 1870, Appendix), I showed that the Golden-winged Warbler was far from uncommon in Massachusetts. Observations made every year since have not altered my opinion. I find it in the proper places from May to August. It is apparently less plenty after the first of June, but is still not a bird of the Canadian Fauna.

In "History of North American Birds" (Vol. I, p. 193) we read: "Occasionally specimens have been obtained in Massachusetts, and, of late, these occurrences have become more common or more observed. . . . Mr. J. A. Allen has known of several specimens taken within the State. Mr. Jillson has observed it spending the summer in Bolton, and evidently breeding, as has also Mr. Allen at Springfield, and Mr. Bennett at Holyoke." (See also Am. Nat., Vol. III, 1869, p. 575; Maynard's Naturalist's Guide, 1870; and this Bulletin, Vol. I, p. 6, for accounts of the nesting of this species in Massachusetts.)

Bull. N.O.C. 2, Jan., 1877. D. 16-17.

Mass. (Concord)

*Helminthophila chrysoptera* ✓

1876

May 19

Thus far this month I have seen or heard at least eleven different 3's of this species near Concord. I heard four to-day.

Their usual song is dee, dee-dee, only three notes. The first is rather prolonged, the second and third on a much lower key.

One of these warblers to-day was very active and restless singing only two or three times in a place and taking flights or two or three hundred yards. After pursuing him vainly for some time I discovered that

Mass. (near Concord).

1887

May 12<sup>1/2</sup> - 16<sup>1/2</sup> - 21<sup>2</sup> - 26<sup>2/3</sup> - 31<sup>1/2</sup>

*Helminthophila chrysoptera*.

Birds of Bristol County, Mass.

F. W. Andros.

*Helminthophila chrysoptera* (Linn.), Golden-winged Warbler. Summer resident, very rare. Breeds.

O. & O. XII, Sept. 1887 p. 140

Winchendon, Mass. June, 1888.

*in chrysoptera* Has been shot by B.

Notes on Birds of Winchendon, Mass.  
William Brewster.

*Helminthophila chrysoptera*.—A single male was obtained by Mr. Bailey in May, 1888.

Auk, V, Oct., 1888. p. 391

1883

*Helminthophila chrysoptera*.

Camden, Mass.

May 18

♀ no. 235 shot by C. R. Sargent in  
Fresh Pond Swamp.

" Sparrow also shot a New Golden-  
winged Warbler in Fresh Pond Swamp  
about a week ago or a little less.  
They were both in the "Common"  
branches of the hemlock trees "

(note book C. R. Sargent)

Sparrow shot in Fresh Pond  
May 18, 1883

*Helminthophila chrysoptera*.—A female was taken by Mr. Eames at Seymour on May 21. It seems to be a rare bird in most parts of the State. At Portland one was seen by Mr. Sage May 13, and five others May 30. None were reported along the coast.

Auk, VI. April, 1889. p. 193.

GOLDEN-WINGED WARBLER.—We have just handled a beautiful Golden-winged Warbler (*Helminthophaga chrysoptera*), shot this morning at Higganum, Conn., by Mr. Harry W. Flint of Deep River. This is one of the rarer Warblers. We have seen but five here (Portland), during the last eight years. May 19, 1875, when watching some other Warblers in a small piece of woods, one of this species, with outspread wings, suddenly dropped beside our feet. It was very much excited and must have been chased by a Hawk.—J. H. Sage, Portland, Conn., May 17, 1882.

O. & C. VII. JUL. 1882. P. 447

#### General Notes

Notes from Portland, Jno. H. Sage, Portland, Conn.

*Helminthophila chrysoptera* is a not uncommon summer resident, arriving as early as the 8th of May and frequenting dense swamps and swampy woodland. It is partial to hickory, oak and buttonwood trees, and when migrating in the spring may be found on high scrubby ground and in old pastures and orchards. The past season (1892) a male was captured in my door-yard—an unusual place, as it is not the custom of this Warbler to visit the thickly settled portions of the village.

To hunt this bird successfully it is necessary to become familiar with the odd song. Did it not in this manner reveal its identity, it would be almost impossible to find it when perched among the young leaves on a buttonwood or hickory tree.

My series of skins of this species, taken here during the past eighteen years, shows many odd variations.

A nest containing four fresh eggs was taken June 4, 1892. It was on the ground in a swampy spot and under a skunk cabbage (*Symplocarpus foetidus*). The eggs are pure white, evidently an abnormal set. The female was secured as she flew from the nest. The male was also seen. It had the typical black throat. I believe the eggs of this Warbler have not been recorded from the State before.

In other sections of Connecticut *H. chrysoptera* is considered rare. At Saybrook, New Haven, Bridgeport and Seymour they are seldom seen. Mr. Willard E. Treat, an experienced collector living at East Hartford, Conn., (fifteen miles north of this place) tells me that he has never found there any of the Warblers mentioned in this article.

The interbreeding of *chrysoptera* and *pinus*, at Portland, was noted in 'The Auk' (Vol. VI, July, 1889). Auk X, April, 1893. p. 208.

*Evidences of Carolinian Fauna in Hudson Valley,  
from observations made at Riverdale, N. Y.*

*E. P. Bicknell.*

**Helminthophaga chrysoptera.** GOLDEN-WINGED WARBLER.—  
Though this species must be of somewhat regular occurrence, I have but  
one record from the immediate vicinity, a male seen on May 11, 1875.

**Bull. N. O. C. 3, July, 1878, p. 130.**

*Correspondence.*

I have also a  
Golden-winged Warbler (*H. chrysoptera*) which  
I shot May 7, 1888, in the same woods (just out of the  
city limits).  
Howard D. Flint.  
Syracuse, N. Y.

**O. & O. XV, Apr. 1890 p. 64.**

**General Notes.**

**Notes - Long Island Birds,  
Arthur H. Howell, Brooklyn, N. Y.**

*Helminthophila chrysoptera*.—Mr. J. P. Giraud, Jr., in his 'Birds of Long Island,' published in 1844, says of this bird: "On Long Island this species occurs only in small numbers, and according to my observations, is not an annual visitor." Since the publication of Mr. Giraud's work, I know of no published records of this species. I have myself secured but one specimen. This was a fine male which I killed at Parkville, Kings Co., on May 11, 1893; it was shot from a low limb in the tall woods, where it had apparently just alighted from a more or less extended flight.

There is a single specimen in the Lawrence collection, a male, collected by J. F. Ward, Aug. 15, 1831.

Mr. Roosevelt, in the paper previously referred to, says that he has "shot it but once, May 10, 1878."

Mr. Dutcher has one specimen in his collection, which was presented to him by Mr. John D. Hicks. It is a male, and was killed at Old Westbury, Queens Co., in the spring of 1880.

**Auk XI, Jan, 1894 p. 83**

**Notes from Western New York.  
Maurice C. Blake, Hanover, N. H.**

*Helminthophila chrysoptera*.—I observed a singing male of this species at Mertensia, Ontario County, on May 17, 1906; and on June 3, 1906, found another male in song at West River, Yates County, where it is very likely the bird breeds. This warbler is recorded as breeding at Naples, Ontario County. This is the second Yates County record.

**Auk, 24, Apr., 1907, p. 224**

Evidence Concerning the Interbreeding of *Helminthophila chrysoptera* and *H. pinus*.—On July 4, 1835, while collecting specimens in a piece of woods underlaid by a scattering undergrowth, I came upon a female Golden-winged Warbler busily engaged in collecting insects. As I stood watching her she flew to a neighboring cedar tree and commenced to feed a young bird. I immediately shot and killed the latter as the female flew away. The noise of the discharge started another young bird from some bushes near by, and as it flew the female flew and alighted near it. Just as I was on the point of firing they started, and I succeeded in wounding the female only and had to follow and kill her with a second shot. On my return to the place where I first shot at her, I could not find the young one, nor did a careful search disclose it. In advancing for a nearer shot I had a good opportunity of seeing the young bird: it closely resembled its mother in appearance and had no yellow on the breast, whereas the one

killed was the exact counterpart of the young of the Blue-winged Yellow Warbler, with its yellow breast and white wing-bars.

In all probability the father of this interesting family was a specimen of *Helminthophila pinus*.—A. K. FISHER, M. D., *Sing Sing, New York*.

*Auk*, 2, Oct., 1886, p. 378-379.

**Plumage of some birds from upper  
So. Carolina - Leverett M. Loomis.**

*Helminthophila chrysoptera*.—A female from Caesar's Head, June 16, 1891, shows an indication of albinism in the continuation of the white of the malar region over more than half of the throat and chin.

*Auk* X, April, 1893, p. 154.

**Birds of Chester County, Penn.  
Cyrus B. Ressel, Ercildoun, Pa.**

149. *Helminthophila chrysoptera* (Linn.). Golden-winged Warbler. Summer resident; rare; in migration common. Arrives last week in April. Nidificates by the last week in May; the nest is generally placed in a tussock, in some low swampy land, which is mostly covered by alders. Eggs, four. Departs first week in October.

O & O. XIV, Aug. 1889 p. 115

**DESCRIPTIONS OF THE FIRST PLUMAGE IN VARIOUS  
SPECIES OF NORTH AMERICAN BIRDS.**

BY WILLIAM BREWSTER.

II.\*

**24. *Helminthophaga chrysoptera*.**

*Fall plumage*: male. Upper parts bluish-gray, washed strongly with olive-green on the back. Forehead and crown yellow, somewhat obscured by greenish streaking. Occiput bright greenish-yellow. Patch on wings clear yellow. Band through the eye and entire under parts, as in the adult. Chin, throat, and jugulum black, each feather broadly edged with soiled white. White maxillary stripes fairly meeting on anterior portion of chin. (This last feature may probably be explained by individual variation, not by age. I have seen many adults similarly characterized.)

*Fall plumage*: female. Remiges, rectrices, etc., as in adult. Pileum and nape uniform olive-green; back and rump bluish-gray, washed with greenish-olive. Upper tail-coverts clear bluish-gray. Sides of head and entire under parts with a slight wash of brownish-yellow; otherwise colored like the adult. From two specimens in my collection shot at Cambridge, Mass., July 18, 1874. It may be well to mention that these birds are in somewhat transitional dress, and have, hardly, perhaps, passed from the first plumage, but as the female differs but little from a specimen of the same sex in the perfected fall dress, taken August 21, 1875, I have thought it best to describe them both as in full autumnal plumage.

*Bull. N. O. C.* 3, April, 1878, p. 56-57.

SOUTH FRAMINGHAM.—One of your circulars has the statement that you would like "particulars in taking rare specimens."

To-day's eggng was rewarded by a "find" of nest and four fresh eggs of the Golden-winged Warbler, (*Helminthophaga chrysoptera*), and it seems to me that the bird is uncommon enough, as a New England breeder, to make an interesting item.

The female was flushed from her nest and shot. The nest itself was placed at the base of a few alder shoots (upright between the stems), and at the edge of a low thicket of new growth oaks and spot. Outwardly the loosely built with dead coarse grasses and gr lining of fine, dry grasses the Yellow-throat's nest.

The eggs are of the white, with small dots points of Vandyke by larger end, but not for

I have found two seen *tidovicianus*, one of the nest of Black and White three young and an egg I saved in halves.

I have found an uncor which, from its small s Solitary (or blue-head

A set of five almost eggs (fresh) was a curio ago.—[F. E. Coombs.]

Nest and Eggs of the Golden-winged Warbler (*Helminthophila chrysoptera*).—This bird selects a semi-swampy situation, overgrown with bushes, in which to nest. It commences to build the last of May or first of June. The nest is placed on the ground, and is supported laterally by three or four bushes situated from four to five inches apart. It is composed externally of dry leaves placed edgewise, and well lined with fine bark fibres, interspersed with a few coarse hairs. The nest when finished measures, inside, three and one-half to four inches in depth, and one and one half to two inches in diameter; the sides are nearly parallel, only slightly contracted above. It is well concealed by the overhanging bushes and leaves.

NUTTALL ORNITHOLOGICAL CLUB.

7

in this section of the country was that collected by Mr. C. J. Maynard, June 12, 1869, and admirably described by him on page 100 of the "Naturalist's Guide." This nest was placed on a slightly elevated tuft of moss, near a swampy thicket, within a short distance of a travelled road, and contained four eggs, and also one of the Cow Bird (*Molothrus pecoris*), which were within a few days of hatching. Since this nest was found there have been no others taken, to my knowledge, until the past year when three were discovered; one each by my friends, E. B. Towne, Jr., and W. W. Eager, who have kindly allowed me to use their notes, and the third by my brother and myself.

We were out collecting on the afternoon of June 8th, 1875, and while passing through a strip of swampy land on the outskirts of a small wood, flushed a bird from under a plant known as "Skunk Cabbage," (*Symplocarpus foetidus*.)

Upon searching we found the nest concealed by the large leaves of the plant. It was raised about two inches above the wet ground by dead oak and maple leaves which were quite damp. The owner soon came back, and hopping excitedly from branch to branch of an alder thicket a few yards away, almost continually uttered a sharp chirp of alarm, betokening her strong dislike to the intruders; but, strange to say, her mate did not make his appearance, although we could hear him distinctly zee-zee-zeeing, a few rods away. As it was fast growing dark, and feeling satisfied that she had laid her set, we shot her.

The nest, which closely resembles that of the Maryland Yellow-throat (*Geothlypis trichas*), is composed outwardly of dry oak and maple leaves, interspersed with long stripes of the outer bark of the grape vine; and is lined with fine fibrous shreds of the same of a reddish tint, interwoven with one or two very small pieces of dry grass. The measurements are as follows: height, 2.75 inches; width, 4.25; diameter inside, 2.30; depth inside, 1.60.

The eggs are three in number, two *pure white*; the third sparsely spotted on the larger end, and measured respectively, .69x.53, .68x.51, and .65x.49. One of them was out of the nest, and had three small holes close to each other on the upper side, through which a little of the albumen had leaked out and dried. I cannot with certainty account for this, as I feel quite positive that no other person had ever molested the nest, but think that a squirrel, or other rodent, had eaten one of the eggs, pulled

NESTING OF THE GOLDEN-WINGED WARBLER (*HELMINTHOPHAGA CHRYSOPTERA*), IN MASSACHUSETTS.

BY J. WARREN.

Of all our warblers there are few that surpass the Golden-wing in elegance of plumage. Though comparatively common with us during the spring migrations but few appear to remain to breed, and yet our State has been considered about its northern limit on this coast. They arrive in eastern Massachusetts from the second to the third week in May, when they are very active, flitting through the trees and young growth, diligently searching for their food, which consists of insects and their larvae, occasionally giving vent to a rather loud, peculiar and unmistakable song, which, though not so musical as that of most of the other individuals of this family, is very pleasing. The Golden-wings do not seem to confine themselves wholly to swampy situations, as is usually stated, but are sometimes found on higher ground, quite remote from such places. They pair shortly after arriving, and commence to build from the latter part of May to the first of June. The first authentic nest found



A Series of Eggs of the Golden-winged Warbler.

The eggs of the Golden-winged Warbler (*Helminthophila chrysoptera*) do not show any great variation except in size.

Set I. May 17, 1880. Monroe County, Michigan. Collected by Jerome Trombley. Nest of dead leaves, strips of bark, etc., on the ground, in woods. Four eggs, fresh. White, very sparingly speckled with russet and chestnut. One of the eggs is entirely unmarked, another has only a few specks, while the other two have nearly all their markings confined to the larger ends: .60 x .48; .60 x .49; .58 x .49; .60 x .49.

Set II. May 30, 1887. Detroit, Minnesota. Collected by J. W. Preston. Nest of coarse leaves, grass stems, and strips of bark, lined with fine fibre, situated on the ground in heavy woods. Five eggs, fresh. White, speckled, chiefly at the larger ends, with russet, and a few specks of burntumber: .65 x .50; .64 x .49; .65 x .50; .64 x .50; .64 x .49.

Set III. May 21, 1886. Monroe County, Michigan. Collected by Jerome Trombley. Nest at foot of wild gooseberry bush, among grass, etc., on side of old road. Four eggs. Light creamy white, speckled at the larger ends with chestnut and lilac-gray: .65 x .49; .63 x .52; .63 x .51; .63 x .52.

Set IV. May 27, 1887. Adams County, Illinois. Collected by Otho C. Poling. Nest in a grove of willows placed four inches from the ground, in a wild pie plant. Made of leaves, grass, etc., lined with finer material. Five eggs, fresh. White, speckled with burntumber, and a few specks of lilac-gray: .68 x .54; .74 x .51; .67 x .54; .66 x .52; .72 x .51. (This set as well as sets I, II and III, is described by me in *Davie's Nests and Eggs*, 1889, p. 300.)

Set V. May 24, 1889. Monroe County, Michigan. Collected by Jerome Trombley. Nest on the ground, at the foot of a black brier bush, near the edge of a thicket, in partly cleared low, wet woodland. Four eggs, incubation begun. White, speckled, principally at the larger ends, in the form of indistinct wreaths, with burntumber: .64 x .51; .64 x .52; .64 x .51; .67 x .51.

Set VI. May 23, 1889. Monroe County, Michigan. Collected by Jerome Trombley.

For a note on the Golden-winged Warbler see *Chondestes grammacus* under *Additions to the Trifascia of North Carolina in 1887*.

O. & O. XV. Feb. 1890. p. 23.

540. *Ornithological Notes*. By John A. Morden. *Ibid.*, III, pp. 255.—On the nesting of *Helminthophaga chrysoptera* near Hyde Ont.

Can. Sport. & Naturalist

Notes on Some Birds of the Great Smoky Mountains.

BY ARTHUR LEMOYNE, M. D.

(Continued from page 164.)

HELMINTHOPHILA CHRYSOPTERA.  
Golden-winged Warbler.

This rather locally distributed species was quite common in Monroe county, where it was found in the hardwood growth at varying altitudes. In

duals of this species Roane counties spring, although a year ago, contained other section. I his past season. I e on April 24th, s." and presume ous. During the seem to keep in the scrub growth open the mating abilities from the th the choirster is their nesting, the begun about the deposited by the ments are rather erience bears me nite and statisti- found uncom- and 30th, and full June 3d and 5th. ests of this species, sequent chapter where they were ests

22

ORNITHOLOGY

Nest at foot of black brier, among grass and weeds, on edge of thicket, in damp retired spot. Four eggs, incubation advanced. White, speckled with russet, most heavily at the larger ends: .64 x .53; .65 x .51; .64 x .51; .61 x .52.

Set VII. May 22, 1889. Monroe County, Michigan. Collected by Jerome Trombley. Nest on ground, near the foot of a blackberry bush, in low, wet, and partly cleared woods. Five eggs, fresh. White, speckled with russet: .61 x .50; .64 x .51; .62 x .50; .62 x .50; .61 x .49.

Set VIII. June 8, 1887. Monroe County, Michigan. Collected by Jerome Trombley. Nest near foot of small elm bush, close to a fence in a partly cleared woodland and second growth timber. Five eggs, incubation begun. Light creamy-white, speckled and spotted with russet. Two of the eggs have specks of burntumber and lilac-gray. All of them have the markings much heavier near the larger ends: .63 x .49; .64 x .49; .61 x .48; .64 x .47; .65 x .49.

Set IX. March 27, 1889. Monroe County, Michigan. Collected by Jerome Trombley. Nest on ground, near foot of alder bush, or edge of thicket of alders on low level ground. In border of partially cleared woods. Five eggs, incubation begun. White, sparingly marked, principally near the larger ends, with small specks of russet and burntumber: .65 x .50; .59 x .40; .64 x .51; .66 x .49; .60 x .50.

O. & O. XV. Feb. 1890. p. 22. J. P. N.

by the compactness of the inside lining. The eggs from the above nest were taken June 8d, '86, and were perfectly fresh on that date. The set numbered four and in coloration were pure, almost glossy white, with bright brown spots at the larger end, which had a tendency to form a wreath around the egg, and would have accomplished, had there been enough of the spots.

O. & O. XI. Dec. 1886. p. 179.

instance and the bird be searched for near at hand. The notes are very deceptive. There are other notes of the Golden-wing, a half song difficult to describe, and the usual call notes, low chirps common to so many of the Warblers.

O. & O. X. Mar. 1885. p. 38

A Series of Eggs of the Golden-winged Warbler.

The eggs of the Golden-winged Warbler (*Helminthophila chrysoptera*) do not show any great variation except in size.

Set I. May 17, 1880. Monroe County, Michigan. Collected by Jerome Trombley. Nest of dead leaves, strips of bark, etc., on the ground, in woods. Four eggs, fresh. White, very sparingly speckled with russet and chestnut. One of the other two have a lined to the large .58 x .49; .60 x .46.

Set II. May 31. Collected by J. W. leaves, grass stem with fine fibre, heavy woods. speckled, chiefly in set, and a few spots .64 x .49; .65 x .50;

Set III. May Michigan. Collected Nest at foot of grass, etc., on Light creamy with chest .63 x .52; .63 x .51

Set IV. May 2 nois. Collected in grove of willows ground, in a wild grass, etc., lined eggs, fresh. White, and a few spots .74 x .51; .67 x .54 set as well as sets me in Davie's Nest

Set V. May Michigan. Collected Nest on the ground bush, near the cleared low, wet tion begun. With the larger ends wreaths, with buff .64 x .51; .67 x .51

Set VI. May Michigan. Collected

For a note on the Golden-winged Warbler see *Chondestes grammacus* under Additions to the *trifasciata* of North Carolina in 1887.

O. & O. XV. Feby. 1890. p. 23.

540. *Ornithological Notes*. By John A. Morden. *Ibid.*, III, pp. 255.—On the nesting of *Helminthophaga chrysoptera* near Hyde.

Can. Sport. & Naturalist

Notes on Some Birds of the Great Smoky Mountains.

BY ARTHUR LEMOYNE, M. D.

(Continued from page 164.)

HELMINTHOPHILA CHRYSOPTERA.  
Golden-winged Warbler.

This rather locally distributed species was quite common in Monroe county, where it was found in the hardwood growth at varying altitudes. In Blount county also, several individuals of this species were noticed, and in Cooke and Roane counties scarcely any were noted the last spring, although the latter county, some four years ago, contained more of these birds than any other section. I failed to note their first arrival this past season. I have them recorded for first time on April 24th, as "seen in considerable numbers," and presume they arrived some days previous. During the first week after their arrival they seem to keep in company and may be found in the scrub growth in the high lands. The males open the mating season by displaying their vocal abilities from the highest point of vantage, though the choirster is often secluded from view. Their nesting, the second act in the drama, is begun about the middle of May and the eggs are deposited by the first of June. These last statements are rather general ones, but my own experience bears me out in this assertion. More definite and statistical records may be given; I have found uncompleted nests on May 26th, 29th and 30th, and full complements on May 28th and June 3d and 5th. The above are in six different nests of this species, the first can have no subsequent chapter added, as I left the locality where they were

found too soon to procure the eggs. The nests of this warbler are placed on the ground, and for so daintily a bird are rather bulky and coarse in detail, though so nearly alike in composition as to admit of an easy selection of a typical structure, a description of which will serve for all. A nest before me has just been inspected by a Professor of Botany, and I avail myself of the opportunity and present its description. The outside of the nest was large beach and oak leaves, followed by a layer of the fine strips of bark of the grape vine. This was followed by a lining of grasses and slender fibres of some coarse weed. The inner lining was of horse hair and very compactly woven into its place, so as to admit of being removed from the nest and still preserving its shape. It resembled very much the nest of the Maryland Yellow-throat, but can be distinguished by the compactness of the inside lining. The eggs from the above nest were taken June 3d, '86, and were perfectly fresh on that date. The set numbered four and in coloration were pure, almost glossy white, with bright brown spots at the larger end, which had a tendency to form a wreath around the egg, and would have accomplished, had there been enough of the spots.

O. & O. XI. Dec. 1886. p. 179.

instance and the bird be searched for near at hand. The notes are very deceptive. There are other notes of the Golden-wing, a half song difficult to describe, and the usual call notes, low chirps common to so many of the Warblers.

O. & O. X. Mar. 1885. p. 38





*Helminthophila ruficapilla* - L. Bancroft

1889  
 April <sup>micro</sup> 30 (Bany) 1889. 28 (7<sup>1/2</sup>) 1891  
 May 11<sup>1/2</sup> - 14<sup>1/2</sup> - 17<sup>1/2</sup> - 29<sup>1/2</sup> - 30<sup>2/3</sup> - 1889. 4<sup>1/2</sup> - 7<sup>3/4</sup> - 9<sup>3/4</sup> - 15<sup>3/4</sup> - 16<sup>(8/8)</sup> - 17<sup>2/3</sup> - 29<sup>2/3</sup> - 31<sup>3/4</sup> 1890  
 June 3<sup>1/2</sup> (1<sup>1/2</sup> milk) - 8<sup>1/2</sup> (young) - 1889. 10<sup>3/4</sup> - 12<sup>1/2</sup> - 13<sup>3/4</sup> - 14<sup>3/4</sup> - 15<sup>1/2</sup> (2<sup>1/2</sup> blue sh) 1890  
 Aug 13<sup>2/3</sup> - 18<sup>(1)</sup> - 19<sup>(2)</sup> 1889.  
 Jan'y 31<sup>1/2</sup> (one found dead by Foster (the sp. notes).) 1890  
 April  
 May 10<sup>1/2</sup> - 17<sup>1/2</sup> - 23<sup>3/4</sup> - 28<sup>3/4</sup> 1891 1<sup>1/2</sup> 2<sup>1/2</sup> 3<sup>1/2</sup> 4<sup>1/2</sup> 7<sup>1/2</sup> 8<sup>3/4</sup> 10<sup>3/4</sup> 11<sup>3/4</sup> 12<sup>3/4</sup> 13<sup>5/8</sup> 14<sup>3/4</sup> 15<sup>3/4</sup> 18<sup>3/4</sup> 19<sup>3/4</sup> 20<sup>3/4</sup> 21<sup>3/4</sup> 22<sup>3/4</sup> 23<sup>3/4</sup> 24<sup>3/4</sup> 26<sup>3/4</sup> 31<sup>3/4</sup> 1899  
 (1<sup>1/2</sup> blue) 6<sup>1/2</sup> 7<sup>1/2</sup> 8<sup>1/2</sup> 10<sup>1/2</sup> 11<sup>1/2</sup> 12<sup>1/2</sup> 13<sup>1/2</sup> 14<sup>1/2</sup> 15<sup>1/2</sup> 16<sup>1/2</sup> 17<sup>1/2</sup> 18<sup>1/2</sup> 19<sup>1/2</sup> 20<sup>1/2</sup> 29<sup>1/2</sup> 31<sup>1/2</sup> Concord 1892  
 10<sup>(8)</sup> 11<sup>1/2</sup> 14<sup>1/2</sup> 15<sup>1/2</sup> 16<sup>1/2</sup> 17<sup>1/2</sup> 18<sup>(2)</sup> 20<sup>1/2</sup> 21<sup>1/2</sup> 24<sup>1/2</sup> 27<sup>1/2</sup> (blue H.) 29<sup>1/2</sup> Concord 1893. 9<sup>1/2</sup> 7<sup>1/2</sup> 1893  
 27<sup>1/2</sup> 4<sup>1/2</sup> 5<sup>1/2</sup> 6<sup>1/2</sup> 12<sup>1/2</sup> 13<sup>1/2</sup> 14<sup>1/2</sup> 16<sup>1/2</sup> 26<sup>1/2</sup> 1894  
 4<sup>1/2</sup> 6<sup>1/2</sup> 23<sup>1/2</sup> 1895  
 16<sup>(blue)</sup> 7<sup>1/2</sup> 1896 4<sup>1/2</sup> 1897 7<sup>1/2</sup> 10<sup>1/2</sup> 11<sup>1/2</sup> 14<sup>1/2</sup> 18<sup>1/2</sup> 19<sup>1/2</sup> 22<sup>1/2</sup> 31<sup>1/2</sup> Concord 1898  
 June 1<sup>1/2</sup> - 2<sup>3/4</sup> - 9<sup>1/2</sup> - Concord 1892  
 " 7<sup>1/2</sup> 1894 22<sup>1/2</sup> 1897 2<sup>1/2</sup> 5<sup>1/2</sup> 13<sup>1/2</sup> 21<sup>1/2</sup> Concord 1898. 3<sup>1/2</sup> 4<sup>1/2</sup> 9<sup>1/2</sup> 10<sup>1/2</sup> Concord 1899.  
 July 5<sup>1/2</sup> 1892 17<sup>1/2</sup> (in full cord) 19<sup>1/2</sup> (blue H.) 30<sup>1/2</sup> (in large mixed flock. Atabrota pl. Concord 1893.  
 August 22<sup>1/2</sup> (ad. ones of 1889) Concord 1892  
 " 4<sup>(1)</sup> (Dorby's Lane) Concord 1893.  
 " 12<sup>1/2</sup> (blue bank) Concord 1894  
 September 7<sup>1/2</sup> (in full flock) Concord 1892. 3<sup>(3)</sup> - 1893.

ruficapilla

*Helminthophila ruficapilla*

Eastern Massachusetts.

1889

Mass.

May 29

Watertown. — A ♂ in full song in the oak woods behind the  
Catholic Cemetery and afterwards in the pines on  
Friend's Hill. I have never known this species to breed in this  
locality but it seems late for migrants.

On the  
Cotledge farm.

" 30

Belmont. Noted only three (all ♂♂ in full song) during a  
morning spent in the region between Arlington Heights  
and the lower end of the "Cotton run." It seems to me that  
they are much scarcer in E. Mass. than I formerly had  
perhaps they were never very numerous in the breeding season.

During this period we have few if any small birds that  
are so shy. I followed each of the birds heard to-day but  
found it impossible to get within pistol range of any  
of them. 30 to 40 yds. was the usual limit of approach that  
they permitted me. The song is very unlike that of any  
other warbler and is difficult to describe. It begins with three  
or four distinctly enunciated, separate notes and ends in a  
rolling trill, thus: chip, chip, chip, chip, tr-r-r-r-r-r-r-r-r-r-r  
falling at the close. Its tone is not unpleasant but it  
belongs unmistakably to the class of uninteresting bird songs.  
It seems to lack energy and character as well as, wholly,  
graciousness. It is one of the most uniform or stereotyped songs I  
know rarely or never varying with the same individual or with  
different individuals, even of different regions. One feels that  
the singer is merely repeating a tiresome strain that he has  
learned by rote. There is no soul in it, no earnestness. Yet the  
bird himself is a remarkably alert, interesting little fellow. His  
chip is more in keeping with his character, sharp, petulant  
identical to my ear with the chip of H. chrysophaea, very close  
to that of the Red-eye Bird.

Song

Chip

*Helminthophila ruficapilla.*

Eastern Massachusetts.

1889 Mass

June 3 Wellesley Hills. - A nest with 5 young on the edge of a small nest with 5 young  
 opening nearly under, but a few inches to one side of, a black oak sprout and well out in the sunshine. Locality east slope of a small knoll covered thickly with gray birches interspersed with a few red cedars and pitch pines. Nest well in under a tuft of dry last year's grass mixed with a few dead twigs the grass completely covering it above, behind and on both sides but in front (on the lower side) leaving an opening about 3 inches wide by 2 inches high. The nest in situ measured 1.85 in diameter, by 1.33 in depth. It was very neatly rounded, semi-cylindrical or cup shaped, sunk in the ground and with the rim, composed wholly of fine dry grasses ~~with~~ a few black and white horse hairs mixed in the lining. The young were about 1/2 grown with tufts of <sup>hilly</sup> down on their heads, their wings and the feathered tracts of their backs covered with sprouting pin feathers. The ♀ fluttered out of the nest as I put my foot down about 40 inches above it. She flew into a bush then flitted out of sight among the foliage and did not return or chirp until some fifteen minutes later when we found a Chickadee's nest with young near the spot. The clamor of the old Chickadee brought up, among other birds, both ♂ & ♀ Nashville Warblers. The ♀ then chirped a little, very softly, like a Chipping Sparrow but both she and her mate seemed much more anxious about their own safety than that of their young. I heard the ♂ singing an hour later but the ♀ was not there on the nest.

" 8 Denton visited the above nest this morning. The young were young lean feathered and all scrambled out as he looked in. The old birds nest. were very bold & ran about ~~with~~ him on the ground with wings Parents bold spread, coming within a few feet. I saw one of the young the note of young. call incessantly for food in a shrill monotonous double chirp chitly-chitly, etc.

Massachusetts,

*Helminthophila ruficapilla.*

1892.

July 5. Concord. In Dutton's lane I heard a Nashville Warbler in full song, the only instance which I remember of July singing in this part of New England the Nashville being one of the first of our birds to become silent.

*Helminthophila ruficapilla.*

1889

Aug 18

Melrose Highlands. - Some Washwills on the 18<sup>th</sup> and next day others singing rather freely & in full voice (Hovey let. Aug. 20) in full song

1890

May 19

Schmitt, Waterman - Lincoln. - Only three males heard during a drive of 20 miles in these towns. The migrants have doubtless all passed in this

" 29

Pelham. - During a walk of about a mile I heard seven different males singing, three of them in hearing at one time. They surely cannot have been migrants yet I have not found so many in the same area for years. Seven heard in a short walk.

June 15

Marblehead. - Found an adult ♂ on Fisher's Island this morning. It acted like a Henslow's Sparrow concealing itself in the grass and taking short flights when flushed. Once it alighted on a weed stalk & gave us a good view of its chestnut crown & yellow under parts. The island is about 200 yds. from the mainland and totally devoid of trees or bushes but sustains a rank growth of coarse grass and weeds where there are no rocks. On a tree on island

Helminthophila ruficapilla.

East Lexington, Mass.

1893.            A Nashville Warbler on the knoll just described (Faxon  
May 18.        and I had followed up the brook that empties into the pond  
for half a mile or more when we reached a low hill half sur-  
rounded by the brook) had a curious song which puzzled us  
completely and excited us greatly until we saw the bird. For  
a long time he sang tchit-tchit-tchit-tchit-tchit in dry me-  
tallic tones—all the notes given with equal emphasis and in  
the same key. This song resembled that of the Chiff-chaff of  
Europe but was shorter and more wiry in tone. It proved how-  
ever to be merely a prelude to the usual song which the bird  
finally tacked on the end of it once or twice. His chirp was  
also abnormal and characterized by the same dry, metallic  
quality as the notes just described. He had a mate and ap-  
parently had chosen the knoll as a breeding ground.

Helminthophila ruficapilla.

Breezy Point, Warren, N.H.

Flight song.

1894.            We took a short walk this evening up the brook and back  
June 17. through the pasture above the house. Among some young spruces  
on a knoll we heard what seemed to be the normal song of a  
Nashville Warbler to which were prefixed a number of short,  
stuttering, warbled notes very like those at the beginning of  
the flight song of the Oven Bird. I have little doubt that  
this was a flight song (if so wholly new to me) of the Nash-  
ville Warbler but we did not see the bird. (Faxon found a  
Nashville chirping and evidently anxious about young on this  
very knoll, two days later.)

Helminthophila ruficapilla.

Peterborough, New Hampshire.

1898. Abundant and very generally distributed but seen oftenest  
July 5 in spruce-grown pastures and thickets bordering roadsides or  
to second-growth woods. Previous experience has led me to be-  
Aug.15. lieve that this species, like H.chrysoptera, does not sing of-  
ten or freely after the close of June but here it continued  
in full song up to July 21st when I heard it for the last time  
(July 7 $\frac{1}{2}$ , 11 $\frac{1}{2}$ , 12 $\frac{1}{2}$ , 13 $\frac{1}{2}$ , 19 $\frac{1}{2}$ , 20 $\frac{1}{2}$ , 21 $\frac{1}{2}$ ). On July 23rd I found  
two young which had nearly completed their autumnal plumage.

1899. A male heard singing on July 4, 7 & 14 and a young bird  
July seen on the summit of Pack Monadnock August 6 were the only  
& individuals noted this summer. The bird heard on July 14th  
August. (near Abbott Thayer's house at Dublin, N.H.) sang on wing  
mounting at an angle of some 45 degrees to a height of about  
100 feet. Just as it cleared the trees tops (pitch pines) it  
began chipping; next followed six or eight short, full, rather  
liquid notes' then the normal song at the close of which the  
bird shot downward to the earth.

*Helminthophila ruficapilla*

1896. Penobscot Bay, Maine.

Deer Island. June 20<sup>5</sup>/<sub>8</sub> 21<sup>8</sup>/<sub>8</sub> 22<sup>7</sup>/<sub>8</sub> 24<sup>1</sup>/<sub>8</sub> 25<sup>5</sup>/<sub>8</sub> 26<sup>3</sup>/<sub>8</sub> 27<sup>7</sup>/<sub>8</sub> 28<sup>8</sup>/<sub>8</sub> 29<sup>7</sup>/<sub>8</sub>

July 1<sup>2</sup>/<sub>8</sub> 2<sup>7</sup>/<sub>8</sub> 3<sup>1</sup>/<sub>8</sub> 4<sup>1</sup>/<sub>8</sub> 5<sup>4</sup>/<sub>8</sub> (6) 6<sup>7</sup>/<sub>8</sub> 7<sup>1</sup>/<sub>8</sub> 8<sup>1</sup>/<sub>8</sub> 9<sup>7</sup>/<sub>8</sub> 10<sup>5</sup>/<sub>8</sub> 11<sup>1</sup>/<sub>8</sub> 12<sup>1</sup>/<sub>8</sub> 13<sup>3</sup>/<sub>8</sub> 14<sup>7</sup>/<sub>8</sub> 17<sup>2</sup>/<sub>8</sub> 18<sup>1</sup>/<sub>8</sub>

Sheep Island - June 23<sup>1</sup>/<sub>8</sub>

Isle au Haut - July 8<sup>2</sup>/<sub>8</sub>

Scdwick - July 15 } Common everywhere in spruce grown pasture.  
Brockville " 16 } but apparently less numerous than on Deer Island

June 24. The Nashville warblers in the woods near the house have nearly ceased singing within the last four days but I still hear them at evening just before & a little after sunset. I have heard them a few days or weeks song flights within the past few days. They give the normal song with a short prelude <sup>three or four</sup> of a fluttering chirp & chirp which are more in the least musical. This flight song is always given after sunset. Unfortunately I have as yet caught only a glimpse of one of the singers & cannot say just what the song flight is like. July 5. Flight song: Swit-tle-tle followed by normal song, and so on.

June 26. A cloudy foggy day with fresh S. W. wind. Saw Nashvilles near the house song through the whole forenoon.

July 1-5. During these five days Nashvilles have sung freely in the woods near the house - quite as freely, in fact, as when we first came here.

Birds of Upper St. John.  
Batchelder.

15. *Helminthophaga ruficapilla* (Wils.) Bd. NASHVILLE WARBLER.—Apparently not very common at Fort Fairfield. It was not observed at Grand Falls.

Bull. N. O. C., 7, April, 1882, p. 109

Summer Birds of Sudbury, Ont.  
A. H. Alberger.

645. Nashville Warbler. Common. Breeds.  
Fresh eggs, July 5th.

O. & C., XV, June, 1890, p. 86

Dwight, Summer Birds of  
Prince Edward Island.

*Helminthophila ruficapilla*. NASHVILLE WARBLER.—Rather abundant at Tignish and not met with elsewhere. The activity of this bird is highly commendable, unless you are in pursuit of one, when you are not so favorably impressed. Hardly pausing to dash off its lively song, it is one moment at the very top of some tall tree and the next on the ground a hundred yards away where its song breaks forth quite as vigorously. The bird is the embodiment of restlessness.

Ank X, Jan., 1893, p. 13

53.  
Summer Birds of the Cobalt Mining Region,  
Nipissing District, Ontario.  
by Frederick C. Heibel, Ank, XXIV, Jan. 1907, p. 51

53. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Only one met with, August 12.

Birds of Toronto, Canada,  
by James H. Fleming.  
Part II, Land Birds.  
Ank, XXIV, Jan. 1907, p. 83.

241. *Helminthophila rubricapilla*. NASHVILLE WARBLER.—Abundant migrant, May 1 to 24, and September 4 to 26. A male was taken June 6, 1891, and a female June 14, 1895.

Birds of Dead River Region, Me. F. H. C.

17. *Helminthophaga ruficapilla*, (Nashville Warbler). A common summer resident of the county, more often observed among the mixed growth of the Dead River valley than elsewhere, though it might have been overlooked in the heavily timbered forests of the northern portion. They were breeding among the scrub on the "plains" between Eustis and Stratton, as the actions of the birds testified, but diligent search failed to discover a nest. Young birds were also frequently seen in August.

O. & O. XI, Sep. 1886, p. 129

Bds. Obs. in Franconia, N.H. June 11-21 '86, and June 4-Aug. 1, '87, W. Faxon

56. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Common.

Auk, V. April, 1888, p.152

*Helminthophila ruficapilla*. — July 30<sup>see</sup> Rye Beach, N. H. 1872.

*Helminthophila ruficapilla*. — Common, Profile House, N. H. Aug. 1-12-1867.

47. *Helminthophila ruficapilla*. — June 16<sup>2</sup> E. Mass. 1885.

Princeton & Rutland, Mass. Aug. 2-1885

6. *Hel. ruficapilla*. — One - <sup>seen</sup> ~~heard~~ Winchendon, Mass. June 1883.

July 12<sup>4</sup> - 13<sup>6</sup> - 15<sup>4</sup> - 16<sup>8</sup> - 17<sup>12</sup>

Shelburne, N. H.

*Helminthophila ruficapilla*.

1884

July

Not uncommon in brush grown pastures. During the first half of the month the males sang pretty steadily; after the 15<sup>th</sup> I only heard one - on the 19<sup>th</sup> when a brood of young was also met with in a "mixed flock."

Birds Obs. at Bridgewater, N.H.  
July 12-Sept. 4, 1883. F.H. Allen

*Helminthophila ruficapilla*.—Common.

Auk, VI. Jan., 1889, p. 77

Summer Birds of Presidential Range,  
White Mts. A.P. Chadbourne

28. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—On July 11, 1884, one was heard singing on the third mile by carriage road from the base, and another was seen on the bare mountain side on the fifth mile. Not positively identified in 1886.

Auk, 4; April 1887, p.105

Birds Obs'd. near Holderness, N.H.  
June 4-12, '85, and 4-11, '86, W. Faxon

46. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Very common.

Auk, V. April, 1888, p.150



57. Helminthophila rubricapilla. NASHVILLE WARBLER.

Several times I heard a song from the spruces near the top of the mountain (3500 feet) which I feel sure came from this species, though I was unable to get even a glimpse of the singer. Mr. Torrey writes me that he heard several during his visit.

Mr. A. L. S. S. S.

THE BOSTON MUSEUM OF NATURAL HISTORY

Scarcity in 1883.

Middlesex Co., Mass.  
June 14, 1883

The Nashville Warble has been unusually scarce here this season. I took an all-day drive to Concord, June 1, and heard not more than three or four. To-day I spent about ten hours in Belmont & Lexington without hearing a single bird. Purdie has noticed the same condition of affairs in West Newton.

Middlesex Co., Mass.

*Helminthophila ruficapilla*

- Aug. 20 Three or four in a mixed flock among red cedars (Coolidge farm, Watertown). I shot one, a young ♂ in perfect fall dress. They were all tame and unsuspecting.
- " 23 Saw one in the place above described.
- " 25 Two in the cedars " " I watched them for some time and was astonished to find that they wagged their tails, not as frequently as *D. palmarum*, but in precisely the same manner; I shot one in the act.
- Sept. 1 Saw two and shot one, a ♀ apparently adult (Watertown)



Mass.

*Helminthophila ruficapilla*

Dr. Samuel Cabot tells me that the first specimen he ever saw of this bird was found dead in a barn in Brookline, Mass., during an autumnal storm. This was somewhere between 1832 and 1835 when he was in College. At that time he is certain it was not found, unless exceptionally, in eastern Mass. But during the next ten years it became common, increasing gradually and steadily from year to year, until in 1842 he killed ten specimens in one morning. (Notes taken after a talk with Dr. Cabot Jan'y 18; 1885)

Mass. (Concord)

*Helminthophila ruficapilla* ✓

1886

Early laying

May 12 A ♀ shot this morning had an egg in the oviduct full-sized but shellless. Apparently other eggs had been recently laid. This Warbler must be one of the earliest breeders of its family and it must also breed remarkably soon after its arrival here. It is as common about Concord in suitable localities as any other species of Warbler.

W. Middlesex Co. Mass.  
June 25-30, 1889.

*Helminthophila ruficapilla*

Ashby, Mt Watatic --- I do not remember to have ever found the Nashville Warbler so numerous anywhere as it was in the country about Ashby. It was very generally distributed and in full song during our stay. We found it less numerous on Mt Watatic <sup>than</sup> at lower altitudes, but it was seen on several occasions nearly to the summit of the mountain. It was not noted at West Townsend. Its favorite haunts about Ashby were the edges of woods, pastures grown up to gray birches, and ~~struck~~ <sup>some of the country woods</sup>

Mass. (near Concord).

1887

May 8<sup>1</sup> - 9<sup>4</sup> - 10<sup>6</sup> - 11<sup>15</sup> - 12<sup>20</sup> - 16<sup>15</sup> - 21<sup>8</sup> - 23<sup>2</sup> - 25<sup>2</sup> - 26<sup>2</sup>

June 2<sup>2</sup> - 4<sup>3</sup> - 7<sup>1</sup> - 13<sup>3</sup>

Aug. 9<sup>2</sup>

*Helminthophila ruficapilla* <sup>\* ruficapilla</sup>  
Mass (Winchendon)

1887

June 25<sup>10</sup> - 26<sup>8</sup>

*Helminthophila ruficapilla*

1888

Nashville Warbler.

S. W. Denton.

June 4. Tom Fitzgerald reports finding a nest on the ground "under a mass of hay against a small bush" made almost entirely of grass. It contained 4 eggs which I purchased.

1888

Nashville Warbler S. W. Denton.

May 6. Shot one  
" 11 " "  
" 13 " Saw one

Birds Known to Pass Breeding Season  
nr. Winchendon, Mass. Wm. Brewster

59. *Helminthophila ruficapilla*.

Auk, V, Oct., 1888. p.389

Birds of Bristol County, Mass.  
F. W. Andros.

*Helminthophila ruficapilla* (Wils.), Nashville  
Warbler. Migrant, common. Rarely breeds.

O. & O. XII. Sept. 1887 p.140

Bds. Obs. near Sheffield, Berkshire  
Co., Mass. June 17-26, '88. W. Faxon

55. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Rare at lower levels, not rare on the mountains.

Auk, VI. Jan., 1889. p.45

Bds. Obs. near Graylock Mt. Berkshire  
Co. Mass. June 28-July 16. W. Faxon

49. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Not rare. A good many were found in the pastures in the Notch and in the 'Mountain Pasture' (2200 feet). A few were seen along the Graylock turnpike up to within about a mile of the summit.

Auk, VI. April, 1889. p.102

On the same day (Jan. 31) I found a dead Nashville Warbler (*Helminthophila ruficapilla*), in Swampscott, Mass., with its neck broken and wedged between two twigs of a barberry bush—clearly the work of a Shrike. Mr. Brewster, who now has the bird's skin, was sure that it could not have been dead over two weeks. In the stomach were many land snail shells, 1.5 mm. long, belonging to the genus *Pyga*. Walter Faxon

Oct., 1890, p. 409.

Connecticut, June, 1893.

*Hirundo thalassina*

June 13<sup>th</sup> \* Saybrook  
" 22<sup>nd</sup> \* Ansonia  
" 24<sup>th</sup> \* Bridgeport

Apparently a new species  
was not kept at last year  
... ..  
day, the bird ... ..  
was being in large ... ..  
a ... ..  
... ..

General Notes

Notes from Connecticut,  
C. H. Cranes, Bridgeport, Conn.

The Nashville Warbler probably breeds regularly throughout southern Connecticut and perhaps even in Westchester County, New York, as a pair spent the summer in Woodlawn Cemetery. I took a beautiful set of five fresh eggs in Bridgeport, June 6. The five nests I have seen were found by accident, mostly a few miles inland. In one place at Seymour, and almost within hearing of each other, five or six pairs have regularly nested for several years. With rare exceptions theirs are the best concealed nests of our birds.

Auk X, Jan., 1893, p. 90.

Birds of the Adirondack Region.  
O. H. Merriam.

21. *Helminthophaga ruficapilla* (Wilson) Baird. NASHVILLE WARBLER.—Have shot it on Moose River, and at Big Moose Lake, in October (latter locality Oct. 19, 1879). Also given by Roosevelt and Minot from Franklin Co.

Bull. N. O. C., 6, Oct., 1881, p. 227.

Brief Notes from Long Island.

the Nashville Warbler of which I have seen two.

Arthur H. Corwell Brooklyn N. Y.

Auk 9, July, 1892. p. 307.

Dutcher, Rare Long Island Birds.

*Helminthophila ruficapilla*. NASHVILLE WARBLER.—The specimen in the collection was shot by Col. Pike in what is now Prospect Park, Brooklyn, and was mounted by Mr. Akhurst who also procured one or two specimens. Col. Pike considers them rare on Long Island.

Auk X, July, 1893 p. 277.

Arrivals of Mig'y Birds, Spring-1886,  
Central Park, N. Y. City. A. G. Paine, Jr.

May 9, *Helminthophila ruficapilla*, (645). Nashville Warbler.

O. & O. XI, July, 1886, p. 109

Of special note is the capture of a breeding female *Helminthophila ruficapilla* on June 16.\* It was not known to nest so far south.

\* Englewood, N. J. (?)

Alb. O. C. N. Y. B. 198

The Singing of Birds. E. P. Bicknell.

*Helminthophila ruficapilla* (Wils.) Ridgw. NASHVILLE  
WARBLER.

Sings regularly on its spring migration, but I have never heard it in the fall.

Auk, I, July, 1884, p. 211.

Birds of Kalamazoo County, Mich.  
Dr. Morris Gibbs.

28. [85.] *Helminthophaga ruficapilla* (Wils.) Baird. Nashville Warbler.—Arrives from May 3 to 10. Remains with us until the last of the month and occasionally later. It may remain through the Summer, but has never been taken to my knowledge at a time to lead me to think that it nested here.

The Nashville is an active and pleasing Warbler and well known to all the collectors. In a large Tamarack swamp near Sugar-loaf Lake, hundreds may be heard singing from the 10th to the 20th of May. The song is similar to the syllables *Cu twee cu twee cu twee cu twee twee twee*, or *cu weet cu weet cu weet twee twee twee*, uttered in a sprightly manner as the little fellow skips about among the branches.

In the Autumnal migration the birds reach us in the latter part of August and remain a month. At this time of the year the song is seldom if ever heard. I have only heard the call, a simple chirp.

O. & O. X. Mar. 1885, p. 38

O. & O., VII. NOV. 1892, p. 173

Three years ago I left an undetermined set of Ground-building Warbler's eggs (because I could not shoot either parent. This year I took a nest and five eggs, identical with the others, in the same place, and secured the female by stealing my hat over the nest. The bird proved to be a Nashville Warbler. The situation, the sunken nest with moss-covered lip flush with the surface, the color and markings

of the eggs, and all surroundings, exactly coincide with the well-known description of this species by A. Allen, copied into "Birds of the Northwest."

~~This season of '82 has narrowed my circle of local inquiry by three species which I had not positively found breeding here before.—J. M. W., Norwich, Conn.~~

Although not at all a rare bird the eggs of the Nashville Warbler (*Helminthophila ruficollis*) are very difficult to obtain, and are seldom seen in large series in collections. Their variation in coloration is much less than that of the eggs of most of the Warblers. Six sets now before me may be thus described:

Set I. May 30, 1886. Hudson, Mass. Nest on the ground. Three eggs, fresh. Very light, creamy-white, speckled, principally near the larger ends, with vinaceous, and a few specks of lilac-gray. The markings form wreaths: .65 x .49; .69 x .49; .64 x .50.

Set II. May 30, 1887. Detroit, Minn. Nest of fine grass, lined with hair, etc. In tussock of grass in a marsh. Four eggs, incubation advanced. White, speckled with vinaceous and a few dots of lilac-gray. The markings are larger and heavier near the larger ends: .60 x .50; .61 x .49; .62 x .49; .62 x .48.

Set III. June 6, 1882. Preston, Conn. Nest under tussock of grass, imbedded in the soil, the edge flush with the surface of the ground. The edges of the nest were covered with moss like a Pewee's nest. Five eggs, fresh. Light, creamy-white, speckled, more heavily near the larger ends, with vinaceous and a few minute markings of lilac-gray. This set was collected by the celebrated oölogist "J. M. W." (Mr. C. L. Rawson), and contains much smaller eggs than

those usually laid by the Nashville Warbler. They measure: .50 x .45; .56 x .46; .56 x .46; .57 x .46; .57 x .47. (This set, as well as Sets I and II, is described by me in Davie's *Nests and Eggs*, 1889, p. 362.)

Set IV. June 8, 1888. Farmington, Maine. Nest on ground, at foot of small maple. Made of fine grass lined with white horse-hair. Four eggs, fresh. White, speckled with hazel. The markings are larger and closer together near the larger ends: .64 x .51; .64 x .52; .63 x .51; .60 x .48. This set also contains a Cowbird's egg.

Set V. June 4, 1887. Farmington, Maine. Nest made of grass and moss, lined with fine roots, and placed at the foot of a little bank, beneath dead and thickly overhanging brakes. Four eggs, fresh. Light creamy-white, speckled with hazel and a few minute dots of lilac-gray. In three of the eggs the markings are principally confined to the larger ends, but the fourth has larger spots and they are more scattered all over the surface: .62 x .49; .61 x .49; .62 x .50; .61 x .49.

Set VI. June 5, 1888. Farmington, Maine. Nest concealed in side of small knoll, beneath dead brakes and small spruce. Made of grass and moss, and lined with hair. Four eggs, fresh. White, heavily spotted, especially at the larger ends, with cinnamon rufous. The markings on this set are larger and heavier than on any other eggs of this species that I have ever seen, and they produce a very brilliant and handsome effect: .64 x .47; .64 x .47; .66 x .47; .63 x .47.

J. P. N.

Auk, XIII, July, 1896, pp. 263-264.

*Helminthophila rubricapilla* vs. *Helminthophila ruficapilla*.—The A. O. U. Committee appear to have ignored their rule "Once a synonym always a synonym," in the case of the Nashville Warbler. The West Indian *Dendroica ruficapilla* was called *Sylvia ruficapilla* by Latham in 1790 (Ind. Orn., II, 540). Wilson applied the same name to the Nashville Warbler in 1811 (Amer. Orn., III, 120). Whether by design or by

inadvertence, the name was altered to *S. rubricapilla* in a later volume of Wilson (Amer. Orn., VI, 1812, 15) and this appears to be the earliest eligible name for the Nashville Warbler. Under the A. O. U. Code, Nos. 645 and 645a of the 'Check-List' should therefore stand as *Helminthophila rubricapilla* (Wils.) and *Helminthophila rubricapilla gutturalis* (Ridgw.).—WALTER FAXON, *Museum of Comparative Zoölogy, Cambridge, Mass.*

1200. *The Genus Helminthophaga*. By Dr. Morris Gibbs. *American Field*, Vol. XXIII, No. 1, Jan. 3, 1895, p. 8.—A review of the four species of this genus which have been recorded from Kalamazoo County, Mich.

431. *Fresh work in an Old Field*. By J. M. W[hipple]. *Ibid.*, p. 173.  
—Finding of nest and eggs of the Nashville Warbler. *D. & O.* Vol. VII

*celata*

*Helminthophila calata*

1891 Mass.

a young?

Nov. 10 Cambridge. - At about noon to-day Mr. Denton called me to look at a Warbler which was flitting my garden about in a bush within ten feet of his window. I at once recognized it and W. W. Fincham who was with me at the time unhesitatingly expressed my conviction that it was an Orange-crowned. Indeed there can be no doubt of the fact for we had a perfectly good sight at it within ten or twelve feet in a strong light. It was rather unusually yellowish beneath and looked like a young bird. Getting my collecting pistol I opened the door cautiously but the bird flew. I followed it about the garden but failed to get a satisfactory chance to shoot and at length it took a long flight into one of the neighboring gardens. It was very active and restless skipping about among the branches of low shrubs and trees descending to, and hopping about on, the ground. It chirped frequently in much the same tone as a *Dendroica*. There were no other birds in company with it and indeed none in the garden at the time except a White-throated Sparrow and several English Sparrows. I noticed that the Orange-crown occasionally tilted up its tail in the manner of a Nashville Warbler. It also worked up erect twigs in a sidelong manner and bent forward and downward at their tips, feeding among the terminal leaves like the Nashville & Golden-wing.

*Helminthophila celata.*

1891. Mass.  
Nov. 25 Cambridge. - "An Orange-crowned Warbler came around on the trees in front of my window [Brewster Museum] twice to-day. I tried to secure it but failed to do so" (S. W. Denton).  
" 28 " "Saw three H. celata to-day [in my garden] and secured one" S. W. Denton.

The bird shot on the 28<sup>th</sup> proved to be a ♀ D. aestiva in a plumage very unusual (if not unique) for that species and closely resembling the normal plumage of H. celata. Indeed Mr. Allen, Mr. Elliot & Mr. Chapman have pronounced this bird to be a hybrid between D. aestiva & H. celata but Mr. Ridgway agrees with me in considering it merely a remarkably colored D. aestiva. As to the other birds noted above there can be little doubt, I think, that Mr. Denton was right in identifying them as H. celata. At least this seems more probable than that they were Yellow Warblers of the same peculiar dark coloring as the specimen which was taken.

1900.

- Nov. 9 Cambridge. - One shot & another seen in the Garden (cf. notes on another page of this record).  
" 17 Belmont. - W. A. Lathrop writes me that he "saw an Orange-crowned Warbler in Belmont" on this date. He gives no further particulars.  
" 23 Cambridge. - Saw a highly-colored bird of this species <sup>at 7.30 this evening.</sup> ~~spend the~~ ~~forenoon in the Garden, where it was seen by both Mr. Allen~~  
" 24 " One seen by W. Dean in the <sup>(cf. detailed notes on another page)</sup> Garden at 12 M. & fully identified. Probably same bird that I noted yesterday.

*Helminthophila celata.*

1900. Mass.

Nov. 9

Cambridge. - At about 10 A.M. immediately after the cessation of a heavy thunder shower Walter Down called my attention to a small bird in a pear tree in the Garden directly in front of my window. At first glance I took it to be a Ruby-crowned Kinglet which it closely resembled in general coloring as well as in behavior but on looking at it more closely I saw that it was a larger & slenderer bird and that it had no wing bars. The next instant I recognized it as an Orange-crowned Warbler. Getting my 22 cal. gun case I rushed out just in time to see the bird fly into the lilacs (still covered with foliage) behind the house where it was, for a few minutes, lost to view. Then it presently reappeared in a willow (where in fact had a lily pond) and flitting nearly under the eaves I shot it. Its general appearance to be a warbler and from the appearance of the throat I took it to be a young bird. The skin was looked well for, the stomach crammed with fragments of the hard parts of small Chalcididae.

Half an hour later another bird of the same species appeared in the same pear tree. My attention was first attracted to it by its persistent chirping which was so loud or at least penetrating that it reached my ears distinctly through the closed windows of the room in which I was sitting. During the ten or twelve minutes which this bird spent in the Garden after I had discovered it it chirped almost incessantly & I could not help forming that it was calling for its missing companion. It was much larger than the latter and I was unable to approach it within safe range of my little collecting case but I had many clear views of it and made absolutely certain of its identity. Both birds were exceedingly active and restless reminding me strongly of Kinglets by their nervous, incessant movements and especially by their habit of

Helminthophila celata

1960 Mass.

Nov. 9  
(No 2)

Cambridge. - half opening and then closing their wings with an abrupt, bobbing motion every few seconds. They also occasionally flicked their tails up or to one side in the manner of a Maryland Yellow-throat or Catbird. They seemed to avoid the latter thus and to prefer the tops of small trees or large shrubs when they hopped or flicked about with ceaseless activity occasionally pausing a moment to closely examine a terminal leaf or bud. While thus engaged they frequently bent well forward or even head down as in the manner of a Golden-winged or Woodchick Warbler. Once one of them descended among the stems of a cluster of lilies to within a foot or less of the ground.

The chief of the bird that escaped (the other was seen) was sharp, metallic and rather *Fringillina* in character reminding me of the down note of the White-crowned Sparrow.

- " 23 Cambridge. - Walking in the Garden at 7.30 a.m. I heard & at once recognized the sharp, incisive chirp of H. celata. The next moment I saw the bird fly from some shrubbery to the upper branches of the old red cedar which stands on the E. wall near the pond. Here I had a good view of it standing directly beneath it for several minutes. It was a highly colored individual with more than the usual amount of yellowish beneath. It hopped & flicked about among the terminal sprays of the cedar branches in the usual active, nervous manner. After watching it awhile I went for my collecting basket intending to shoot it but when I returned it had disappeared.

- " 24 A highly colored bird as dark the same color yesterday seen in the Garden - named today by W. Deane. It kept within 10 feet of the ground & once descended nearly to it among the stems of a solitary bush where I got within 8 ft. of it & stood watching it for some minutes.

*Helminthophila celata* at Montreal.—On May 21, 1890, I shot an Orange-crowned Warbler at Montreal. This is, I believe, the first record of its occurrence here.—ERNEST D. WINTLE, *Montreal, Canada*.

*Auk*, VII, July, 1890, p. 290

Birds of Toronto, Canada,

by James H. Fleming,

Part II, Land Birds,

*Auk*, XXIV, Jan., 1907, p. 83

242. *Helminthophila celata*. ORANGE-CROWNED WARBLER.—Regular migrant, rare, May 7 to 15 and probably later (May 27, 1888, Hamilton, Ont.); in the fall, October 6 to 10. I have the records of only eight in eight years.

Fairfaxton, Maine  
Sept. 19, 1906.

Mr. William Brewster,  
Cambridge Mass.

Dear Mr Brewster:-

After receiving the Orange  
Warbler as a migrant at my  
station nearly a year ago, I intended  
to have all year long of the species  
as a migrant and a warbler in Maine.  
My own records are complete  
I would be glad to furnish  
you with the desired data and station  
for comparing with and possibly  
supplementing, my own, & would be  
greatly obliged. In passing, I  
should mention that my own record  
for this warbler is for Sunday, Sept.  
29th of the present year, on which  
date I had a male and female  
(adult) Orange-crown under observation  
for some five hours, during which

there they were daily feeding on the  
leaves of a certain plant (Mimulus) that  
improved the condition of the species (*Spiza*  
*truncoides*) at the time.

The loss of the growth of this tree, and  
the various peculiarities of these little  
birds, rendered identification possible,  
and a close study of their song, calls,  
feeding habits etc., possible.

I thought that a note in regard  
to this, with a set of skins, would  
for the species might be of some  
interest to "Ornith" readers. We can  
not do so, just credit would, if you  
be given for all accounts and so on.

I may say that I was referred to you  
by Robert Ridgway, of the United States, who  
received my letter in regard to the above matter  
just as he was in the midst of preparations  
for a three months sojourn in the West,  
and he referred me to you as the one  
most likely to be able to help me.

With thanks for any information, I am,  
Very sincerely,

Le Roy McDeville Telfer

REPORT OF THE SECOND CAPTURE OF THE ORANGE-CROWNED WARBLER (*Helminthophaga celata*) IN NEW HAMPSHIRE.—Mr. Edward G. Gardiner, of Boston, informs me that a specimen of this rare Warbler was taken at the Isles of Shoals, September 9, 1877, by two young collectors, Messrs. Outram and Edward A. Bangs. The bird was a female, and was in company with a small flock, supposed to be of the same species, though no more were captured. Three specimens of this bird have been recorded from Massachusetts and one from New Hampshire.\*—JOHN MURDOCH, Roxbury, Mass. **Bull. N. O. C. 3, April, 1878, p. 96-99**

For a correction of the appearance of the Helminthophaga celata  
in New Hampshire see *H. peregrina*.

Bull. N. O. C. 7. Jan. 1882 p. 53

Sor. *Rare Vermont birds.* By Francis H. Herrick. *Ibid.*, p. 303.—  
States that *Recurvirostra americana* and *Helminthophaga celata* were  
given in his former note (see above No. 797) on this subject "on mistaken  
evidence." **Science, Vol. 11**

Helminthophaga celata

Brookline, Mass.

Oct. 10. 1879

Among some mounted birds in Mr. Arthur Smith's collection I recently detected a fine Orange-crowned Warbler. In reply to my questions he informed me that while collecting with Mr. C. F. Daniels about Oct. 10<sup>th</sup> they shot this specimen & with it three others which he is positive were of the same species. They found a small flock of Warblers in a cranberry thicket bordered by White Pine woods & killed the specimens just referred to. He thought there were several others, only one specimen was preserved.

Middlesex Co., Mass.

Helminthophila celata.

1885.

Sept. 30

H. W. Henshaw shot an adult ♂ in full autumnal plumage in birches bordering Prospect St., Belmont. It was in a large mixed flock comprising about twenty D. coronata, two D. hypochrysa, and Parus atricapillus and numerous sparrows. It was silent and rather shy but when a D. coronata was shot it descended and perched about a foot above it, looking down at it in reticent position it was killed. The rufous on the crown is nearly as extensive as in Spring birds, the under parts yellow.

E. Mass. 1885.

H. W. Henshaw in Belmont (see coll. No. 17.)

93. Helminthophila celata. - Sept. 30 - 1885 ♂ ad. shot by

The other being badly shot since from arrival.  
It made Mrs. Menard's of the date. But  
I remember that Chestnuts were ripe at the time

There is any certain specimen  
that I have left to be seen and  
perhaps nearly as yellow as  
in any Minnesota skin. The  
specimen goes in to *Hudsonian's*  
*coll. 1885.*

E. Mass. 1885. *H. W. Henshaw in *Acton* (in coll. M. 19.)*  
93. *Helminthophila celata*. - Sept. 30 <sup>1885</sup> Bad. shot by

CAPTURE OF THE ORANGE-CROWNED WARBLER IN MASSACHUSETTS.—  
The Orange-crowned Warbler (*Helminthophaga celata*) must be regarded,  
so far as our present knowledge warrants, as a rare visitor to New England.  
Two only have been previously reported in Massachusetts,\* and these, with  
a third shot in New Hampshire,† fill the list of New England quotations.

In view of this fact, the announcement of a third specimen for Massachusetts may be of interest. On October 2, 1876, while collecting at Concord, Mass., I shot a female of this species in fine autumnal plumage. When first observed it was gleaning industriously among some low, scattered birches, in company with several Black-throated Green Warblers (*Dendroica virens*), a few Black-polls (*D. striata*), and one or two Nashville Warblers (*Helminthophaga ruficapilla*). Its small size and dark colors first drew my attention to it, and led me to suspect its identity. It proved upon dissection to be a bird of the year.—WILLIAM BREWSTER.

\* One was taken at Springfield, May 15, 1863, by Mr. J. A. Allen (see Proc. Essex Institute, Vol. IV, p. 60), and the other at Lynn, Jan., 1875 (see Brewer, in Proc. Bost. Soc. Nat. Hist., Vol. XVII, p. 439).

† At Hollis, May 16, 1876, by Mr. W. H. Fox (Forest and Stream, Vol. VI, p. 354).

Bull. N. O. C., I, Nov. 1876, p. 94-95.

The Orange-crowned Warbler in Eastern Massachusetts.—During a visit to Cambridge last autumn, Mr. H. W. Henshaw spent a day with me in rambling through certain fields and woods which we used to ransack together years ago. We had not expected to do much more than enjoy the brilliant autumn coloring and revive old-time associations; but late in the afternoon, as we were passing through a lane in Belmont, Mr. Henshaw had the good fortune to discover and shoot an Orange-crowned Warbler (*Helminthophaga celata*) which was feeding in a low birch in company with several Yellow-rumps (*Dendroica coronata*). This specimen, an adult male in unusually fine plumage, is only the second for Middlesex County, and, I believe, the fifth for the State. Through my friend's generosity it has found a final resting place in my collection by the side of the female which I shot at Concord in 1876.\* The date of this last capture was September 30, 1885.—WILLIAM BREWSTER, Cambridge, Mass. Auk, 3, April, 1886, p. 298.

*Helminthophaga celata*

AMERICAN  
**ORNITHOLOGY**  
PUBLISHED  
MONTHLY BY  
CHAS. K. REED.  
WORCESTER, MASS.

THE BEST  
ILLUSTRATED  
MAGAZINE  
DEVOTED  
TO THE STUDY  
OF  
BIRDS  
50 CENTS  
A YEAR

MR. William Brewster  
Cambridge, Mass.

Dec. 17, 1901

Dear Sir;—

I am not positive, but I do not recall that I ever recorded the Orange-crowned Warbler. I have one, a male, that I collected here, May 20th, 1899. It was in company with a number of Nashville Warblers. This is the only record we have for this bird for this county.

Yours respectfully,

Chester A. Reed

Helminthophila celata

The Garden, Cambridge, Mass.

1904

Nov. 7

I saw an Orange-crowned Warbler in Mr. Brewster's garden at about 9 o'clock in the morning of November 7. It was feeding in the southeastern corner of the garden on the fruit of some *Carex* within one or two feet of the ground. I was within eight or ten feet of it for half a minute. It resembled exactly the bird seen in the garden by Mr. Brewster & me on Nov. 9, 1900. This bird was shot by Mr. Brewster and found to be a young male. I saw the bird again about four o'clock in the afternoon of the same day. It was hopping about low down in the Parkman's Apple tree -

Walter Deane

**Orange-crowned Warbler (*Vermivora celata celata*) in Cohasset, Mass.**—On December 8, 14, 26, and 31, 1916, and January 9, 1917, I saw a single Orange-crowned Warbler, *Vermivora celata celata* in Cohasset, Mass. This is, as far as I know, the first specimen reported from this town, which is about twenty miles southeast of Boston, on the coast.

In each case it was with Black-capped Chickadees, with Myrtle Warblers near, and usually Hudsonian Chickadees, and Golden-crowned Kinglets. It was usually in small cedars, near the ground.

One point in Mr. Wright's paper in the January 'Auk' is of especial interest in relation to my own experience. He quotes Mr. Wayne as saying that the Orange-crown "never displays its crown patch while here in winter or early spring" and Mr. Wm. Brewster as saying that he has never seen the concealed crown patch shown by a living bird.

My first view of the bird was while observing, at about twenty feet, a Brown-capped Chickadee in a small cedar. (I think these birds are referable to *Penthestes hudsonicus hudsonicus* rather than *P. h. littoralis*, this winter.) Into my field came a yellowish green bird, which showed distinctly a reddish brown crown patch. In a moment it was gone to shrubbery near by and though I flushed it some half dozen times, I did not again see it at rest. The glimpse of the crown was only momentary, as the bird swung over on its side, showing the entire back but no underparts, but the impression of the reddish crown was very distinct.

On December 8 I had one brief glimpse of the bird in flight.

December 26 I had an excellent study of the bird, in a small scrub oak, under very good light conditions. The streaky breast was seen for the first time. On the 31st, with Mr. Chas. B. Floyd, I had another excellent study. This time the bird was in company with Black-capped Chickadees, Tree Sparrows, Purple Finches, Myrtle Warblers, and a Downy Woodpecker.

Today, January 9, I heard its call note for the first time, very different from the calls of the Myrtle Warbler, louder, clearer, and of different quality.—JOHN B. MAY, Cohasset, Mass.

*Auk* vol. XX × 18. July 1917. p. 342.

Cranston R. I. Jan 3/98  
Mr L. W. Hutton  
Dear Sir,  
I am Sir of the  
Orange Co. Nov. 3, 1874  
mounted I shot it  
Dec 3, 1874. It was  
in company with some  
Chickadees & was then  
shot in a thicket of  
maple & birch trees near  
the Providence Water Works  
in Cranston. The number  
on it should be less than  
1000 if I remember correctly  
I am in some doubt of the  
year whether you wish  
I think the chances are  
you will find it in  
Mutt. Bill. possibly re-

Some Birds of Rare or Accidental Occurrence in New England. H. A. Purdie

3. *Helminthophaga celata*. ORANGE-CROWNED WARBLER. — Mr. Jencks writes me that "a specimen was shot in Cranston, R. I., December 3, 1874." This is the fifth specimen reported for New England, and the second taken in the winter season.\*

Bull. N. O. C. 2, Jan., 1877, p. 21

Some Birds of Rare or Accidental Occurrence in New England. H.A. Purdie

3. *Helminthophaga celata*. ORANGE-CROWNED WARBLER. — Mr. Jencks writes me that "a specimen was shot in Cranston, R. I., December 3, 1874." This is the fifth specimen reported for New England, and the second taken in the winter season.\*

Bull. N.O.C. 2, Jan., 1877, p. 21

Report to the  
Genl. Secy  
of the  
Bureau of  
Ornithology  
Washington  
D.C.

*Helminthophila celata* in Connecticut.—May 8, 1888, I shot a male bird of this species. It was in company with Nashville Warblers when killed. As far as I can ascertain this is the only specimen actually taken in Connecticut, although it has been observed close by the Connecticut line in New York.—WILLARD E. TREAT, *East Hartford, Conn.*

Auk, V, July, 1888, p. 323.

*Capture of Rare Bird near West Point, N. Y.*

2. *Helminthophaga celata*, (Say) Baird. On May 13, 1875, I shot a beautiful male of this rare species, as it was skipping among the apple-blossoms, close to my house, in company with a little band of Warblers which may have belonged to the same species.

*Edgar A. Mearns, Highland Falls, N. Y.*

Bull. N.O.C. 3, Jan., 1878. p. 46.

*Rare Bird at Riverdale, N. Y.*

*Helminthophaga celata*. ORANGE-CROWNED WARBLER.—A female was taken on October 9, 1876, and a second specimen seen on the 29th of the same month. The former bird was shot while gleaning among the withering blossoms of a patch of golden-rods (*Solidago*), while the latter was hopping about in a clump of leafless briars and shrubbery quite unsuspectingly, allowing an approach of a few feet.—E. P. BICKNELL, Riverdale, N. Y. Bull. N.O.C. 4, Jan., 1879. p. 61.

238. ORANGE-CROWNED WARBLER.—(*Hel. Birds of Central minthophaga celata*.) (Say.) Baird. Rare. *New York by* But one individual on record, an adult *female, Wright,* female, taken September 15th, 1880, by F. *Wright.* S. Wright from a migratory flock of small *O. & O. VII.* species, while collecting in a tamarack *Jun. 1882, p. 132* swamp in Wolcott, Wayne Co., N. Y.

ORANGE-CROWNED WARBLER (*Helminthophila celata*). Oct. 2, 1886, I shot a young female near Syracuse, as it was following a small company of Golden-crowned Kinglets.

*Morris M. Green, Syracuse, N. Y.*

Auk, 4, Oct. 1887. p. 350.

*Dutcher, Rare Long Island Birds.*

*Helminthophila celata*. ORANGE-CROWNED WARBLER.—This specimen was shot on the East-side lands by Mr. Akhurst, and is the only one he ever procured. It is in immature plumage, and was shown to, and identified by, Mr. George N. Lawrence.

Auk X, July, 1893 p. 277.

*General Notes*

*On the occurrence of this rare bird on Long Island*  
*Arthur H. Cornell, Brooklyn, N. Y.*

*Helminthophila celata*.—This bird has been recorded from a number of localities in the Atlantic States, but never from Long Island. The nearest approach to our limits is found in a specimen taken at Hoboken, N. J., in May, 1865, by Charles S. Galbraith [Amer. Mus. coll. no. 39,669]. Dr. Edgar A. Mearns<sup>2</sup> refers to it as a "rare migrant" in the Hudson River valley, and cites a specimen from Highland Falls, N. Y., May, 1875, and two specimens noted by Mr. E. P. Bicknell at Riverdale, N. Y., October, 1876. Mr. W. E. Treat<sup>1</sup> records a specimen at East Hartford Conn., May, 1888, and Mr. Wm. Brewster<sup>2</sup> speaks of a number of other records from New England.

On October 12, 1892, at Flatbush, King's Co., New York, I shot a young male. It was in a hedge-row in company with great numbers of Myrtle Warblers, White-throated Sparrows, and a few other species. My brother and I were driving these birds along the hedge, watching for anything rare, and most of them were very alert and continued their flight at every motion we made. This bird, however, was sitting quietly on a bush, and was at once shot.

Auk X, Jan., 1893. p. 90-1.

24. *Helminthophila celata*. GOLDEN-CROWNED WARBLER.—First met with April 28. A few were seen almost daily till late in May.

Among a fairly extensive series of Orange-crowned Warblers I find two well-characterized and readily separable races, one a dark greenish-olive bird coming from Florida and Georgia, the other a bright yellowish form, the extreme of which is represented by specimens from California. The latter, it is perhaps needless to say, is variety *lutescens*, supposed to be restricted to the Pacific Slope.

Specimens from Texas and Minnesota are paler and less yellowish than California ones, but on the whole more nearly like them than they are like the Florida examples. Still closer to *lutescens* are my Arizona and Colorado representatives, several of which are so nearly identical with even the brighter California birds that it is practically impossible to distinguish them. The general evidence of this series shows a barely appreciable paling of the yellow in the Colorado and Arizona birds as compared with those from California, a still further and rather more decided diminution of this color in the Texas and Minnesota ones, and an abrupt and very wide gap between the latter and the dark greenish-olive Florida specimens.

If the geographical variation among the representatives of the region at large west of the Mississippi is always as trifling as in the series before me, little violence would be done by uniting *lutescens* and *celata* under the latter and prior name.

But whatever the disposition finally made with the western forms, there seems to be no reason why the dark bird found in the Southern Atlantic States should not be recognized as a distinct variety, for it differs more from *celata* than the latter does from *lutescens*. Mr. Ridgway called attention to some of its peculiarities in "North American Birds" (Vol. I, p. 202), proposing to distinguish it under the name *obscura*, but as he unfortunately claimed among its characteristics the absence of certain markings (*i.e.*, the "orange" crown-patch and white spots on the outer rectrices) which it has been since shown to normally possess, the variety fell into disrepute, having been latterly ignored even by Mr. Ridgway himself. Believing that it really deserves a distinctive name I take the present opportunity to reinstate it under the following diagnosis:—

*Helminthophila celata obscura* RIDGWAY. SUBSP. CHAR. Differing from true *H. celata* in being darker and dingier, especially beneath, where the usual yellowish tinge is replaced by a greenish one.

♂ adult (No. 1800, Coll. W. B., St. Mary's, Georgia, April 7, 1877). Above dark greenish-plumbeous; beneath dingy greenish-olive, darkest on the sides, palest on the middle of the abdomen; sides of head and neck scarcely lighter than the back; eyelids and a short, ill-defined superciliary stripe greenish-yellow; a concealed crown-patch of deep orange-rufous; inner webs of outer tail feathers narrowly margined with white near their terminal ends.

♀ adult (No. 1801, Coll. W. B., Mellonville, Florida, March 14, 1877). Lacking the rufous crown-patch; otherwise similar to the male.

*Habitat.* Georgia and Florida in winter and early spring, perhaps migrating northward to breed.

Audubon figured this race, and his plate even exaggerates its peculiar dark coloring. It is probable that his specimens were taken in Florida, although he does not state that such was the case. I have seen no examples from the Mississippi Valley east of the Mississippi River but Mr. Ridgway says (North American Birds, Vol. I, p. 202) that "specimens from Southern Illinois . . . and from Wisconsin are precisely like Rocky Mountain examples." Two Massachusetts ones before me are doubtfully referable to var. *obscura*. Both are somewhat lighter than Florida specimens although darker and greener than Texas or Minnesota examples. As they are in fresh autumnal plumage, in this respect differing from any others that I have, I cannot decide upon their precise relationship.

There seems to be some mystery, by the way, as to where these southern birds breed. They are not uncommon in Georgia and Florida during the winter and early spring, but they apparently depart before the end of April. To the northward of the Carolinas in the Atlantic States the Orange-crown, of whatever race, is very rarely seen, while the migrants that pass up the Mississippi Valley are said to belong to the typical (*celata*) form. Possibly *obscura* will be found to summer among the little-known mountains of Georgia and the Carolinas. In such a case it will probably turn out to be a very local form.

**The Orange-crowned Warbler in Cambridge, Mass., in December.**

— On Sunday, December 13, 1914, at about 4 o'clock in the afternoon, I noticed a small bird flitting to and fro in a vine which grows on my neighbor's piazza railing about 30 yards from the room in which I was sitting. The actions of this bird at once attracted my attention. While they somewhat resembled a kinglet's, they were not so quick and restless, and were those of a warbler.

The bird was not shy and during the 10 minutes I observed it I got within 4 or 5 feet of it, and had ample opportunity to observe it carefully through field glasses. Its under parts were dull greenish yellow becoming a little darker on the breast, there was a whitish eye-ring and a very faint showing of dull greyish wing-bars. The head was about the same color as the back and tail, a greenish olive brown. It appeared to be feeding on seeds and berries that grow on the vines.

The bird was unquestionably an Orange-crowned Warbler, and its occurrence in December seems worthy of notice. So far as I know, while there have been a number of November records (W. Brewster's 'Birds of the Cambridge Region') and one for Jan. 1, 1875 (Dr. C. W. Townsend's 'Birds of Essex County') this is the first December record for Massachusetts.— HENRY M. SPELMAN, JR., Cambridge, Mass.

*Auth. XXXI. Apr. 1915. 72. 230.*

*peregrina*

Summer Bds. Restigouche Valley, N. B.  
July, '88. J. Brittain and P. Cox, Jr.

*Helminthophila peregrina*. TENNESSEE WARBLER.—Very rare.

Ank, VI. April, 1889. p. 118

Birds of Toronto, Canada,  
by James N. Flaming.  
Part II, Land Birds.  
Ank. x x i v Jan. 1907. p. 87.

243. *Helminthophila peregrina*. TENNESSEE WARBLER.—Regular migrant, rare, May 13 to 22, and September 23 to October 24 (September 5, 1885, Hamilton, Ont.). First taken here in 1886; the records in the 'Proceedings' of the Canadian Institute, 1890-92, refer to the female of the Black-throated Blue Warbler.

**Rare Warblers at Hatley, Stanstead County, Quebec.**—Notwithstanding the very cold and backward spring I have added two new warblers to my list (which now numbers 22 species), the Tennessee (*Vermivora peregrina*) and Blackpoll (*Dendroica striata*). Four examples of the former were seen between May 26-27, out of which two were obtained, and a male of the latter was seen at Ayers Cliff (about six miles from Hatley) on May 28 at close quarters, making identification absolutely sure. In addition to these between May 19 and June 2 may be mentioned twelve examples of the Cape May (out of which I secured three), Nashville, nineteen; Bay-breasted, twelve; Blackburnian, three; Northern Parula, one; and Water-Thrush, eight; besides numbers of all the commoner species with the exception of the Yellow which was again scarce as usual, only three examples being seen.—H. MOUSLEY, Hatley, Que.

Ank. Vol. x x i v. Oct. 1917. p. 484.

18. *Helminthophaga peregrina*, (Tennessee Warbler). Although I have never seen this species in either Franklin or Somerset counties, yet a record of its occurrence a few miles over the line in Oxford county might be of interest, as the records of this bird are very limited. One was shot, while in company with several Blue Yellow-backs at the Upper Dam, Mooseluckmaguntic Lake. They kept entirely to the spruce trees and it was by the peculiar and differing manner of flight, that *H. peregrina* was singled out from among his companions as a victim.

O. & O. XI, Sep. 1886, p. 129

**The Records of the Tennessee and Cape May Warblers in Southwestern Maine.**—Up to the summer of 1914 the Tennessee Warbler (*Vermivora peregrina*) seems to have eluded the few observers who have looked for it in southwestern Maine. There is a bare mention, in a migration list published by the 'Journal of the Maine Ornithological Society,'<sup>1</sup> of its occurrence at Westbrook on May 30, 1902; and Mr. Arthur H. Norton is given as the authority for this. But Mr. Norton tells me that the record was made without his knowledge, through a typographical or editorial error, and that he has never seen the bird in the vicinity of Portland.

A Tennessee Warbler, apparently a male, came into my garden, with many other little migrants, on August 30, 1914, and, after giving for a long time only inconclusive evidence of his identity, flew to the lower branches of an old apple tree, amongst which I was standing, and displayed his specific characteristics at very close quarters. Constantly moving about, but unhurried and seemingly quite free from fear, he was several times within three feet of me on a level with my eyes, offering me in a good light a perfect opportunity for studying him, whilst he pecked at leaves and twigs, made futile little sallies a-wing in the attempt to snap up insects and voiced his feelings in subdued call-notes. His plumage was beautifully smooth, and he was very plainly recognizable.

Late in the afternoon of September 6, 1914, a Tennessee Warbler appeared in the same old apple tree. The flutterings of a moth which he had caught absorbed his attention, and he permitted me to approach him as near as I chose. I scrutinized him carefully, until he was chased away by a Myrtle Warbler,—long enough to note that he was indistinguishable in appearance from my visitor of August 30; and he may, of course, have been the same bird.

The writer obtained on Cape Elizabeth, August 21, 1876, the only specimens of the Cape May Warbler (*Dendroica lignina*) which have thus far been taken in the vicinity of Portland, and there has since been no announcement to his knowledge, of other examples seen. Perhaps it is safe to assume that the species is a regular migrant; but for the present more data seem desirable in support of this hypothesis.

The Cape May Warbler passed at least four times through some of the gardens at the West End of Portland during September, 1914, and on these occasions the birds were so tame and leisurely that close inspection of them was easy. On the 3rd I detected one in a troop of Warblers. On the 10th one remained about my house the greater part of the day, alone, several times visiting a piazza roof, in the gutter of which rain water was standing, and at times foraging on the open lawn. Two came together on the 18th and with other Warblers, including the Parula, the Myrtle and the Black-throated Green, bathed long and fully in the spray of a sprinkler placed so as to play upon an apple tree about four feet high. They permitted themselves to be showered in the tree and also descended to a little pool under it where they splashed about vigorously. On the 21st I found a solitary bird at the edge of a group of native spruce and hemlock saplings, near one corner of my garden.

This garden is a recent inclosure, and most of the trees and shrubs in it are young. One is disposed to believe that otherwise it would sooner have harbored examples of both of the warblers which form the subject of the present note.—NATHAN CLIFFORD BROWN, Portland, Maine.

<sup>1</sup> Vol. VI, p. 79.

Arch. XXXI, Jan. 1915, p. 104, 105-106.

AN ERRONEOUS RECORD OF THE ORANGE-CROWNED WARBLER (*Helminthophaga celata*) IN NEW HAMPSHIRE.—In Vol. III, pp. 96, 97 of this Bulletin, Mr. John Murdoch recorded the capture of an Orange-crowned Warbler at the Isles of Shoals, New Hampshire, by the Messrs. Bangs of Boston. I have lately had an opportunity of examining this specimen and find it to be a Tennessee Warbler (*Helminthophaga peregrina*), in the ordinary autumnal plumage. It is but just to the Messrs. Bangs to state that they are not to be held responsible for this blunder, the bird having been submitted by them to an ornithologist of some standing, one in whose determination they placed perfect confidence. Nor can Mr. Murdoch (who I believe took all his facts at second hand) be blamed for accepting the same supposed good authority.—WILLIAM BREWSTER, Cambridge, Mass.

Bull. N. O. C., 7, Jan, 1882, p. 53.

Summer Birds of Presidential Range,  
White Mts. A. P. Chadbourne

29. *Helminthophila peregrina*. TENNESSEE WARBLER. — One found on Mt. Adams, at an altitude of 4000 feet, on Sept. 2, 1884.

Auk, 4, April 1887, p. 106

Bds. Obs. in Franconia, N. H. June 11-21 '86, and June 4-Aug. 1, '87, W. Faxon

57. *Helminthophila peregrina*. TENNESSEE WARBLER. — Two, June, 1887, in pastures above the Profile House Farm. Evidently nesting in the neighborhood.

Auk, V. April, 1888, p. 152

White Mts., N. H.

1885

1884

*Helminthophila peregrina*

Shelburne  
N. H.

August 18

786 ♀ sent by C. R. Bond

by fair cert. C. R. Bond

Helminthophila peregrina:

SEE note by Purdie; "Rare Warblers in Massachusetts," under Geothlypis philadelphia.

Bull. N. O. C. 7, Oct., 1882, p. 252.

Middlesex Co., Mass.

Helminth. peregrina.

1884

Deerham, Mass., May 18<sup>th</sup> An adult ♂ shot by Wakefield & given to Spelman.

Wattham, Mass. May 21. Heard a male singing in a wet birch tree.

Helminthophila peregrina.

Copy from (Miss Brewster)

Brookline, Mass.

- ♀ had a surprise in May 25, 1902

Tennessee Warbler here on May 21. They have not been known to pay Brookline a visit before, according to Mr. Howe - He did not see it for his time and did not permit "Guy Swenson

**Tennessee Warbler (*Vermivora peregrina*) in Massachusetts in Autumn.**—As the Tennessee Warbler (*Vermivora peregrina*) occurs so rarely during the fall in Massachusetts I wish to record the following instances of its occurrence at Harvard, Mass., that have come under my observation this fall and last.

September 9, 1912 a young female shot.

September 17, 1912 an adult female shot.

September 14, 1913 a young female shot.

All these birds are now in my collection.

In addition to these three definite records may be added that of a bird seen in company with the one shot on September 17, 1912; two seen September 9, 1913, and two seen with the bird secured on September 14, 1913.

— JAMES L. PETERS, Harvard, Mass.

Aug 31, Jan, 1914. p. 103.

la peregrina

W. Adams, 16 May  
1889

of in the  
St. Concord  
chee, pitchee,

Dear Mr. Brewster:

I have run up  
here to spend a few days on  
my "Graylock farm". Yesterday  
I fell in with the Tennessee  
Warblers in considerable  
numbers along the banks of  
the Hoosic River near No.  
Adams. Had eight or ten in  
view at once, singing in-  
cessantly. I send you one  
by mail, hoping you can  
utilize it. It looks as if the  
Hoosic Valley was a migration  
route for this species. I shall  
remain here about a week longer

Tennessee Warbler and two Yellow-bellied  
Waxwings were taken May 30 at Woburn,  
Mass. by W. W. Brown.

O. & C. XIII, July, 1888 p 111.

Yours in haste  
Walter Faxon

DICKNELL in his list of the summer birds of the Catskills.  
Tennessee Warblers seem to show much diversity in their choice of a  
summer haunt. In 1887 Mr. Bradford Torrey and myself found two males  
in full song through the breeding season in some pasture land largely  
grown up to black spruce in Franconia, New Hampshire, at a high level  
(some distance above the Profile House Farm). In the latter part of May,  
1888, my brother discovered it near the same place and also in an exten-  
sive larch swamp in the lower part of the same town, where Mr. Torrey  
found it again in the latter part of the following month. Mr. William  
Brewster\* detected it in a white spruce and larch swamp in Anticosti,  
July 11, 1881, and he informs me that at Lake Umbagog he has generally  
observed it during the breeding season in larch swamps, but sometimes  
on mountain sides—always among coniferous trees. Dr. C. H. Mer-  
riam† states that in the Adirondack region, where it breeds, it generally  
prefers hard-wood areas, and Mr. J. A. Allen‡ reports it as not uncom-  
mon toward the middle of July, near Denison, Iowa, "in low groves of  
bur- and other oaks."

for the Tennessee Warbler (*Vermi-*  
s.— I have previously had occasion to  
p. 103), the occurrence of the Tennessee  
the autumn migration. I now wish to  
nces of its occurrence in this town since

hot (coll. J. L. P. No. 415).

hot (coll. J. L. P. No. 565).

hot (coll. J. L. P. No. 595).

accounted for by the fact that I was out  
jmn. I have no doubt that the species  
autumn.— JAMES L. PETERS, Harvard,

Jan. 1916. p. 78.

† Baird, Brewer and Ridgway, Hist. N. A. Birds. Land Birds, I, 207, 1874.

\* Proc. Boston Soc. Nat. Hist., XX, 370.

† Bull. Nuttall Orn. Club, VI, 227.

‡ Mem. Boston Soc. Nat. Hist., I, 494.

Mass. (Middlesex Co.)

*Helminthophila peregrina*

1886

May 23

One in full song this morning in the top of a tall ash on Monument St. Concord near the Mass. The song was pitchee, pitchee, pitchee, pit-tit - tit - tit - tit - tit - tit - tee.

near Graylock Mt. Berkshire Co. Mass. June 28-July 16. W. Faxon

50. *Helminthophila peregrina*. TENNESSEE WARBLER.—On the morning of the 15th of July, near the point of divergence of the Williamstown and Adams paths on the southwestern side of Graylock Peak (altitude, about 3000 feet) I was surprised to hear the characteristic song of the Tennessee Warbler. I soon found the bird in a thick growth of black spruce, balsam fir, and mountain ash. Impeded by the dense undergrowth of hobble-bushes and by fallen logs, and losing the clew of song (for the bird became silent soon after discovery), I was unable to follow the bird and secure it. The next morning I again discovered it on the same path, half way between the former place and the summit of the mountain, but failed in my attempt to shoot it. My identification of the bird in both instances was absolutely certain. The only record of this bird's summering in Massachusetts that I can find is that of a bird, nest, and eggs, said to have been secured near Springfield by Professor Horsford.† This record seems to have been generally discredited. It is not included by Mr. Bicknell in his list of the summer birds of the Catskills. Tennessee Warblers seem to show much diversity in their choice of a summer haunt. In 1887 Mr. Bradford Torrey and myself found two males in full song through the breeding season in some pasture land largely grown up to black spruce in Franconia, New Hampshire, at a high level (some distance above the Profile House Farm). In the latter part of May, 1888, my brother discovered it near the same place and also in an extensive larch swamp in the lower part of the same town, where Mr. Torrey found it again in the latter part of the following month. Mr. William Brewster\* detected it in a white spruce and larch swamp in Anticosti, July 11, 1881, and he informs me that at Lake Umbagog he has generally observed it during the breeding season in larch swamps, but sometimes on mountain sides—always among coniferous trees. Dr. C. H. Merriam† states that in the Adirondack region, where it breeds, it generally prefers hard-wood areas, and Mr. J. A. Allen‡ reports it as not uncommon toward the middle of July, near Denison, Iowa, "in low groves of bur- and other oaks."

A Tennessee Warbler and two Yellow-bellied ~~Chats~~ were taken May 30 at Woburn, Mass., by W. W. Brown.

O. & O. XIII, July, 1888 p III.

for the Tennessee Warbler (*Vermis*). I have previously had occasion to p. 103), the occurrence of the Tennessee in the autumn migration. I now wish to note its occurrence in this town since

hot (coll. J. L. P. No. 415).

hot (coll. J. L. P. No. 565).

hot (coll. J. L. P. No. 595).

accounted for by the fact that I was out ann. I have no doubt that the species autumn.—JAMES L. PETERS, Harvard,

Jan. 1916. p. 78.

† Baird, Brewer and Ridgway, Hist. N. A. Birds. Land Birds, I, 207, 1874.

\* Proc. Boston Soc. Nat. Hist., XX, 370.

† Bull. Nuttall Orn. Club, VI, 227.

‡ Mem. Boston Soc. Nat. Hist., I, 494.

*Helminthophila peregrina.*

1882.

Cambridge, Mass.

May 22.

Mr.C.F.Batchelder shot a Tennessee Warbler on May 22 1882, by the shore of Fresh Pond. The skin is now in his collection. At the time there were two birds of this species together. Mr.H.M.Spelman who was with Mr.Batchelder shot, a little later, another Tennessee Warbler which Mr.Batchelder thinks was not one of the two which he saw.

Walter Deane, Jan.22, 1903.

Mr.Batchelder gave me the above information to-day.

Tennessee 1882. May 22<sup>nd</sup> shot in willows along Fresh Pond betw. coal boat house near F. P. Hall & Malottum Br. F&W track. My notes state that Batehelder was also there and he shot a Tennessee in the same willows a little later in the morning. Warm rather hazy morning.

numbers below on 15<sup>th</sup> day of  
birds shot. If Batehelder  
shot was at F. P. Hall  
May 19/03.

1880 Sept 10 "Mud along by Clear Riv. & now several fresh ones.  
An Arsenal St. shot a ♀ Tennessee, was my tenant & waited until a train went by. (Must have been my place where Coalley Ave crosses riv, see note on N side Arsenal St. note of H. M. Spelman)

Helminthophila peregrina

1882

Cambridge Mass.

May 22

Extract from Journ. of Charles F. Batehelder -  
"About five [A.M.] I went over to the hemlock grove by the Fresh Pond Hotel & I spent most of the morning among the willows along the shore of the bay & & & We [C. F. Batehelder & H. M. Spelman] shot two<sup>x</sup> well Tennessee Warblers" then follows the record of the bird, its measurements &c. - there are no more details concerning the bird: The skin is in the Batehelder's collection, no 1598. Orig. no. 915. The bird was shot in the willows in the South cove of Fresh Pond. It was skinned and sexed by Mr. Batehelder.  
[Mr. Spelman's skin is in his collection. It is a ♀ W.D. Apr/1903.]

1480. *Tennessee Warbler in Rhode Island.* [By J. M. Southwick.]  
*Ibid.*, No. 10, Oct., 1886, p. 79. ~~PLATE NOTES~~ ~~PLATE III~~

140 Coccyzoides

peregrina

Litchfield Conn

May 19-27 1905.

E. S. Norduff.

420-421

Connecticut notes

**Vermivora peregrina.** TENNESSEE WARBLER.—An adult male was found dead in the wire of my tennis court on May 20, 1916. An adult female was found dead in the same place June 2, 1917. Both of these birds were found within a few hundred yards of the place at which I took three specimens on May 20, 1892, which are already recorded.

Auk, vol. xxxv. 1918. p. 232.



*Helminthophila peregrina*

*Merriman Bull. N. O. C. VI, 227* Also *tilibratus*

*ad. Aug. 1, 24*

*Breeds in Adirondacks - Not  
rare - generally prefers hard-wood areas!*

*Ank, XIII, Jan., 1896, p. 87.*

*Notes on Long Island Birds.*

*Helminthophila peregrina.*—On the same morning on which the Lincoln's Sparrow was obtained (Sept. 28, 1895), and but a few minutes later, a specimen quite as rare was captured; namely, the Tennessee Warbler. This bird was in the woods and when first seen was on the ground, from whence it flew into the low pendant branches of a tree, about four feet from the ground. No bird-note that I could identify as his was heard. The specimen is an adult male.

*William C. Brewster, Brooklyn, N. Y.*

**Notes from Western New York.**

**Maurice C. Blake, Hanover, N. H.**

*Helminthophila peregrina.*—I observed two in song at Mertensia, May

17, 1906, and one singing bird in Victor, May 22, 1906. These are the first Ontario County records.

*Ank, 24, Apr., 1907, p. 224-225*

The Singing of Birds. E. P. Bicknell.

*Helminthophila peregrina* (Wils.) Ridgw. TENNESSEE  
WARBLER.

The transient presence of this species, in the upper foliage of the woodland in May, is usually revealed by its attractive song. In the autumn it passes in silence. *Auk*, I, July, 1884. p. 212.

THE TENNESSEE WARBLER DESTRUCTIVE TO GRAPES.—Mr. N. S. Goss, of Neosho Falls, Kansas, writes me substantially as follows respecting an interesting and hitherto unrecorded trait of the Tennessee Warbler (*Helminthophaga peregrina*): "While visiting my brother, Capt. B. F. Goss, at his home in Pewaukee, Wis., the 13th of September last, he handed me for identification the embalmed bird herewith enclosed, remarking that the birds were very destructive to his grapes, puncturing them with their bills, and eating the pulp, or succulent part of the grapes. I at once pronounced the bird to be a young Tennessee Warbler. . . . On visiting his grounds we found, I should think, about twenty birds scattered singly here and there among the vines. They were very wild and kept continually in motion, uttering now and then a sharp, but not loud *chip*, as they darted from the grapes into the raspberry-bushes, and when followed they flew to a young grove of timber near by. I succeeded, however, in killing four. I enclose also one of these for your examination."

"These birds," he further adds, "are likely to prove destructive to the grapes in that latitude (43° and further north), but I think that in their southward migration they do not reach us (latitude 38°) until the grape season is over. I at first thought the grapes thus punctured contained the eggs or larvæ of some insect; but examination proved, on the contrary, that only the largest and healthiest-looking grapes were attacked."—*J. A. ALLEN, Cambridge, Mass. Bull. N. O. C.* 5, Jan., 1880. p. 48.

*Helminthophila peregrina*.

DESTRUCTION OF BIRDS BY THE COLD WAVE OF MAY 21ST AND 22ND.  
—It seems worthy of note that, judging from indications in this vicinity, . . . we must have been very

Birds of Kalamazoo County, Mich.  
Dr. Morris Gibbs.

29. [87.] *Helminthophaga peregrina* (Wils.) Baird. Tennessee Warbler.—This is the last member of this genus to arrive, and in fact one of our latest arrivals of all the migrants. My earliest recorded arrival is May 18, and my latest date recorded, as the first seen for the season, is May 23. The species passes rapidly by us and it is rare to meet with specimens for more than two days during Spring.

The species arrives so late that the foliage has reached that degree of density by the time of their appearance that few are seen. The Tennessee keeps in the tops of the tallest trees, principally the Elms and Maples, and it is difficult to secure specimens. They are more often heard than seen, and frequently a flock will pass through without a chance of securing a shot. Occasionally a bird will be seen to dart from the dense top of a tree, immediately enter the foliage of the next before a shot can be had. The song is a rather sharp chatter, but not at all like that of the Pine Warbler. The call notes are short chirps, similar to others of the genus.

*Helminthophila peregrina*  
died shortly afterwards.  
*parva pennsylvanica*. On  
s of the following species  
of cold: *Dendroica macu-*  
*linus*.

life may, to a considerable  
of temperature, as well  
*Vis.*, May 24, 1882.

1882, p. 185.

Cherrie, Birds, San Jose, Costa Rica.

9. *Helminthophila peregrina*. Recorded the first this fall, October 20. In a series of 15 Tennessee Warblers, taken from the beginning of September to the beginning of March, there is not one that is not more or less strongly tinged with greenish yellow, very different from the breeding bird found in the United States.

*Auk*, 8, July, 1891. p. 278

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*Helminthophila peregrina.*

DESTRUCTION OF BIRDS BY THE COLD WAVE OF MAY 21ST AND 22ND.—It seems worthy of note that, judging from indications in this vicinity, the destruction of bird life by the recent cold wave must have been very considerable.

On the morning of May 21st, a specimen of *Helminthophila peregrina* was picked up so nearly chilled to death that it died shortly afterwards. The same was also true of a specimen of *Dendroica pensylvanica*. On the morning of May 22nd, three other specimens of the following species were picked up here which had apparently died of cold: *Dendroica maculosa*, *Myiodiocetes pusillus*, and *Empidonax minimus*.

These facts suggest that the abundance of bird life may, to a considerable extent, be influenced by sudden extreme changes of temperature, as well as by heavy gales.—F. H. KING, *River Falls, Wis., May 24, 1882.*

*Bull. N. O. C.* 7, July, 1882, p. 185.

migrants from the burning plains of Central Africa on the same principle that they leave the inclement North. In each district the animal and vegetable food which abounds in one case is winter, in the other in Summer, entirely fails

Cherrie, Birds, San Jose, Costa Rica.

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