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PROCEEDINGS

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Indiana Academy of Science.

1803.

BROOKVILLE, IND

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AUGUST, 1894.

er specimen is reported to

a Cormorant.

ies near Indianapolis, May

adpiper.

Sept. 10, 1892 from a large afavette. This is the first

er.

oird from the same locality reported within the state. ecimen, the one last mened in my collection.

identified it at Wolf lake, l., April 29, 1883. This is

ner resident in the northlarge lakes in early spring

years ago but now rather

Duck.

nam Davis (Dr. Hancock).

e birds were seen feeding I shot two specimens." Vren.

Davis (Dr. Hancock).

Vallace at Wabash. The

county, December 1893. the state.

Calcarius lapponicus (Linn.). Lapland Longspur.

Has been taken at Wabash, Ind. One specimen. (Wallace). Dendroica kirtlandi Baird. Kirtland's Warbler.

One specimen, Wabash, Ind., May 1, 1893 taken by W. O. Wallace. This is the first specimen of this rare warbler reported from the state. Mr. Wallace has very kindly presented me with the specimen.

The species was described from a specimen taken by Dr. Kirtland near Cleveland, O. The following are the reported records of its occurrence:

- 1. At sea off Abaco, Bahamas, by Dr. Samuel Cabot, second week in October, 1841.
- 2. Near Cleveland, O., by Dr. Dr. J. P. Kirtland, male, May 15, 1851. Type specimen.
 - 3. Near Cleveland, O., by R. K. Winslow, female, June, 1860;
- 4. Near Cincinnati, O., by Charles Dury, male, first week in May, 1872.
- 5. Ann Arbor, Mich, by A. B. Covert, female, May 15, 1875.
- 6, 7. Rockport, Cuyahoga county, O., by Wm. and John Hall, May, 1878.
- S. Andros Island, Bahamas, by Charles B. Cory, female, Jan. 9, 1879.
- 9. Ann Arbor, Mich., by A. B. Covert, female, May 16, 1879.
- 10, 11. Cleveland, O., reported by Dr. Langdon, male and female, May 4, 12, 1880.
- 12. Battle Creek, Mich., male, May 11, 1883, now in U. S. National Museum.
 - 13. St. Louis, Mo., May 8, 1885. Otto Widmann.
- 14. Spectacle Reef, Mich., May 25, 1885. Wm. Marshall. Struck the light at Spectacle Reef light house.
- 15. Near Dublin Gap Springs, Pa., June 25., 1885. Prof. H. J. Roddy. He says: "Saw one with family."
- 16. St. Helena Island, S. C., Apr. 27, 1886. Walter Hoxie. Reports seeing three others.
- 17. Near Fort Meyer, Va., Sept. 25, 1887. Wm. Palmer. Another seen a week later.
 - 18. Ann Arbor, Mich., Apr. or May 1888, female, by Mr. Knapp.
 - 19. Chester, S. C., female, Oct. 11, 1888. L. M. Loomis.
- 20. Near Minneapolis, Minn., May 13, 1892, male. H. M. Guilford.
- 21. Wisconsin. Dr. P. R. Hoy. Reported seen.
- 22. Wabash, Ind., May 1, 1893. W. O. Wallace.

The winter home of this rare and narrowly restricted species is apparently the Bahama Islands. It has been taken most commonly during the spring migrations near Cleveland, O. and Ann Arbor, Mich. It has never been taken in the interior of the United States during the fall migrations. The summer home of this warbler would seem to be northern Michigan and Wisconsin or north thereof and possibly in the mountains of Pennsylvania. The line of its spring movements seems to be a narrow route from the Bahamas past the western end of Lake Erie toward Lake Superior. Perhaps the return migration may be over the same route but it is possible this may be, in whole or in part, farther to the eastward passing down the coast after it reaches the Atlantic.

Its distribution is very remarkable. Yet there seems to be an effort on the part of other species to follow a line remarkably similar to that noted. From the northwest into South Carolina, even to the coast, there seems to be a migration route analagous to this. Along it would seem to move, in a southeastly migration, such forms as Brewer's Blackbird, Yellowheaded Blackbird, Leconte's Sparrow, Prairie Horned Lark, typical plains forms.

BIBLIOGRAPHY OF INDIANA MAMMALS.

By B. W. EVERMANN AND A. W. BUTLER.

1687. La Hontan. New voyages to North America. English edition, vol. I, p. 217.

1718. Vandrenil. New York coll. of mss. Paris documents, VII, pp. 885-891.

1720. Charlevoix. Letters. Goadby's English edition, p. 303.

1778. Hutchins, Thomas. Topographical description of Virginia, Pennsylvania and North Carolina, comprehending the rivers Ohio, Kanawha, Scioto, Cherokee, Wabash, Illinois, Mississippi, etc. London, 1778.

Referred to in Allen's History of the American Bison, p. 505; foot note mentions buffalo as "innumerable" northwestward of the Obio river, from the mouth of the Kanawha far down the Obio.

1831. Croghan, Col. George. Journal of Col. Croghan, Monthly American Journal of Geology and Natural Science. Philadelphia, December, 1831.

References to the buffalo in 1765.

1834. Butler, Mann. History of Kentucky.

Contains copy of the Journal of Col. Croghan down the Ohio in 1765, in which references are made to the buffalo, deer, bear, etc.

1842. **Duvernoy**. Notices araigne. Sorex Cuv., Ma miferes 1-48, pl. 38-84. Containing descriptions of Bro

-----Abstract of above

1846-7. Groghan, Georg Time. A monthly public ments and other authenti tions, and the settlement head of the Ohio. Edited 4to. Pittsburg, 1846-48. Referred to by Allen's History

1851. Audubon, J. J. an America, etc. Vol. II. E

to buffalo, 1765, also 1770-1785.

1856. Kennicott, Robert beneficial to the farmer. Refers to a number of mamm

ably the same as mentioned Journal, as existing in Wayne

1857. Baird, Spencer F. railroad route from the Dept. Vol. IX.

1869. Haymond, Rufus. lin county. Indiana Agric Gives a list of 31 or 32 species.

report of a geological surv summer and fall of 1869.

Reference to remains of masto

1876. Jordan, D. S. Man States, including the distr North Carolina and Tenn Starr Jordan, M. S., M. D. Other editions dated 1878, 1880,

1877. Allen, J. A. Histo by J. A. Allen. Ninth A the Territories, embracin