

the grasses and sedges appear not to have been studied at all, though these, next to the trees and shrubs, are the most important ecologically in most temperate regions. These omissions as well as the failure to distinguish sharply between related species—thus *Vitis cordifolia*, which is not known certainly to occur in Michigan, is confused with the very common *Vitis riparia*—and the failure also to discriminate between primary and secondary plant societies, detract seriously from the worth of Mr. Livingston's paper. The excellence of his treatment of the soils and the geological factors of the flora is thus marred somewhat by hurried and inexact observation of the flora itself. The ecologist must know his plants, or his work is worthless. He can not neglect any great group, not even the lower cryptogams, and give us a true conception of the actual plant life. He must stay with his flora till he knows it—he must see, if possible, the relation of each species with its environment, its relation too with its neighbor. If he can not cover a state or a county, let him be content with a township or a section. A broad plant survey has its uses; it has also its defects, but even so, such a survey should spring out of an intimate knowledge of local floras. A generalization not drawn from verified particulars is of no use to exact science.

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DISCOVERY OF THE BREEDING AREA OF KIRTLAND'S
WARBLER IN MICHIGAN.

ABOUT a month ago Mr. E. H. Frothingham, an assistant in this museum, and his friend, Mr. T. G. Gale, took an outing in Oscoda County, Michigan, and went prepared to secure specimens for the museum. On their return it was found that a male specimen of Kirtland's warbler (*Dendroica kirtlandi*) was among the bird skins which they had secured. This is one of the rarest and most interesting of North American birds, less than thirty specimens having been recorded from the United States and Canada. Mr. Frothingham has published a preliminary note of this June

capture of a Kirtland warbler in the *Bulletin of the Michigan Ornithological Club*, Vol. IV. (Detroit). This is the first June record of the capture of this species. The late occurrence of this bird in northern Michigan and its relative abundance (several birds were seen and heard which were not taken) suggested that the bird was breeding in that region. In the hope of settling this point, as the breeding area of this bird was unknown, this museum sent its taxidermist, Mr. N. A. Wood, to Oscoda County to make a thorough investigation of this question and to secure specimens for the museum. Mr. Wood has just returned from this trip and has had excellent success as is shown by his having secured two nests with the young and one egg, thus establishing beyond question the breeding area of this species. A full account of the results of Messrs. Wood and Frothingham will soon be published. From an ornithological standpoint this is a very important discovery. In the *Auk* for October, 1898, Mr. F. M. Chapman writes concerning our knowledge of the North American warblers: "With the exception of several Mexican species just reaching our border, we can now write 'rare; nest and eggs unknown,' only of Kirtland's warbler." It is thus evident that this is a discovery of considerable interest.

Some unauthorized and incorrect reports have been made public, which makes it desirable to make this preliminary statement.

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CURRENT NOTES ON METEOROLOGY.

CLIMATE OF CAIRO.

IN 1859 the Khedive of Egypt ordered the reestablishment of the observatory which had existed at Bulaq from 1845 to 1850, but had then been closed. A site was selected and regular observations were commenced in 1868. The observatory is about three miles northeast of Cairo, on the edge of the desert, close to the military barracks of Abbassia. In 1889 Mr. J. Barois published a very