

whitish edging on the inner webs of the tail feathers to which the standard authorities fail to refer.

The third bird on my list is LeConte's bunting (*Coccyus lecontei*). The discovery that this little known species is included among the birds of Minneapolis is the latest ornithological novelty of which the district can boast; being first indisputably noted only during the past summer. But his presence is due to from being a familiar one in this part of our territory. As of late he has rigidly confined himself to one particular spot. This is a large tract of meadow just outside the city limits, which, despite the close proximity of a railroad and several other scarcely less noisy highways, proves to be a great resort for many birds among them the species in question. It has been observed on sundry occasions during the last season, and taken both in juvenile and adult stages.

One of the smallest of the sparrows, and likewise one of the least noticeable in point of attire, it is also the fate of this species to lead a career of the utmost unobtrusiveness and humility, being for the most of his time buried deeply in the grass, where he gleans the lesser grubs and more delicate seeds found to constitute his fare. In his style of flight, as well as in his song, he is almost undistinguishable from his yellow-winged brother sparrow (*Coturniculus passerinus*); in short, it may be described as the yellow-winged sparrow transferred to low grounds and marked by certain constant characteristics brought about by the change.

While the young of the bird were procured in several instances in the meadow to which I have alluded, the nest remained undetected, doubtless being hidden so securely in the grass that its whereabouts could only have been brought to light by the luckiest chance.—W. L. Tiffany, Minneapolis, Minn.<sup>1</sup>

MODE OF DISTRIBUTION OF FRESH-WATER MUSSELS.—On April 17, 1877, the writer, while exploring that portion of the Erie Canal known as the Wide Water, near Mohawk, N. Y., unexpectedly came across *Unio rubiginosus* Lea. Five specimens in all were secured during this and two succeeding expeditions. The species has not hitherto been found on the Atlantic slope, but belongs to the Ohio basin, and, hence, to the western fauna. It has been recorded at Buffalo (teste Prof. C. Dewey), and at Rochester (teste C. T. Robinson) in Western New York, but only in streams flowing into the great Lakes. Between Mohawk and the latter localities is a ridge or water-shed sloping to the West and the East. The Erie canal passes over this ridge, and through it the species has probably been introduced and colonized. My friend, Dr. Lewis, of Mohawk, informs me that about eight years ago he found in the canal, a single specimen of *Unio gibberosus*.

<sup>1</sup> The nest and eggs of *C. Lecontei* are unknown, and Mr. Tiffany would do well to make thorough search for them on the spot where the species thus unexpectedly proves to be abundant.—E. C.

Through the same medium introduced.

*Unio rubiginosus* Lea, was also found (within three miles) in Massachusetts, to include the possibility of its introduction. The specimens were taken from a lake which lies between high hills, and is an artificial branch of the Erie Canal, having no connection with the main canal, and could possibly reach it from the Mohawk, but over a very rocky route. The species is essentially western. (Vide Lewis in Bulletin of the U. S. Geol. Surv. 177.) Its occurrence in the latter perhaps, in a manner similar to the present case, in an intermediate locality has it been observed. How came this western species to be introduced? Mr. Darwin, (in "Origin of Species") has conjectured a probable mode of distribution of certain fresh-water univalves. The mode in which the writer has actually seen the species certainly does. Mr. Arthur F. Noyes informed me of the foot of a mountain to which is attached a bivalve shell, and which is held by the latter.

The young of *Unio*, since they are not attached to the water, may be distributed in various ways; viz: attaching themselves to the water, or being often carried away by water. The manner in which they do thus attach themselves to the water, or the manner or cause of its introduction into the above lake, absolutely foreign to the species might have been introduced into the preceding, may yet become clear. The fact of its occurrence now and there in the locality mentioned, under the circumstances, may be of interesting value in the distribution of the Unionidæ comes from the North Call.

DEFENSIVE URINATION OF THE FROG.—When a frog leaps a mile from any water, one of the first things which leap out of the way in a very short time is the first leap is made, the frog ejects a mass of urine in a quantity of urine which is largely diminished quantity the second leap. The idea which naturally occurs is that this water is the ordinary urine.

Through the same medium other western species may be introduced.

*Unio pressus* Lea, was also found by the writer, near the same locality (within three miles) in May, 1877, but under conditions which exclude the possibility of its introduction in a like manner. The specimens were taken from a small lake near Herkimer, N. Y. The lake lies between high hills and receives as its water supply an artificial branch of West Canada Creek, a mountain stream having no connection with the Erie canal, or any stream which could possibly reach it from the west or south. It empties into the Mohawk, but over a very rocky bed, and after a considerable distance. The species is essentially western, but is recorded at Troy, N. Y. (Vide Lewis in Bulletin Buf. Soc. Nat. Sci. Aug. 1874, p. 100). Its occurrence in the latter locality may be explained, perhaps, in a manner similar to the preceding, though at no known intermediate localities has it been found. The problem to be solved is: How came this western species in this isolated eastern locality? Mr. Darwin, (in "Origin of Species," p. 344, Ed. 1877) has suggested a probable mode of distribution, relating particularly to certain fresh-water univalves. What Mr. Darwin conjectured the writer has actually seen. The same may occur with bivalves, as he certainly does. Mr. Arthur F. Gray, of Danversport, Mass., has informed me of the foot of a water-fowl, now in his possession, to which is attached a bivalve shell, the former caught and held by the latter.

The young of *Uniones*, since they are capable of swimming about, may be distributed in the manner suggested by Mr. Darwin; viz: attaching themselves to pond-weeds, the latter being often carried away by water-fowl. That *Limnæa* and *Physorbis* do thus attach themselves every collector knows. Whatever the manner or cause of its introduction *Unio pressus* is found in the above lake, absolutely foreign to any stream through which the species might have been introduced. This species, as well as the preceding, may yet become colonized in the Mohawk River. The fact of its occurrence now and its probable recent introduction in the locality mentioned, under conditions that seem physically impossible, may be of interest when the geographical distribution of the Unionidæ comes to be more fully studied.—R. W. Smith Call.

**DEFENSIVE URINATION OF THE FROG.**—On the Iowa prairies, about a mile from any water, one frequently meets with frogs which leap out of the way in a very startled manner. Generally, when the first leap is made, the frog ejects a quantity of water, which is thrown in a mass to the amount of a fluid ounce or more, with a largely diminished quantity the second time he springs from the ground. The idea which naturally occurs to the observer, is, that this water is the ordinary urine of the reptile, voided in this