

CONCHOLOGICAL NOTES.

But few mussels have been recorded from the Hudson Bay drainage area of Ontario, though many must occur.

Mr. J. B. Tyrrell, who explored the District of Patricia in 1913, found *Unio (Lampsilis) luteolus* in the Fawn and Severn about lat. 54° N. The species doubtless extends down to Hudson Bay as it does down the Mackenzie. The shells are smaller and lighter in color than these of the same species from the Rideau river and the Rideau canal. In the latter between Bank and Concession Streets, Ottawa, they are ordinarily of large size, green in color, and beautifully rayed. The Patricia shells resemble closely the *L. luteola* found in Lake Nipissing at North Bay, and in Lake Talon, near Rutherglen, but are not as yellow on the same species from Lake Gauvreau in the Gatineau hills.

No mussel peculiar to America has a wider range than this. It is found from the Brazos of Texas to the Arctic Circle and from the Rocky Mountains to the St. Lawrence and the Hudson drainage areas. Throughout this vast extent, under conditions varying from crystal lakes and streams to muddy sloughs and pools, in polar cold and torrid heat, it preserves unvaried the peculiar undulations of the beaks which distinguish it from allied species. It thus affords a striking proof of the proposition of Quatrefages, that specific characteristics—properly so-called—are not permanently affected by environment.

An *Anodonta* found by Mr. Tyrrell in the Fawn river has the beaks so eroded that it cannot be identified. It is not probably *A. kennicottii* Lea, which was described from Lake Winnipeg and Great Slave lake.

Another lot of mussels from Northern Ontario was collected in 1914 by Mr. J. K. Latchford in the Missinaibi, where on its way to Hudson Bay it flows under the National Transcontinental Railway, about twenty miles east of Hearst. They are mainly *L. luteola*, but include two *Anodontæ* which may be undescribed. Throughout Ontario, especially northward, the *Anodontæ*, or paper-shell mussels, abound. It is seldom, however, that any but mature specimens are collected. The beaks of old shells are nearly so always eroded that positive identification is extremely difficult, except in the case of a few species with prominent characteristics. The result outside of narrow limits is absolute confusion. It is safe to say the only thin-shelled mussels found near Ottawa which can be identified with any certainty are *A. (Strophitus) edentula* Say *A. cataracta* Say (= *fluviatilis* Dillw. of our lists) and *A. subcylindracea* Lea. Many