

### The Crayfish in the Atlantic Provinces.

The only species of Crayfish, or "fresh-water lobster," at present known to occur in the waters of Eastern Canada is *CAMBARUS BARTONII*, (Fabr.) Gir., formerly called *ASTACUS BARTONII*. It was first reported, so far as we know, by Dr. Bell, of the Canadian Geological Survey, who found it, prior to 1859, abundant in the Metapedia, Restigouche and Metis Rivers. He tells us also (*Canadian Naturalist*, IV., 1859, p. 210) that he found a specimen in the Ouïatchouan, a river flowing into Lake St. John in Quebec. In 1865, Professor Hind (*Preliminary Report on the Geology of New Brunswick*) reported its presence in the Upsalquitch,\* a branch of the Restigouche. We have found no other references to its occurrence in our waters until the appearance of Dr. Faxon's splendid monograph of this group, the *Revision of the Astacidae* (Cambridge, Mass., 1885) in which, in the Dominion of Canada, it is reported from St. John, N. B., from the Aroostook Valley, and doubtfully from Montreal. But in 1887, a short article appeared in the *Bulletin of the Natural History Society of New Brunswick*, No. VI. (p. 74), in which attention was drawn to its occurrence in the St. John River and its tributaries, and additional testimony given as to its presence in the Restigouche and branches, and also in the Miramichi. It was predicted that it would be found also in the Nipisiguit and St. Croix.

Since that paper was published but few additional facts have come to light, and it is to call the attention of the readers of the REVIEW to this interesting question, and to ask their co-operation, that the present notes are written. Its presence in the Metis and Restigouche has been confirmed by Mr. J. W. Bailey and Mr. Philip Cox respectively, though the latter has not seen it in his trips on the Miramichi. The present writer has looked for it in vain in the St. Croix, and he cannot find that any one has seen it in the Nipisiguit, nor in fact in any rivers or streams, other than the above-mentioned, in the Eastern Provinces.

In explanation of the occurrence of this crayfish in branches of Lake St. John, Quebec, it may be suggested that it will probably be found widely distributed in the waters between that place and Montreal.

It is probable that it has spread into Eastern Canada, south of the River St. Lawrence, in late

post-pleiocene times, by way of the head-waters of the Kennebec, Penobscot and St. John. Not only do the waters of the two latter rivers very closely approach each other at more than one point, but in Telos Lake and Webster Pond\* they actually mingle; and there is also a close approximation of Penobscot and Kennebec waters. These animals can easily pass the low and swampy portages and perhaps even high and dry ones of not too great a length, and hence doubtless it is that they have spread into the Restigouche, via Grand River, and into the Miramichi by way of the Beccaguimec, Shiktehawk or Nashwaak, or perhaps through branches of the Tobique. It probably reached the Metis by way of the Patapedia, the head waters of these two streams closely interlocking. We should expect to find it also in the Nipisiguit, the Richibucto, the St. Croix and other streams connected by easy portages with the branches of the St. John. But as it cannot live in salt water, we do not expect to find it in Nova Scotia or Prince Edward Island. Its most northern point, then, so far as known, is the Metis, and its most easterly the Miramichi. Will any reader of the REVIEW, who can learn of its occurrence in either of the latter Provinces, or at any new localities in New Brunswick, kindly communicate the fact to the editors?

The Crayfish cannot be mistaken for any other animal. It lives in fresh water only, and is the exact picture of a small lobster. It grows to a length of about three or four inches, and is of a dark ashy-brown color. It forms burrows in alluvial lands. This species is not used for food, though some southern and western species are of considerable value for this purpose. On the other hand, it may do considerable damage to meadows where it is abundant, its burrows loosening the soil and making it more easily washed away. It is also called "Crawfish."

While we have probably but a single species, it is not impossible there may be more, particularly if they should be discovered in Nova Scotia or Prince Edward Island. The editors would be very thankful for specimens from any locality, which will at once be placed in the hands of a specialist for exact determination. They may either be preserved in alcohol, or by placing them in alcohol over night and then subjecting them to gentle heat over a stove until dry. The latter way does not give as good specimens for determination as the former, but they can be more readily sent by mail.

It is such questions as this that our teachers can profitably bring to the notice of their pupils. To ask their assistance in a definite inquiry of this sort about animals which may live in their own brooks, must have some effect in stimulating powers of observation. We propose, in future numbers of the REVIEW to call attention to other problems of a similar nature, which may be utilized in the same way.

\*He mentions a Micmac belief concerning this animal that is of considerable interest. "In walking up this stream I observed one of the Micmac Indians take a little crawfish and place it carefully on the bank, about two feet above the then level of the water. On enquiry, he stated that his object was to 'get a freshet' so that we might go down the Nipisiguit without difficulty. 'The little crab would bring it, and make the water rise just as high as he pleased.' He remarked that this was an old Micmac superstition, 'and a very good one.'" (p. 130).

\*Thoreau, *Maine Woods*, pp. 36, 250.