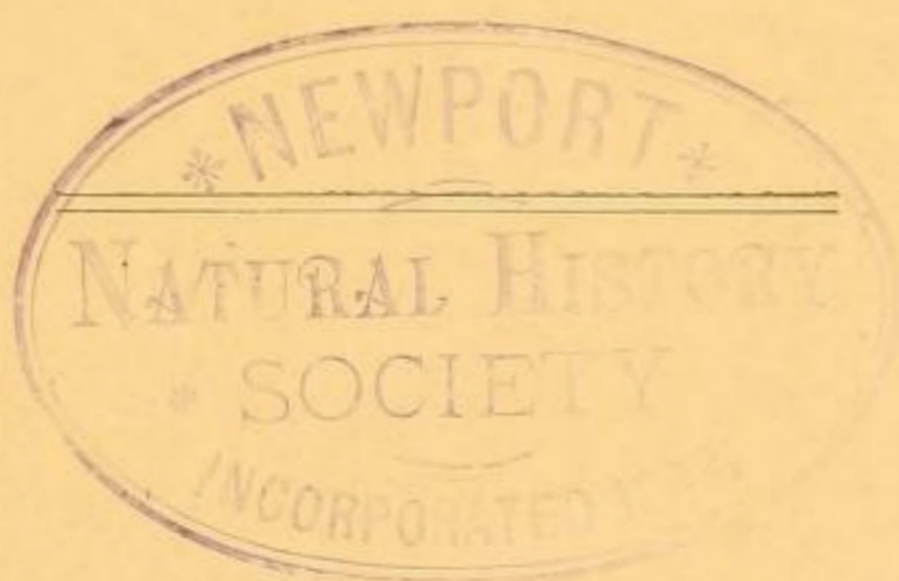


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XIII.—*Note on a Decapod Crustacean from the Upper Cretaceous of Highwood River, Alberta, N. W. T.* By J. F. WHITEAVES.

(Read May 21, 1884.)

Remains of crustaceans allied to the lobster and crab of recent seas, though comparatively frequent in the Cretaceous rocks of Europe and the United States, have not yet been recorded as occurring in deposits of the same age in Canada.

In 1876, however, while engaged in studying the fossils collected by Mr. James Richardson from the Lower Shales of Skidegate Inlet, in the Queen Charlotte Islands, which are now believed to be the equivalents of the Gault, and in attempting to remove the matrix which covered one side of an Ammonite, the writer had the good fortune to expose to view a nearly perfect specimen of a small crab, which has been sent to Dr. Henry Woodward, of the British Museum, for examination and description.

The fossil, which it is the more immediate object of this paper to describe, is a rather remarkable example of a macrurous decapod or lobster-like crustacean, collected by Mr. R. G. McConnell, in 1882, from the Cretaceous shales of the Highwood River, a tributary of the Bow.

The specimen originally consisted of an elongate-oval and flattened concretionary nodule of soft argillite, with a small piece broken off from one end, but enough of the matrix has been removed to show most of the carapace and the upper surface of a few of the abdominal segments. The anterior extremity of the carapace, with the rostrum, is unfortunately not preserved, and the tail, with some of the posterior abdominal segments, was broken off when the nodule was found. The ambulatory feet are preserved, but it was found to be scarcely possible to remove the soft shale from around them without running the risk of spoiling the specimen.

The carapace, like that of most of the macrura, is elongated and comparatively narrow, with nearly parallel sides, and, when perfect, its length must have been about twice as great as its breadth. A little in advance of the midlength a single, broadly V-shaped, deep and rather wide groove or furrow crosses the carapace transversely. The posterior half of the carapace is depressed and rather distinctly three-keeled in a longitudinal direction, though it is most likely that these appearances are mostly or wholly due to a considerable and abnormal compression from above. Be this as it may, in the specimen collected by Mr. McConnell, a central keel, or narrow but prominent raised ridge, which is about three times as broad posteriorly as it is anteriorly, and which is bounded on each side by a deep and angular furrow, extends from the posterior end of the carapace to the centre of the V-shaped groove which transverses it. This central keel is much more strongly marked than the broad and comparatively obtuse lateral keels, which latter are placed near the outer margin of each side. The surface of the posterior half of the carapace (and perhaps that of the anterior also) is covered with rather distant, small, isolated conical tubercles, which, under the lens, look as if they might have each borne a bristle at the summit, and

which, occasionally, are surrounded by a minute annulus at the base; and the three keels each have a single series of larger conical tubercles, whose pointed apices are directed forward.

In front of the transverse and V-shaped furrow the carapace is very badly preserved, and the anterior margin with the rostrum is broken off. The two lateral and tuberculated keels appear to be prolonged to within a short distance of the front margin of the carapace, though they are somewhat less distinct in front of the transverse furrow than they are behind it. On the anterior side of the furrow the central keel is absent, and the median portion of this part of the carapace bears a number of comparatively large and prominent, distinct and conical tubercles, which are somewhat peculiarly arranged. Next to the furrow, and in advance of it, in the median line, there are five tubercles arranged, in two convergent rows of two pairs and an odd one, which, if connected by lines, would have much the shape of an isosceles triangle, with its base near to the furrow. Between the space bounded by these five tubercles and each lateral keel, there is a shallowly concave and rather broad depression of the carapace. In front of these five tubercles, again, there are four others and still larger ones, (the two anterior ones apparently of considerable size), arranged somewhat in the form of a square, any of whose sides would be greater than the base of the isosceles triangle indicated by the other five.

The upper surface of each of the abdominal segments bears a tubercle in the centre, on its anterior edge, and another one on the margin of each of the sides. The most prominent characteristic of the species, in fact, is the possession of three widely distant, longitudinal and tuberculated keels, which extend over nearly the whole length of the upper surface of the body.

To the right of the carapace, in front, there are indications of what appears to have been a large pinching claw, and, if the appearances presented are correctly interpreted, the sides of the fixed ramus of that claw are also coarsely tuberculated.

Until its exact generic position shall have been settled by the collection of more perfect specimens, it may be convenient to designate the present species as *Hoploparia* (?) *Canadensis*, though it is by no means certain that it belongs to McCoy's genus of that name.