

APPENDIX.

THE GIANT TRILOBITE OF MOOSE RIVER IRON MINE, N. S.

ATTENTION has again been directed to this interesting crustacean.

From a correspondence with Prof. Vogdes, of Fort Hamilton, New York, the Trilobite which we considered a *new species* and named *Asaphus ditmarsiae*, seems to have been the first of the family in Nova Scotia to which special attention has been given. It is now over half a century since it was described figured and named. Prof V. has kindly sent me the following description, which is sufficiently convincing and very interesting.

Feb. 1, 1888.

D. HONEYMAN.

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DESCRIPTION OF A NEW TRILOBITE FROM NOVA SCOTIA—by
JACOB GREEN, N. D., PROF. CHEM. IN JEF. MED. COL.
PHILA.

Asaphus? crypturus, Green.

Cauda acuta, articulis terminalibus obscuris; parte marginali vix membranacea; corpore convexo.

A tolerably perfect fragment of the abdomen and tail of this highly interesting fossil comprised all of the animal which has yet been found. Eleven articulations of the middle lobe, and ten of the lateral lobes are quite distinct. All the costal arches or ribs are smooth and rounded, being without pustulatiæ striæ or grooves. Four of the upper arches of the dorsal, or middle lobe are longer than those on the sides of the body, a peculiarity which is sufficiently decisive to mark the species. Indeed this organization furnishes a striking exception to the generic characters of the *Asaphus*, as given by Professor Brong-

niart, who states "that the middle lobe of the abdomen is rarely more than 1-5 the width of the body." But what is more remarkable, and still further distinguishes this animal remains from all other Asaphs, is the epidermal covering which concealed the terminal articulations of the tail. In our specimen there is no appearance of what has been called the membranous development beyond the lobes of the animal, another circumstance which seems to separate it from the genus *Asaphus*. The body is quite convex, and (page 38) both in breadth and length our fragment measures nearly three inches.

I am indebted to the kindness of Dr. Charles J. Jackson, of Boston, Mass., for this interesting species: it occurs in magnetic iron ore, and was found by Dr. Jackson and Mr. F. Alger during their geological tour through Nova Scotia. Their highly important memoir describing the mineralogy and geology of that part of North America, has been justly proposed as a model, both in its generalizations and its details, to future explorers of those districts of our country which yet remain unexamined and undescribed. According to this memoir, Nova Scotia is based upon granite, although that rock is almost every where covered by more recent formations. A transition slate, with marine organic remains, and containing beds of limestone and rich deposits of iron ore, is very abundant. The iron ore is often beautifully impressed with organized bodies, of which our *A. crypturus* is a fine example. Sometimes one portion of a fossil is found moulded in the slate, and the other portion in the iron ore, thus indicating their contemporaneous formation. Sandstone is next in extent after the slate, and it is said corresponds geologically with the new red sandstone or red marl of England. Dr. Jackson, in his letter which accompanied our fossil, remarks: "I send you a Trilobite from the mines of magnetic iron in Nova Scotia, which exist in the clay slate of Clements, on the Moose River, at Annapolis Basin; also a *Terebratula* found in the same locality. I beg you to show these specimens to the Geol. Soc. of Penn., and let me know the result of your decisions. The most extraordinary thing connected with these fossils is, that they were found in a magnetic iron ore, the pro-

toxide mixed with the peroxide and clay slate. The walls of the bed are of the same, or nearly the same date with the bed of the ore, for they are filled with *terebratulæ*."

In a communication recently made to the Geol. Soc., London, by J. Prestwich, Jr., Esq., "On some of the faults which affect the coal field of Coalbrookdale," the author concludes his memoir with some observations on the fossils he procured, principally from the iron stone of the coal measures; among the most remarkable were the remains of some *trilobites*, hitherto undescribed. They were procured from a bed of ironstone in the centre of the coal measures. No description of these animals being to my knowledge, yet given, it is impossible to say what affinities they may have to our *Asaphus crypturus*. Mr. Prestwich, who notices a *Coleopterous insect*, and another apparently belonging to the genus *Aranae*, which were obtained from the ironstone nodules. The occurrence of these different races of animals in the same formation is certainly a very curious and highly important fact.