

so that the series, though with some faults and flexures, is on the whole descending, and exhibits in succession to the rocks just mentioned, gray and dark shales, with bands and lenticular patches of coarse limestone, some of which appear to consist principally of brachiopodous shells *in situ*, while others present a confused mass of drifted fossils. Below these the beds become more argillaceous, and in places have assumed a slaty structure, and occasionally a red colour. The thickness of the whole series to this point was estimated at 500 feet. The dip then returns to the south, and the beds run nearly in the strike of the shore for some distance, when they become discoloured and ochraceous, and then red and hardened; and finally, at Arisaig pier, are changed into a coarse reddish banded jasper, where they come into contact with a great dyke of augitic trap of carboniferous date. Beyond this place they are much disturbed, and so far as I could ascertain, destitute of fossils. The alteration of the beds extends to a distance of 300 yards from the trap, and beyond this in some places slaty cleavage and reddish colours have been produced; the latter change appearing to be connected with vertical fissures traversing the beds.

In the lower or shaly portion of the Arisaig series, the characteristic fossils are *Graptolithus* not distinguishable from *G. clintonensis*, *Leptocælia* (*Atrypa*) *intermedia*, (Hall,) a new species closely allied to *L. hemispherica* of the Clinton group of New York, *Atrypa emacerata*, *Orthis testudinaria*, *Strophomena profunda*, *S. rugosa*, *Rhynconella equiradiata*, *Avicula emacerata*, *Tentaculites*, allied to or identical with *T. distans*, *Helo pora* allied to *H. fragilis*. There are also abundant joints and stems of crinoids, and a *Pulceaster*, the only one as yet found in Nova Scotia, which was presented to me by Mr. Honeyman, and has been described by Mr. Billings in the Canadian Naturalist under the name of *P. parviusculus*. These and other fossils associated with them, in the opinion of Prof. Hall, fix the Geological position of these rocks as that of the Clinton group, the upper Llandovery of Murchison, at the base of the upper Silurian or top of the middle Silurian.

In the upper and more calcareous part of the series, fossils are very abundant, and include species of *Culymene*, *Dalmania*, *Homalonotus*, *Orthoceras*, *Murchisonia*, *Clidophorus*, *Tellinomya*, and several brachiopods, among which are *Discina tenuilamellata*, *Lingula oblonga*, *Rhynconella quadricosta*, *R. Saffordi*, (Hall.)

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