

is completely known. One piece of dorsal shield in counterpart shows the impression of the supposed branchial pouches on one side.

"The pointed fragments in the collection may be *Cephalaspizian cornu*, but are uncertain. There is also present the typical *Onchus Murchisoni*.

"Most interesting is one small fragment of *Pramnoterus*, with ornament identical with that of *P. anglicus*.* In this fossil the chambers of the middle layer are larger than in our unique plate.

"On the whole, I should place the McArras Brook beds on the same horizon as the Lower Old Red Sandstones-Cornstones of the Hereford district of England above the passage beds."

CONCLUSIONS

It may thus be safely concluded, with the evidence at hand, together with the learned opinion of Messrs Arthur Smith-Woodward and R. H. Traquair, that we have in Nova Scotia an area of Lower Devonian rocks which represent well in America the lower portion of the Old Red Sandstone of Europe. This latter series of strata, together with the Devonian rocks proper, Sir Roderick Murchison held to be the result of "different geographical conditions of the same period." The same statement may be uttered with all truth in North America. From the character of the strata, it is evident that lacustrine deposits were laid and shallow-water conditions prevailed throughout the Knoydart area in Eo-Devonian times, and a lake similar to lake Orcadie, lake Caledonia, lake of Lorne, the Welsh lake, etcetera, of Great Britain, so graphically described by Sir Archibald Geikie, existed in Canada, to which the name *lake Pictou* might appropriately be given.

It may here be remarked that the Knoydart formation of Nova Scotia finds a near equivalent in the Eo-Devonian strata of the Campbellton formation in the Baie des Chaleurs region. To the lake in which *Coccosteus* (*Phlyctænaspis*), *Cephalaspis*, *Protodus*, *Ctenacanthus*, *Acanthoides*, *Cyclonura*, etcetera, once flourished in the Bay des Chaleurs region, the name "lake Chaleur" is suggested.

It is an interesting fact to note that much contemporaneous volcanic ash materials constitute the deposits of both these ancient Paleozoic lake basins—"lake Pictou" and "lake Chaleur."

* See Traquair, Ann. Mag. Nat. Hist., ser. 7, vol. 11, 1898, p. 67, pl. 1, figs. 1, 2.