

stem, which would serve as a basis of classification for the North American Coniferæ. Since then, somewhat extended opportunities for verification and comparison have been offered, and the present synopsis is now given in the belief that it embodies what may be regarded as final deductions.

The classification as at present outlined, indicates that the Taxaceæ and Coniferæ must be regarded as distinct families. It also shows that among the Coniferæ, the genera heretofore recognized as distinct, are separable from one another on anatomical grounds with the exception of Cupressus and Chamæcyparis, between which there is no adequate ground of differentiation. They are, however, combined in the former genus, of which there are two sections, Cupressus proper and Chamæcyparis.

*Additional Notes on Fossil Sponges and other Organic Remains from the Quebec Group at Little Metis,* By Sir J. William Dawson, LL.D., F.R.S., with descriptions and remarks on some of the specimens, by Dr. G. J. Hinde, F.G.S., etc.

This paper is intended as a continuation of that on the same subject published in the transactions of the Royal Society of Canada for 1889.

It notices, in the first place, the present state of our knowledge of the rocks of the Quebec group of Sir William Logan, as developed on the South shore of the St. Lawrence, below Quebec, and especially at Little Metis Bay; with the sub-division of these rocks resulting from the recent observations and collection and study of fossils by the officers of the Geological Survey of Canada, and by Prof. Lapworth. From these it would appear that the beds at Little Metis which have afforded so many interesting species of fossil sponges, may be referred with some certainty to the upper part of the Sillery series, the lowest member of the Quebec group; and which should probably be regarded as equivalent to the lower Calciferos of the interior of the continent, and may therefore be held to be on the confines of the Cambrian and Ordovician Systems.

That the beds of the Lower Cambrian were already hardened and in process of denudation at the time when the Sillery Series was laid down, is evidenced by the fact that in the conglomerate almost immediately overlying the sponge-beds, boulders occur holding *Olenellus* and other characteristic Lower Cambrian fossils. This fact, observed last summer, is noticed in the paper, with a list of these fossils.

Attention was then directed to the results of recent excavations in the sponge-beds, revealing some new forms and new facts with reference to those previously known; special mention is made of the giant sponge referred by Dr. Hinde to a new genus *Palæosaccus*, and described by him in the London Geological Magazine; and to the occurrence of a