

Charles Lapworth in many places in his "Geological distribution of the Rhabdopora," recognized *Bryograptus* as older than the *Dictyonema* shale,¹ but Dr. W. C. Brögger disputes this, and says that in Scandinavia that genus appeared above the *Dictyonema* beds. He cites three species which appeared very soon after *Dictyonema*, and one of these is referred by Hermann to *Trichograptus*.

Our observations in the St. John basin favour Lapworth's views, as we find a *Bryograptus* mingled with the earliest examples of *Dictyonema*, and below the proper *Dictyonema* beds.

Dictyonema flabelliforme ranges through a greater thickness of beds in Acadia than it does in Sweden or Norway, and perhaps for this reason, has a greater variety of Brachiopods and Trilobites associated with it than are found in these countries, or indeed any where else. Included in the beds where *Dictyonema* is found, there are trilobites belonging to Angelin's genus *Leptoplastus* and to *Agnostus*. *Parabolina* cf. *heres* Brögg, and *Protopetura* cf. *acanthura*, Ang., also occur, and as the fossil is found about fifty feet lower down than the bed where these trilobites occur, it may even reach the zone of *Parabolina spinulosa*, Wahl. But the *Dictyonema* of these lower layers is a bushy form like var. *confertum* of Sweden.

Only one trilobite is mentioned as occurring in Sweden in the *Dictyonema* beds. This is Angelin's species *Acerocorne ecorne*, a species resembling *Peltura scarabeoides*, but possessing a pygidium devoid of spines. J. C. Moberg has thrown doubt on the occurrence of even this one trilobite in the *Dictyonema* beds. He mentions that it is said to have been found at Sandby in Scania where *Protopeltura acanthura* occurs, and it is thus possibly with fossils somewhat older than the true *Dictyonema* beds. Further, it may be added that Linnarsson says the *Dictyonema* beds in Scania contain (beside their characteristic fossil) a species of *Dichograptus* in great numbers, and that in that province a "transition

¹ Dic. Silurischen Etagen 2 und 3, p. 37.