

*Dictyonema flabelliforme* had been sought for in the black shales of Division 3 (Bretonian) unsuccessfully until this year. Films, probably due to this fossil had been met with, but they were too much distorted and obscured by slaty cleavage to be with safety referred to it. Now, however, the presence of this fossil is undoubted, and serves to add another to the known palæontological horizons of the St. John group.

Mr. G. Stead, whom the writer had sent to search for the Tremadoc fauna on Navy Island, in St. John harbour, found *Dictyonema* in the ledges at the west end of the island. Subsequent examinations resulted in the discovery of fine examples of the fossil, and showed that it occurs at intervals through a considerable thickness of beds. Judging from the position at which *Dictyonema* was found, it is probable that the Tremadoc fauna is not on the island, but to the north of it in the channel of the river St. John.

The history of this *Dictyonema* is interesting, as showing through how many successive phases of increasing accuracy the knowledge of an extinct organism may pass. The original describer of the species evidently thought it related to the sea-fans as he called it a *Gorgonia*. The rising, branching and spreading hydrosome, with its sub-parallel, occasionally forking branches, would seem to favour this reference of the species. The branches too, are covered with minute pores, or what appear to be such, and thus in another respect the species resembles the sea-fans.

But Eichwald could not have discovered that he was dealing with a hollow cup or bell, and not a fan-like expanded organism, or he would scarcely have applied the specific name by which he designated the fossil.

Still further from a correct understanding of the nature of this fossil, were Goeppert and Unger, who thought it to be a plant of some kind. These men were palæobotanists, and so less prepared to look for analogies to the fossil in the animal kingdom.

It is now generally admitted that the fossil described by the late J. W. Salter as *Dictyonema sociale* is identical with