

ORGANISMS OF THE ST. JOHN OR ACADIAN GROUP (SERIES).

Fauna and Flora of Division (Stage) 1.—(Paradoxides Beds).

The fauna of Band *b* of this stage, resembles in many respects that of the series just described. There is the same prevalence of sponges. The basket sponges and the rod-like sponges (?) are common to both, but the latter here attain a much larger size, and are more plentiful. In all the fine layers of this band, traces of Protospongiadæ may be found, but no examples of the typical Protospongiæ of the Paradoxides beds have been observed. The Protospongiadæ of this band have either a minute rectangular reticulation, or the mesh is coarser, and crossed by large diagonal and branching spicules. Even the sandstone beds of this band exhibit numerous fragments of spicules.

The brachiopods are represented in this band by several genera, some of which have been already described. This paper contains descriptions of additional species—an *Obolus*, a *Jingulella*, and three species of *Leperditia*.

The Algæ are present in several different types, among which are a *Buthotrephis*, and a microscopic form parasitic on the larger organisms. This little thing spread itself in a minute network over the mud of the sea bottom, by jointed filaments, which at their intersection formed enlarged nodes. There are also some quite small oval forms of dark color resembling *Hydrocystium*, which may have been algaoid.

Among the new species of the Paradoxides beds is a little *Platyceras*. New facts have been obtained, relative to the smaller *Stenotheca*, to *Lepidella anomala* and to two species of the Paradoxides that have been described: *P. pontificalis* is found to be a narrow, and *P. Micmac* a broad form of *P. Hicksii*.

Fauna of Division (Stage) 2.—(*Olenus* Beds).

Abundant remains of large *Protospongia* are found in these beds. Among them are *Protospongia fenestrata*, Salt,