the Silurian period had a cryptogamic vegetation in which lycopods and ferns no doubt played the chief part.[57]

In the fauna of the Silurian rocks, the most lowly organisms known are foraminifera, of which several genera, including the still living genus Saccammina, have been detected. Certain layers of chert, widely spread over the south of Scotland, have yielded upward of a dozen genera with more than twenty species of radiolaria.[58] The Silurian seas possessed representatives both of the calcareous and of the siliceous sponges of modern times. Under the former group may be placed the genus Archæocyathus which occurs in the Cambrian system, and the genera Astræospongia and Amphispongia of the Upper Silurian rocks; under the latter group come Astylospongia and Protachilleum. Of the puzzling genera Receptaculites and Ischadites, the true relationships have not yet been determined. Nidulites, too, though a common fossil, is still a subject of uncertainty as to its organic grade, the latest view being that it may be related to the polyzoa.

Some of the most plentiful and characteristic denizens of the Silurian seas were undoubtedly the various hydrozoan genera united under the common name of graptolites (Fig. 340).[59] Among the monoprionidian forms, or those with a single row of cells, the genera Monograptus (of which upward of 40 species have been found in Britain), Rastrites and Cyrtograptus are characteristic of Upper Silurian rocks.

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[57] The student will find a valuable compendium of information by L. F. Ward regarding the fossil floras of past time all over the world in the 8th Ann. Rep. U. S. Geol. Surv. part ii. 1889.

[58] G. J. Hinde, Ann. Mag. Nat. Hist. 1890, p. 40.

[59] The student should consult Prof. Lapworth's Monograph "On the Geological Distribution of the Rhabdophora" (Ann. Mag. Nat. His. ser. 5, vols. iii. iv. v. and vi. 1879, 1880) in which the geological significance of the graptolites is fully discussed.