

posed, which also has given conglomerates to the Cambrian, and which has a great thickness.

The oldest of these three series of rocks has been described in the reports of the geological survey of Canada as the "Upper series" of the Laurentian area, and in this the fossils I refer to have been found.

At three horizons in this system, remains of animals of low organization occur. The oldest is in the upper part of the quartzites which are found in the lower half of the system. They are Hexactinellid sponges, probably allied to the genus *Cyathospongia*. The frame-work consists of a somewhat irregular set of cross-bar spicules, forming a mesh, in the intervals of which are scattered smaller spicules similarly arranged.

The second horizon of organic forms is in the upper limestones of the "Upper series." The organism found here is of an entirely different character from the sponges. It is one of the calcareous coral-like structures, somewhat like certain forms found in the basal beds of the Cambrian. Its structure has not yet been studied, but it consists of elongated cylindrical objects with bodies from one inch to three inches across, and several inches in length.*

The object consists of a cumulative growth of conical partitions, layer upon layer; building up a cylindrical body that in cross-section looks not unlike a part of a tree trunk; and which bears a general resemblance to *Stromatopora rugosa*. The upper limestones at the base of which these organisms are found have probably suffered greatly from denudation, as we find areas of the rock system to which they belong, which do not appear to have the upper limestones. Good examples of the fossils are known from only one locality.

The third horizon is that of the graphite beds, in which occur great numbers of spicules of sponges arranged in parallel sets, one set crossing another at an acute angle. This type of sponge is apparently Monactinellid. As only straight needle-like spicules, without rays, have been observed in this sponge, it probably was a mass of jelly, or sarcode protected

Archæa * Described further on as *Bozoon Acadiense*.

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