

memoirs, Mr. Billings enumerates one hundred and fourteen species as known to him as occurring in the Devonian Formation of Ontario, and describes one hundred and four of these, a large number being new to science.

Of the forms described by Mr. Billings a considerable number have not come under my notice, owing, no doubt, to my researches having been confined to a comparatively limited area. As the result, however, of my researches, I have now to record one hundred and sixty species of fossils from the Devonian Rocks of Canada, of which forty-nine species appear to be altogether new, and about twenty-six additional species are now first described from Canadian specimens. I am, therefore, enabled to add seventy-five species to the list of the Devonian fossils of Ontario; though, from the condition of the literature appertaining to this subject, it is possible that some of the forms which I have described as new may really be identical with previously recorded species. There is also a number of forms which the materials in my hands do not permit me to identify at present, but which I hope to be able to determine by the aid of future investigations.

The following tables show more precisely the nature of the fossils which have come under my notice:—(In all the tabular lists the letter C indicates that the species occurs in the Corniferous Limestone, whilst H indicates its occurrence in the Hamilton Formation).

#### I. PROTOZOA.

The remains of Protozoa in the Corniferous Limestone, though not of a very varied nature, are far from uncommon, and constitute quite a marked feature in the Lower Devonian fauna. With the exception of a species of *Astræospongia*, and one or two undetermined forms, they belong entirely to the enigmatical genus *Stromatopora*, or to a genus so closely allied to this as to render any separation at present unadvisable. They may, with the greatest probability, be regarded as belonging to the *Spongida*, though the more typical forms of *Stromatopora* have not as yet been shown to possess some of the more important characters of Sponge-structure. Of the five species of *Stromatopora* which occur in the Corniferous Limestone, one is found in the Hamilton Formation, and all except *S. concentrica*, Goldfuss, appear to be new. The single species of *Astræospongia* is only known by its spicules, and it is probably identical with *A. Hamiltonensis*, Meek and Worthen.