ARTICLE I.

NEW SPECIES OF CAMBRIAN FOSSILS FROM CAPE BRETON.

By G. F. MATTHEW, LL. D., F. R. S. C.

(Read October 2, 1900.)

While engaged in the study of the Cambrian formation of Cape Breton, and in collecting fossils from this terrane in the summer of 1899, the writer met with some new species; these are of interest to the biologist as showing mutations of forms described from other areas, or as carrying previously known genera to lower horizons.

The Director of the Canadian Geological Survey, Dr. G M. Dawson, C. M. G., has kindly allowed the writer to publish these species in advance of a report on the work in Cape Breton.

The lower and middle zones of the Cambrian in Cape Breton are comparatively barren of fossils, and the species herein described are chiefly from the upper zones. They consist of Brachiopods of the orders Atremate and Protremata, with some few Trilobites. Other fossils were collected, but as they are of species already described, they are not included in this article.

Though the fossils herein described are referred to the three several zones of Parabolina, Peltura and Dictyonema, all in the Bretonian Division of the Cambrian, there is some uncertainty as to the references of the species *Lingula lens*, n. sp., to the Parabolina Zone. The exposures are very limited where this fossil occurs, and its position is fixed by the occurrence of a Peltura limestone band a little way above it. The fossil occurs in beds which are strongly ripple-marked, filled with worm burrows, and bear other marks of shallow-water deposition-Further observations, however, may show that these ripple-marked beds are within the Peltura Zone.

The band above, of the Peltura Zone (3 b), containing the three species of trilobites herein described, does not accord closely in its species with the strata of the same zone as known at St. John, but