

GEOLOGICAL SURVEY OF CANADA

PALÆOZOIC FOSSILS.

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2. Revision of the fauna of the Guelph formation of Ontario, with descriptions of a few new species.

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Since the first part of this volume was written, quite a number of fossils from this formation have been acquired by the Survey, most of which were collected by Mr. Joseph Townsend, of Toronto. Some of these fossils are much better specimens than had hitherto been obtained, of species that were already insufficiently characterized, others are new to this formation in Ontario, and a few appear to have been previously undescribed. Of late years particular attention has been given to the collecting of natural moulds of the exterior of shells of gasteropoda, etc., from this formation, as it has been found that gutta percha impressions of such moulds often give much more information about the exact shape and surface markings of the shell than can be derived from mere casts of the interior. Quite a number of these natural moulds have recently been obtained from a small exposure on the south bank of the Grand River at Belwood, formerly called Douglas or Garafraxa, in the township of West Garafraxa, seven miles north-east of Fergus. Several of the figures on the plates which accompany this paper are drawn from impressions of such moulds. These impressions were skilfully and most successfully made by Mr. L. M. Lambe, to whom the writer is indebted for valuable assistance in ascertaining the characters of some of the more critical species which are neither enumerated or described in this Report.

The publication of many special monographs and papers, and notably that of Lindström's beautifully illustrated memoir "on the Silurian gasteropoda and pteropoda of Gotland,"* has thrown so much new light upon the fossils of the Silurian (Upper Silurian) rocks, that it is now thought practicable to attempt a revision of the entire fauna of the Guelph formation as developed in Ontario, based not merely upon the new material collected, but upon all the specimens in the Museum of the Survey.

*Kongl. Svenska vetenskaps-academiens Handlingar, Bandet 10, No. 6. Stockholm, 1884