

## *Trilobites and associated trace fossils from the Georgian Bay Formation (Upper Ordovician), Toronto Region*

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The Georgian Bay Formation comprises an approximately 200 m thick sequence of alternating shales and minor carbonates extending from the Toronto region in the south to Owen Sound in the north. The unit represents a dominantly regressive marine clastic facies deposited in a high energy, shallow shelf environment.

Early palaeontologic and biostratigraphic studies on the lower member of the Georgian Bay Formation in and around Toronto resulted in publications containing lengthy faunal lists dominated by bryozoans, molluscs, and brachiopods; three genera of trilobites, *Isotelus*, *Flexicalymene*, and *Cryptolithus*, were recognized. Trace fossils, treated under the general heading "Markings", and including "fucoids, tracks, rill marks, etc", were limited to nine described forms.

Preliminary reinvestigation indicates that the ichnofauna of the

lower member of the Georgian Bay Formation in the Toronto region is far more diverse than previously recognized, and is comparable in many respects with the well documented ichnoassemblages from the Upper Ordovician of the Cincinnati area. Two additional trilobite genera are now known to occur in the same interval.

The following trace forms, attributable to the activity of trilobites, have so far been recognized: *Rusophycus carleyi*, *R. pudicum*, *R. cryptolithi*, and *Cruziana* spp.; it is possible in each case to refer these forms, on the basis of size and morphology, to one of the three described trilobite genera. Traces referable to the two new trilobite taxa are as yet unknown.

In general the ichnofauna, which also includes *Diplocraterion*, *Lockeia*, *Trichophycus*, *Palaeophycus*, *Chondrites*, *Phycodes* and *?Isopodichnus*, is assignable to the *Cruziana* ichnofacies.