



***Jardamarekia enigma*, a new Early Devonian tryblidioidean from Royal Creek area (Yukon Territory, Canada), and paleobiogeography of the Early Devonian of northwestern Canada**

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The Tryblidia (= Monoplacophora) represents the conchiferan class with the fewest Recent taxa in the phylum Mollusca (Haszprunar 2008) and its phylogeny is still poorly known. This group is known already in Cambrian strata (Early Paleozoic) more than 500 Ma ago. Present-day tryblidian species are known mainly from hadal environments (Schwabe 2008, but see also Wilson *et al.* 2009) in contrast to Paleozoic species, which have been described only from shallow environments of continental shelves of many paleocontinents (e.g., Horný 1962). A typical feature of fossil as well as living tryblidian species is their rarity. The vast majority of species are known only from several specimens (Haszprunar 2008). Furthermore, description of Paleozoic tryblidian molluscs is strongly underrepresented in the literature, despite the existence of diverse material. This is also true for fossils described in the present study based on a diverse silicified molluscan fauna of mostly gastropods collected from Lower Devonian strata of the Royal Creek area, Yukon Territory (Fig. 1) by Alfred C. Lenz and David G. Perry from 1970–1980. Lists of all hitherto described molluscan species as well as detailed information on their age and locality can be found in Lenz (1977a), Blodgett *et al.* (2001, 2010) and Frýda *et al.* (2008). Prior to our studies of the Royal Creek tryblidian and gastropod fauna, no descriptions or illustrations were available for Lower Devonian molluscs of north-western Canada, although a short discussion and faunal lists were provided by Blodgett *et al.* (1988) for Lower Devonian tryblidians and gastropods from the relatively nearby Delorme Formation of Northwest Territories, and early Emsian (late Early Devonian) tryblidians and gastropods from the Mt. Lloyd George area, northeastern British Columbia. The poor knowledge of Paleozoic tryblidians and gastropods faunas of Laurentia (North America) caused difficulties in the evaluation of Early Devonian paleobiogeography (Blodgett *et al.* 1999). The present paper is focused on the taxonomy of a new Devonian tryblidian limpet, but it provides also useful data for paleobiogeography and biostratigraphy of the Lower Devonian of western Canada.

Molluscan shells from middle Early Devonian (Pragian) strata of the Royal Creek area (Yukon Territory, Canada) are silicified and were extracted by hydrochloric acid from limestone samples at the Department of Geology, University of Western Ontario, London (Ontario, Canada) beginning 45 years ago. The specimens (holotype and paratype) described in this paper are deposited in the National Type Collection of Invertebrate and Plant Fossils of the Geological Survey of Canada, Ottawa, Canada K1A 0E8 (GSC 134793-134794).

Class Tryblidia (= Monoplacophora)

Family Ladamarekiidae Frýda, 1998

Remarks. Horný (1992) placed his new genus *Ladamarekia* in the order Tryblidioidea of the class Monoplacophora (= Tryblidia; = Tergomya). Horný also noted that the shell ornamentation of *Ladamarekia* is unique among described Paleozoic tryblidian genera. Frýda (1998), on the basis of newly collected material of the Pragian (middle Early Devonian) *Ladamarekia miranda* Horný, 1992, established a new family, Ladamarekiidae, for the genus. He mentioned that no morphological character of *L. miranda* supports the taxonomic position within the class Monoplacophora. The