

**Paleogeography of the Devonian Woodchopper Volcanics, Yukon-Charley Rivers
National Preserve, East Central Alaska.**

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The Woodchopper Volcanics of Mertie (1930) consist of complexly folded and faulted pillow basalt and pyroclastic rocks, interbedded limestone, shale, and chert containing fossils ranging in age from Early Devonian (Pragian) to Late Devonian (Frasnian). Churkin and others (1982) included this unit in their Woodchopper Canyon terrane, lying immediately to west of the Jurassic-Cretaceous rocks of the Kandik Group, the latter being deposited immediately west of the western edge of the Paleozoic North America continental margin.

Field work conducted in 2006 on these rocks cropping out along the Yukon River showed that the limestone is a slightly recrystallized packstone to grainstone with abundant disarticulated crinoids and sparse brachiopods and corals. The massive limestones of the formation are primarily Emsian (late Early Devonian) in age and are interbedded in a thick succession of pillow basalts that are spectacularly exposed in cliffs along the river. Brachiopods from the Woodchopper are poorly preserved and include *Schizophoria*, *Ivdelinia* sp., indet. gypidulids, *Mimatrypa?*, and indet atrypids. Solitary rugose corals belonging probably to the genus *Acanthophyllum* are relatively common. Although most of the brachiopod elements are relatively cosmopolitan, a Eurasian aspect of the fauna is indicated by the typical Old World Realm gypidulid genus *Ivdelinia*. The genus is widely reported from Early Devonian (Lochkovian-Emsian) and early Middle Devonian (Eifelian) age rocks of the Rhenish-Bohemian and Uralian Regions, but is almost wholly unknown in the Cordilleran Region of the Old World Realm which, in the Emsian, included Arctic and western Canada, as well as Nevada. The presence of the genus *Ivdelinia* indicates a link to both the Mystic subterrane of the Farewell terrane and Alexander terrane of southern Alaska.

Based on our observations and limited collections we conclude that the Woodchopper Volcanics represent part of an accreted terrane not related to cratonic North America. It may have originated in an oceanic island-arc setting adjacent to the Urals and may be related to the Farewell and Alexander terranes of southern Alaska, which likewise have Emsian biotas of Uralian and/or Siberian aspect.