

Ostracods and facies of the Lower and Middle Frasnian at Devils Gate in Nevada: Relationship to the Alamo Event.

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In order to document the Alamo Event and to investigate its influence on shallow-marine environments, we undertook a study of ostracods, conodonts, and analysis of the sedimentology of the lower member of the type Devils Gate Limestone. Six major carbonate microfacies (MF1-MF6) ranging from open-marine environments below storm wave base to pre-evaporitic supratidal lagoons were recognized. The sedimentological study detected no important sedimentological changes during the Alamo Event; only an influx of detrital material and lithoclasts indicate that an unusual event had occurred. Ostracods are generally rare or absent in the lower member of the Devils Gate Limestone, and only 2,000 carapaces, valves and fragments were extracted; from these some 26 taxa were identified. Two new species, *Voronina* ? *eureka* and *Serenida dorsoplicata* are proposed. The ostracods belong to the Eifelian Mega-Assemblage and their distribution was influenced by strong salinity variations. Because of the rarity and low diversity of ostracods and conodonts in samples collected from the lower part of the lower member of the Devils Gate Limestone it is not adequate to demonstrate conclusively an extinction event close to the Alamo Event Bed. Nevertheless the greater abundance and diversity of ostracods above this bed seems to indicate that the Alamo Event did not result in significant extinction of ostracod taxa in this shallow water setting. The ostracod fauna present in the lower member of the Devils Gate Limestone suggests faunal exchanges between Nevada and the Russian Platform via the Western Canadian platform.

Key words: Ostracoda, conodonts, sedimentology, palaeoecology, Frasnian, Alamo Event, Pilot Basin, Nevada.

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