The Early Permian Gallina Well Vertebrate and Trace Fossil Site in Socorro County, New Mexico

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The Gallina Well locality is a Lower Permian vertebrate body and trace fossil site located approximately 20 km northeast of Socorro, New Mexico in the Joyita uplift. The locality is stratigraphically low in the Scholle Member of the Abo Formation and is Coyotean in age. The fossiliferous beds are reddish-brown, fluvially-deposited, calcrite-pebble conglomerates and mudrock. Vertebrate body fossils from the site include paleoniscoid fish; the temnospondyl amphibians Eryops sp., Trimerorhachis sp., Platylhystrix sp., and Zatrachys sp.; a skull fragment of the lepospondyl Diplocaulus sp.; postcrania of the diadectid Diadectes sp.; a captorhinid skull and postcranial skeleton; and specimens of the eupelycosaur Ophiacodon sp., Sphenacodon sp. and Dimetrodon sp. The coprolite ichno-assemblage includes Dakyroncopros arroyoensis, Allococopros triassicus, Heteropolacopros texaniensis and amorphous coprolites. The Gallina Well locality yields the most diverse and extensive vertebrate body fossil and coprolite assemblage of Early Permian age known from southern New Mexico. Its basic composition differs little from the pelycosaur-dominated assemblages found to the north, indicating some uniformity of the Coyotean vertebrate fauna across New Mexico.

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