LATE PERMIAN TETRAPODS FROM THE SAHARA

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Based on the presence of common genera in southern Africa, India, Europe, and Russia, the Late Permian has been interpreted as a time of broad cosmopolitanism among terrestrial vertebrates. In particular, the Beaufort Group of South Africa has shaped our understanding of late Paleozoic and early Mesozoic terrestrial ecosystems because of its thick sedimentary sequence and long history of paleontological study.

Recent fieldwork in the Upper Permian Moradi Formation of northern Niger suggests that this more equatorial region of Pangea hosted an endemic tetrapod fauna with a community structure remarkably different from that of the Beaufort Group. In contrast to the dicynodont-dominated faunas known elsewhere, the herbivores of the Moradi Formation are predominantly captorhinids, represented by *Moradisaurus*, and pareiasaurs, represented by a new genus possibly related to *Elginia*. The latter taxon is known from abundant cranial and postcranial material and is characterized by globular bosses over the external naris, orbit, and temporal region. Faunal dissimilarity also extends to the amphibians. Beaufort temnospondyls are rare and low in diversity, with *Rhinesuchus* and *Laccocephalus* representing the only Permian genera. The Moradi Formation has yielded the remains of at least three new taxa, including one possible rhinesuchid and two larger forms that represent families not known from the Permian of southern Africa. Most surprisingly, therapsids are only tentatively present in the Moradi Formation; several isolated maxillae and caniniform teeth possibly belong to a gorgonopsian or therocephalian predator.

Our research in the Moradi Formation suggests that West Africa may not conform to the model of faunal homogeneity previously considered for the Late Permian. The rarity (or potential lack) of dicynodont herbivores, coupled with a unique reptile and amphibian fauna, instead indicates a previously unsuspected area of biogeographic isolation and endemism in the center of Pangea.