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A TERTIARY VAEJOVID SCORPION FROM MEXICO AND ANOTHER NON-BUTHID CRETACEOUS SCORPION FROM BRAZIL

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Several Oligocene to Miocene (Tertiary) scorpions, some identifiable to extant buthid genera, are known from Baltic, Dominican, and Chiapas amber. Non-amber Tertiary scorpions are *Uintascorpio* (Middle Eocene, Colorado), which appears close to buthids, as well as the non-buthid unplaced Miocene *Mioscorpio* (Germany) and *Sinoscorpius* (China). The only reported Cretaceous scorpions are *Araripescorpius* (Santana Formation, Brazil), *Archaeobuthus* (Lebanese amber), and an unnamed Burmese amber specimen, all Aptian to Albian, approximately 125-100Ma. We report a non-amber Oligocene scorpion from México and another Cretaceous scorpion from Brazil. The Mexican specimen probably is an adult cephalothorax from the Los Ahuehuetes lacustrine deposits in Tepexi de Rodríguez (Puebla), probably Oligocene. The subtrapezoidal cephalothorax (6.6mm long medially, 4.0mm wide anteriorly, 7.0mm wide posteriorly) is finely and abundantly microsculptured. The slightly anterad median ocular area is highly raised and it has prominent superciliary carinae. Together with the very subtly convex anterior edge of the carapace, which has obsolete carinae, this scorpion is strongly reminiscent of the Vaejoidea - the first fossil record of this North American family, for which México appears to be center of origin and diversity. The Brazilian specimen, one of several known from the Santana Formation, is almost complete and it measures slightly over 40mm. Although the matrix that surrounds most of the scorpion looks different from the rest of the piece, X-ray elemental microanalyses demonstrated that the matrix is a relatively homogeneous mix mostly of gypsum and quartz. The scorpion has been mineralized by gypsum as well as iron and manganese oxides. The elongated stigmata and heavy chela indicate the scorpion belongs to a non-buthid family of Neoscorpionina. Of special significance is the presence of, at least, three trichobothrial bases on the pedipalp chela fixed finger. Trichobothrial patterns are used as a complex character set in analyses of scorpion evolution and classification. Together with *Archaeobuthus*, our find implies that many modern major scorpion clades survived the Cretaceous extinction (65Ma).