

Lower Tithonian microconchiate simoceratins from eastern Mexico: Taxonomy, biostratigraphy, and paleobiogeography

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The precise record of simoceratins sampled bed-by-bed is first reported from Mexico (Mazatepec area in Puebla, central-eastern Mexico), as well as the existence of lappeted peristomes in these ammonites. Both *Pseudovolanoceras aesinense* and the subspecies *Pseudovolanoceras aesinense chignahuapense* are shown to occur among Mexican simoceratins. The European species and the Mexican subspecies share the same stratigraphic range in the studied sections, yet they differ in ephebic sculpture. Ecological adaptation to neritic seas corresponding to eastern Mexico areas is interpreted, forcing phenotypic deviation with geographic significance, i.e., subspeciation. The new subspecies would indicate stratigraphic horizons within the *Semiformiceras semiforme*/*Haploceras verruciferum* Chronozone in the Mediterranean Tethys. A revision of contemporaneous simoceratins in the Americas is founded on a comparative analysis with respect to the European species *P. aesinense*.

Key words: Ammonitina, *Pseudovolanoceras*, Tithonian, Upper Jurassic, Mexico.

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