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Three new bivalve genera from Triassic hydrocarbon seep deposits in southern Turkey

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Three new bivalve genera and species are described from Upper Triassic hydrocarbon seep deposits from the Kasımlar shales in the Taurus Mountains in southern Turkey. *Terzileria gregaria* and *Kasimlara kosuni* belong to the carditiid family Kalenteridae, and *Aksumya krystyni* belongs to the anomalodesmatan superfamily Pholadomyoidae. A single specimen is described in open nomenclature as *Kasimlara* sp. due to its significantly more angular shell profile compared to *K. kosuni*. The kalenterids *Terzileria* and *Kasimlara* narrow the stratigraphic gap between two seep-inhabiting "modiomorphid" clades: the Silurian–Devonian Ataviaconcha and the Late Jurassic–Cretaceous Caspiconcha. This raises the questions whether these four genera are members of a single phylogenetic lineage that continuously inhabited deep-sea hydrocarbon seeps from the Silurian to the Cretaceous (the "single lineage hypothesis"), or are repeated offshoots of various lineages that convergently developed similar morphological adaptations to this habitat (the "repeated colonization hypothesis"). *Aksumya* represents the first anomalodesmatan genus that appears to be restricted to the seep environment, considering that all previous claims of seep-inhabiting anomalodesmatans are questionable.

Key words: Bivalvia, Pholadomyoidae, Kalenteridae, hydrocarbon seeps, Triassic, Taurus Mountains, Turkey.

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