



The earliest mollusc dominated seep fauna from the Early Jurassic of Argentina

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The hydrocarbon seep deposits are known from Early Jurassic of Argentina since the report of Gomez-Perez (2003). The latter author identified very negative $\delta^{13}\text{C}$ values (down to -33) and several fabrics typical for seep carbonates. Nevertheless she identified no macrofaunal assemblages apart from worm tubes. We re-visited the locality of Gomez-Perez (named here La Elina) and we were able to collect several molluscs associated with the seep carbonate. The most common and diversified are molluscs and worm tubes. We identified at least three species of gastropods, including the oldest-known species of neomphalids, lucinid and protobranch bivalves and numerous ammonoids. Unlike another known Early Jurassic seep from Oregon and the only Late Triassic seep (also from Oregon) there are no brachiopods associated with this seep. Therefore we consider the seep at La Elina as the oldest seep of modern aspect where the fauna is dominated by molluscs and not brachiopods.