

Poster

NON-DIMERELLOID BRACHIOPODS IN ANCIENT HYDROCARBON SEEPS

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Dimerelloids are the most common and characteristic brachiopods for ancient hydrocarbon seeps and hydrothermal vents. They often occur in mass accumulations similar to these of chemosymbiotic bivalves. Other brachiopods are much less common and in several instances they occur seemingly fortuitously at hydrocarbon seeps. The best known association is reported from the Campanian Omagari site in Japan where terebratulide *Eucalathis* occurs in significant quantities and is apparently absent from ambient strata (Kaim et al. 2010). An exceptionally taxonomically diverse brachiopod fauna occurs in the shallow water Late Jurassic–Early Cretaceous seeps in Spitsbergen, comprising 16 species represented by one lingulide, three rhynchonellide and 12 terebratulide species with the dominance of short-looped forms (Holmer and Nakrem 2012; Sandy et al. 2014). A new locality from the Paleocene hydrocarbon seeps in Spitsbergen has one species of short-looped terebratulide, belonging most probably to the genus *Pliothyryna*. Some new brachiopods were also found in the Oligocene seeps in Japan. They are represented by a rhynchonellide *Frieleia* sp. and terebratulide ?*Terebratulina* sp. There are no extant brachiopods that are unequivocally associated with vent/seep environments, though some species are recorded in their vicinities (e.g., Lee et al. 2008; Zezina 2008). Thus there is no evidence that they are obligatory members of chemosynthesis-based communities, but are rather primary opportunistic colonisers of available hard substrates (Lee et al. 2008).

References

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