

Bivalves from Cretaceous cold–seep deposits on Hokkaido, Japan

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Cretaceous cold–seep deposits of the Yezo Group on Hokkaido, Japan, yield a rich and well–preserved mollusk fauna. The systematics of nine bivalve species previously reported from these deposits can now be reevaluated using newly collected fossils. The fossils include a Cenomanian specimen of *Nucinella gigantea* with a drill hole possibly made by a naticid, by far the oldest record of a drill hole from a cold seep site. In Japan, Cretaceous seep bivalve assemblages are characterized by (i) the unique occurrence of large specimens of *Nucinella* (Manzanellidae), (ii) the commonly present nuculid *Acila (Truncacila)*, and (iii) a high diversity of lucinids, possibly as many as four distinct genera. Two new species described are the Albian *Acharax mikasaensis* (Solemyidae) and the Albian to Campanian *Thyasira tanabei* (Thyasiridae), of which the former had previously been misidentified as the oldest vesicomid, the latter as the oldest *Conchocele*.

Key words: Solemyidae, Manzanellidae, Lucinidae, Thyasiridae, hydrocarbon seeps, chemosymbiosis, Cretaceous, Japan

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