

Bivalves from Cretaceous cold–seep deposits on Hokkaido, Japan

Steffen Kiel, Kazutaka Amano, and Robert G. Jenkins

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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 vesicomyid, the latter as the oldest *Conchocele*.

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

Steffen Kiel [steffen.kiel@gmx.de], Institut für Geowissenschaften, Christian–Albrechts–Universität Kiel, Ludewig–Meyn–Str. 10, 24118 Kiel, Germany, and Dept. of Paleobiology, Smithsonian Natural History Museum, Box 37012, Washington DC 20013–7012, USA; Kazutaka Amano [amano@juen.ac.jp], Department of Geoscience, Joetsu University of Education, Joetsu 943–8512, Japan; Robert G. Jenkins [robertgj@ynu.ac.jp], Faculty of Education and Human Sciences, Yokohama National University, Kanagawa 240–8501, Japan.

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