

New taxa, records, and data for vesicomyid bivalves from Cenozoic strata of the North Pacific region

Steffen Kiel, Kazutaka Amano and James L. Goedert


Acta Palaeontologica Polonica 68 (2) 2023: 297-320 doi:10.4202/app.01061.2023

New discoveries of Cenozoic deep-water hydrocarbon seep deposits and continued collecting at previously documented sites in the North Pacific region have resulted in additional fossils of vesicomyid bivalves and necessitate a systematic review. We report five new vesicomyid species, including four species from western Washington State, USA: *Isorropodon humptulipsense* sp. nov. from middle to upper Eocene strata of the Humptulips Formation and the “Siltstone of unit B”, the oldest record for *Isorropodon*, *Pleurophopsis thieli* sp. nov. from upper Eocene to lowermost Oligocene strata of the Lincoln Creek, Makah, and Pysht formations, and *Pliocardia? guthrieorum* sp. nov. and *Squiresica plana* sp. nov. from Oligocene strata of the Lincoln Creek and Pysht formations. The new species *Squiresica yooni* sp. nov. is from the Middle Miocene Duho Formation in South Korea. We report possibly the as-yet oldest *Vesicomya* from a lower Oligocene seep deposit in the Lincoln Creek Formation in western Washington. *Pliocardia kawadai* was previously only known from Lower to Middle Miocene strata in Japan; with our new record from the Lower to Middle Miocene Astoria Formation in western Washington, this species represents the first fossil vesicomyid species with a trans-Pacific distribution. The large and elongated *Pleurophopsis chinookensis* is restricted to upper Eocene strata; previous Oligocene records are shown to belong to other species.

Key words: Bivalvia, chemosymbiosis, deep-sea, Japan, South Korea, USA, Washington.

Steffen Kiel [steffen.kiel@nrm.se; ORCID: <https://orcid.org/0000-0001-6281-100X>], Swedish Museum of Natural History, Department of Palaeobiology, Box 50007, 10405 Stockholm, Sweden. Kazutaka Amano [amano@juen.ac.jp; ORCID: <https://orcid.org/0000-0002-8320-8661>], Joetsu University of Education, Joetsu 943-8512, Japan. James L. Goedert [jamesgoedert@outlook.com; ORCID: <https://orcid.org/0000-0002-0257-7255>], Burke Museum of Natural History and Culture, University of Washington, Seattle, Washington 98195, USA.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(2.736.4 kB\)](#)