A left valve of *Promanawa konishii* (Nohara, 1976) was found in the modern surface sediment of the East China Sea, off the western Iheya-Izena Islands, SW Japan (Fig. 1). The specimen was collected from St 447 (26.98°N, 127.72°E, 512 m water depth) during the GH09 cruise by the Geological Survey of Japan, Agency of Industrial Science and Technology (AIST). *Promanawa konishii* has a laterally compressed semi-elliptical carapace with a wide frill around the entire ventral margin and a long straight hinge, uniquely characteristic of the superfamily Puncioidea which includes the extant genera *Manawa*, *Promanawa* and *Puncia* (Hornibrook, 1949; McKenzie & Neil, 1983), considered by some to represent a surviving lineage of the order Palaeocopida, all others of which have been extinct since the end of the Palaeozoic (Hornibrook, 1949; Swanson, 1991). Living specimens of *Manawa* were described from a water depth of 17 m of Goat Island, New Zealand, by Swanson (1989, 1991). According to this study, the nauplius larvae of *Manawa* have a dome-shaped single carapace that is later divided into two valves jointed by hingement during the growth stages; however, ostracods usually have two such valves throughout their lifetime. Tabuki & Hanai (1996) suggested that this ontogenetic change may reflect the phylogeny of ostracods as a group.

*Promanawa konishii* was first discovered in the Pliocene Shinzato Formation on Okinawa Island (Ishizaki, 1973). It was formally described as a new species, *Manawa konishii*, from the Pleistocene Chinen Formation on the same island by Nohara (1976), and was then reassigned to the genus *Promanawa* by McKenzie & Neil (1983). Modern occurrences of this species were also reported in the sea adjacent to the Okinawa Islands, such as Yaeyama Islands and Kerama Islands (Fig. 1). According to Tabuki & Hanai (1996), specimens collected from the coral reef lagoon of the Yaeyama Islands were considered to be autochthonous because of the presence of preserved setae on their valves. A geographical feature (i.e. an enclosed lagoon) of their study area also suggests that it is unlikely that ostracod valves are affected by postmortem transportation. For these reasons, they suggested that *P. konishii* inhabits extremely shallow-water environments, similar to *Manawa* (Swanson, 1989).

In the present study, *P. konishii* occurred at a water depth of approximately 500 m. Nevertheless, it coexisted with intertidal and phytal taxa, such as *Neonesidea*, *Paradoxostoma* and *Xestoleberis* (Fig. 2), which generally live in seaweeds and in nearshore environments with sandy bottoms (Hanai et al., 1977; Sato & Kamiya, 2007; Tsurumi & Kamiya, 2007). For example, *Xestoleberis hanaii* (a characteristic species of *Xestoleberis* spp. in the present study) is a typical phytal species broadly distributed in intertidal zones in Japan (Sato & Kamiya, 2007). The specimens of these co-occurring taxa are all empty shells without soft parts, as the *Promanawa* specimen. The above observations indicate that the *Promanawa* specimen of this study is allochthonous, and was probably transported from a shallow-water area together with these intertidal and phytal taxa. *Promanawa konishii* may well live in a similar environment to the habitat of these co-occurring taxa.
There are few reports of modern Puncioidea because of their low population density (Hornibrook, 1949; Swanson, 1991). This study is one of the few reports concerning the occurrence of modern Puncioidea, ‘a living fossil’.

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The higher classification above superfamily level follows Horne et al. (2002). This specimen is stored in the Department of Geoscience, Interdisciplinary Faculty of Science and Engineering, Shimane University (DGSU).

Superfamily Puncioidea Hornibrook, 1949
Family Puncidae Hornibrook, 1949
Genus Promanawa McKenzie & Neil, 1983
Promanawa konishii (Nohara, 1976) (Fig. 3)

1976 Manawa konishii Nohara: 75–78, pl. 1, fig. 1.
1987 Manawa konishii Nohara; Nohara: 30–35, pl. 6, figs 34, 37.
1995 Promanawa konishii (Nohara); Hanai & Tabuki: 260–265, text-fig. 1; pl. 1, figs 1–3; pl. 2, figs 1–5; pl. 3, figs 1–4.
1996 Promanawa konishii (Nohara); Tabuki & Hanai: fig. 1.
2010 Promanawa konishii (Nohara); Iwatani & Irizuki: fig. 2.

Specimen. Male left valve, DGSU no. CO0290.

Locality. East China Sea, off the western Iheya-Izena Islands, SW Japan, 26.98°N, 127.72°E, 512 m water depth, St 447 (GH09).

Dimensions (mm). Length = 0.477; height = 0.249.

Remarks. The specimen of the present study is larger and more strongly calcified than the modern specimen shown in Hanai & Tabuki (1995). The specimen of Hanai & Tabuki (1995, pl. II) has sharp polygonal reticulation with thin muri. The characteristic roundish polygonal reticulation with thick muri of our specimen is similar to that of fossil individuals (Ishizaki, 1973; Nohara, 1976). As little is reported about the modern specimens of P. konishii, our understanding of their morphological variation leaves room for various interpretations. One possibility may be that the modern specimen of Hanai & Tabuki (1995) is not an adult but a juvenile. Another possibility is that P. konishii has two morphological forms, namely a large valve with strongly calcified form and a small valve with weakly calcified form.

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Geology and Hydrocarbon Potential of Neoproterozoic-Cambrian Basins in Asia

Edited by G.M. Bhat, J. Craig, J.W. Thurow, B. Thusu & A. Cozzi

This volume provides a comprehensive overview of the geology and hydrocarbon potential of the major Neoproterozoic-Cambrian basins of Asia from Oman, across the Middle East and the Indian Subcontinent, to China and SE Siberia, along with new research on the region.

Many of these areas (e.g., Oman, Bikaner-Nagaur Basin in India, South China and SE Siberia) host prolific Neoproterozoic-Cambrian petroleum systems with giant to supergiant fields. Three key elements: (1) tectonic stability, (2) relatively late phase of hydrocarbon generation and (3) presence of an effective evaporite seal, seem to be critical for the development of effective Neoproterozoic-Cambrian petroleum systems. These key elements appear of less consequence for the development of ‘unconventional’ hydrocarbons, and the future prospectivity in many of these basins may lie in the exploration for, and production of, shale gas and shale oil directly from the thermally mature, organic-rich source rocks.

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