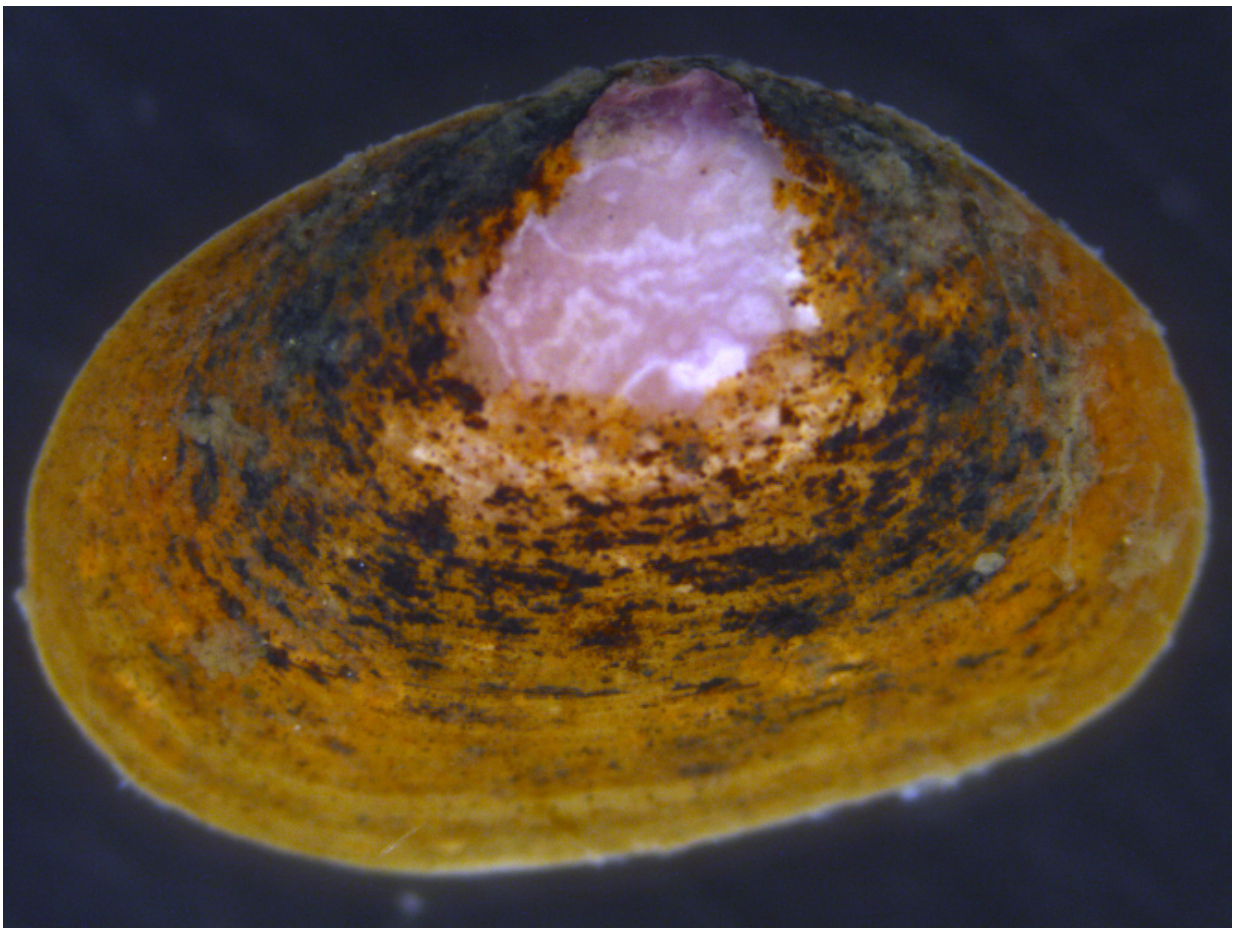


Living together in mud: New bivalve species dwelling on a sea cucumber discovered in Japan

September 8 2016



Shell of the new bivalve species *Borniopsis mortoni*. Credit: Dr. Ryutaro Goto

Most bivalves live in sand or mud or attached to rock surface. However, a new bivalve species described from Japan lives on a sea cucumber.

Ryutaro Goto, postdoctoral fellow in Museum of Zoology and Department of Ecology and Evolutionary Biology, University of Michigan, and Hiroshi Ishikawa, amateur malacologist in Japan, have their paper, describing the new species, published in the open access journal *ZooKeys*.

The new species, named *Borniopsis mortoni* (Galeommatoidea), was discovered in [mudflats](#) at the mouth of the Souzu River, southwestern Shikoku Island, Japan.

This bivalve has tiny brownish shells (up to 4.1 mm in length). The species lives attached by both its foot and byssal threads to the body surface of the earthworm-like sea cucumber *Patinapta ooplax* (Synaptidae). Individuals of *B. mortoni* are often found on the same [host](#), yet sometimes there could be more than 10 individuals existing side-by-side.

The new species is dedicated to a famous British malacologist Brian Morton, emeritus professor of University of Hong Kong. He has described many interesting Pseudopythina species from mudflats in Hong Kong, now assigned to the genus *Borniopsis*.



Bivalves of the new bivalve species *Borniopsis mortoni* on the host sea cucumber *Patinapta ooplax*. Credit: Mr. Hiroshi Ishikawa

Host sea cucumbers burrow in mudflats. Most likely, the *B. mortoni* bivalve uses the host burrows as shelter from predators.

The [new species](#) is one of the smallest [species](#) in this genus. With the burrow of the host [sea cucumber](#) being very narrow, the small body size of *B. mortoni* is probably a corresponding adaptation.



Host sea cucumber *Patinapta ooplax* in mud. Credit: Mr. Hiroshi Ishikawa

More information: Ryutaro Goto et al, *Borniopsis mortoni* sp. n. (Heterodonta, Galeommatoidea, Galeommatidae sensu lato), a new bivalve commensal with a synaptid sea cucumber from Japan, *ZooKeys* (2016). [DOI: 10.3897/zookeys.615.8125](https://doi.org/10.3897/zookeys.615.8125)

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