An undescribed species of *Saipanetta* (Superfamily Sigillioidea) from the central Japan
– the first report from the upper eulittoral zone, with details of its habitat –

Yuriko NAKAO* & Akira TSUKAGOSHI**

* Department of Earth and Environmental sciences, College of Humanities and Sciences, Nihon University
** Graduate School of Science and Technology, Shizuoka University

An undescribed living species of ***Saipanetta*** was found from the eulittoral zone (water depth ca. 20 cm) of the central Japan (Fig. 1). The sampling point is a gravel beach in Ebisu Island, the southern part of the Izu Peninsula (Fig. 2). Specimens were collected from coarse sediments in the upper eulittoral zone at the lowest lowtide time.

Carapaces of the specimens were observed using a optical microscope, and a SEM without coating (Fig.3). Dimensions are listed in Table 1. The followingfeatures were shown:

- The carapace is a somewhat elongate ovoid in lateral view and the surface is almost smooth
- The valves are strongly assymetric, with the left valve larger and overlapping the right valve around the entire margin
- Many small adductor muscle scars make a large circular aggregate
- The outline of each scar is obscure
- The hinge is the merodont-type

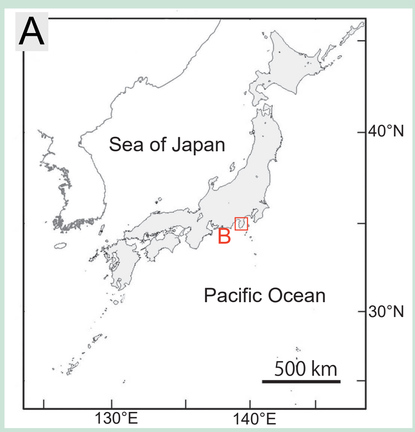


Fig. 1 Sampling site
A, Map of Japan; B, Map of Izu Peninsula and location of Ebisu Island; C, Sampling point.

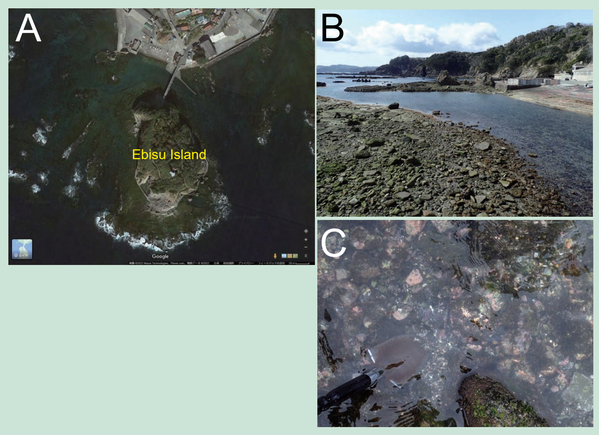


Fig. 2 Photos of sampling site and point
A, aerial photo of Ebisu Island; B, photo of sampling site; C, photo of sampling point.

Table 1 Dimensions of *Saipanetta* sp.

Object		Length (μm)			Height (μm)			width (μm)		
		average	observed range	n	average	observed range	n	average	observed range	n
Male	RV	627	617-636	3	305	298-313	3			
	LV	644	634-655	3	340	335-349	3			
Carapace						340	1		652	1

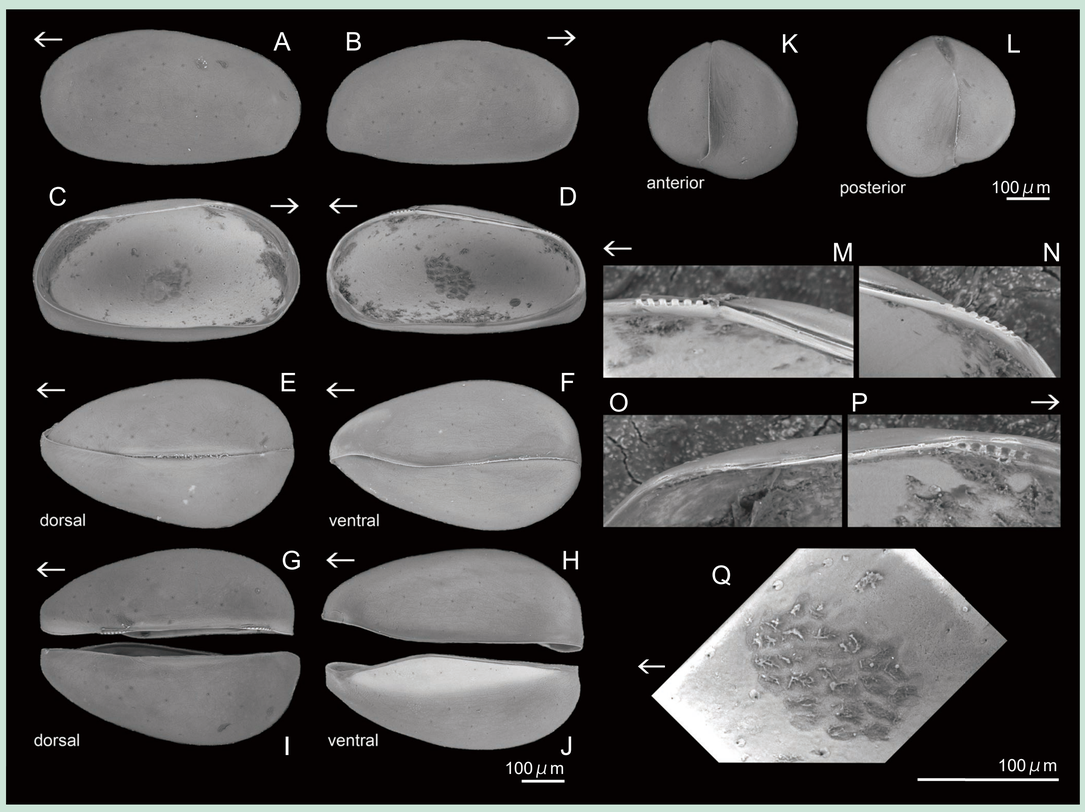


Fig. 3 SEM images of *Saipanetta* sp.
A, external view of LV; B, external view of RV; C, internal view of LV; D, internal view of RV; E, dorsal view of carapace; F, ventral view of carapace; G, dorsal view of RV; H, ventral view of LV; I, dorsal view of LV; J, ventral view of RV; K, posterior view of carapace; L, posterior view of carapace; M, anterior element of RV hinge; N, posterior element of RV hinge; O, posterior element of LV hinge; P, anterior element of LV hinge; Q, adductor muscle scar of RV. Arrows indicate anterior.

Considering these features and observations of dissected soft parts of male specimens (Fig. 4), the species is belonging to the genus ***Saipanetta***.

Some unique features were also observed, including an extremal faint geometrical pattern on the carapace surface (Fig. 5), and the absence of pore canals in the postero-dorsal area. The species is distinguished from other ***Saipanetta*** species.

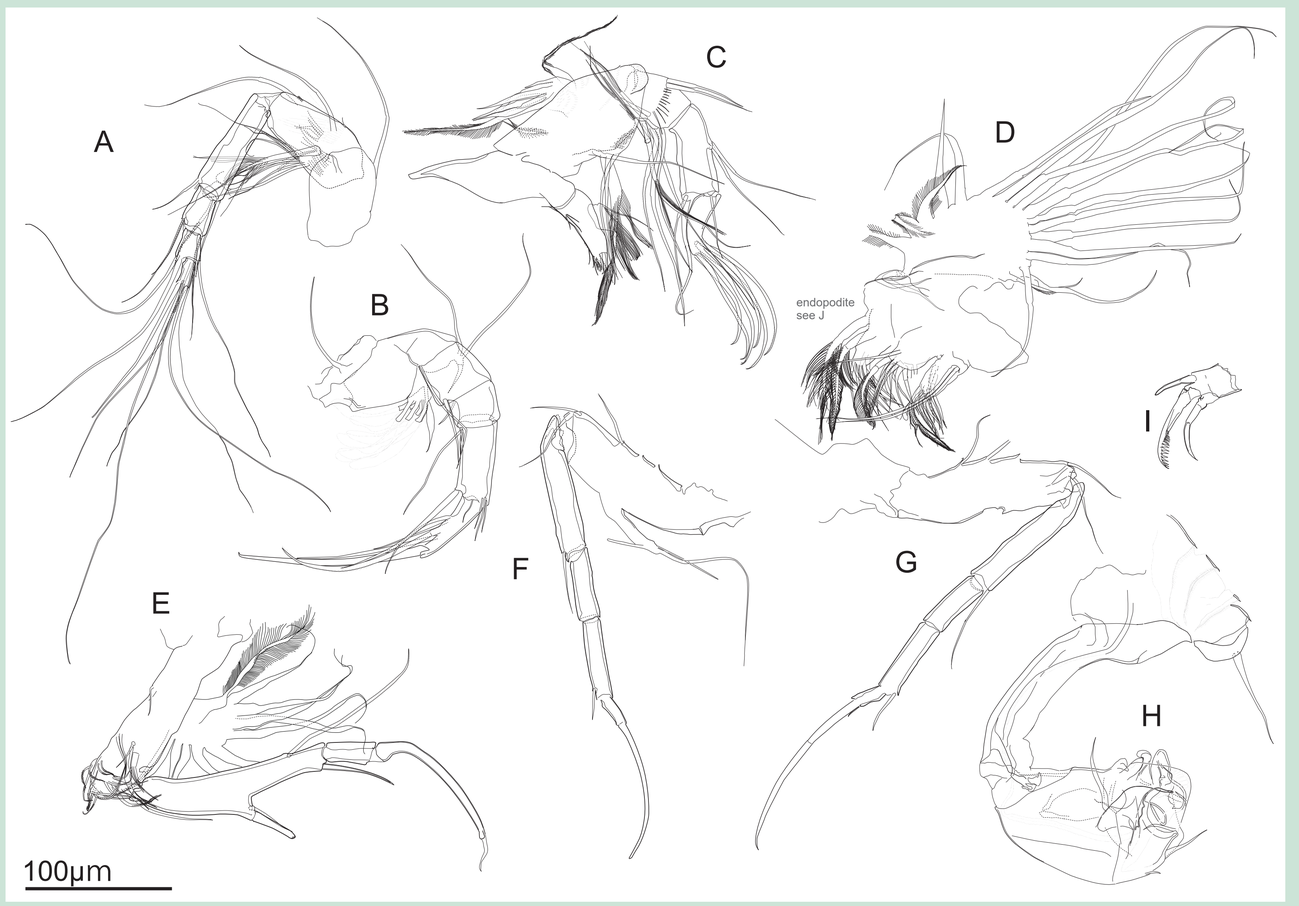
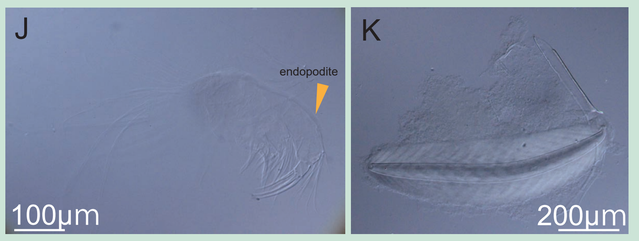


Fig. 4 Appendages of *Saipanetta* sp. (male)
A, antennule; B, antenna; C, mandibula; D, maxillula; E, 5th limb; F, 6th limb; G, 7th limb; H, male copulatory organ and posterior part of body; I, terminalpart of furca; J, endopodite of maxillula; K, Zenker's organ.



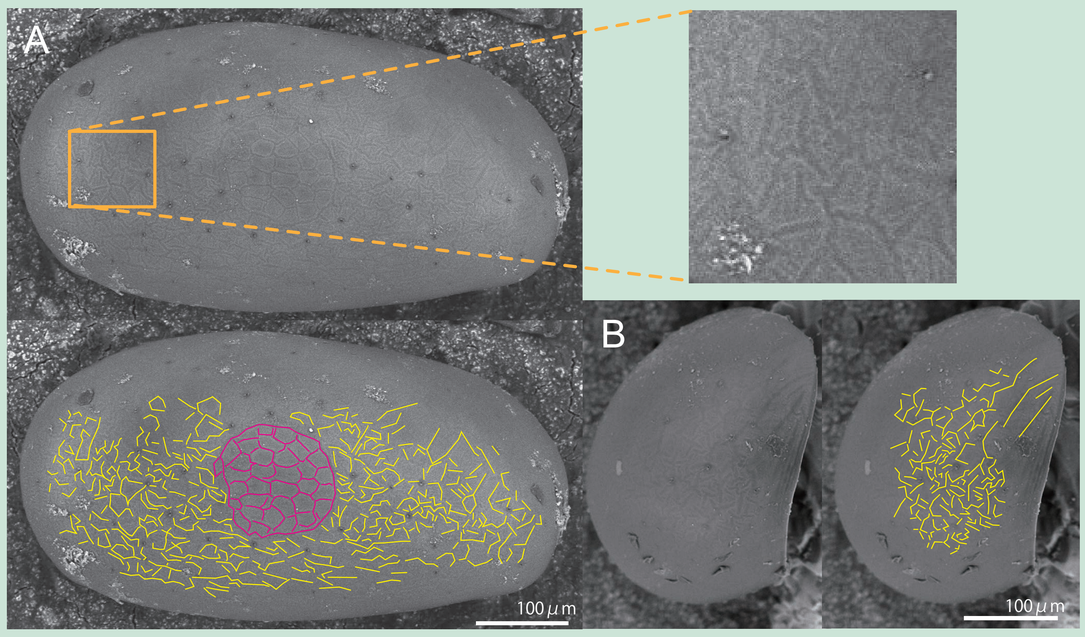


Fig. 5 Faint geometrical pattern on the carapace
A: example of the pattern observed on LV from side view, B: example of the pattern from posterior view.

All Saipanetta species previously reported with softparts description were obtained from the sublittoral zone (by scuba diving) to deep sea (Fig. 4). Some of them have been presumed to be interstitial based on associated species and coarse-grained substrates.

Our specimens were obtained from the upper eulittoral zone, depth of ca. 20 cm at the lowest lowtide time. Since we could collect plural number of individuals with softparts, It is reasonable to surmise that they are truly interstitial species, and this is the shallowest record of living ***Saipanetta***.

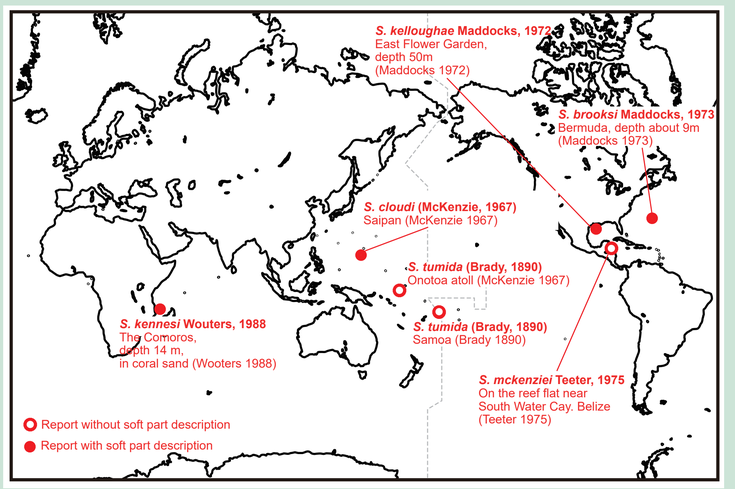


Fig. 4 Previous reports on genus *Saipanetta*