

Note

Some biological notes on *Lobatolampea tetragona* (Ctenophora: Lobatolampeidae) in Japan

KATSUAKI SASAKI¹, SHUNSHIRO UENO², SETSUOKO IWANAGA³, NAOMASA OSHIRO³ & SHIN KUBOTA⁴

¹ Towa-cho Nagisa Aquarium, Aquatic Wildlife Breeding Center, Towa-cho, Yamaguchi 742–2601, Japan

² National Fisheries University, Yoshimi, Shimonoseki 759–6595, Japan

³ Okinawa Prefectural Institute of Health and Environment, Ozato 2085, Okinawa 901–1202, Japan

⁴ Seto Marine Biological Laboratory, Graduate School of Science, Kyoto University, Shirahama 459, Wakayama 649–2211, Japan

Received 26 February 2001; accepted 24 May 2001

Lobatolampea tetragona was first found at Toba, middle Japan in 1992 and was described by Horita (2000) as a monotypic new member of the ctenophores, based on 2 specimens. *L. tetragona* had not been found thereafter and is thought to be a rare species (Horita, personal communication). 4 specimens of this species were newly collected in Japanese waters, 2 in the Inland Sea of Japan and the other 2 along the East China Sea coast of Okinawa Island. It is noteworthy to describe some biological information such as morphological variation, movement, and the mode of feeding besides the geographical distribution of this species.

The occurrence records of the four specimens are as follows.

Specimen 1.—Part of body damaged (Fig. 1A), collected at Ihota harbor, Towa-cho town, Yamaguchi Pref. (Fig. 2I), its oral end attached to the seaweed *Gelidium amansii* Lamouroux growing on a mooring raft for boats, by K. Sasaki in the morning on 3 May 1998. The animal was found at a depth of 1 m. The surface water temperature was 16.8°C.

Specimen 2.—At the same site as specimen 1, an intact specimen (Fig. 1B) was collected again by K. Sasaki in the morning on 11 April 2000. The water temperature was 12.9°C.

Specimens 3 and 4.—Two intact specimens (Figs 1C, D) were collected by S. Iwanaga on the sea surface in Ginowan harbor, Ginowan city, Okinawa Pref. (Fig. 2G) at night after 2100 h on 25 May 2000. They were slowly floating and drifting in the surface water. The water temperature was 23.4°C.

All the morphological features of the present four specimens are in accordance with those of the original description (Horita 2000). However, specimens 1 and 2 from the Inland Sea of Japan were larger, measuring 39.7 mm and 38.8 mm in the tentacular plane and 47.0 mm and 45.5 mm in the pharyngeal plane when they were well extended just after collection. In specimen 2, which was reared for 102 d by K. Sasaki, nei-

ther distinct morphological changes nor increase in size was observed. The other two specimens from Okinawa were small, measuring about 10 mm in the tentacular plane.

Specimen 2 was kept after collection, first in a 3-liter and later in a 6-liter plastic vessel filled with filtered natural seawater, without aeration for 7 and 95 d respectively. The water temperature varied between 12.9°C and 25.0°C during the rearing period. Seawater was exchanged once or twice every day and newly hatched *Artemia* nauplii were provided as food. The ctenophore usually sank to the bottom of the rearing vessel with its oral surface down, although sometimes attached to the side of the vessel. Brief movement of this specimen sometimes occurred but only when the seawater was exchanged and/or it was fed with *Artemia*. It seems that the specimen does not swim for feeding.

This specimen caught *Artemia* larvae by secondary tentacles deployed along the margin of the body. Then the food was carried to the central part of the body upon which the mouth opened. It is surmised that the movement of the velar apparatus generates gentle water current, which facilitates catching of the *Artemia* larvae. The seawater then flowed out from the clefts.

It is conceivable that the geographical distribution of the present species is in fact much wider and that it is not endemic in Japan. The species is eurythermal since it was collected in different seasons and after collection it lived for a long time in the laboratory, being exposed to a wide range of seawater temperatures. Judging from the behavior of the specimens in the rearing tanks, they seem to be benthic rather than planktonic. The wide geographical distribution might be due to the presence of a planktonic larval stage.

It should be mentioned here that all the four specimens, as the holotype, failed to preserve in a formalin-seawater solution due to their fragile bodies.

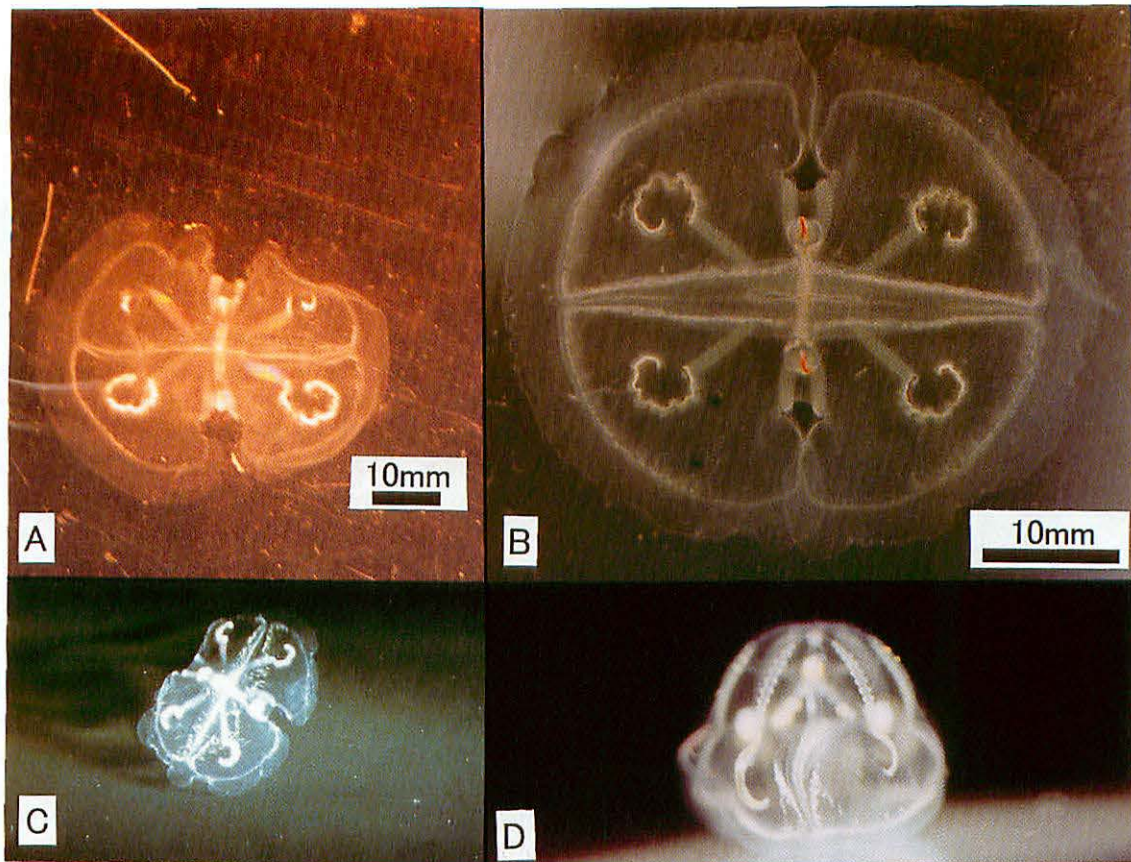


Fig. 1. Live *Lobatolampea tetragona*. Specimens 1(A) and 2(B) from Ihota harbor in the Inland Sea of Japan. Specimens 3(C) and 4(D) from Ginowan harbor, Okinawa Island. All specimens were photographed on the next day after collection.

Acknowledgments

We thank Mr Tadafumi Maenosono for his kind help in collecting specimens from Okinawa Island.

Literature Cited

Horita, T. 2000. An undescribed lobate ctenophore, *Lobatolampea tetragona* gen. nov. & spec. nov., representing a new family, from Japan. *Zool. Med. Leiden* 73: 457–464.

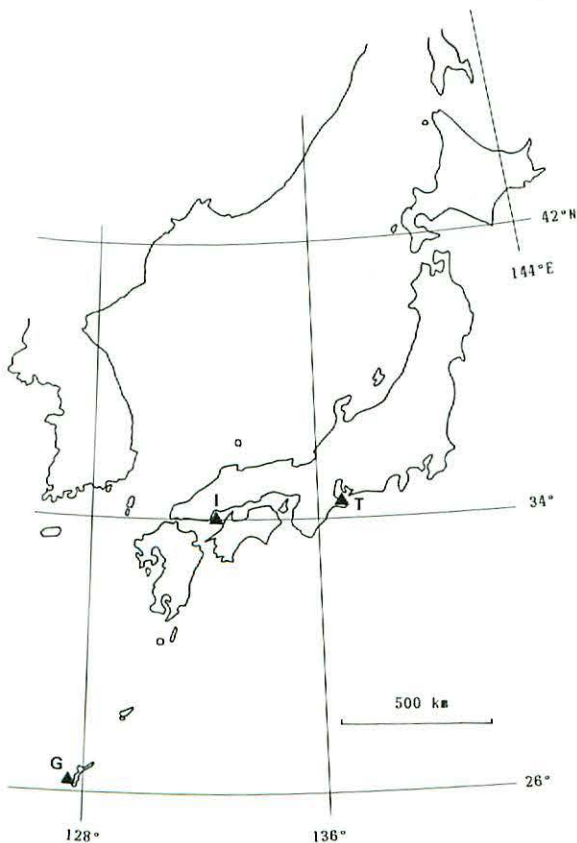


Fig. 2. Collection sites of *Lobatolampea tetragona*. I: Ihota harbor, Towa-cho town, Yamaguchi Pref. and G: Ginowan harbor, Ginowan city, Okinawa Pref. in the present study. T: Toba, middle Japan in Horita (2000).