

**OCCURRENCE OF A RARE *Thecocardium* MEDUSA (ANTHOMEDUSAE,
PTILOCODIIDAE) FROM TAIWAN**

By

Shin KUBOTA ¹, Tiger HUI-TAI LEE ² and William TAN ³

Abstract

One medusa of *Thecocardium*, measuring about 3.5 mm in height and possessed many linear nematocyst spurs at the umbrellar margin, many exumbrellar nematocysts, and umbrellar marginal four furrows (each houses base of each of four tentacles), was recorded at Kenting in southern Taiwan as the southernmost distributional record of this genus with an ordinary medusa in its life cycle in the Pacific Ocean. It is treated as *Thecocardium* aff. *quadratum* (Werner).

The laboratory-reared medusa of the genus *Thecocardium* with an ordinary medusa in its life cycle was described for the first time by Jarms (1987). Since then, in its natural habitat, such a medusa was collected in Japanese waters (Fig. 1) by Kubota (1993) [Kuchinoearbu Island, Kagoshima Prefecture], Akiyama *et al.* (2013) [Sasebo, Nagasaki Prefecture], Kubota (2015) [Oosezaki, Shizuoka Prefecture], and also in Florida, USA (Kubota & Melodian, 2016). The present medusa of the rare genus *Thecocardium* was found jointly by William Tan and Tiger Lee while diving off the coast of Kenting in Southern Taiwan, at a dive site called Houbihu (Fig. 1: 21.9451° N, 120.7447° E). At the time of discovery, this medusa was floating at about 3 m depth, above a sand bottom of about 7 m. Although lights were used to attract plankton, the medusa was found in total darkness, at more than 10 m away from where the lights were placed.

The medusa, without eye-spot, is about 3.5 mm in height, clearly belonging to the genus *Thecocardium* with an ordinary medusa in its life cycle, having such characteristics as many linear nematocyst spurs at the umbrellar margin, many exumbrellar nematocysts, and umbrellar marginal four furrows (each houses base of each of four tentacles) (photographed at c. 10 p.m. on September 16, 2017: Fig. 2). Here we record it as the fourth specimen of *Thecocardium quadratum* (Werner) in the Pacific Ocean, though its specific status is not yet completely determined since the present medusa was not examined in the laboratory.

-
1. Seto Marine Biological Laboratory, Field Science Education and Research Center, Kyoto University, 459 Shirahama, Nishimuro, Wakayama, 649-2211 Japan
e-mail: kubota.shin.5e@kyoto-u.ac.jp
 2. No. 8, Aly. 60, Ln. 64, Hengnan Road, Hengchun Township, Pingtung County 946, Taiwan (R.O.C.)
 3. 2 Florissa Park, S789585, Republic of Singapore

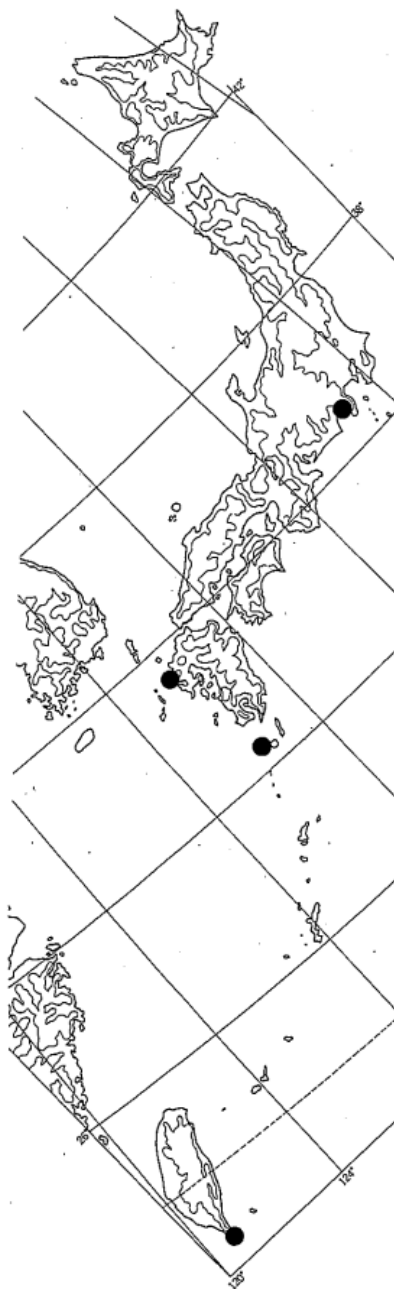


Fig. 1. Occurrence of *Thecocardium quadratum* around the Japanese waters and Taiwan (present new finding as *T. aff. quadratum*).

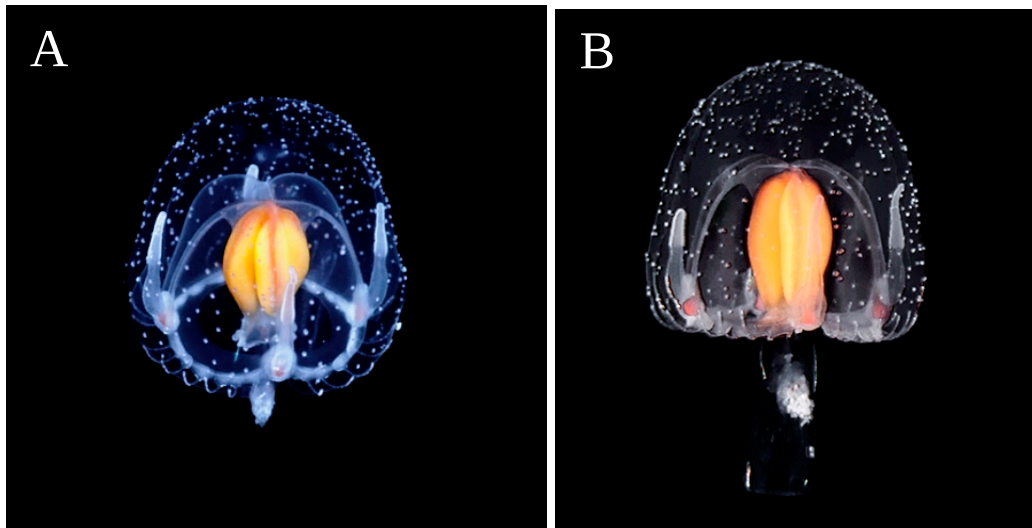


Fig. 2. Living *Thecocardium* aff. *quadratum* photographed at Kenting in south Taiwan by Willam Tan (A) and Tiger Lee (B).

References

- Akiyama, H., Y. Yamasaki and S. Kubota. 2013. Second record of *Thecocardium quadratum* (Hydrozoa, Anthomedusae, Ptilocodiidae) in Japan. Bull. biogeogr. Soc. Japan, 68: 113-115. (In Japanese with English abstract)
- Jarms, G. 1987. *Thecocardium quadratum* (Werner) redescribed, *T. penicilatum* sp. nov., and a method for rearing hydrozoans. In Bouillon, J., Boero, F., Cicogna, F. and Cornelius, P. F. S. (eds.), "Modern Trends in Systematics, Ecology and Evolution of Hydroids and Hydromedusae", Oxford University Press, London, pp. 57-66.
- Kubota, S. 1993. The medusa of *Thecocardium quadratum* (Werner) (Anthomedusae, Ptilocodiidae) from southern Japan. Publ Seto Mar. Biol. Lab., 36(1/2): 89-92.
- Kubota, S. 2015. *Thecocardium quadratum* (Werner, 1965). p.108, p.288, In "Minemizu, R., Kubota, S., Hirano, Y. and Lindsay, D.: A Photographic Guide to the Jellyfishes of Japan", Heibonsha, Tokyo.
- Kubota, S. and S. Meldonian. 2016. Occurrence of a rare *Thecocardium* medusa (Anthomedusae, Ptilocodiidae) from Riviera Beach, Florida, USA. Biogeography, 18: 77-78.