



## ***Comanthus kumi*, a new shallow-water comatulid (Echinodermata: Crinoidea: Comatulida: Comasteridae) from the Ryukyu Islands, Japan\***

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### **Abstract**

A new species of the genus *Comanthus* A.H. Clark, 1908, is described on the basis of specimens collected from Kume Island and Okinawa Island, the Ryukyu Islands, Japan. *Comanthus kumi* n. sp. is distinguished from all ten congeners by having extremely elongate arms exceeding 300 mm in length and the colouration in life. The new species concealed its whole body in a crevice or small hole on coral reefs during the day and protruded only several elongate arms on the reef surface at night. This habit suggests that the new species is nocturnal.

**Key words:** Crinoidea, Comatulida, Comasteridae, new species, Okinawa

### **Introduction**

The species of the comatulid genus *Comanthus* A.H. Clark, 1908 are well known in shallow-water coral reefs (Kogo 1998; Rowe *et al.* 1986). The genus was established by A.H. Clark (1908), and revised by Hoggett & Rowe (1986) and Rowe *et al.* (1986), the latter two revisions chiefly based on the shapes and distributions of combed pinnules as follows: 1) proximal comb segment transversely-oriented and saucer-like; 2) remaining comb teeth usually confluent with lateral margin of each segment, and; 3) combed pinnules occur beyond the second pinnule (P<sub>2</sub>) and sometimes to near arm tip (Hoggett & Rowe 1986; Rowe *et al.* 1986).

Hoggett & Rowe (1986) recognised 11 species. Consequently, Kogo (1998) referred *Comanthus imbricata* (A.H. Clark, 1908), to the genus *Oxycomanthus* Rowe, Hoggett, Birtles & Vail, 1986. The genus *Comanthus* therefore now contains ten species: *C. alternans* (Carpenter, 1881); *C. briareus* (Bell, 1882); *C. delicata* (A.H. Clark, 1909); *C. gisleni* Rowe, Hoggett, Birtles & Vail, 1986; *C. mirabilis* Rowe, Hoggett, Birtles & Vail, 1986; *C. parvicirrus* (Müller, 1841); *C. suavia* Rowe, Hoggett, Birtles & Vail, 1986; *C. taviania* (A.H. Clark, 1911); *C. wahlbergii* (Müller, 1841); and *C. weberi* (A.H. Clark, 1912).

During the course of our studies on the shallow-water comatulid species diversity in the Ryukyu Islands (see Kogo & Fujita 2000; Obuchi *et al.* 2009), an unusual species of *Comanthus* was found by SCUBA dives at night off Kume Island and Okinawa Island. The present paper herein describes the species as new to science.

### **Materials and Methods**

The method for measurements of specimens generally follows that of Messing *et al.* (2000). In addition, the maximum width and length of the brachial and pinnular ossicles were also measured. Terminology for