

# Review of Armored Searobins of the Genus *Peristedion* (Teleostei: Peristediidae) in Japanese Waters

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The genus *Peristedion* Lacepède, 1801 occurring around Japanese waters is reviewed, with 4 species described based on 157 Japanese specimens: *Peristedion orientale* Temminck and Schlegel, 1843, *P. liorhynchus* (Günther, 1872), *P. nierstraszi* Weber, 1913, and *P. amblygenys* Fowler, 1938. The four species are distinguished from each other by the shape of the rostral projection, the position of the fourth sensory pore on the rostral projection, the number of branches on the filamentous barbel on the lip, the total number of chin barbels, and the shape of the perifacial rim. The present study records *P. amblygenys* in Japanese waters for the first time.

**Key Words:** Armored searobins, *Peristedion orientale*, *Peristedion liorhynchus*, *Peristedion amblygenys*, *Peristedion nierstraszi*, *Peristedion picturatum*, western Pacific, Japan, new record.

## Introduction

The genus *Peristedion* Lacepède, 1801 (family Peristediidae) is characterized by the absence of teeth on the upper jaw, a smooth lateral margin of the head, and contralaterally sutured posterior pairs of bony plates in the lower lateral rows along the ventral mid-line (Kawai 2008). This is the most species-rich genus of the family, with 24 species known from tropical to temperate deep waters throughout the world (Miller and Richards 2002; Nelson 2006; Kawai 2008; Bussing 2010; Tenda and Kawai 2012).

Taxonomic studies of *Peristedion* in Japanese waters began with the description of *Peristedion orientale* Temminck and Schlegel, 1843. A second Japanese species, *Peristedion nierstraszi* Weber, 1913, was recorded from Tosa Bay, Japan (Kamohara 1936). Later, Kamohara (1952) reviewed the Peristediidae in Japanese waters and reported *Peristedion liorhynchus* (Günther, 1872) as an additional species from Japan. These three species were subsequently recognized in Japanese waters by a number of authors (e.g., Ochiai and Yatou 1984; Yatou 1997; Yamada and Yanagishita 2013). Based on a large series of Japanese specimens of *Peristedion* occurring in this area, including type specimens, four species are recognized in this study: *P. orientale*, *P. liorhynchus*, *P. nierstraszi*, and *Peristedion amblygenys* Fowler, 1938. The last is a new record for Japan. In addition, new diagnostic characters of the four species and a key to the species of *Peristedion* around Japan are provided.

## Materials and Methods

Specimens examined for the present study are deposited in the collections of the Australian Museum, Sydney, Australia (AMS), Natural History Museum, London, UK (BMNH), Faculty of Science, Kochi University, Kochi, Japan (BSKU), Fish collection of Kyoto University, Maizuru, Japan (FAKU), Fisheries Research Laboratory, Mie University, Shima, Japan (FRLM), Hokkaido University Museum, Hakodate, Japan (HUMZ), National Museum of Nature and Science, Tsukuba, Japan (NSMT), Naturalis Biodiversity Center, Leiden, Netherlands (RMNH), Smithsonian Institution National Museum of Natural History, Suitland, U.S.A. (USNM), and Zoological Museum, Faculty of Science, University of Amsterdam, Netherlands (ZMA, now at RMNH).

Counts and proportional measurements follow Kawai *et al.* (2004, 2008), except for the rostral projection length, which is defined as the distance from the tip of the rostral projection to the intersection of the midline of the rostral projection with a horizontal line drawn between the anterior tips of the premaxillae. Rostral projection width was measured at the level of the anterior margin of the third sensory pore on the ventral side. Digital calipers and dividers were used with the aid of a microscope for measurements, which were taken to the nearest 0.1 mm. Terminology and counts for bony plates and barbels follow Yatou and Okamura (1985) (see also Tenda and Kawai 2012: fig. 2). Cranial spine terminology follows Miller (1967). Standard length and head length are abbreviated as SL and HL, respectively. Descriptions of species are based exclusively on specimens from Japanese waters.