

Acropoma profundum, a New Species of Lanternbelly (Teleostei: Perciformes: Acropomatidae) from the Solomon Islands

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A new species of acropomatid fish, *Acropoma profundum*, is described based on a single specimen, 40.1 mm in standard length, from the Solomon Islands (depth 1169–1203 m). It is distinguished from congeneric species by its unique long, U-shaped luminous gland, which extends from the throat to just in front of the anal-fin origin. The new species is further distinguished from its congeners by the following combination of characters: anus situated nearer to the pelvic-fin base origin than to that of the anal fin, proximal radial of first anal-fin pterygiophore with a trough-like recess, body depth 29.1% SL, and pectoral-fin rays 15. *Acropoma profundum* is the deepest-living species of its genus, and the smallest in size at sexual maturity.

Key Words: Taxonomy, *Acropoma*, luminous organ, South Pacific Ocean.

Introduction

Acropomatids are a percoid family of medium size (most around 20 cm, some reaching 40 cm in standard length) comprising seven genera and *ca.* 30 species generally found in depths of greater than several hundred meters in the temperate Atlantic, Pacific, and Indian Oceans. Species have a single or two dorsal fins with 9–10 spines, a pelvic fin with one spine and five soft rays, an anal fin with two or three spines, seven branchiostegal rays, and 24–25 total vertebrae.

The genus *Acropoma* Temminck and Schlegel, 1843 can be distinguished from other genera of the family in having a ventral luminous organ (Matsubara 1953; Yamanoue and Toda 2008). It currently includes five valid species: *A. argentistigma* Okamoto and Ida, 2002, *A. boholensis* Yamanoue and Matsuura, 2002, *A. hanedai* Matsubara, 1953, *A. japonicum* Günther, 1859, and *A. lecorneti* Fourmanoir, 1988. The luminous organ comprises a luminous gland, lens, and reflector, and the shape of the luminous gland is an important diagnostic character for the species (Haneda 1950; Haneda and Johnson 1962; Okamoto and Ida 2002). In general, the luminous gland is flat and embedded in the muscles of the ventral region, and it cannot be seen from the outside (see Haneda 1950).

While studying material of the genus from various South Pacific localities, a single specimen from the Solomon Islands in the research collection of the Muséum National d'Histoire Naturelle, Paris (MNHN) was found to have characters that differ from those of previously described species. The specimen is similar to two of the above-mentioned species, *A. argentistigma* and *A. japonicum*, in having a U-shaped luminous gland, a trough-like recess in the proximal

radial of the first anal-fin pterygiophore, and the anus situated nearer to the pelvic-fin base origin than to that of the anal fin. However, it differs significantly from specimens of these two species in the length of the luminous gland. The specimen is therefore described herein as the type of new species.

Materials and Methods

Meristic and morphometric methods follow Hubbs and Lagler (1958) and Okamoto and Ida (2002). Lower-jaw length was measured from the anteriormost point of the dentary to the posteriormost point of the retroarticular. Luminous gland length was measured from the anterior tip of the luminous gland to the posterior end of the gland on the left side. Missing lateral-line scales were estimated by counting scale pockets. All measurements were made by calipers to the nearest 0.1 mm. Counts of supraneurals and vertebrae were taken from radiographs. The formula for the configuration of the supraneural bones, anterior neural spines, and anterior dorsal fin pterygiophores follows Ahlstrom *et al.* (1976). The condition of the luminous gland and the sex of the specimen were established by dissection of the abdomen on the right side. Standard length is abbreviated as SL. The institutional abbreviations of the comparative material examined in the present study are as follows: Australian Museum, Sydney, Australia (AMS); Laboratory of Marine Biology, Faculty of Science, Kochi University, Kochi, Japan (BSKU); School of Marine Biosciences, Kitasato University, Ofunato, Japan (FSKU); Fisheries Research Laboratory, Mie University, Shima, Japan (FRLM); Kagoshima University Museum, Kagoshima, Japan (KAUM); Muséum National