

A RARE RIBBON-GOBY *OXYMETOPON CYANOCTENOSUM* (ACTINOPTERYGII: PERCIFORMES: GOBIOIDEI: MICRODESMIDAE): THE FIRST AND NORTHERNMOST RECORD FROM TAIWAN

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Abstract. Species of the genus *Oxymetopon* (Gobioidae: Microdesmidae) have never been recorded from Taiwanese waters. The main objective of this paper is to document the presence of this genus in the waters of Taiwan. A single specimen (99.2 mm standard length) of genus *Oxymetopon* was collected from south-western Taiwan in 2017. The morphology and fresh coloration of the collected specimen are herein described. The majority of the morphological characters of the specimen closely matched the diagnostic features of *Oxymetopon cyanoctenosum* Klausewitz et Condé, 1981 given by the previous study: ray in first dorsal-fin not elongated, tip of depressed rays just reach origin of second dorsal-fin origin; longest first dorsal-fin length shorter than body depth; dorsal crest high, approximately half of the diameter of pupil; tip of depressed pelvic fin reach to anal-fin origin; pelvic-fin length longer than pectoral-fin length. Therefore, the specimen from south-western Taiwan is identified as *Oxymetopon cyanoctenosum*. This species has previously been known only from Philippines, Indonesia, and Papua New Guinea. The presently reported specimen represents the first record for Taiwan, as well as the northernmost record of this species up to now.

Keywords: *Oxymetopon compressus*, taxonomy, distribution, South China Sea

INTRODUCTION

The genus *Oxymetopon* Bleeker, 1868 belongs to the wormfish (family Microdesmidae), and is characterized by strongly laterally compressed head and body, the presence of dorsal crest on the head, and large gill slit (Chan 1996, Klausewitz and Condé 1981). The species of this group are sheltering in burrows at silt or mud bottom areas. This genus currently comprises 5 valid species occurring in the western Pacific (Prokofiev 2016), however, some species appear to be rare, and none of them have been recorded in Taiwan.

A single specimen of *Oxymetopon cyanoctenosum* Klausewitz et Condé, 1981 was recently collected off Kaohsiung south-western Taiwan. This species was previously known only from region of East Indies (Allen and Erdmann 2012, Fricke et al. 2018). In Taiwan, only two microdesmids, *Gunnellichthys curiosus* Dawson, 1968 and *Gunnellichthys viridescens* Dawson, 1968, were recorded previously (Ho et al. 2013, Ho and Lin 2016). Therefore, the new specimen is herein described as the first record of the genus *Oxymetopon* and the species *O. cyanoctenosum* in Taiwan, and the third reliable and northernmost records of this species.

MATERIALS AND METHODS

Counts and measurements follow Prokofiev (2016). Measurements were made to the nearest 0.1 mm with needle-point callipers under a dissecting microscope. Standard and head lengths are abbreviated as SL and HL, respectively. The morphological description is based on the specimen collected from Taiwan. The specimen of *O. cyanoctenosum* examined in this study is deposited at the Pisces collection of the National Museum of Marine Biology & Aquarium (NMMB-P).

Specimen examined. NMMB-P29845, 99.2 mm SL, off Kaohsiung, obtained at Ke-tzu-liao Fish Landing Port, 17 August 2018, bottom trawling, coll. by H.-C. Ho.

RESULTS

Family Microdesmidae
Subfamily Ptereleotrinae
Oxymetopon Bleeker, 1868
窄頰塘鱧屬

Oxymetopon cyanoctenosum Klausewitz et Condé, 1981
藍梳窄頰塘鱧

Fig. 1

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Oxymetopon cyanoctenosum Klausewitz et Condé, 1981; Klausewitz and Condé 1981: 71, fig. 1, 10–17, 19e (type locality: probably from off Cebu, Philippines); Allen and Adrim 2003: 61; Allen and Erdmann 2012 (in part): 995; Fricke et al. 2014: 178; Prokofiev 2016: 136.

Description of NMMB-P29845. Counts: first dorsal-fin rays VI; second dorsal-fin rays I + 31; anal-fin rays I + 31; pectoral-fin rays 20; pelvic-fin rays I + 4; caudal-fin rays ix + 8 + 7 + viii; total gill rakers in first arch 26; pseudobranchial filaments 16; vertebral formula 10 + 16; dorsal pterygiophore formula 3-2211. Measurements (as percent of SL): head length 15.9%; pectoral-fin length 18.0%; pelvic-fin length 38.2%; caudal-fin length 40.6%; maximum body depth 18.0%; minimum body depth 9.0%; length of caudal part of body 49.2%; horizontal diameter 4.4%; upper jaw length 7.5%. Body elongate, its maximum depth 5.5 times in SL and anal-fin origin to caudal-fin base 2.0 times in SL; body and head strongly compressed laterally. Dorsal profile of head almost straight from snout to above preopercle with sharp notch above eye. Dorsal crest present above head, its height almost half of pupil diameter. Ventral profile of head gently rounded from snout to pelvic-fin origin. Dorsal and ventral profiles almost straight posterior to dorsal- and pelvic-fin origins. Snout very short; eye located close to dorsal profile. Nostrils located at just anterodorsal of eye. Mouth strongly oblique, forming angle of 70° to horizontal; lower jaw projecting than upper jaw. Gill opening large, lowermost point at same level of ventral margin of preopercle; gill membrane of both sides connecting at isthmus. Jaws with two to three rows of minute conical teeth anteriorly, and single row posteriorly; two pairs of fang-like teeth of anterior parts of jaws. Origin of first dorsal fin slightly posterior to vertical above pelvic-fin origin; spines of first dorsal-fin short, filaments absent, last two spines just reaching origin of

second dorsal fin when depressed; base of second dorsal fin longer than that of first; soft rays of second dorsal fin longer posteriorly; soft rays of posterior half of second dorsal fin longer than longest first dorsal-fin spine. Origin of anal fin below base of fourth soft ray of second dorsal fin; length of first ray of anal fin almost half of other rays. Pectoral fin short, posterior tip not reaching vertical drawn through posterior end of dorsal-fin base. Origin of pelvic fin slightly posterior to base of pectoral fin; pelvic fin rays very long as filaments, most of rays reaching base of seventh anal-fin ray. Caudal fin diamond-shape, middle rays longer than upper and lower rays.

Coloration—When fresh, body and head uniformly greyish-blue; abdomen metallic light-blue with 11 faint yellow vertical bands; faint dusky radial stripes at anterodorsal to anteroventral of eye; small faint dusky blotches at opercle; dorsal crest on head dusky with yellow outer margin snout faintly yellowish. Dorsal, pectoral, and pelvic fins yellowish translucent; anal fin faintly dusky posteriorly; caudal fin yellowish with dusky vertical stripes.

When preserved, body and head uniformly pale brown with 22 brownish vertical stripes throughout body, paler posteriorly; seven brown longitudinal bars on abdomen; pectoral-fin base followed by brown bar; two small brown blotches above pectoral fin. Brown radial stripes at anterodorsal to anteroventral of eye; small brown blotches on opercle and preopercle; basal part of dorsal crest at head brown; lips brown. Second dorsal and anal fins pale, posteriorly brownish; caudal fin light brown with brown vertical stripes.

Distribution. *Oxymetopon cyanoctenosum* is currently known from the Philippines, Indonesia, and Papua New Guinea (Allen and Adrim 2003, Allen and Erdmann 2012, Fricke et al. 2018), and now from south-western Taiwan (presently reported study).



Fig. 1. Fresh (upper) and preserved (lower) specimen of *Oxymetopon cyanoctenosum* from south-western Taiwan; NMMB-P29845, 99.2 mm SL

DISCUSSION

The majority of morphological characters of the presently reported specimen match those from the keys of Prokofiev (2016): ray in first dorsal-fin not elongated, tip of depressed rays just reach origin of second dorsal-fin origin; longest first dorsal-fin length shorter than body depth; dorsal crest high, approximately half of the diameter of pupil; tip of depressed pelvic fin reach to anal-fin origin; pelvic-fin length longer than pectoral-fin length.

Among its congeners, *Oxymetopon cyanoctenosum* is most similar to *Oxymetopon compressus* Chan, 1966 in having dorsal-fin spines shorter than maximum body depth and relatively high dorsal crest which approximately half of the diameter of pupil (Prokofiev 2016). *Oxymetopon cyanoctenosum* can clearly distinguish from *O. compressus* in having tip of the depressed pelvic fin reach to the anal-fin origin in the former (vs. do not reach anus in the latter); pelvic-fin length longer than pectoral fin length (vs. shorter).

Oxymetopon cyanoctenosum was originally described by Klausewitz and Condé (1981) from a single specimen collected probably from Cebu Island in Philippines. Allen and Adrim (2003) reported a second record on the basis of specimen collected from Maumere Bay, Flores, Indonesia. No reliable records known for the species after their report. Allen and Erdmann (2012) shown underwater photo of this species in their field guide, but the photo was likely *O. compressus* with relatively short pelvic fin. In summary, the present report represents the third reliable record of *O. cyanoctenosum*, as well as, the northernmost record of the species.

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