

## Report on specimens of the family Xenisthmidae (Teleostei: Gobiiformes) deposited in the Department of Zoology, The University Museum, The University of Tokyo

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### Abstract

The specimens of the family Xenisthmidae (Teleostei: Gobiiformes) deposited in the Department of Zoology, The University Museum, The University of Tokyo (ZUMT) were re-identified in the present study. In total 3 specimens representing two species, *Xenisthmus clarus* (Jordan & Seale, 1906) and *X. nigrolateralis* Chen, Harefa, Jiang & Chang, 2022 were found from the collection. No types for the family were found.

### Introduction

The gobies of the family Xenisthmidae Miller, 1973 inhabit sand patches adjacent to coral reefs or reef rubble throughout subtropical and tropical zone of the Indo-West Pacific (Springer 1983; Gill and Hoese 1993, 2004; Gill et al. 2014, 2017; Senou 2021). Presently, Xenisthmidae comprises 17 species representing six genera (Springer 1983; Gill and Hoese 1993; Gill et al. 2014; Fricke et al. 2024). In Japanese waters, two species of the genus *Xenisthmus* Snyder, 1908, *X. clarus* (Jordan & Seale, 1906) and *X. polyzonatus* (Klunzinger, 1871), were formally recorded (e.g., Akihito et al. 2013; Senou 2021), but some unidentified species have remained (Yoshigou and Nakamura 2008; Akihito et al. 2013; Hagiwara 2018, 2019). In addition, an unidentified species of the genus *Paraxenisthmus* Gill & Hoese, 1993 was illustrated from Amami-oshima Island, Amami Islands, Ryukyu Archipelago (Hagiwara 2018, 2019).

To aid future taxonomic and biogeographic studies, a list of specimens of Xenisthmidae deposited in the Department of Zoology, The University Museum, The University of Tokyo (ZUMT) is herein provided.

### Materials and Methods

Species nomenclature and identifications of ZUMT specimens generally followed Akihito et al. (2013) and Hagiwara (2018, 2019). Size of the specimens are expressed in standard length (mm; abbreviated as SL). Abbreviations pertaining to the cephalic sensory pore system followed Akihito et al. (2002). Institutional codes generally follow Sabaj (2020).

### Collection of Xenisthmidae in ZUMT

As a result of our survey, 3 specimens representing two species of *Xenisthmus*, *X. clarus* (Jordan & Seale, 1906) and *X. nigrolateralis* Chen, Harefa, Jiang & Chang, 2022 were confirmed. No specimens representing other genera or types for the family Xenisthmidae were found from the collection.

**Xenisthmidae** Miller, 1973 ヤナギハゼ科  
**Xenisthmus** Snyder, 1908 ヤナギハゼ属  
**Xenisthmus clarus** (Jordan & Seale, 1906) ヤナギハゼ  
(Fig. 1)

#### JAPAN

**ZUMT 58093**: 21.3 mm SL, stained with Alizarin Red S, Ayamaru (あやまる), Amami-oshima Island, Amami Islands, Kagoshima Pref., Ryukyu Archipelago, 17 Sept. 1989, hand net, coll. M. Aizawa (藍澤正宏) et al.

**ZUMT 60424**: 14.8 mm SL, Hoshizuna-no-hama Beach (星砂の浜), Iriomote-jima Island, Yaeyama Islands, Okinawa Pref., Ryukyu Archipelago, 23 Aug. 1989, hand net, coll. M. Aizawa, H. Senou (瀬能 宏), T. Suzuki (鈴木寿之) and T. Uryu (瓜生知史).

**Xenisthmus nigrolateralis** Chen, Harefa, Jiang & Chang, 2022 クロヤナギハゼ  
(Fig. 2)

#### JAPAN

**ZUMT 58915**: 20.2 mm SL, Ikegachi (生勝), Amami-oshima Island, Amami Islands, Kagoshima Pref., Ryukyu Archipelago, 15 Sept. 1989, hand net, coll. M. Aizawa.

**Remarks.** Hayashi (1990) reported a single specimen (NSMT-P 31485, 18.5 mm SL) from Amami-oshima Island as an undescribed species, *Xenisthmus* sp. B sensu Hayashi, Aizawa, Itoh & Arai, 1990, and proposed a standard Japanese name, Kuro-yanagi-haze, based on the specimen. After that, “Kuro-yanagi-haze” has long been treated as an unidentified species in Japanese literature (e.g., Akihito et al. 2013; Hagiwara 2018, 2019). Chen et al. (2022) described a new species, *X. nigrolateralis* Chen, Harefa, Jiang & Chang, 2022, based on two specimens from Taiwan. Although Chen et al. (2022) did not refer to “Kuro-yanagi-haze”, the morphology of “Kuro-yanagi-haze” reported in Japanese literature is well matched with that of *X. nigrolateralis* in the following combination of characters: dorsal fin rays VI-I, 13; anal fin rays I, 12–13 [I, 13 in Chen et al. (2022)]; pectoral fin rays 15–17 [16]; longitudinal scale rows 69 [68–70]; five sensory canal pores (M', N, O, P, Q') on preopercle; lateral side of trunk with broad, deep brown stripe from rear of lateral gill opening to caudal fin base; two indistinct dark lines from eyes to upper part of opercle; center of caudal fin with brown stripe (Hayashi et al. 1990; Akihito et al. 2013; Hagiwara 2018, 2019; this study). Therefore, we identified “Kuro-yanagi-haze” as *X. nigrolateralis*.

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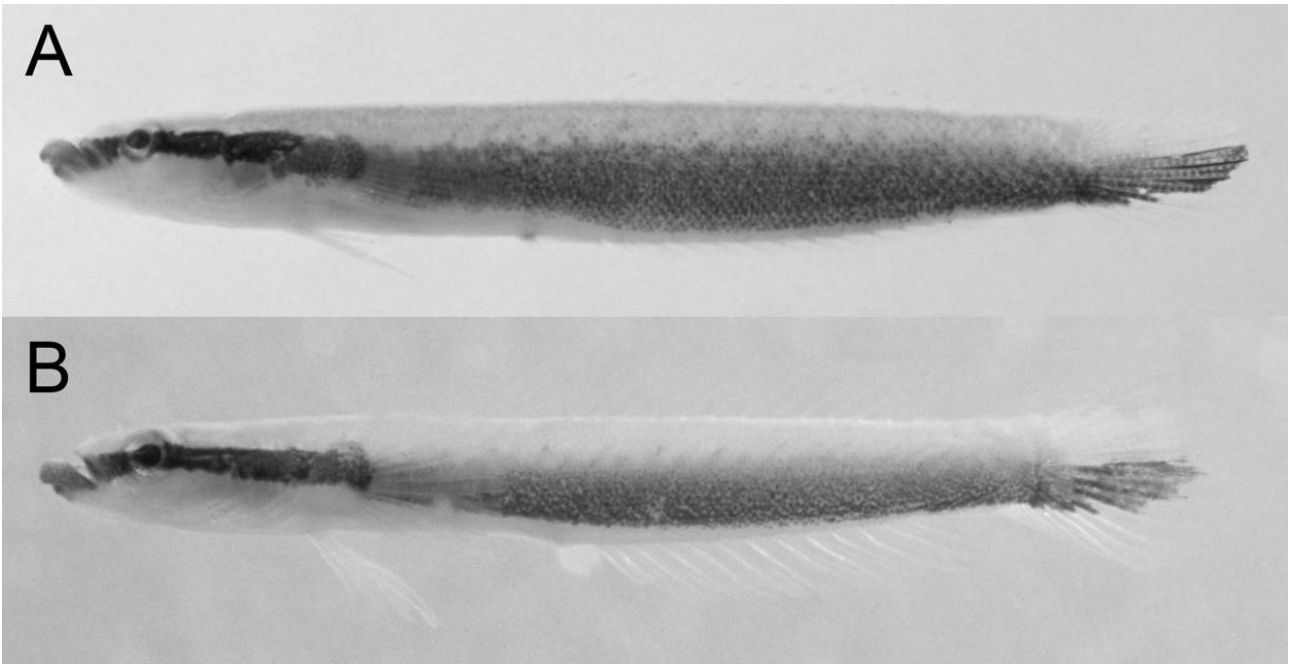


Figure 1. *Xenisthmus clarus*, immediately after fixation (A: ZUMT 58093, 21.3 mm SL, Amami-oshima Island, Amami Islands; B: ZUMT 60424, 14.8 mm SL, Iriomote-jima Island, Yaeyama Islands). Photos by M. Aizawa.

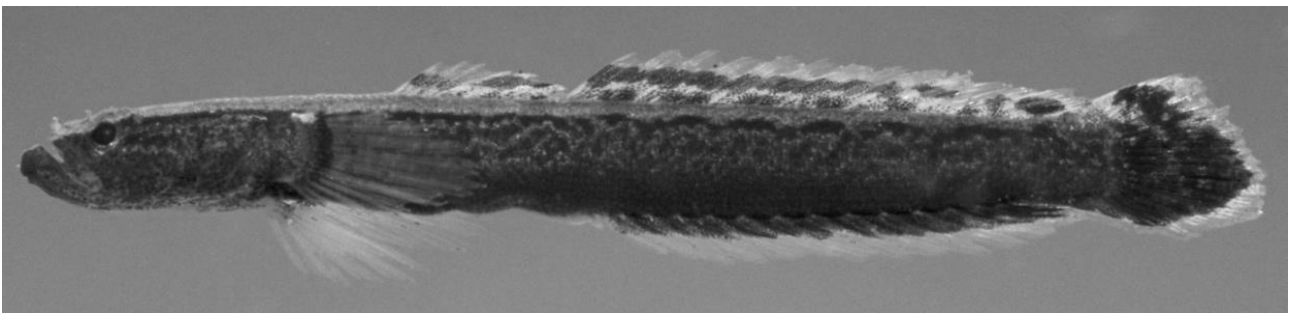


Figure 2. *Xenisthmus nigrolateralis* from Amami-oshima Island, Amami Islands, Ryukyu Archipelago, Japan, immediately after fixation (ZUMT 58915, 20.2 mm SL). Photo by M. Aizawa.