

SECOND RECORD OF BLUE-NOSED GRUBFISH, *Parapercis albogutta* (GÜNTHER, 1872) (PERCIFORMES: PENGUIPEDIDAE) FROM BITUNG, NORTH SULAWESI

Teguh Peristiwady^{1*)} dan Fasmi Achmad²

1. Technical Implementation Unit for Marine Biota Conservation, Indonesian Institute of Sciences, Bitung, North Sulawesi, Indonesia
2. Field Research Station of Center for Research Oceanography, Indonesian Institute of Sciences, Ternate, North Maluku, Indonesia

^{*)}E-mail: ikan_teguh@yahoo.com

Abstract

A specimens of Blue-nosed Grubfish, *Parapercis alboguttata* (Günther, 1872) were collected from reef flat of Ron Bolaan, Lembeh Island, North Sulawesi on 21 July 2008. It was caught by hook and line from a depths of about 10 - 20 m. First record of this specimen found in Makassar Strait and deposited at the Bishop Museum (BPBM) in Honolulu, USA. *P. alboguttata* has been found in many scattered locations in the Indo-West Pacific, from north western Australia, Indonesia, Philippines, Singapore, Malaysia, Oman and Somalia. Morphological features of the Indonesian specimen are reported.

Keywords: Parapercis alboguttata, second record, Indonesia

1. Introduction

Parapercis belong to the order of Perciformes. Some scientists are familiar with this group of fishes by different names like blue-nosed grub-fish or bluenose Sand-perch. It is, in general, small size fish benthic and flatten slightly laterally. The mouth is big with thick lips armed by small teeth. The body is covered with small scales. The dorsal fin is unique but composes by the soft rays. Sand-perches or grub-nose are solitary, demersal (bottom-dwelling) carnivores that inhabit on sandy, rubbles or hard bottoms. This common species are also inhabits in the coral reef areas of shallow lagoons and seaward reefs to at least 30 m. It is frequently observed between small coral heads waiting prey.

The fish genus is *Parapercis*, species of which are known by the English common name sand-perches, has been classified in the Paraperidae and Mugiloididae, but Rosa and Rosa [1] showed that the correct family name is Pinguipedidae. The family consists of seven genera as *Pinguipes*, *Parapercis*, *Prolatilus*, *Pseudopercis*, *Kochichthys*, *Simipercis* and *Ryukyupercis* [2].

Studies on fish in Indonesia are still insufficient. Scientific fish collections in Indonesia began with the visits of European explorers in the early 19th century,

following by Dutch researchers. Historically, the Indonesian fish specimens mostly were deposit at the United States National Museum of Natural History (USNM) in Washington, D. C. and the Bishop Museum (BPBM) in Honolulu [3]. The purpose of the present study is to inventory a new finding on fish species from the Indonesian waters. Thus, it is hope that this new finding will be used as a new baseline of the fisheries sciences which can stimulate future research in North Sulawesi and eastern Indonesian in general.

2. Methods

Two specimens of Blue-nosed Grub-fish, *Parapercis alboguttata* (Günther, 1872) [4] were collected from Ron Bolaan, Lembeh Island, North Sulawesi on 21 July 2008 (Fig.1). Valid record of the fish specimen was used data from Fishbase [5, 6].

Measurements were made on the left side of specimen by using dial-point caliper to the nearest of 0.01 mm. Length is recorded to 0.1 mm only for measurements under 150 mm, measurements bigger than 150 mm is recorded to tenths of mm.

Total length is measured from the tip of snout to the tip of caudal fin. Standard length (SL) is taken from the front of the upper lip to the base of the caudal fin (end

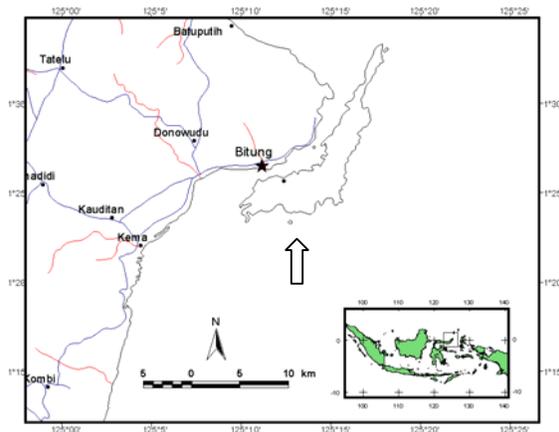


Fig.1. Location of Ron Bolaan, Lembeh Island, North Sulawesi, Indonesia where the Specimen was Collected (Arrow)

of hypural plate). Head length (HL) is measured from the front of the upper lip in the median plane to the end of the opercular membrane. Snout length is taken from the same anterior point to the fleshy edge of the orbit. Body depth is the greatest depth from the base of the dorsal fin, adjusting for any obvious malformations of preservation. Body width is the maximum width just behind the gill opening (anterior to the base of the pectoral fins). Orbit diameter is the greatest diameter to the fleshy edges of the orbit. Inter-orbital width is measured between eyes on top of head area. The length of the upper jaw is measured from the front of the upper lip to the posterior fleshy edge of the jaw. The depth of the caudal peduncle is the least depth, and the length of the caudal peduncle is taken horizontally from the rear base of the anal fin to the base of the caudal fin. Lengths of the dorsal and anal spines and rays are measured from the point they depart from the contour of the body. Dorsal fin base is taken from the anterior base of first dorsal rays to the end of the dorsal fin rays. Pectoral- and pelvic-fin lengths are the lengths of the longest ray. Anal fin base is taken from the base of anterior anal fin rays to the base of the end of anal fin rays.

3. Results and Discussion

Specimen Examined. Observations and measurements of specimens *Parapercis alboguttata* (Günther, 1872) [4] based on two specimens: LBRCF-337, 173.5 mm SL, LBRCF-338, 185.5 mm.

Penguipedidae [7]. Body moderately elongate and little compressed, except posteriorly (size to about 30 cm); head pointed; eyes often jutting slightly above dorsal profile of head, oriented as much dorsally as laterally. Mouth moderately large, protractile, and terminal or with lower jaw slightly projecting; recurved canine teeth

in an outer row at front of jaws, those in lower jaw with 3 to 5 on each side, the most lateral largest; a band of villiform teeth behind anterior canines, soon narrowing on side of jaws; an outer row of incurved conical teeth on side of jaws, a few as large recurved canines; small teeth on vomer in a chevron-shaped patch of 1 to 3 rows; teeth on palatines present or absent. A strong sharp spine posteriorly on opercle, and a lesser spine at upper end of margin of subopercle. Gill membranes united, free from isthmus except anteriorly; branchiostegal rays 6. A long dorsal fin with IV or V spines and 20 to 24 soft rays, the soft portion clearly higher than the spinous; anal fin with I spine and 16 to 20 soft rays; caudal fin variable in shape, from slightly rounded to lunate, usually with 15 branched rays; pectoral fins with 14 to 21 rays; pelvic fins with I spine and 5 soft rays, the fourth ray longest, the fins inserted below or anterior to base of pectoral fins. Lateral line complete, slightly arched above pectoral fins, the pored scales 38 to 84; scales ctenoid, often becoming cycloid ventrally on abdomen and chest; small scales on opercle and cheeks, none on occiput, interorbital, or snout; no scales on dorsal or anal fins.

Colour: most species distinctively though rarely brightly coloured, frequently with dark bars and/or small spots; most, if not all, are sexually dichromatic, though the differences may be slight (males of some species with oblique lines on cheek and operculum, in contrast to spots or no markings on females).

Taxonomic account. *Parapercis alboguttata* (Günther, 1872) [4]. English Name: Blue-nosed Grubfish; Bluenose Sandperch as shown as Fig. 2.

Diagnostic characters. Counts and measurements of three specimens *Parapercis alboguttata* (Günther, 1872) [4] are given in Table 1. Dorsal fin continuous with V spine and 22 soft rays between spinous and soft portions deeply notched; anal fin with 19 soft rays; Pectoral fin with 17-18 rays; Ventral fin with 6 fin rays.

Body depth (16.48-17.42)% times in standard length. Eye not very large, its diameter more than 4 times in head length of adults; lateral-line scales 57 to 60; fourth dorsal-fin spine longest; last inter-spinous membrane of



Fig.2. Blue-nosed Grubfish, *Parapercis alboguttata* (Günther, 1872) [4] LBRCF-338.

Table 1. Counts and Measurements of Blue-nosed Grubfish, *Parapercis alboguttata* (Günther, 1872).

Counts and Measurements		LBRCF	LBRCF
Counts	Dorsal fin rays	V, 22	V, 22
	Anal fin rays	19	19
	Pectoral fin rays	17	18
	Ventral fin rays	6	6
	Caudal fin rays	18	18
Body and	Total length	204.50	219.50
Head	Standard Length	173.50	185.50
	Body depth	28.59	32.32
	Body width	30.47	33.95
	Head length	53.04	56.57
	Snout length	19.11	21.52
	Orbit diameter	13.69	14.16
	Interorbital width	12.22	13.94
	Upper-jaw length	22.73	24.52
	Predorsal length	50.67	54.77
	Preanal length	81.14	85.81
	Prepelvic length	45.20	49.69
	Caudal-peduncle depth	12.01	12.63
	Caudal-peduncle length	11.87	13.15
Dorsal fin	Dorsal-fin base	104.37	116.49
	1 th dorsal spine	2.96	4.66
	2 nd dorsal spine	6.42	10.78
	3 th dorsal spine	9.94	13.27
	4 th dorsal spine	11.79	14.57
	Longest dorsal ray	19.96	23.46
Anal fin	Anal-fin base	81.29	86.61
	Longest anal ray	15.36	19.61
Caudal fin	Caudal-fin length	27.06	30.99
Pectoral	Pectoral-fin length	28.25	30.40

dorsal fin connected to base of first soft ray; Palatine teeth absent, Canine teeth in outer row at front of lower jaw 6.; soft portion of dorsal fin not elongated; Caudal fin with a short prolonged upper lobe;

Color in life. Light red dorsally and shading to white ventrally, the scale edges brown except ventrally; 2 longitudinal rows of indistinct light red blotches on body, ending in 2 dark red spots on base of caudal fin; snout light blue with oblique yellow lines; 2 blackish spots at base of caudal fin;

Distribution. There are numerous technical or research reports, published earlier, which contain information on fishes of the Indonesian waters. However, most of these reports concentrate on community structure of some coastal ecosystems and realized by census visual method.

This species occurs in Indo-West Pacific, from Persian Gulf to the continental shelf of Asia, the Philippines [7]

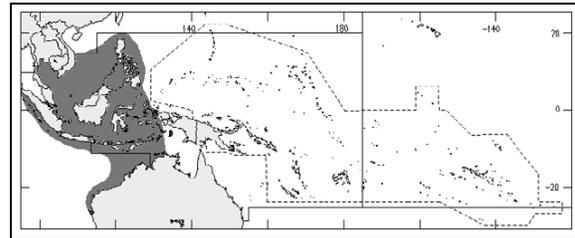


Fig. 5. Geographic Distribution of Blue-nosed Grubfish, *Parapercis alboguttata* (Günther, 1872) [4] at Western Central Pacific [7]

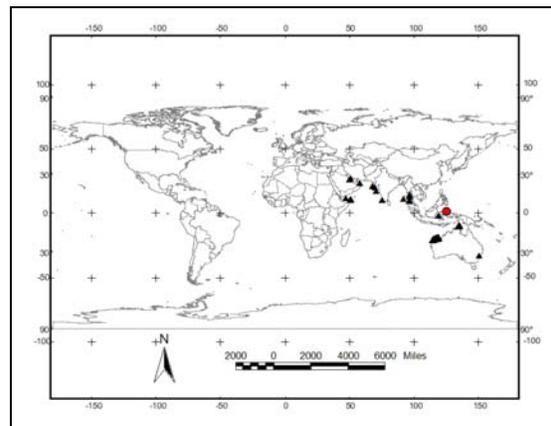


Fig. 6. Geographic Distribution of Blue-nosed Grubfish, *Parapercis alboguttata* (Günther, 1872) on the World. The Triangle are the Position of Specimen from Froese and Pauly (eds.) [5], while the Red Circle is the Position of the Specimen from Bitung, North Sulawesi, Indonesia

as shown as Fig. 5. While the previous reports of distribution of this species are as follows Malaysia, Indonesia, and northwestern Australia [8]; Oman [9]; Philippines [7] and Somalia [10] as shown Fig. 6.

Remarks. Around coastal areas and due to their occurrence over or inside hard substrat, they can not apt to be taken by fishermen using trawls or gill-net. This species were almost taken by hooks and line. At a deeper water this species usually catch by trawl net in depth range of 50 to 120 m. Maximum total length about 27 cm. This species belong to a coastal species of the continental shelf of Asia, northwestern Australia, and the islands of Indonesia. First record of this specimen found in Makassar Strait and deposited at the Bishop Museum (BPBM) in Honolulu, US.

Similar family and species. Similar families occurring in the area Percophidae (especially *Bembrops* and *Chrionema*): 2 separate dorsal fins, the first with VI spines (IV or V in Pinguipedidae).

4. Conclusion

A specimens of Blue-nosed Grub-fish, *Parapercis alboguttata* (Günther, 1872) [4] collected from Ron Bolaan, Lembah Island, North Sulawesi is a second valid record for Indonesian waters while the first record found in Makassar Strait. Due to their occurrence over or inside hard substrat, they can not apt to be taken by fishermen using trawls or gill-net.

Acknowledgement

I am very grateful to the reviewers for all suggestions and corrections. I also express my sincere gratitude to all technicians and scientists of Technical Implementation Unit for Marine Biota Conservation Indonesian Institute of Sciences, Bitung for their help.

Reference

- [1] I. L. Rosa, R. S. Rosa, Copeia 4 (1987) 1048-1051.
- [2] J. E. Randal, R. Bull. Zoo, Supplement No. 19 (2008) 159-178.
- [3] G. R. Allen, M. Adrim, Zool, Stud. 42(1) (2003) 1-72.
- [4] A. Günther, Esq., Ann. Mag. Nat. Hist. (Ser. 4), 10 (60) (1872) 418-426.
- [5] R. Froese, D. Pauly. (eds), 2006, FishBase, World Wide Web electronic publication, <http://www.fishbase.org>, version (06/2006).
- [6] W. N. Eschmeyer, Editor, Special Publication, California Academy of Sciences, San Francisco, 3 vols., 1998, p. 2905.
- [7] J. E. Randall, in: K. E. Carpenter and V. Niem (eds.), FAO Species Identification Guide for Fishery Purposes, The Living Marine Resources of the Western Central Pacific, vol. 6, Bony fishes part 4 (Labridae to Latimeriidae), Estuarine Crocodiles, FAO, Rome, 2001, p. 3381-4218.
- [8] G. R. Allen, R. Swainston, Western Australian Museum, Perth, 1988, p. 201.
- [9] J. E. Randall, University of Hawaii Press, Honolulu, Hawaii, 1995, p. 439.
- [10] C. Sommer, W. Schneider, J. M. Poutiers, The Living Marine Resources of Somalia, FAO, Rome, 1996, p. 376.