

First substantiated record of slender goby *Gobius geniporus* (Osteichthyes: Gobiidae) from the Syrian coast (Eastern Mediterranean Sea)

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A specimen of slender goby Gobius geniporus Valenciennes, 1837 was caught on 21 February 2021, from the Syrian coast at a depth of 13 m. This specimen measured 87 mm in total length and weighed 6.89 g. The present finding represents the first record of G. geniporus from the Syrian coast and confirms the species occurrence in the Levant Basin, eastern region from the Mediterranean Sea.

Key words: *Gobius geniporus*; extension range; Gobiidae; Syrian coast; Levant Basin

INTRODUCTION

The family Gobiidae comprises 1931 species belonging to 258 genera (FRICKE *et al.*, 2021), is the most species-rich family worldwide and displays the highest diversity in the Mediterranean Sea (KOVAČIĆ, 2020). However, only 8 genera including 11 species are reported to date in the Syrian marine waters (SAAD, 2005; ALI, 2018). In this area, the genus *Gobius* Linnaeus, 1758 has been represented by four species: giant goby *Gobius cobitis* Pallas, 1811, red-mouthed goby *G. cruentatus* Gmelin, 1789, black goby *G.*

niger Linnaeus, 1758 and rock goby *G. paganelus* Linnaeus, 1758.

Recently, the investigations regularly monitored throughout the entire Syrian coast and supported by local and experienced fishermen, allow to collect a fifth species with a specimen of slender goby *Gobius geniporus* Valenciennes, 1837 in the prospected area. The aim of this paper is to describe the specimen and provided comments about its local and Mediterranean distributions.

MATERIAL AND METHODS

On 21 February 2021, a specimen of *G. geniporus* was collected using hook at a depth of 13 m, off Banyas, 35° 14' 35" N, 35° 55' 12" E, (Fig. 1).

The specimen was measured to the nearest millimeter (mm), weighed to the nearest gram (g); morphometric measurements and meristic counts were identified and summarized in Table 1. The specimen was preserved in 10% buffered formalin and deposited in the Ichthyological collection of the Marine Sciences Laboratory, Faculty of Agriculture, Tishreen University, Syria with the reference MSL 1/2021 (Fig. 2). The morphological diagnosis is a minimum combination of characters that positively identify the preserved specimen of *G. geniporus* among species of family Gobiidae in the Mediterranean (KOVAČIĆ & SVENSEN, 2017; KOVAČIĆ, 2020).

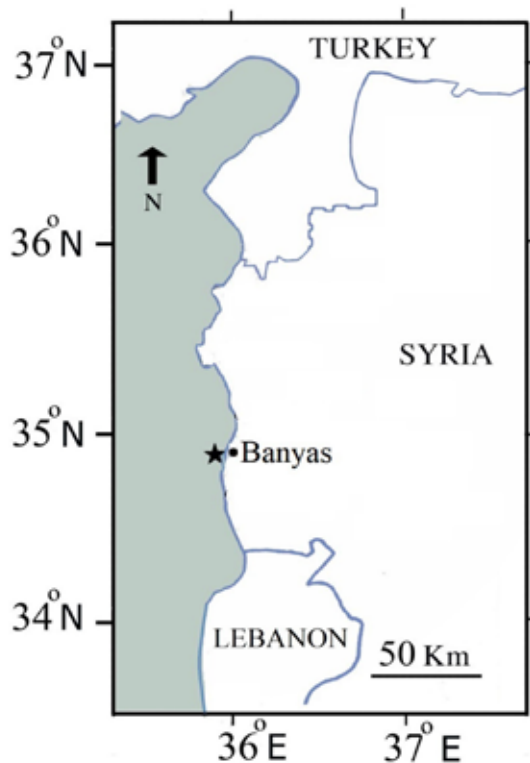


Fig. 1. Map of the Syrian coast indicating the capture site of *Gobius geniporus* (ref. MSL 1/2021) off Banyas coast (black star)



Fig. 2. Specimen of *Gobius geniporus* (ref. MSL 1/2021) collected from the Syrian marine waters, scale bar = 30 mm

RESULTS AND DISCUSSION

The present specimen measured 87 mm for total length, weighed 6.89 and identified as *Gobius geniporus* by the combination of the following diagnostic characters: 1) all three head canals present; 2) anterior oculoscapular head canal with pore *a* at rear of orbit; 3) suborbital sensory papillae without row *a* below eye; 4) oculoscapular row *x*' of sensory papillae ending forward behind pore *b*; 5) anterior dorsal row *g* of sensory papillae ends behind lateral end of

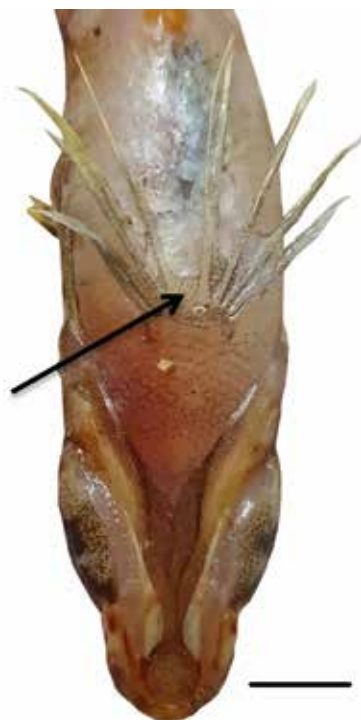


Fig. 3. Ventral view of *Gobius geniporus* (ref. MSL 1/2021), with arrow indicating the pelvic disc truncate and the anterior membrane reduced, scale bar = 10 mm

Table 1. Morphometric measurements in mm and as a percentage of standard length (%SL), meristic counts and weight in grams recorded in the specimen *Gobius geniporus* caught off the Syrian

Morphometric measurements	mm	SL%
Total length (TL)	87	124.3%
Standard length (SL)	70	100%
Body depth	15	21.4%
Head length	20	28.6%
Eye diameter	5	7.1%
Pre-orbital length	2	2.9%
Post-orbital length	12	17.1%
Pre-dorsal length	23	32.9%
Pre-anal length	43	61.4%
Anal fin base length	16	22.9%
Dorsal fin 1		VI
Dorsal fin 2		I + 14
Anal fin rays		I + 12
Pectoral fin rays		17
Scales in lateral series		54
Total weight (TW) g		6.89

row *a*; 6) predorsal area scaled; 7) longitudinal scale count ≥ 50 (54 in the present specimen); 8) anterior membrane of the pelvic fins reduced and without lateral lobes; 9) body with five oblong dark blotches along lateral midline, with spots and lighter marks in-between, no longitudinal rows of dots or small dashes on body.

Description: body moderately elongate, laterally compressed; head moderately depressed; snout with oblique profile; anterior nostril with triangular flap; mouth oblique; angle of jaws ending below anterior part of eye; predorsal area, including nape, and breast scaled; cheek and opercle naked; the body lateral line absent and the head lateral line system of head canals and rows of surface sensory papillae developed as usually in Gobiidae (these papillae, “genipore”, are prominent and clearly visible in *G. geniporus*, hence the name of this goby); all three head canals present and anterior oculoscapular canal with pore *a* at rear of orbit; suborbital sensory papillae without row *a* below eye, six transverse suborbital rows, oculoscapular row *x'* ending forward behind pore *b* and anterior dorsal row *g* of sensory papillae ends behind lateral end of row *a*; scales in lateral series 54; pelvic disc membrane between rays damaged, so the shape of posterior edge of fin unknown, anterior membrane reduced and without lateral lobes; pectoral free rays moderately developed (Fig. 3); caudal fin rounded. Colour: lateral and upper parts of body light yellowish brown and mottled brown; five oblong blotches along lateral midline, with spots and lighter marks in-between; underside of body and lower third of lateral side yellow; two brown marks better defined on cheek (Fig. 3); chin yellow, head sensory papillae black;

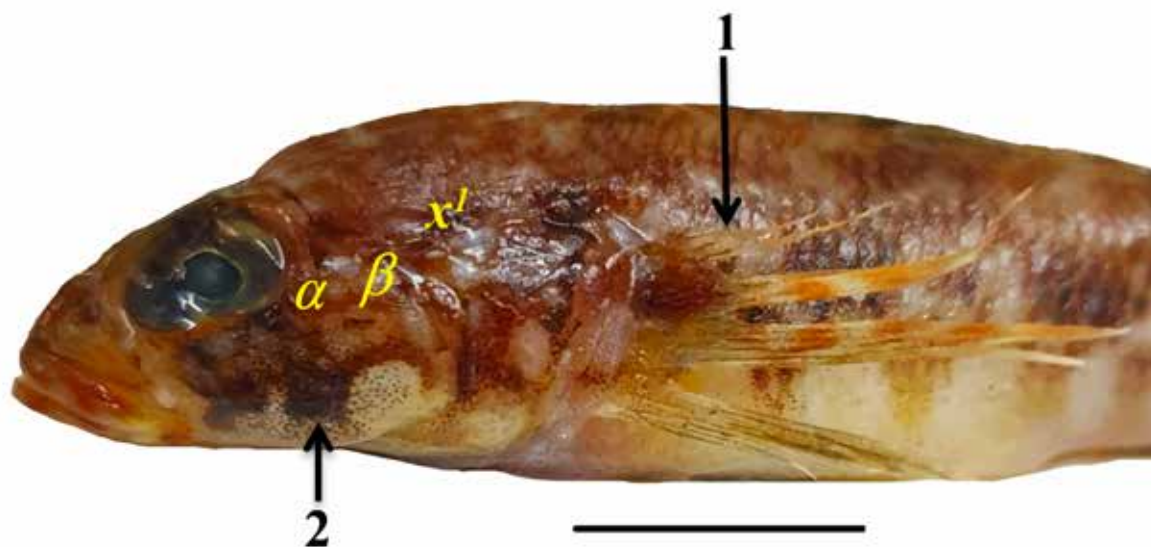


Fig. 4. Head of *Gobius geniporus* (ref. MSL 1/2021), pore *a*, pore *b*, row *x'*, 1 = pectoral free rays moderately developed, 2 = brown marks on cheek, scale bar = 10 mm

first dorsal fin with irregular longitudinal rows of brown spots, the second dorsal fin, caudal fin with brown spots; anal fin light brown on distant part of fin and pale at origin; ventral fin yellowish white.

Morphology, morphometric measurements, meristic counts and colour of the specimen are in total agreement with previous descriptions of *Gobius geniporus* from the north-eastern Atlantic and the Mediterranean Sea (MILLER, 1986; KOVAČIĆ & GOLANI, 2007; KOVAČIĆ, 2008; KOVAČIĆ, 2020). We provided the evidences following the recommendations of KOVAČIĆ & SVENSEN (2017) for the first record data for gobies. Therefore, the species could be included in the Syrian ichthyofauna, constituting the first record and the fifth gobiid species known to date from the coast of Syria.

Gobius geniporus occurs inshore, on rocky and pebbly areas and sandy and muddy bottoms near seagrass meadows, it feeds on zooplankton,

and inhabits from seven to 22 m depth (MILLER, 1986; KOVAČIĆ *et al.*, 2011; FROESE & PAULY, 2020). Slender goby is an endemic species of the Mediterranean Sea (MILLER, 1986), it has a continuous distribution including the Adriatic sea, from the French Mediterranean coast and Balearic Islands in the west to the Turkish coast in the east (MILLER, 1986; BILECENOĞLU *et al.*, 2002; FISCHER *et al.*, 2007), also it was recorded in the southeastern Mediterranean, from Cyprus and Crete (KOVAČIĆ & GOLANI, 2007; KOVAČIĆ *et al.*, 2011), southern Mediterranean in Algeria and Tunisia (DIEUZEIDE *et al.*, 1955, BRADAI *et al.*, 2004), and eastern Mediterranean from Lebanon (AGUILAR *et al.*, 2018), but up to date this species was never recorded off Syria (SAAD, 2005; ALI, 2018). This report represents the second record of *G. geniporus* from the southeastern Mediterranean and confirms the species occurrence in the along the Syrian coast, filling the gap of its distribution between Lebanon and Turkey.

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**Prvi potvrđeni zapis o glavoču bjelašu, *Gobius geniporus*
(Osteichthyes: Gobiidae) na sirijskoj obali (istočno Sredozemno more)**

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SAŽETAK

Primjerak glavoča bjelaša *Gobius geniporus Valenciennes*, 1837, ulovljen je 21. veljače 2021. sa sirijske obale na dubini od 13 metara. Ovaj nalaz imao je ukupnu duljinu 87 mm i težio je 6,89 g. Sadašnji nalaz predstavlja prvi zapis o *G. geniporus* sa sirijske obale i potvrđuje pojavu vrste u slivu Levanta, istočnoj regiji Sredozemnog mora.

Ključne riječi: *Gobius geniporus*; raspon proširenja; Gobiidae; Sirijska obala; Levantski bazen