

A RECENT FINDING OF *DIDOGOBIUS SCHLIEWENI* (GOBIIDAE) WITH SOME NOTES ON ITS ECOLOGY AND DISTRIBUTION

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Abstract. This paper reports a new record of *Didogobius schlieveni* in the Ligurian Sea (Italy). Ecological data of all previous findings and the distribution of this species in the Mediterranean Sea are presented.

Keywords: *Didogobius schlieveni*, new find, Ligurian Sea, ecology distribution

FORMER FINDINGS IN THE ADRIATIC SEA

Didogobius schlieveni Miller, 1992 was described on the basis of a single immature male specimen (Miller 1992). This fish was collected in June 1991 at Unije Island (Fig. 1, site 1) to the southwest of the island of Cres, Croatia, among pebbles in a rocky gully at a depth of about 1.5 m. It swam slowly using the large pectoral fins (Miller 1992). The find was made during daytime, by turning over several stones (Schlieven pers. comm.).

Another finding, in the Adriatic Sea, was made in June 1994 at the Mala Lamjana Cove at Ugljan Island near

Zadar, Croatia (Pallaoro and Jardas 1996) (Fig. 1, site 3). One individual was found in an outer, protective net, used for sea-cages (mariculture area), which had been deposited on the bottom at a depth of less than 1 m, for several days. It was a male and measured 32.4/39.3 mm (SL/TL) (Pallaoro pers. comm.). The next finds were made in the year 2000 by M. Kovačić—a single specimen from each location—at Sv. Marak, Krk Island, at 2.5 m depth (Fig. 1, site 2), and at Šolta Island near Split, Croatia (Fig. 1, site 4), both among pebbles and gravel surrounded by bedrock, cryptobenthic, deep within the layers. The latter two individuals measured 33.4/43.3 mm, probably female and 38.6/49.6 mm, probably male, respectively (SL/TL) (Kovačić 2005, pers. comm.).

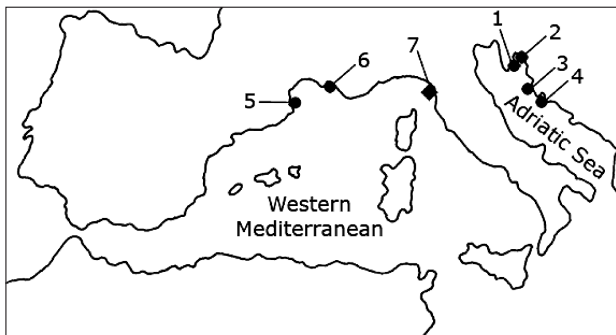


Fig. 1. Distribution of *Didogobius schlieveni* in the Mediterranean Sea

• = former finds, ♦ = recent find

1 = Unije Island near Cres Island (Miller 1992).

2 = Sv. Marak, Krk Island (Kovačić 2005).

3 = Mala Lamjana Cove at Ugljan Island near Zadar (Pallaoro and Jardas 1996).

4 = Šolta Island near Split (Kovačić 2005).

5 = Cap du Troc in the Marine Reserve of Cerbère/Banyuls-sur-Mer (Ballesta et al. 1998).

6 = Endoume at Marseille (Patrice Francour; publication in preparation).

7 = Leghorn, Toscana (presently described record).

FORMER FINDINGS IN THE WESTERN MEDITERRANEAN SEA

The first record for the western Mediterranean Sea was published by Ballesta et al. (1998). A single specimen was observed at Cap du Troc in the Marine Reserve of Cerbère/Banyuls-sur-Mer, France (Fig. 1, site 5). In June 1997 the fish was found during a night dive, among pebbles on a rocky bottom, at about 10 m depth. It also swam slowly using the large pectoral fins (Ballesta et al. 1998).

Another observation of *D. schlieveni* in the western Mediterranean Sea was made by Patrice Francour (publication in preparation) at the marine station of Endoume at Marseille, France (Fig. 1, site 6). In July 1996 a single individual was observed at night, among seagrass, *Posidonia oceanica*, shoots, at depth of 10 m. Its behaviour was described as “relatively quiet” (Francour in prep.).

NEW FINDING IN THE WESTERN MEDITERRANEAN SEA

On 23 September 2005, one specimen of

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Fig. 2. *Didogobius schlieveni* at Leghorn (Toscana, Italy); Photograph: Stefano Guerrieri

D. schlieveni was found at Leghorn (Toscana, Italy) (43°32'59''N, 10°18'0''E) (Fig. 1, site 7). The location was about 100 m off the rocky coast line at a position where it is interrupted by a sandy channel. The observation was made during a night dive at 2300 h. One individual was seen at the depth of 14 m, hidden among sea-grape, *Caulerpa racemosa*, growing between a rocky wall and the sand (Fig. 2). It was moving around slowly. When disturbed, by the diver, it swam about, 20 cm above the bottom, for a distance of 1 m. Thereafter, it settled again.

CONCLUSIONS

Didogobius schlieveni is a rare cryptobenthic gobiid species of the Mediterranean Sea (Tab. 1). It spends the day hidden to become active during the night. Swimming movements are slow, and when disturbed it swims approximately 20 cm above the bottom. *D. schlieveni* lives on a bottom substrate of pebbles or on sand among *Posidonia oceanica* or *Caulerpa racemosa*. It has been

found at depths between 1.5 and 2.5 m in the Adriatic Sea, and at 10 to 14 m in the western Mediterranean. Geographical distribution: up to now finds have been restricted to the Adriatic Sea and the northern part of the western Mediterranean basin (Fig. 1). As this species is certainly very rare and cryptobenthic at daytime it is possible that it is distributed over a much wider area of the Mediterranean Sea, as it turned out for some other cryptobenthic gobies e.g., *Corcyrogobius liechtensteini* (Kolombatovic, 1891) (cf. Patzner 2005).

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Table 1

Characteristics of all known findings of *Didogobius schlieveni*

Date	Water depth	Substrate	Behaviour	Time	Author(s)
June 1991	1.5 m	among pebbles in a rocky gully	slowly swimming, found by turning over stones	daytime	Miller 1992, Schliewen pers. comm.
June 1994	< 1 m	in a net spread on the bottom	hidden in a net	daytime	Pallaoro and Jardas 1996, Pallaoro pers. comm.
July 1996	10 m	among <i>P. oceanica</i>	relatively quiet	night	Francour (in prep.)
June 1997	10 m	among pebbles on a rocky bottom	slowly swimming	night	Ballesta et al. (1998)
April 2000	2.5 m	pebbles and gravel surrounded by bedrock	cryptobenthic, deep within the layers	daytime	Kovačić 2005, Kovačić pers. comm.
May 2000	2 m	pebbles and boulders surrounded by bedrock	cryptobenthic, deep within the layers	daytime	Kovačić 2005, Kovačić pers. comm.
Sept. 2005	14 m	between <i>Caulerpa racemosa</i> on sand, near rocks	slowly swimming	night	present paper

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