

JOACHIM LANGENECK

Università di Pisa, Dipartimento di Biologia, Unità di Biologia Marina e Ecologia,
Via Derna 1, 56126 Pisa, Italy
e-mail: jo.langeneck@gmail.com

**FIRST RECORD OF
HYPLEUROCHILUS BANANENSIS (POLL, 1959)
(PERCIFORMES, BLENNIDAE) IN THE IONIAN SEA**

RIASSUNTO

Viene comunicata l'osservazione nel Mar Piccolo di Taranto di due esemplari adulti (circa 10 cm) del raro e poco conosciuto blennide *Hypleurochilus bananensis*, noto finora nel Mediterraneo per cinque segnalazioni, nessuna delle quali posteriore al 1997. Gli esemplari sono stati osservati a 5 m di profondità su pali infissi in fondale fangoso, ricoperti da epibionti di vario tipo. La specie risulta caratterizzata da labbro superiore estremamente massiccio, tentacoli oculari con un robusto, lungo ramo centrale contornato da diversi tentacoli molto più brevi e sottili, e corpo massiccio e robusto; i maschi adulti hanno i primi due raggi dell'anale trasformati in strutture ghiandolari, che durante la riproduzione svolgono funzione relazionale. Queste caratteristiche permettono di distinguere questa specie dagli altri rappresentanti della sottofamiglia Salariinae viventi in Mediterraneo: il corpo massiccio e il labbro superiore spesso permettono di distinguere *H. bananensis* da *Parablennius pilicornis*, *P. tentacularis*, *P. incognitus* e *P. zvonimiri*, che hanno tentacoli oculari grossolanamente simili, mentre la forma dei tentacoli oculari permette la distinzione da *Parablennius gattorugine* e *P. sanguinolentus*, che hanno una struttura corporea più massiccia, che può ricordare *Hypleurochilus*. Gli altri rappresentanti della sottofamiglia Salariinae risultano ben distinti, *Parablennius rouxi* per la livrea inconfondibile, *Aidablennius* per i tentacoli non ramificati e le ridotte dimensioni e le specie dei generi *Salaria*, *Scartella*, *Lipophrys*, *Microlipophrys* e *Coryphoblennius* per l'assenza dei tentacoli oculari.

Poiché la specie risulta molto rara nel Mar Mediterraneo e in linea generale la sua iconografia è molto scarsa, in particolar modo per quanto riguarda fotografie scattate in ambiente naturale, si ritiene opportuno descrivere la livrea di questa specie nell'esemplare vivo. Il corpo presenta una serie di cinque fasce trasversali alternate brune e beige sabbia, con sul capo un

disegno formato da macchie e strisce scure di forma irregolare; su tutto il corpo si notano, più o meno evidenti, macchie vermicolari rossastre e verdegrigiastro. Sulle pinne dorsale, caudale e pettorali sono presenti numerose macchie scure tondeggianti e ben definite, e tra i primi due raggi della pinna dorsale è evidente una macchia gialla o turchese, ampia e ben marcata, quale si osserva in numerose specie del genere *Parablennius*.

Hypleurochilus bananensis è una specie termofila, descritta nel 1959 per il Congo, il cui areale di diffusione riguarda principalmente l'Atlantico subtropicale orientale. In Mediterraneo è stato segnalato tra il 1965 e il 1997 in Algeria, in Israele, nel Mar Tirreno (a Napoli e Palermo) e in Tunisia; in aggiunta a ciò, la specie è stata segnalata per la costa atlantica spagnola e portoghese tra la fine degli anni '90 e l'inizio degli anni '80. Mentre la segnalazione di questa specie lungo la penisola iberica può probabilmente essere messa in relazione con i cambiamenti climatici, i cui effetti sono evidenti a partire circa dalla metà degli anni '80, la presenza di *Hypleurochilus bananensis* in Mediterraneo a partire dal 1965 fa pensare che in realtà questa specie, per quanto non comune, sia sempre stata presente, e che la sua frequenza sia stata sottovalutata anche in virtù della superficiale somiglianza con numerose specie del genere *Parablennius*, con cui è sovente stata confusa anche in seguito alla descrizione ufficiale. Questa segnalazione risulta di un certo interesse sia perché permette di ampliare la distribuzione della specie nel Mediterraneo, sia perché ne conferma la presenza nelle acque italiane dopo oltre 30 anni dall'ultima segnalazione. La presenza di questa specie nel Mar Piccolo di Taranto, interessato da un notevole impatto antropico (legato alla navigazione, alla coltivazione di mitili e allo scarico di collettori fognari), non stupisce, in quanto le precedenti segnalazioni della specie nei mari italiani si riferiscono ad esemplari campionati in acque portuali.

SUMMARY

Two specimens of the rare blenny *Hypleurochilus bananensis* have been observed in the Mar Piccolo di Taranto, confirming the presence of this species in Italian waters after more than thirty years since the last record. Since the iconography of the species is very poor, its live coloration is described, and the speculated reasons of its presence in the Mediterranean Sea are briefly discussed.

INTRODUCTION

The rare blenny *Hypleurochilus bananensis* (Poll, 1959) was described from the coast of Congo (POLL, 1959), and subsequently reported from several

sites in the subequatorial Eastern Atlantic Coast (Cameroon, Congo, Togo) (WIRTZ, 1982; ANONYMOUS, 1997) with one record from Western Atlantic Ocean (Brazil) {MNHN B-2189, originally misidentified as *Parablennius pilicornis* (Cuv., 1829)}. The species has been recorded from the Southern Spanish Atlantic coast (NIETO and ALBERTO, 1990; 1993) and in the Mediterranean Sea too, although these records can be considered sporadic. In particular, the Mediterranean records refer to the Algerian coast (BATH, 1965, described as a new species, *Hypleurochilus phrynus*), the Israeli coast (BENTUMIA, 1971), the Tunisian coast (GHARRED *et al.*, 1998) and the Italian coast, where the species was reported from southern Tyrrhenian Sea (Palermo and Napoli) (TORTONESE, 1975 – the record refers to specimens collected by Giglioli, 1883; CATALANO, 1978). In Italian waters there was no further record since 1977. In this paper the presence of *Hypleurochilus bananensis* is first reported from the Mar Piccolo di Taranto, a marine lagoon in the nearby of Taranto town (Apulia, Northern Ionian Sea), where some specimens were observed by SCUBA divers. The pictures taken are the first of this species in its natural environment in the Mediterranean Sea.

MATERIALS AND METHODS

On 9th June 2011, two adult specimens of *Hypleurochilus bananensis* of approximately 10 cm TL (Fig.1) were observed during a scuba-diving at a depth of 5 m in the north-eastern part of the Western Inlet of the Mar Piccolo di Taranto (40° 29' 41" N; 17° 15' 56" E). The specimens lived on poles fixed in the muddy bottom at a depth of approximately 10 m. Poles were covered by a rich biocoenosis dominated by ascidians, *Sabella spallanzanii*, *Mytilus galloprovincialis*, *Antedon mediterranea* and bryozoans (Fig.2).

RESULTS AND DISCUSSION

The pictures of *H. bananensis* in the present work are the first taken in nature in the Mediterranean Sea. The two specimens were observed in the Mar Piccolo di Taranto, a marine inlet with a consistent inflow of freshwater by several submarine springs (locally called "citri") and some small tributary rivers, that influence the salinity of the basin (PASTORE, 1993). The basin is also affected by several anthropogenic activities, like the mussels farm (the largest in Italy), sewer pipes and maritime traffic. The presence of *H. bananensis* in a marine environment with a relatively high degree of anthropization is not surprising, as the species has been frequently reported from such an environment (BATH, 1965; CATALANO, 1978; WIRTZ, 1982).



Fig.1 – *Hyleurochilus bananensis* (Poll, 1959) photographed on 9th June 2011 in the Mar Piccolo di Taranto (Photo by courtesy of Stefano Guerrieri)



Fig. 2 – The benthic biocoenosis where was observed *Hyleurochilus bananensis*; the polychaetes *Sabella spallanzani* and *Protula intestinum* and the featherstar *Antedon mediterranea* are clearly recognizable. (Photo by courtesy of Gianni Neto)

H. bananensis differs from the other Mediterranean species belonging to the family Blennidae and the subfamily Salariae for the *i*) extremely thick superior lip, *ii*) ocular tentacles with a strong principal branch surrounded by several thin, *iii*) massive body. Unfortunately, the presence of four large, caniniform teeth, typical of the species, was impossible to check, as the specimens were not collected. Another character, typical of the male of this species and clearly recognizable in one of the observed specimens (Fig. 3), consists of the first two rays of the anal fin that are modified in club-shaped and covered by a dark, mucilaginous tissue, as described in CATALANO (1978). This structure is believed to have a relational function through the production of hormones during the breeding season (ZANDER, 1975). Since the available iconography about *H. bananensis* is very poor, it is interesting to describe its live coloration. The color pattern of the observed specimens is quite characteristic, providing five alternate sandy- and chocolate-brown bars on the body, with a motive of irregular dark blotches and stripes on the head; in addition, reddish and grayish-green vermiculate blotches are more or less evident, especially on the dorsal fin and the head. The pectoral, dorsal and caudal fins show definite dark, round blotches, and between the two first rays of the dorsal fin a large, yellow or blue-green blotch is noticeable. This blotch is also commonly observed in several species belonging to the genus *Parablennius*.



Fig.3 – Male specimen of *Hycleurochilus bananensis* showing the two modified rays on the anal fin (red arrow) (Photo by courtesy of Stefano Guerrieri)

The shape of the lip and the stoutness of the body allow to distinguish this species from *Parablennius pilicornis*, *P. tentacularis* (Brünnich, 1768), *P. zvonimiri* (Kolombatovic, 1892) and *P. incognitus* (Bath, 1968), which are at first sight similar for the shape of ocular tentacles. The shape of the ocular tentacles distinguishes *H. bananensis* from *Parablennius gattorugine* (Linnaeus, 1758) and *P. sanguinolentus* (Pallas, 1814), whose body is as massive as that of *H. bananensis*. The last Mediterranean species of the genus, *Parablennius rouxi* (Cocco, 1833), can be easily distinguished from all other Mediterranean Blennidae (except from a chromatic phase of *P. pilicornis*) because of its particular coloration pattern, pale with a large longitudinal dark band along the side; whereas *Aidablennius sphyinx* (Valenciennes, 1836) is much smaller and has unbranched ocular tentacles. Conversely, the genera *Salaria*, *Scartella*, *Lipophrys*, *Microlipophrys* and *Coryphoblennius* do not have ocular tentacles.

This paper reports the sixth record of *H. bananensis* in the Mediterranean Sea and the third along the Italian coasts, as well as the first in the Ionian Sea. *H. bananensis* is a thermophilic species; hence, its presence with conspicuous populations along the Atlantic Spanish coasts suggests a relation with the trend of climatic changes, whose effects are evident since the second half of the 1980s (FRANCOUR *et al.*, 1994). Nevertheless, the species was reported from the Southern Mediterranean Sea between 1965 and 1997 and a record based on museum specimen dates back to 1883 (TORTONESE, 1975), when the effects of global warming could not explain its presence. Although several Blennidae, including a species belonging to the genus *Hypleurochilus*, can invade and colonize new areas via ballast waters (WONHAM *et al.*, 2000), there is no report of such a mode of introduction for *H. bananensis*. In addition, this species is not considered alien by the CIESM Atlas of Exotic species in the Mediterranean (GOLANI *et al.*, 2002); with the additional remark that *H. bananensis* has been reported in the Mediterranean Sea since a few years after its description, it is very probable that it is a native species and its presence in the Mediterranean Sea has been underestimated, as already observed for other benthic fishes, such as *Thorogobius macrolepis* (GUIDETTI *et al.*, 2006; PIAZZI *et al.*, 2009) and *Scorpaena maderensis* (LA MESA *et al.*, 2007), due to both its actual rarity and high degree of morphological similarity with other native and more common species of the subfamily Salariae, for which it could be mistaken. Further data are needed to widen the knowledge about this species in the Mediterranean Sea and to understand whether *H. bananensis* is an uncommon and localized species, whose distribution is not related to the climatic change, or, as already observed for *Parablennius pilicornis* (PASTOR and FRANCOUR, 2010), we could expect a progressive increase of the records of this Atlantic thermophilic species in the Mediterranean Sea in relation to the warming of Mediterranean waters.

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