

On the occurrence of the Indo-Pacific *Champsodon nudivittis* (Ogilby, 1895) (Perciformes, Champsodontidae) from the Mediterranean coast of Israel, and the presence of the species in the Red Sea

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Abstract

The Indo West Pacific nakedband gaper, *Champsodon nudivittis*, is recorded for the first time from Israel on the basis of a single specimen collected off Ashdod, southern Israel. This species was previously recorded in the Mediterranean from eastern Turkey. Examination of *Champsodon* specimens deposited in the National Collection at Tel Aviv University revealed the previously unknown presence of *C. nudivittis* in the Red Sea. This presence suggests the species may have entered the Mediterranean through the Suez Canal.

Key words: Red Sea, Mediterranean Sea, alien species, *Champsodon nudivittis*

Introduction

Champsodon nudivittis (Ogilby, 1895), one of the 13 species of the monogeneric Indo-Pacific family Champsodontidae (Nemeth 1994; Froese and Pauly 2011), is known from the Indo West-Pacific, including the Madagascar channel (Nemeth 1994). Recently, it was reported from southeastern Turkey, in the Mediterranean Sea (Çiçek and Bilecenoglu 2009). A congener, *C. vorax* Günther, 1867, has been reported from Lebanon (Bariche 2010). The occurrence of *C. nudivittis* in the Levantine basin of the Mediterranean, far from its native range, raised questions as to its mode of arrival. Çiçek and Bilecenoglu (2009) considered it "a ship-mediated introduction".

In May 2011, a single specimen of *C. nudivittis* was collected in southern Israel (off Ashdod) during a survey of the benthic communities. Additionally, twenty *Champsodon* specimens originating in the southern Red Sea and deposited in the National Fish Collection at Tel Aviv University were examined and identified as *C. nudivittis*.

Champsodon nudivittis (Ogilby, 1895)

Centropercis nudivittis Ogilby, 1895: 320. Type locality: Maroubra Bay, New South Wales, Australia.

Material examined: Mediterranean specimen: TAU P-14329, SL 89mm, off Ashdod, 31°45.414N, 34°24.893E, depth: 100m., leg. N. Stern, 31 May, 2011.

Red Sea specimens: TAU P-5523, 18 spec. SL 41-51mm. Eritrea, Dahlak Archipelago, Museri, leg. ISRSE expedition, 23 October 1965 (mentioned in Dor, 1970 as *C. omanensis*, T.A.U. 1311); TAU P-6274, 1 spec. SL 55mm. Eritrea, Dahlak Archipelago, 15°35'N, 40°44'E, depth 36m., leg. ISRSE expedition, 23 October 1965 (mentioned in Dor, 1970 as *C. omanensis*, ISERSE1963); TAU P-6293 1 spec. SL 37mm. Eritrea, Dahlak Archipelago, Museri leg. ISRSE expedition, 23 October 1965.

Diagnosis: A species of *Champsodon* differing from all other species of the family by the combination of the following characteristics: A small patch of scales on the breast (Figure 2), Chin naked, one gill raker on upper limb of first



Figure 1. *Champsodon nudivittis* (TAU P- 14329, SL 89mm) collected off Ashdod, Israel (Photo: Oz Rittner).



Figure 2. Ventral view *Champsodon nudivittis* (TAU P- 14329). The line delimits the scaled from the naked area (Photo: Oz Rittner).

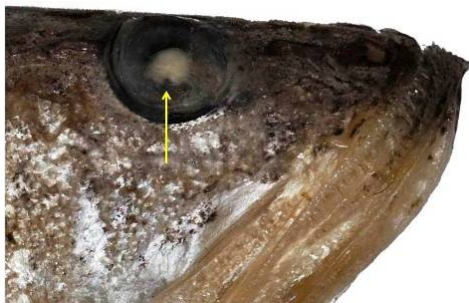


Figure 3. Eye of *Champsodon nudivittis* (TAU P- 14329) ventral flap of iris (Photo: Oz Rittner).

gill, sensory papillae between eyes not arranged in a semicircle, ventral margin of pupil indented by flap of iris (Figure 3).

A brief description: Elongate, laterally compressed fishes. Mouth oblique, maxilla extending to below rear margin of eye, eye large, pupil of eye round, ventral margin of pupil indented by flap of iris. Nostrils, two on each side, on anterior part of snout. Two rows of elongated crests on upper part of head. Base of pelvic fins below a vertical from rear edge of operculum, first dorsal fin inserts behind base of pectoral. Scales small and spiny, not overlapping. Chin, breast (with the exception of a small patch), abdomen and fins bases naked.

Counts of fin rays and gill rakers as well as body proportions presented in Table 1.

Color (fresh): silver pinkish, upper part darker, abdomen shiny silver. Pectoral fins pinkish, caudal fin pinkish with dark pigmentation. Half rays on mid caudal fin colorless.

Discussion

The occurrence of *Champsodon nudivittis* in Israel and Turkey indicates the presence of a reproducing population in the Mediterranean. Evidence of the existence of a population in the Red Sea suggests that their presence in the Mediterranean is part of the Erythrean invasion, commonly known as Lessepsian migration, of Red Sea biota through the Suez Canal (Galil 2009).

Table 1. Counts of fin rays, gill rakers and selected body proportions of *Champsodon nudivittis* from Mediterranean and the Red Sea (see details in list of material).

	Mediterranean (n=1)	Red Sea (n=20)
SL (mm)	89	41-55
D1	5	4-5
D2	20	19-20
A	18	17-18
P	13	12-13
V	5	5
Gill rakers on upper arch	1	1
Gill rakers on lower arch	10	9-10
% Head length of standard length	29.1	28.4-33.1
% Body depth of standard length	21.7	18.4-23.0
% Eye diameter of head length	19.8	18.5-21.2
% Distance snout–first dorsal fin of standard length	34.2	34.8-37.5
% Distance snout–second dorsal fin of standard length	47.4	47.1-50.6
% Distance snout–anal fin of standard length	54.0	51.6-54.0
% Caudal peduncle depth of SL	6.5	6.4-7.0

Our finding of *C. nudivittis* from the Red Sea begs the question of the identity of the Red Sea *Champsodon* species. There is a single report on the presence of *C. capensis* in the Red Sea, whereas *C. omanensis* was widely reported (Kotthaus 1977; Dor 1970; Klauswitz 1982; Baranes and Golani 1993; Nemeth 1994). Other publications (Dor 1984; Goren and Dor 1994; Golani and Bogorodsky 2010) cite the primary reports. Since most of these reports predate the revision of the family (Nemeth 1994), one cannot ignore the possibility that reexamination of the material may lead to different identifications. This suggestion is supported by the present study, during which examination of twenty *Champsodon* specimens previously identified as *C. omanensis* by Dor (1970), were found to be in fact *C. nudivittis*.

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