

First record of the oilfish *Ruvettus pretiosus* (Pisces: Gempylidae) in the northern Adriatic Sea

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A specimen of the oilfish, *Ruvettus pretiosus*, was captured from the northern Adriatic (Gulf of Trieste) and represents the northernmost extension in range of this species in the Adriatic Sea.

Oilfish, *Ruvettus pretiosus* Cocco, 1829, is an oceanic, benthopelagic species found on the continental slope and underwater at about 100–700 m. It occurs in the Mediterranean and Atlantic Ocean, south of the Bay of Biscay, with isolated individuals as far north as the western Irish slope, tropical and subtropical seas (Parin, 1986).

It is rare in the Adriatic, occurring mostly in the southern part (Jardas, 1996). Its basic morphological characters are: body oblong, fusiform; lower jaw slightly projecting below the upper; tips of jaws without cartilaginous processes; no free spines before the anal fin; lateral line single, often obscure; a rigid scaly keel on belly and the scales on the body interspersed with spiny bony tubercles. Up to a standard length of 200 cm, (reported up to 300 cm in the Pacific Ocean) but is usually 100–150 cm (Parin, 1986).

One specimen of *R. pretiosus* was caught in Gulf of Trieste, on 26 October 1998, near the shoreline in front of the Marine Biology Laboratory of Trieste (Figure 1). The specimen was identified in accordance with Šoljan (1975). It was embalmed and deposited in the Natural History Museum of Trieste. Table 1 shows the main morphometric and meristic data. These characteristics of the specimen are in agreement with data by Morović (1960), but differ from those by Parin (1986) and Jardas (1996).

Ruvettus pretiosus was first reported in the Adriatic by Kolombatović (1882) near the Island Šolta 'eastern central Adriatic' in 1875 (Figure 1). Šoljan (1975) registered this species as *Thyrstites pretiosus* C.V. On 7 January 1960 one specimen, total length 175 cm, head length 41 cm, weight 22.5 kg, was caught near the small village of Igrane near Makarska (Figure 1). Bini (1968) recorded one specimen 15 miles off Bari in August 1964.

The numbers of thermophilic species caught during the past few years have increased in the northern Adriatic. Several species, scarce until now, are more abundant, while others are new to the area. On 24 December 1993, a specimen of rubberlip grunt *Plectorhinchus mediterraneus* was captured in a fish trap in the middle of the Piran Bay (northern Adriatic), and the second specimen of this thermophilic species was caught in August 1993 in the Gulf of Trieste. No haemulids have been recorded previously from the Adriatic (Lipej et al., 1996). The increased northward movement of southern Adriatic thermophilic species *Balistes carolinensis* (Pallaoro, 1988; Dulčić et al., 1997a), *Trachinotus ovatus* (Dulčić et al., 1997b), *Lepidopus caudatus* (Pallaoro, 1988), *Coryphaena hippurus* (Dulčić & Lipej, 1997), *Trachipterus trachipterus* (Dulčić, 1996; Dulčić & Lipej, 1997), *Sphyræna sphyraena* (Žiža, 1997), *Sphoeroides pachygaster* (= *S. cutaneus*)

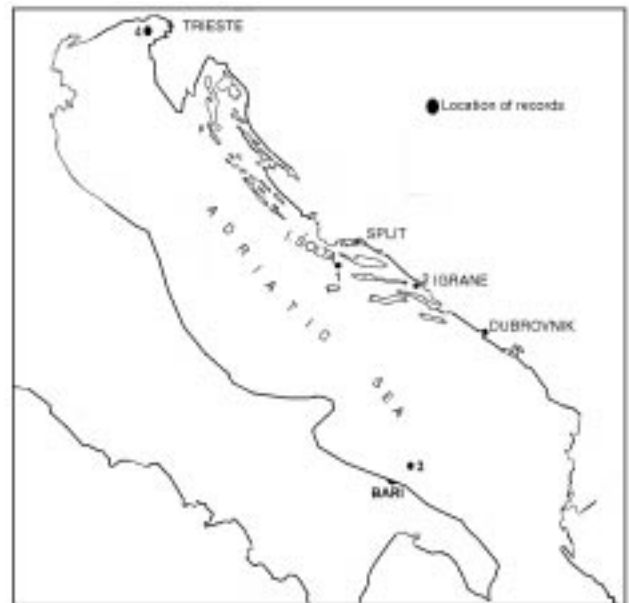


Figure 1. Geographic locations of *Ruvettus pretiosus* records in the Adriatic Sea (1, Island Šolta; 2, Igrane; 3, Bari; 4, Gulf of Trieste).

(Jardas & Pallaoro, 1996), *Thalassoma pavo* (A. Pallaoro, personal communication), *Naucrates ductor* (A. Pallaoro, personal communication), *Euthynnus alletteratus* (M. Kovačić, personal communication) has been also ascertained. Stephens et al. (1988) suggested that changes in fish assemblages may reflect changes in oceanographic conditions which can be the first indication of an environmental shift. According to these authors, temperature is the most important large-scale variable which could affect fish populations. On the Adriatic coast, the northern records of southern species have always followed similar trends: migration of small numbers of adult specimens are observed first and adult migration of fish species may be considered a primary indicator of change. This results in an increased adult population of southern species, recruitment follows and juveniles can now be found. All changes in fish fauna could indicate a more long-term change, as proposed by Francis (1990) and Tönn (1990). It is difficult to interpret accurately long-term observations of coastal water temperature and, therefore, to make a direct correlation between changes in coastal populations and an increase in temperature. Pallaoro (1988) stated the Adriatic ingressions increasing salinity and temperature caused more

Table 1. Morphometric and meristic data of the oilfish specimen in the Gulf of Trieste.

Characteristic	Data (cm)
Total length	163
Standard length	138
Preanal length	95
Predorsal length	40
Head length	38
Snout length	16
Eye orbit diameter	6.2
Upper jaw length	20
Pectoral fin length	17
Ventral fin length	10
Length of anal fin base	26
Body depth (max)	27
Weight (kg)	21
First dorsal fin rays (D1)	XII
Second dorsal fin rays (D2)	15
Pectoral fin rays (P)	13
Ventral fin rays (V)	I-4
Anal fin rays (A)	II-13
Caudal fin rays (C)	17

rare species (*Centracanthus cirrus*, *Aulopus filamentosus*, *Pseudocaranx dentex*, *Synodus saurus*, *Centrolophus niger*) to appear in the central Adriatic region in 1986–1987 period. The Gulf of Trieste is the northernmost basin of the Mediterranean Sea; the Bora wind, the reduced depth and the copious riverine inputs are responsible for a very extreme and particular environment (Aleffi et al., 1995), therefore the status of *Ruvettus pretiosus* needs to be evaluated on a continuous basis.

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