

First documented record of *Lampris guttatus* (Brünnich, 1788) opah, in Greek seas

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In the present study, the occurrence of the fish *Lampris guttatus* in Greek seawaters was documented with the capture of a single individual off the Chalkidiki Peninsula. The specimen had a total length of 86 cm, a maximum height of 46 cm and weighed 20.52 kg. Gonads were absent. Age was determined to be up to 2 years. The species was characterized as very rare for the region. A previous record of the species has been made in 1948, but the report was not well-documented, and thus the present work is considered to be the first conclusive report on the presence of the species in the seas of Greece.

Key words: *Lampris guttatus*, opah, Greek seas, Mediterranean, ichthyofauna.

INTRODUCTION

The Aegean Sea has many specific characteristics, such as a long irregular coastline, the presence of many islands and the interconnection with the Black Sea, which distinguishes it from the rest of the Mediterranean Sea. It is considered to be an enclosed sea with both smooth shorelines and sheer cliffs of considerable height, for example in the Chalkidiki Peninsula. The north Aegean, which is the part of the Aegean Sea northern to the 38th parallel (located at the southern tips of the islands of Evia and Chios), as considered in the Mediterranean International Trawling Survey (Kallianiotis et al., 2004), is covering an area of 19,500 km² with a mean depth of 250 m and a maximum depth of 1500 m and is characterized by an extensive continental shelf, formed by the sediment provided by six large rivers (Axios, Aliakmon, Pinios, Strymon, Nestos and Evros) (Lykousis & Chronis, 1989).

The study of the ichthyofauna of the Aegean Sea has attracted the attention of both Greek and foreign researchers over the last 50 years (Belloc, 1948; Ondrias, 1971; Economidis, 1973; Economidis & Bauchot, 1976; Papakonstantinou, 1988). Sinis & Koukouras (1995) have contributed new information

to the ichthyofauna of the Aegean Sea and most of the species mentioned were characterized as rare, or very rare. The presence of several species was reported for the first time in certain locations, e.g. *Diaphus metopoclampus* in the Eastern Mediterranean, *Nerophis maculatus* in the Aegean Sea and *Pseudocaranx dentex* in the North Aegean Sea (Sinis & Koukouras, 1995).

Despite the extensive bibliography referring to the ichthyofauna of the Aegean, interest in research has been kept alive with the continual discovery of species previously unknown to the region. This study is based on such a discovery with the report of the capture of a single specimen of the species *Lampris guttatus*.

MATERIALS AND METHODS

The documented report of the presence of the fish *Lampris guttatus* in Greek Seas was based on the capture of one specimen on the 26th of September 2002, 8 miles off the coast of Nea Skioni, Chalkidiki and at a depth of about 370 m (Fig. 1). The fish was caught using a long-line set by commercial fishermen (Kyriakos and Charalambos Mavridopoulos of Nea Fokea, Chalkidiki). The long-line had a length of 10 km and had 1000 hooks (No 7) baited with sardine. The individual caught had a total length of 86 cm, a maximum height of 46 cm and

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FIG 1. Map indicating the location where *Lampris guttatus* was caught (★).

weighed 20.52 kg. The species was identified with the aid of the description of Bauchot & Pras (1980). The specimen was deposited at the Museum of the Laboratory of Ichthyology, Department of Zoology, School of Biology, University of Thessaloniki.

RESULTS AND DISCUSSION

The species *Lampris guttatus* is one of two living species known within the Lamprididae family. According to Tortonese (1970), the name of the genus (*Lampris*) originates from the Greek word “lampros” meaning bright while the species *guttatus* is likely derived from the Latin word for spot, *guttat*. The most frequently used common names for the genus in English are opah and moonfish. According to data of Froese & Pauly (2002; www.fishbase.org), the common name of the species in Greek is “Lampropsaro” and refers to an unpublished technical report of Economidis (2001).

Description

Body tall, compressed laterally, oval, with easily removable, small cycloid scales and a visible lateral line markedly curved above the base of the Pectoral fins. (Fig. 2). Colour metallic blue, with shades of green and numerous bright spots in irregular lines, ventral surface silver-pink. Mouth small, no teeth. Fins, colour dark red: Dorsal fin, with the first rays form-



FIG 2. The single specimen of *Lampris guttatus*, caught in the North Aegean Sea.

Table 1. Meristic and morphometric features of a specimen of *Lampris guttatus* having a total length of 86 cm which was collected from North Aegean Sea

Meristic features	
Dorsal (D)	52
Pectoral (P)	21
Ventral (V)	15
Anal (A)	41
Morphometric features (cm)	
Total length	86
Fork length	77
Standard length	73
Maximum body height	46
Head length	24
Mouth vertical opening	5
Mouth horizontal opening	6
Eye diameter	4
Pre-dorsal distance	32
Pre-ventral distance	42
Pre-anal distance	55
Dorsal fin length	38
Anal fin length	25
Pectoral fin length	23
Pelvic fin length	26
Dorsal fin depth	21

ing a bow, Pectoral fins, long, sickle-shaped with a horizontal base, Pelvic fins, long and sickle-shaped, located behind the protuberance of the Pectoral fins, Caudal fin, forked and with marks. The meristic and morphometric features are given in Table 1.

It appeared that the specimen was sexually immature, since gonads were absent and it was not possible to identify the sex. Residues of cephalopods were found in the stomach contents. The scales were examined in order to determine the age of the spec-

imen and two annual rings could be recognized (the first annual ring was not obvious on all of the scales examined).

Geographical distribution

The species is encountered in the North-Eastern Atlantic Ocean, the North Sea and the Mediterranean Sea, while it is cosmopolitan in warm and tropical seas (Palmer, 1986). Tortonese (1970) has characterized the species as a very rare in the Mediterranean, with known catches in all of the Italian seas, as well as in Spanish and French coastal waters. Bauchot & Pras (1980) refer to the species as a relatively common and Bauchot (1987) as a slightly common. Swaby & Potts (1990) have categorized the species among the uncommon sea fish of the British Isles.

Belloc (1948) was the first to report the presence of this species in Greek seas with the synonym *Lampris luna* Risso. However, the report was incomplete, since the number of individuals was not given, nor the location or the wider area in which the species was found. It is suggested that the author may not have had a specimen and that the report was based on information provided by fishermen. Thereafter, the report by Belloc has been cited in more recent works (Ondrias, 1971; Economidis, 1973; Papakonstantinou, 1988) in order to record the ichthyofauna of the Greek seas. Therefore, the recent discovery of this species off the coast of Nea Skioni, Chalkidiki, represents the first documented report in Greek waters and more specifically in the Northern Aegean.

In accordance with the above, *Lampris guttatus* must be characterized as a very rare fish in Greek seawaters. The rarity of the species may be attributed to the small number of individuals living in the Aegean or to the occasional movement of some individuals eastwards from the Mediterranean in searching of food, rather than a lack of research or restricted commercial fishing activities. Over the last few years, extensive research has been carried out at the National Fisheries Research Centre (Papakonstantinou, personal communication) and overfishing has been observed. In addition, this view is strengthened by information provided by Tortonese (1970) that the species is solitary and that it probably swims slowly.

The only specimen of *Lampris guttatus* caught in Greek waters at a depth of about 370 m, had a length of 86 cm and weighed 20.52 kg, while the other fish

caught on the long-line were European hake (*Merluccius merluccius*). Tortonese (1970) has reported a specimen of *L. guttatus* with a length of 95 cm and a weight of 28 kg which was fished at Finale, Italy, while individuals reach lengths up to 180 cm and a weight of about 100 kg. Individuals of the same length and weight have been reported by Bauchot & Pras (1980), while according to Froese & Pauly (2002), Gon (1990) has reported a maximum length of 200 cm and a maximum weight of 270 kg. The above reports are in accordance with the view that the species lives up to a depth of 400 m. *L. guttatus* is of commercial value as it is considered to be a nutritional and palatable fish (Tortonese, 1970; Bauchot, 1987; Froese & Pauly, 2002).

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