

NOTE

First record of *Neocyttus helgae* (Pisces: Oreosomatidae) on the slope off Galicia (Northwest Spain)*A.C. FARIÑA¹, A. PÉREZ² and R. MORLÁN¹¹ Centro Oceanográfico, Instituto Español de Oceanografía; Apdo. 130, 15080 A Coruña. Spain.² Cofradía de Pescadores, Cedeira, A Coruña. Spain.

SUMMARY: The capture of a specimen of *Neocyttus helgae* (Oreosomatidae) on the Galician slope (Northwest Spain) is recorded. It is the first time this species has been recorded in the waters off the Iberian Peninsula. Representatives of the family Oreosomatidae are scarce in the temperate waters of the Northern Hemisphere and *N. helgae* is known to be present only in the Northeast Atlantic from a small number of individuals. Morphometric and meristic characteristics of the specimen examined are given.

Key words: Pisces, Oreosomatidae, *Neocyttus helgae*, Northwest Spain.

INTRODUCTION

Fishes from the family Oreosomatidae, also known as "oreos" (Myers, 1960), are widely distributed throughout the Southern Hemisphere, and are abundant in the deep waters of the shelf and slope in the southeastern Atlantic, south of Australia, the Tasman Sea and New Zealand (Myers, 1960; Lloris, 1986; James *et al.*, 1988). In the waters off southeastern Australia and around New Zealand four species of oreos (*Allocyttus verrucosus*, *Allocyttus niger*, *Neocyttus rhomboidalis* and *Pseudocyttus maculatus*) are commonly caught as a by-catch to the fishery of the orange roughy, *Hoplostethus atlanticus*. Until recently, oreos were

mostly discarded, but they are currently considered to be a commercial species (Lyle *et al.*, 1992; Lyle and Smith, 1997). There are few records of Oreosomatidae species found in the temperate waters of the Northern Hemisphere (Myers, 1960; Karrer, 1990). In the Northeast Atlantic the family is represented by two species: *Allocyttus verrucosus* and *Neocyttus helgae* (Karrer, 1986; Du Buit and Quéro, 1993).

This contribution records the catch of a specimen of *Neocyttus helgae* (Holt and Byrne 1908) in the waters of the Galician continental slope (Northwest Spain). The fact that only a few specimens of this species have been caught in the Northeast Atlantic and that it has not been recorded to date as a member of the ichthyologic fauna of the Iberian Peninsula should warrant special interest.

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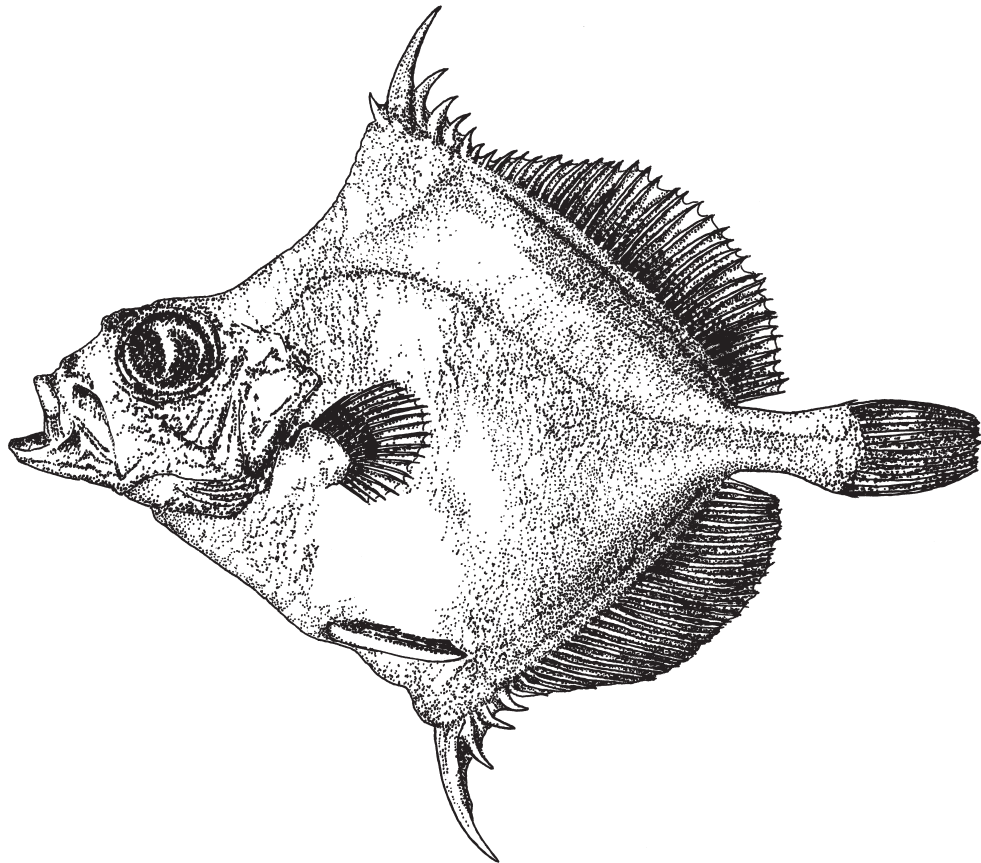


FIG. 1. – *Neocyttus helgae* (length 232 mm) caught on the slope off Galicia.

MATERIAL AND METHODS

A specimen of *Neocyttus helgae* (Fig. 1) was caught in the waters of the continental slope off northern Galicia in April 1997 by the fishing vessel “Sarridal” based at the port of Cedeira (A Coruña, Spain). The specimen was caught using large mesh gill nets, at a depth of 900 m, in the fishing ground known as “As Paredes”, at a geographical position of 44° 12' N, 8° 18' W (Fig. 2). The specimen was transferred to the collection of the Centro Oceanográfico of the Instituto Español de Oceanografía in A Coruña.

Morphometric measurements were taken and the following structures were counted: gill rakers of the first gill arch, lateral line scales, and spines and rays of the fins.

RESULTS AND DISCUSSION

In the Family Oreosomatidae, juveniles and adults are extremely different in body form. All

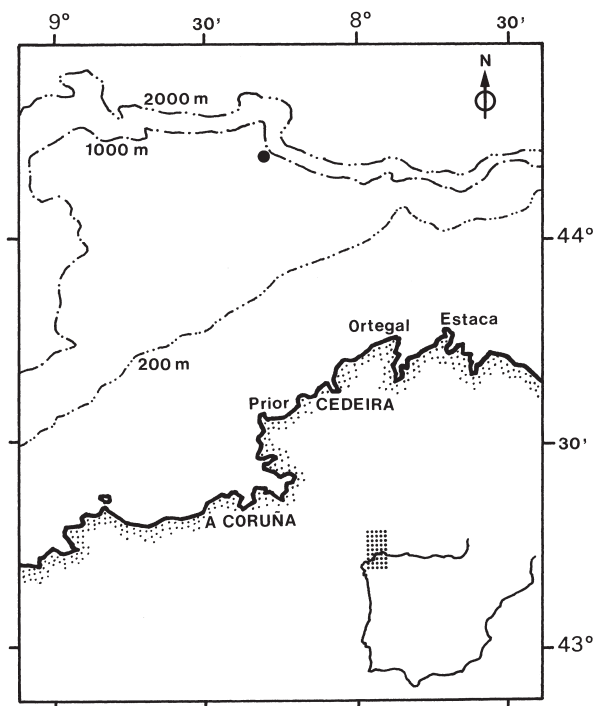


FIG. 2. – Location of the capture of *Neocyttus helgae* in Galician waters.

species of Oreosomatidae are assumed to undergo a pelagic pre-juvenile Oreosoma stage, which is characterized by a deep body having conical protuberances along the sides (Myers, 1960; Karrer, 1986; James *et al.*, 1988). The present specimen shows adult characteristics. The following external details primarily describe the adult of *N. helgae*: very deep body, compressed with a rhomboid shape; and a concave predorsal profile. The head surface covered with asperities, and consequently much rougher and more granulated than the remainder of the body. All fin spines are strong. The first anal and second dorsal spines are the longest and strongest, and have fine longitudinal grooves. The soft dorsal and anal fin rays have small lateral spinules. The spine of the pelvic fins exceeds the origin of anal fin. The body coloration is deep brown; and the fin and gill membranes, as well as the mouth parts, are blue-gray.

There are few records of *Neocyttus helgae* from the Northeast Atlantic. Apart from the holotype of *N. helgae* (Holt and Byrne, 1908) from off the Irish coast, the other record of the species described was caught north of Madeira. Although it was first described as *Crassispinus granulosus* Maul (1948) and later as *Neocyttus rhomboidalis*, Albuquerque (1954-1956), reported differences between the sample from Madeira and other *N. rhomboidalis* sam-

ples described by other authors and suggested a revision of the specimen, that finally was identified as *N. helgae* by Wheeler (1973). Both records are the only ones listed in the review of the family Oreosomatidae in the Northeast Atlantic (Karrer, 1986). They are also the only ones which were studied morphometrically. However, Quéro *et al.* (1985) reported the first record of a specimen of *Neocyttus helgae* in the Bay of Biscay. Later, Quéro *et al.* (1993) reported the catch of several specimens between a depth of 1000 and 1100 m from the banks of "Petite Sole" and "La Chapelle", but they did not present morphometric or meristic data. In addition to these references to the species, it is important to note that Bakes *et al.* (1995), in a comparative study of the biochemical composition of several species of oreos in Australian waters, also mentioned the use of three specimens of *Neocyttus helgae*, caught in 1993 in Atlantic waters around the Faroe Islands.

Morphometric and meristic characteristics for the present specimen as well as the data reported from the specimens from Ireland (Holt and Byrne, 1908) and Madeira (Maul, 1948) are given in Table 1. There is a narrow range of variability in the data provided. However, the specimen from Galicia shows the largest length of the second dorsal and first anal fin spines. The live weight of the specimen was 0.225 kg.

TABLE 1. – Comparison of measurements and counts for specimens of *Neocyttus helgae*.

Measurements	Present specimen	Holt and Byrne, 1908	Maul, 1948
Total length	232	239	
Standard length	201	201	215
Greatest body depth	154	131	
Head length	63.2	68	73
Head depth	46.2		
Horizontal diameter of orbit	29	29	23
Vertical diameter of orbit	25.2	23	
Interorbital width-middle	22	22	
Predorsal length	75		
Preanal length	95		
Length of base of dorsal fin	118		
Length of base of anal fin	97		
Pectoral fin length			
Depth of caudal peduncle	13.4	15	17
Length of second dorsal spine	39.1	31	33
Length of first anal spine	36.1	31.5	25
Length of pelvic spine	34.6	30	
Meristic characters			
Dorsal	VII + 34	VII + 34	VII + 35
Anal	IV + 31	IV + 30	IV + 32
Pelvic	I + 5	I + (5 6 6)	I + 5
Pectoral	19	19	17
Caudal	13		
Lateral line scales	80	about 82	74
Gill rakers in first gill arch	24		23

The biology of *Neocyttus helgae* is not known. Living at great depths, it shows habits possibly corresponding to a midwater species, which would make it inaccessible to the gears used by commercial fisheries. The exploration and expansion of fishing activity to the deep zones of the slope, which has been occurring in several areas of the Northeast Atlantic, will likely bring to light new catches of fishes that have been uncommon up to now. Species such as the one reported here, and which are thought to be rare or solitary, may prove to be abundant at certain depths.

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