

RECORD OF OCCURRENCE OF GASTEROSCHISMA MELAMPUS (SCOMBRIDAE) IN THE SOUTH OF BRAZIL

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SUMMARY

Three specimens of the Scombridae family, caught by a Brazilian longliner off the south of Brazil on July 30, 1988, were identified as butterfly mackerel, Gasteroschisma melampus, Richardson, 1845. These individuals were caught at 34°18'S-49°58'W in depths ranging from 60 to 120 m, and surface water temperature of 17.1°C. The boat was fishing above waters around 3,000 m deep. Two of the fish were adults, male and female, of 122.6 and 127.0 cm total length, respectively. The third fish was rejected because it had been preyed by other fish.

RESUME

Trois spécimens de la famille des Scombridés, capturés le 30 juillet 1988 par un palangrier brésilien au large du sud du Brésil, ont été identifiés comme étant des Gasteroschisma melampus (Richardson 1845). Ces poissons ont été pris par 34°18'S - 49°58'W, à une profondeur de 60 à 120 m, avec une température de l'eau de 17,1°C en surface. La zone où pêchait le bateau atteint une profondeur de 3.000 m. Deux des poissons étaient des adultes, mâle et femelle, qui mesuraient respectivement 122,6 et 127,0 cm de longueur totale. Le troisième poisson a été rejeté du fait qu'il avait été endommagé par d'autres poissons.

RESUMEN

Tres ejemplares de la familia Scombridae, capturados por un palangrero brasileño frente a la costa sur de Brasil el día 30 de julio de 1988, fueron identificados como Gasteroschisma melampus, Richardson, 1845. Fueron pescados a 34° 18'S - 49° 58'W a profundidades entre 60 y 120 m, con una temperatura en superficie de 17.1°C. El barco pescaba en aguas de una profundidad cercana a los 3.000 m. Dos de los peces eran adultos, macho y hembra y medían 122.6 y 127.0 cm respectivamente. El tercer pez fue descartado al haber sido dañado por otros peces.

1. INTRODUCTION

The butterfly mackerel, Gasteroschisma melampus, Richardson, 1845, according to COLLETE & NAUEN (1983) is synonymous with Lepidothynnus huttoni, Günther, 1889, and Chenogaster holmbergi, Lahille, 1903.

The species has a circunglobal distribution in temperate South waters and it is most frequently taken in areas of 8°C to 10°C surface water temperatures (WARASHIMA & HISADA, 1972).

This epipelagic oceanic species, belongs to Scombridae family, Gasteroschismatinae subfamily. There is only one genus and a single species.

2. MATERIAL AND METHODS

The three butterfly mackerel were captured by the Brazilian longliner Itauna I. The hooks of the fishing gear were distributed in depths ranging from 60 to 120 m. According to Mr. Akira Nakamura, the captain of the boat, the three specimens were caught on July 30th, 1988, off the coast of Rio Grande do Sul State, 34°18'S - 49°58'W, in waters around 3,000m deep. The superficial temperature was 17.1°C. Only two of them were put on board and donated to the "Instituto de Pesca" in Santos-SP. The third fish was rejected because it had been preyed by other fish.

The identification and the meristic and morphometric data, were based on COLLETE & NAUEN (1983). The morphometric data are expressed in percentages of the total length (TL).

3. RESULTS AND DISCUSSION

The two specimens, caught off Rio Grande do Sul State by a Brazilian longliner an adult male of 122.6 cm (TL) and an adult female of 127.0 cm (TL), were identified as Gasterochisma melampus, Richardson, 1845.

Table 1 presents the morphometrics and meristics data and sex of butterfly mackerel. The meristics data are according to those presented by COLLETE & NAUEN (1983).

The 1,708 exemplars from 74 to 164 cm of total length, cited by WARASHIMA & HISADA (1972), also caught by longliners, occurred in the whole fishing grounds south of latitude 35°S in Atlantic, Pacific and Indian Oceans. These three specimens were caught in latitude 34° 18'S recording the northern occurrence of this species (FIGURE 1).

The surface water temperature, measured by fishermen, in areas where the butterfly mackerel was most frequently taken ranged from 8°C to 10°C. However it could be found in surface water temperature up to 16°C (WARASHIMA & HISADA, 1972). Nevertheless, the Brazilian specimens were caught in surface water temperature of 17.1°C.

According to WARASHIMA & HISADA (1972), southern bluefin tuna, Thunnus maccoyii, frequently occurs in operations that catch butterfly mackerel too. Also in the same trip of the butterfly mackerel occurrence, four southern bluefin tuna were caught by the Brazilian longliner. The catch of southern bluefin tuna by Brazilian longliners is also very rare.

ACKNOWLEDGEMENTS

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LITERATURE CITED

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- Warashima, I. & K. Hisada, 1972. Geographical distribution and body length composition of two tuna-like fishes, Gasterochisma melampus Richardson and Allothunus fallai Serventy, taken by Japanese longline fishery. Bull. Far. Seas. Fish. Res. Lab., (6): 51-75 (in Japanese with English summary).

TABLE 1. Proportional dimensions as percentages of total length of two Gasterochisma melampus from South of Brazil: adult female 127.0 cm and adult male 122.6 cm.

| | female | male |
|-------------------|--------------|--------------|
| Length | | |
| Fork | 81,1% | 80,7% |
| Standard | 89,8% | 89,7% |
| Head | 21,9% | 22,4% |
| Body depth | 22,4% | 24,6% |
| Eye diameter | 2,7% | 2,7% |
| Number of rays | | |
| First dorsal fin | 18 | 17 |
| Second dorsal fin | 10+8 finlets | 10+7 finlets |
| Pectoral fin | 21 | 21 |
| Anal fin | 12+7 finlets | 12+7 finlets |

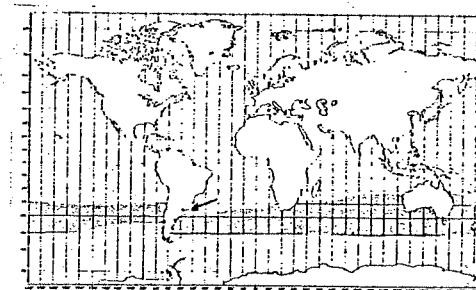


FIGURE 1 - Distribution area of Gasterochisma melampus by COLLETE & NAUEN (1983) and the new occurrence (34° 18' S - 49° 58' W).