

***Emmelichthys ruber* (Trunov, 1976): first record of the family Emmelichthyidae (Actinopterygii: Perciformes) in the Western South Atlantic Ocean (Northeastern Brazil).**

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Abstract. The first record of the family Emmelichthyidae (Actinopterygii: Perciformes) from Brazil is presented with basis on 41 specimens of *Emmelichthys ruber* (Trunov, 1976) measuring between 111.2 and 171.0 mm standard length collected at 18°02.465' S - 36°06.586' W (littoral of the Bahia State, northeastern Brazil) between 28 and 56 m of deep in June, 1999.

Key words: first record, marine teleost, Emmelichthyidae, *Emmelichthys ruber*, Brazil

Resumo. É apresentado o primeiro registro da família Emmelichthyidae (Actinopterygii: Perciformes) para o Brasil com base em 41 exemplares de *Emmelichthys ruber* (Trunov, 1976) medindo entre 111.2 e 171.0 mm de comprimento padrão coletados em 18°02.465' S - 36°06.586' W (litoral do estado da Bahia, nordeste do Brasil) entre 28 e 56 m de profundidade em junho de 1999.

Palavras-chave: primeiro registro, teleosteo marinho, Emmelichthyidae, *Emmelichthys ruber*, Brasil

INTRODUCTION

The members of family Emmelichthyidae (known as "rovers") occur mainly in tropical to warm temperate regions of the eastern Atlantic, Indo-Pacific, south Pacific and Caribbean Sea, comprising 3 genera and 15 species (NELSON, 2006). The adults usually inhabit areas near the bottom, in depths between 57 and 500 m; some species reach 40.0-60.0 cm in length and are considered excellent as food but they are nowhere near abundant enough to be of significant commercial importance (HEEMSTRA in SMITH & HEEMSTRA, 1986; CERVIGÓN, 1993).

The Bahia state (northeastern coast of Brazil, in the Western Atlantic Ocean) has the most extensive littoral among the Brazilian federative units (1.188 km, corresponding to 13.2% of the Brazilian coast) (BAHIA PESCA, 1994), but its ichthyofauna is still poorly known, both in regards to its specific composition and in relation to the most diverse aspects of its biology.

MATERIAL AND METHODS

The present study refers to 41 specimens belonging to the family Emmelichthyidae caught on June, 8th 1999 with the aid pelagic trawling nets, between 28 and 56 m deep at S18°02.465' -

W36°06.586' by the French OV "Thalassa" during "Operação Bahia I", as part of the "Programa de Avaliação do Potencial Sustentável de Recursos Vivos na Zona Econômica Exclusiva Brasileira - Programa REVIZEE/SCORE Central" (SECIRM/MMA/Bahia Pesca).

Body measurements, taken with a caliper accurate to 0.05 mm, counts, and identification to generic and specific level were based on HEEMSTRA & RANDALL (1977) and presented in table 1 like percentages of standard length.

The materials here cited is housed in the collection of Laboratório de Ictiologia (Departamento de Ciências Biológicas), Universidade Estadual de Feira de Santana (Bahia, Brazil), preserved in 70% alcohol under the number LIUEFS 4033.

RESULTS

On the basis of the dichotomous key and the diagnosis presented by HEEMSTRA & RANDALL (1977) it was possible to determine the examined specimens as *Emmelichthys ruber* (TRUNOV, 1976) (Figure 1). Counts, measurements, and body proportions, as well as its expression in relation to the standard length of the analyzed material

are presented in Table 1, along with the values obtained by HEEMSTRA & RANDALL (1977).

DISCUSSION

The family Emmelichthyidae was revised by HEEMSTRA & RANDALL (1977). The genus *Emmelichthys* Richardson, 1845 includes 4 species, of which *E. ruber* (TRUNOV, 1976) is recorded from the Atlantic; *E. ruber* is known from Bermuda (near Nonsuch Island), Gulf of Mexico (off Florida, USA), Jamaica (Discovery Bay), and Saint Helena (Heemstra & Randall 1977; HEEMSTRA *in* SMITH & HEEMSTRA 1986; RUIZ-CARUS *et al.* 2002).

Saint Helena Island, the type-locality of *E. ruber*, is located in the middle of the Atlantic Ocean, very far from the Brazilian coast, and its record was done off the island (at 15°41' S - 06°59' W); the record of *E. ruber* from the Gulf of Mexico is based on a specimen regurgited by *Lutjanus campechanus* (POEY, 1860), Actinopterygii, family Lutjanidae (HEEMSTRA & RANDALL, 1977; RUIZ-CARUS *et al.*, 2002).

E. ruber reaches at least 23.0 cm in length, with adults and juveniles larger than 10 cm occurring near the bottom in depths of 180 to 200 m; although considered common in some areas, its small size and the type of bottom to which

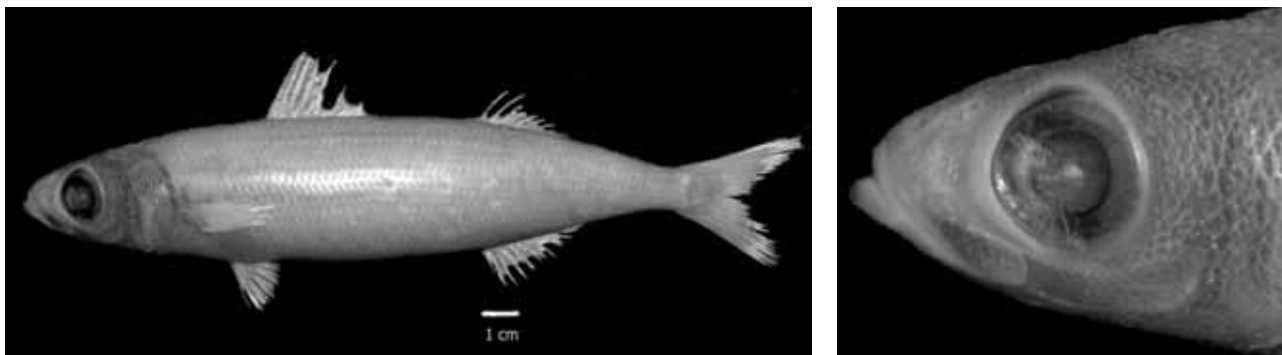


Figure 1. *Emmelichthys ruber* (LIUEFS 4033 - total length: 196,0 mm, standard length 164,0 mm).

Table 1. Meristic and morphometric data (body measures expressed as percentages of SL) of *E. ruber* examined by HEEMSTRA & RANDALL (1977) and in the present study. SL: standard length.

Counts, body measurements	Heemstra and Randall (1977)	Present Study
Spines, rays, dorsal fin	XII-XIII, 9-11	X-XI, 8-10
Spines, rays, anal fin	----, 9-10	III, 9-10
Spines, rays, ventral fin	----, ----	I, 5
Rays pectoral fin	19-20	Right: 19-20 Left: 17-20
Gill rakers	33-38	Upper arch: 7-11 Lower arch: 24-27
Standard length	64.0-162.0 mm	111.2-171.0 mm
Body deep/SL	19,0-22,0%	15,2-20,7%
Body width/SL	14,0-16,0%	9,5-19,2%
Head length/SL	25,0-27,0%	22,0-29,1%
Orbit diameter/SL	8,6-9,8%	7,1-10,5%
Interorbital width/SL	6,5-7,1%	5,6-8,1%
Predorsal length/SL	35,0-38,0%	31,1-46,7%
Distance snout-anus/SL	58,0-61,0%	49,7-65,1%
Pectoral length/SL	16,0-19,0%	11,3-22,0%
Ventral length/SL	12,0-15,0%	7,8-18,8%
Caudal length/SL	18,0-20,0%	9,0-24,9%
Caudal peduncle deep/SL	6,3-8,4%	5,1-8,8%
Caudal peduncle width/SL	----	2,7-8,0%
Snout length/SL	----	7,0-11,7%

is associated (irregular and inclined) makes its commercial exploration difficult (HEEMSTRA *in* CARPENTER, 2002).

ROBINS *et al.* (1986) record for Emmelichthyidae, *Erythrocles monodi* Poll & Cadenat, 1954 from the Atlantic coast of North America and add that its range extends from South Carolina (USA) and the Bahamas to Venezuela, this being the only other species in the family cited for North America.

CERVIGÓN *et al.* (1992) confirm the presence of *E. monodi* in the northern coast of South America; CERVIGÓN (1993) also cites only this species to the coast of Venezuela, which is considered as the only representative of the genus in the Western Atlantic. These authors do not cite *E. monodi* for Brazilian waters. HEEMSTRA *in* CARPENTER (2002) confirms the presence of *E. monodi* and also records *Emmelichthys ruber* in the Western Atlantic (Fishing Area 31, after Food and Agriculture Organization of the United Nations, FAO).

MENEZES & FIGUEIREDO (1980) treating the marine fish species of Southwestern Brasil, CARVALHO-FILHO (1999) and MENEZES *et al.* (2003) treating the marine fish occurring in Brasil, FIGUEIREDO *et al.* (2002) and BERNARDES *et al.* (2005), commenting on the fishes of the South and Southwestern Brazil "Zona Econômica Exclusiva", BONECKER & CASTRO (eds.) treating the fish larvae in the central region of the Brazilian "Zona Econômica Exclusiva", do not record the presence of representatives of the family Emmelichthyidae.

Small differences in counts and body proportions were observed in relation to the material examined by HEEMSTRA AND RANDALL (1977) (Table 1) who, despite analyzing only five specimens measuring between

64 and 162 mm, extended the known intraspecific variation of *E. ruber*.

Thus, the occurrence of the family Emmelichthyidae (Actinopterygii: Perciformes) is recorded for the first time off the coast of Brazil (Western Atlantic Ocean), on the basis of the record of 41 specimens of *E. ruber*, a species already known from other areas of the Western and Central Atlantic.

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