



## The coastal fishes of Madeira Island—new records and an annotated check-list

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### Abstract

A check-list of the coastal fishes of Madeira Island is presented. The species *Rhincodon typus*, *Megalops atlanticus*, *Apterichtus caecus*, *Apterichtus* sp., *Chelidonichthys lucernus*, *Caranx crysos*, *Lutjanus goreensis*, *Crystallogobius linearis*, and *Canthidermis sufflamen* are recorded for the first time from Madeira waters. We have recognized 13 previous records as identification errors or registration errors and indicate 14 other records as doubtful. Including the nine new records, we list 226 species from the coastal waters of Madeira Island.

**Key words:** Eastern Atlantic, marine biodiversity, reef fish, global warming

### Introduction

Santos *et al.* (1997) have given an annotated check-list of the marine fishes of the Azores. Brito *et al.* (2002) published an annotated list of the fishes of the Canary Islands. No such list has been published for the Madeira archipelago (including Madeira Island, Porto Santo Island, and the Desertas Islands) since 1949 (Maul 1949).

The first list of Madeiran fishes was produced by Bowdich (1825), comprising 18 species found in local markets, nine of which he considered as rare or new. The fishes of Madeira then attracted the attention of the English naturalist R. T. Lowe, who, during his 32-year stay in Madeira, described several new species of fish and produced the first comprehensive ichthyological account, listing and illustrating 27 species found in coastal and deep waters of Madeira (Lowe, 1843-60). One century later, Noronha & Sarmiento (1934) listed 283 species for Madeira and gave information on the historical aspects of the fisheries in the archipelago. But it was only in 1949 that the first check-list of the fishes of Madeira was published (Maul, 1949). This author, who is responsible for a huge increment in the knowledge of the fish of Madeira over a period of more than 50 years (see Biscoito (1997) for a complete bibliography and biographical notes), lists 328 species with indications on their relative abundance, habitat and existence in the collection of the Museu Municipal do Funchal (História Natural) (MMF). Based on Maul's check-list and on his own experience as a skilled amateur fisherman, Nunes (1974) published an account on the fishes of Madeira, with descriptions, drawings and picturesque fishing directions and culinary advice on 189 coastal and deep-water species. Ré (1978) and Araújo *et al.* (2005) gave two limited lists of coastal fishes observed at the Desertas Islands and at Porto Santo Island.

The fishes of Madeira should have been included in the 3 volumes on the "Fishes of the North-eastern Atlantic and the Mediterranean" (Whitehead *et al.* 1984-1986). However, many authors contributing to this compilation have apparently forgotten to include the Madeira archipelago and, as a consequence, numerous species common at Madeira are not listed there. The subsequent work "Check-list of the fishes of the eastern