



Fish fauna of Baía da Babitonga (southern Brazil), with remarks on species abundance, ontogenic stage and conservation status

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Abstract

Basic data on species composition and abundance are essential to subsidize the development of effective actions for conservation of biological diversity and to identifying the effects arising from these actions. This work provides an updated checklist of the fish species occurring in the proposed Baía da Babitonga marine protected area (southern Brazil) as well as their abundance, ontogenic stage and conservation status, based on multi-site data collected in shallow water and deeper zones of the main channel and from published literature. A total of 152 fish species belonging to 18 orders and 53 families were registered, with 29 species being reported for the first time in Baía da Babitonga. Among the registered species, the exotic blenny *Omobranchus punctatus* (Valenciennes) was the most unexpected. The most species-rich families were Sciaenidae (18), Carangidae (15), Engraulidae (9), Paralichthyidae (8), Epinephelidae (8) and Gobiidae (7). Nine species inhabiting Baía da Babitonga are classified as globally threatened, and 17 species are classified as nationally overexploited; four of these species are on both global and national red lists.

Key words: fish assemblage, ichthyofauna, Santa Catarina, species list, southwestern Atlantic

Introduction

Baía da Babitonga, the surrounding mangrove area and adjacent marine environment are part of a high priority zone for conservation on the Brazilian coast (MMA 2007), and are currently a candidate site for the creation of a sustainable use marine protected area (MPA), in the national category of *Reserva de Fauna*. Curiously, faunal aspects are poorly known for this region, and available information comes mainly from grey literature. This paucity of information makes it difficult to measure Baía da Babitonga's real ecological importance and priority status for conservation in the face of social, technical and financial constraints relative to the establishment of protected areas in Brazil as elsewhere in the world. The main motivations driving the creation of this protected area are the presence of endangered species, such as the cetaceans *Pontoporia blainvillei* (Gervais & D'Orbigny) and *Sotalia guianensis* (Bénédictin) and the goliath grouper, *Epinephelus itajara* (Lichtenstein) (Gerhardinger *et al.* 2009). Additional motivation for the designation of the MPA comes from potential improvement of local ecotourism, artisanal fisheries and the capacity to minimize present actions that threaten the environmental integrity of the bay, such as the building of new ports, expanding real estate and predatory fishing. Given the constraints exposed above, provision of the baseline biological information on the several taxonomic groups that compose the aquatic biota in understudied areas in the country has a central role in selection of priority sites for conservation and development of an effective MPAs network in a national context.

Previous information about the Baía da Babitonga fish community is dispersed in few works published mainly in documents of limited distribution. These works include surveys carried out in a secondary water body located in inner bay called Linguado Chanel (Figure 1; Corrêa *et al.* 2006), in the proper bay (Hostim-Silva *et al.* 1998) and more recently, in an artificial environment created for mussel culture (Freitas & Velastin 2010). However, a com-