

Using the size independent discriminant analysis to distinguish the species of *Myliobatis* Cuvier (Batoidea: Myliobatidae) from Brazil

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Abstract

The two only species of *Myliobatis* Cuvier, that occur in the Brazilian coast, *Myliobatis freminvillii* Lesueur and *Myliobatis goodei* Garman, have great similarity in external morphology and possess few diagnostic characters that allow easy identification. In order to discriminate these two species, 34 specimens of *M. freminvillii* and 19 of *M. goodei* were measured and twenty morphometric characters were taken from each specimen. The residuals of a previous regression analysis performed on all morphometric variables relative to the disc width were used in the Size Independent Discriminant Analysis. All specimens were correctly allocated to their respective taxa. The analysis showed a clear separation of the specimens, forming two well-defined distinct groups. The fifth interbranchial distance (5ID) was the variable with the highest standardized discriminant coefficient value. The fifth interbranchial distance (5ID)-Internarial distance (IND) and fifth interbranchial distance (5ID)-Mouth width (MW) were the proportions that showed better differentiation between *Myliobatis* species.

Key words: Identification, *Myliobatis*, Brazil, size independent discriminant analysis

Introduction

The genus *Myliobatis* Cuvier comprises 12 species of rays widely distributed in tropical to warm temperate continental waters (Bigelow & Schroeder 1953; Compagno 1999). The members of this genus can be recognized, amongst other features, as having a rhombic disc broader than long, a head distinct from disc with a single cephalic lobe projected forward, and the presence of a dorsal fin. The only two valid species of *Myliobatis* occurring on the Brazilian coast, *Myliobatis freminvillii* Lesueur and *Myliobatis goodei* Garman,