



# Observations on the reproductive seasonality of *Atlantoraja platana* (Günther, 1880), an intensively fished skate endemic to the Southwestern Atlantic Ocean

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## Abstract

Specimens of the La Plata skate (*Atlantoraja platana*) were collected monthly from commercial fishing landings at Guarujá, São Paulo State, Brazil, from March of 2005 to April of 2006. One hundred males ranging from 13.1 to 70.0 cm and 88 females ranging from 12.5 to 76.0 cm of total length were collected and their gonads analysed to determine maturity stages. Gonadosomatic and hepatosomatic indexes did not significantly vary among seasons between the sexes. Ovulation and egg-laying were continuous throughout the year. These observations suggest an annual cycle with eventual -though not well delimited- peaks in the reproductive activity. This pattern has been reported for skates of the same genus and for other species. *Atlantoraja platana* is intensely exploited, though as a non-target species, and retained for exportation over the South and Southeast Brazilian coast. For these reasons the species is already considered 'vulnerable' by the IUCN Red list of Threatened Species. Present data may be the base for future studies in order to protect the populations of *A. platana* from local disappearance.

## Introduction

Genus *Atlantoraja* Menni, 1972, is endemic to the Southwestern Atlantic Ocean (McEachran and Aschliman 2004). The La Plata skate's (*Atlantoraja platana*) (Günther 1880) distribution ranges from São Paulo's littoral area to Argentina, and is common in Rio Grande do Sul State in Southern Brazil (Figueiredo 1977). In Southern Brazil, it is found at depths of 40-100 m (Vooren 1997), though Marçal (2003) recorded its occurrence at up to 231 m deep. In the Southeastern Brazilian continental shelf, *A. platana* is commonly caught in the range of 20-120 m deep (Oddone and Amorim 2007).

The assessment of chondrichthyan populations requires a quantitative approach to the study of reproduction (Walker 2005). Oddone and Amorim (2007) reported the size at maturity of male and female *A. platana* in Southeastern Brazil. Data on the reproduction of *A. platana* were also provided by Marçal (2003), Oddone et al. (2008) and Oddone and Vooren (2008). However, so far, the trend in the seasonality of the reproduction of this species is unknown. But Vooren and Klippel (2005) demonstrated that intensive fisher-