

***Pseudobatos percellens* SEXUAL DIMORPHISM: A CONSERVATION
ALERT**

Renata Daldin Leite¹, Natascha Wosnick¹, Carolina Arruda Freire¹

¹*Universidade Federal do Paraná, Curitiba, Brazil – daldin.r@gmail.com*

Pseudobatos percellens occurs all over the Brazilian coast, being commonly caught as bycatch in large volumes. Although currently listed as Data Deficient on the national list, if fishing pressure is not reduced, the species might soon be moved to threat categories. Since biological data are needed to determine its real conservation status, this work aimed to verify the existence of sexual dimorphism in the body shape of *P. percellens* caught by the artisanal fleet, in order to determine the biological patterns for each sex. Ten females and eight males were photo recorded in dorsal views. After digitalization of 15 anatomical landmarks and semi-landmarks, the coordinates were superimposed through Generalized Procrust Analysis to remove the effect of position, size (static) and orientation. To remove the influence of allometric size on the configurations, a Multivariate Regression of the shape components was performed in relation to the centroid size logarithm. Sexual dimorphism was tested by a cross-validated Discriminant Analysis using Multivariate Regression residuals. Our results demonstrate a significant variation in shape between sexes. Males have a thinner body than females (disc, scapular girdle, dorse and tail). In addition, the influence of allometric size was verified only for females, which indicates that their shape changes differently from males throughout the growth. Currently, there is no minimum catch size established for the species but considering the predetermined for the congener *P. horkelli*, gender differences regarding disc width are not taken into account, demonstrating a flaw in legislation as body size is directly related to sexual maturation and fertility. In view of our results, we emphasize the need to implement specific gender measures of minimum catch size for elasmobranchs in general. Finally, ontogenetic differences are also required, as nothing is known about the influence of body shape in the legal determination of size limits for capture.

Keywords: Geometric morphometry; Legislation; Minimum catch size; Brazilian guitarfish; Sexual dimorphism.