

Accepted Manuscript

Shark length—length relationships: Studying morphology allows the detection of bias in routine fisheries sampling

Agustín M. De Wysiecki, J. Matías Braccini

PII: S2352-4855(17)30176-7
DOI: <https://doi.org/10.1016/j.rsma.2017.10.005>
Reference: RSMA 305

To appear in: *Regional Studies in Marine Science*

Received date: 13 June 2017
Revised date: 25 August 2017
Accepted date: 7 October 2017

Please cite this article as: De Wysiecki A.M., Braccini J.M., Shark length—length relationships: Studying morphology allows the detection of bias in routine fisheries sampling. *Regional Studies in Marine Science* (2017), <https://doi.org/10.1016/j.rsma.2017.10.005>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



1 **Shark length–length relationships: studying morphology allows the**
2 **detection of bias in routine fisheries sampling**

3 *Agustín M. De Wysiecki¹ and J. Matías Braccini^{2,*}*

4 ¹ Universidad Nacional de Mar del Plata, Diagonal J.B. Alberdi 2695, Mar del Plata,
5 Argentina

6 ² Western Australian Fisheries and Marine Research Laboratories, PO Box 20, North Beach,
7 WA 6920, Australia

8 *Corresponding author: Tel.: +61 08 9203 0211; Email: Matias.Braccini@fish.wa.gov.au

9

10 **Abstract**

11 Reliable information on length–length relationships is required for standardising and
12 comparing size measures and for improving the use of available data and biological
13 information collected as a function of different size measures. Here, we used biological
14 information on sharks and rays collected by on-board observers in Western Australia since
15 the 1990s to estimate the total length–fork length relationships for 31 species. For an
16 additional five species, the estimated model coefficients were unreliable. Further analysis for
17 four wobbegong species indicated that some records could have been misidentified. For six
18 gill sharks, the linear model fitted the data well but visual exploration showed that two
19 observers systematically measured this species differently. Our study shows that length–
20 length relationships can be used to detect biases in biological data sets.

21 **Keywords:** morphometrics; species mislabelling; robust regression

Download English Version:

<https://daneshyari.com/en/article/8872679>

Download Persian Version:

<https://daneshyari.com/article/8872679>

[Daneshyari.com](https://daneshyari.com)