Rpackage for the automatic estimation of the parameters of the Von Bertalanffy fish growth model

Marine Ballutaud[*,a], Lyndsay Clavareau[**,1], Etienne Rouby[**,1], Julien Renoult[**,1], Fabienne Ribeyre[**,1]

[a]*Department, Street, City, State, Zip*

Abstract

This is the abstract.

Introduction

This package was created as part of the training course "Good practices for reproducible research in digital ecology" co-organized by the Cesab of the FRB and the GDR EcoStat. It uses the model de Bertalanffy (1938).

Material and methods

Datasource. The data used comes from the website https://www.fishbase.in/home.htm.

Statistical methods. The Growth model of Von Bertalanffy is

$$Linf.(1 - exp^{-K*(a-to)})$$

with Linf = maximum size, a = fish age, K and t0 are fixed parameters.

Model was adjusted using the method described by Rafail (1973).

Results

The results of the model are presented in Figure 1.

Discussion

Working with others on a project is much more complicated than working alone, but much faster.

*Corresponding Author

**Equal contribution

Email addresses: marine.ballutaud@univ-lille.fr (Marine Ballutaud), lyndsay.clavareau@ifremer.fr (Lyndsay Clavareau), etienne.rouby@univ-lr.fr (Etienne Rouby), julien.renoult@blabla.com (Julien Renoult), fabienne.ribeyre@cirad.fr (Fabienne Ribeyre)

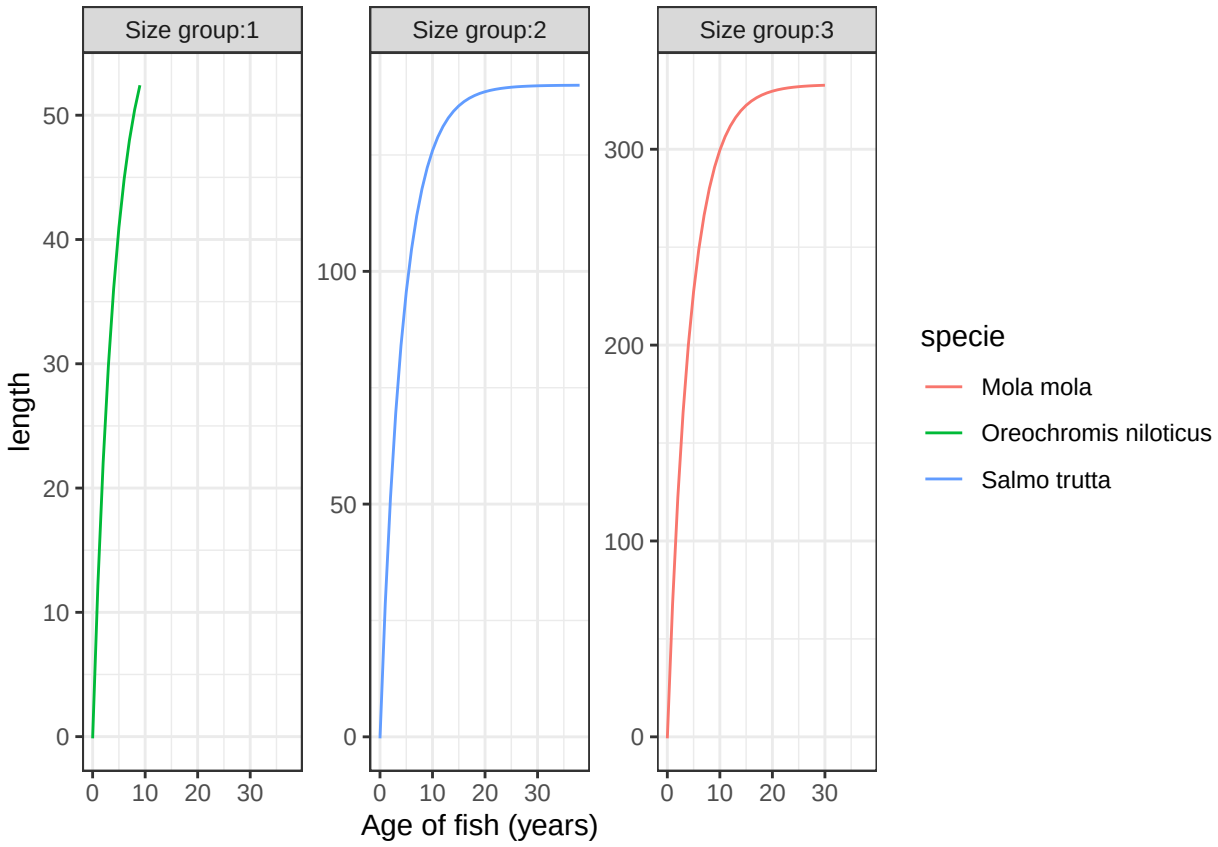

Figure 1: Growth curve obtained with the Growth model of Von Bertalanffy

Acknowledgement

Merci à vous c'était un super projet !

References

Bertalanffy, L. von, 1938. A quantitative theory of organic growth (inquiries on growth laws ii). Human Biology 10, 181–213.

Rafail, S.Z., 1973. A simple and precise method for fitting a von Bertalanffy growth curve. Marine Biology 19, 354–358. doi:10.1007/BF00348907