

Growth and maturation in *Argentina silus* and *Argentina sphyraena*

Introduction

Argentina silus and *Argentina sphyraena* are two species in the Northern Atlantic that have a largely **understudied life history**.

The research aim was to understand **growth** by estimating the mean length from age data of *A. silus* and *A. sphyraena*. We also estimated **maturity** probability by age and length of *A. Silus*.



Method

Length, sex and maturity data was collected for the Argentina species during a research cruise in the North sea and Norwegian coast. Data collected from BIO325 research cruises from 2019-2022 were used in all analyses.

Age was determined by counting otolith annuli. Maturity of fish was determined by gonad visual inspection.

Von Bertalanffy growth curve and maturity at age and length

Von Bertalanffy

This growth model used body length as a function of age. *A. silus* follows common allometric growth. The mean growth per year decreases with age. *A. sphyraena* lacks data distribution across all age classes, but mostly after age 6. Resulting in an incomplete estimated growth trajectory across the lifespan of *A. sphyraena*.

Maturity at age and length

Maturity ranked samples, where 0 is immature and 1 is mature, were used to estimate maturation probability across total catch of *A. Silus*. Length and age at maturity models were created using logistic regression, showing a 50 % probability of a fish being mature given its age is 5 and/or 280 mm in length.

