Age, Growth and relationship between abundance and different environmental variables of *Diplodus sargus* (Linnaeus , 1758) on five beaches of Cadiz coast

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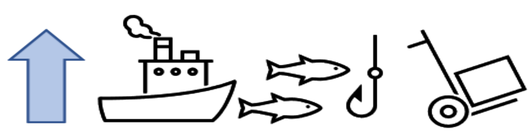
INTRODUCTION

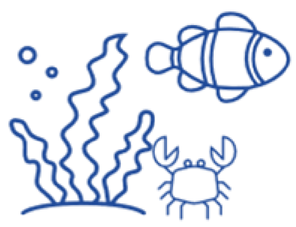
This study is carried out in the surf zone of sandy beaches.

Abundance of shelter and food

Place of recruitmet

Anthropogenic pressure



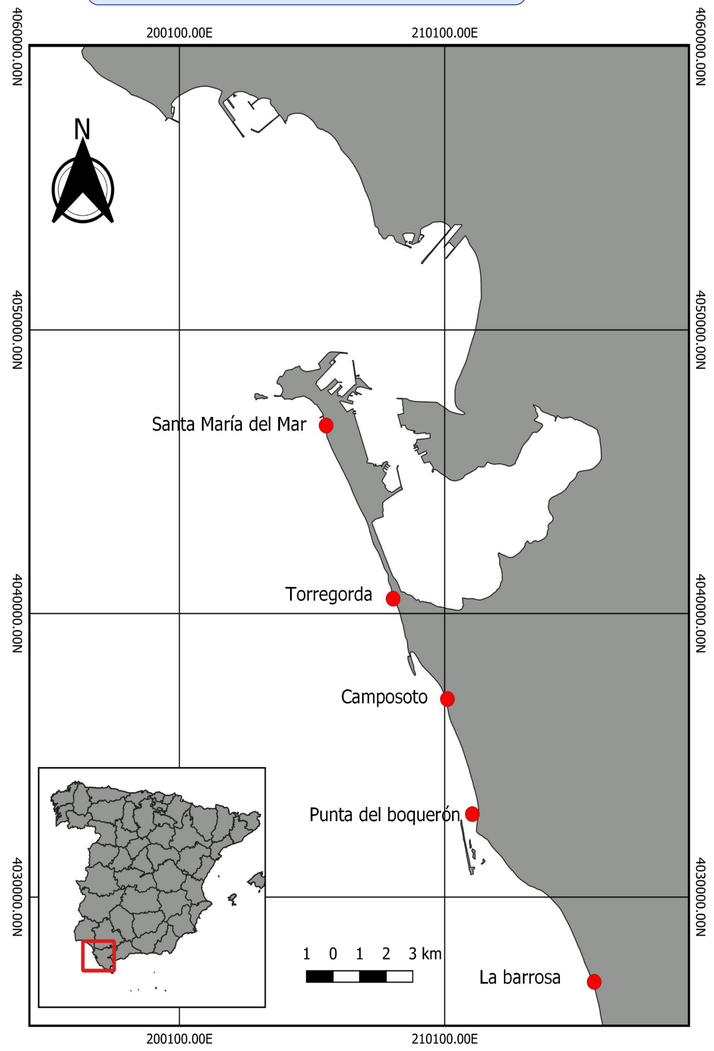


OBJECTIVES

To study the growth of *Diplodus sargus* and its relationship with environmental variables on five beaches on the coast of Cadiz.

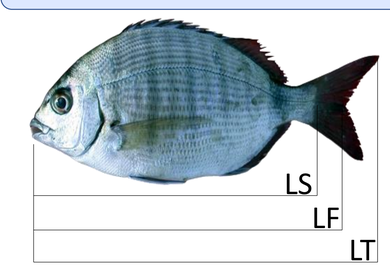
METHODOLOGY

Study area

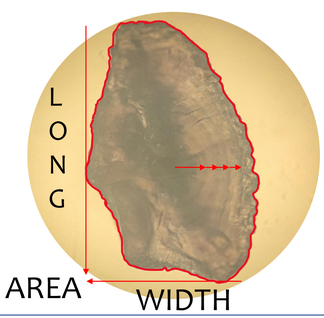


Seine net

Biometric data

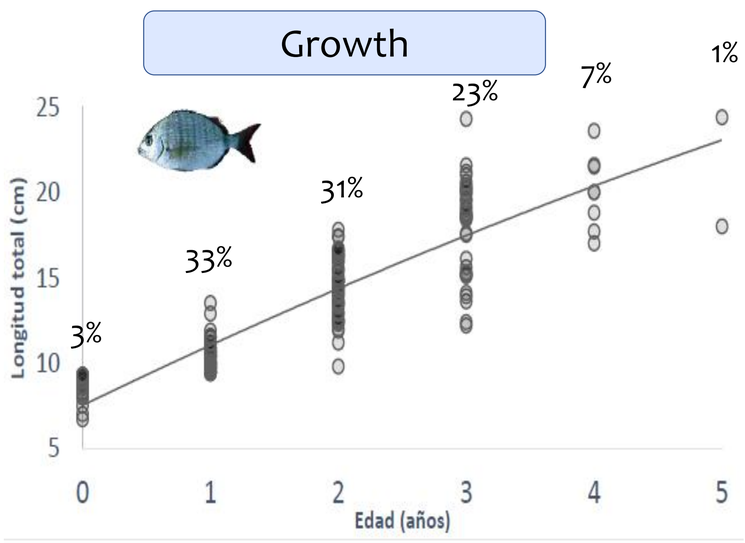


Otolith analysis



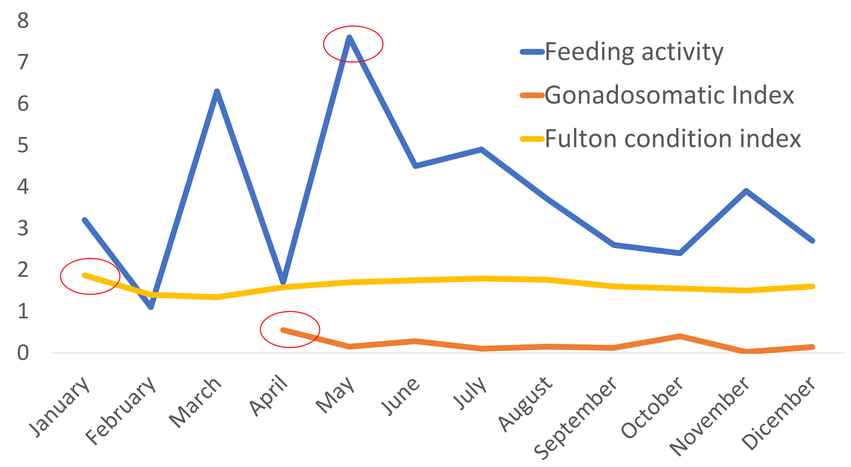
RESULTS AND DISCUSSION

Growth



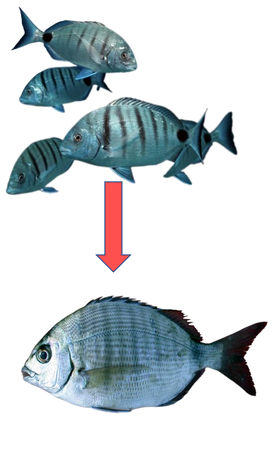
The growth constant (k) for the species showed a value of 0.186 years^{-1} while the value of the initial condition parameter obtained is (T_0) = -2.2721.

Indices



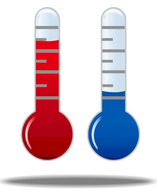
Feeding activity is highest in May, coinciding with the post-breeding season, while the Fulton condition index is highest in January (pre-breeding season). The gonasomatic index is maximun in April, when *D. sargus* is in the breeding season.

CCA analysis



Wave height ↓

Temperature (°C) ↓



The variables that most explained the variation in abundance of individuals were temperature (59.22%) and wave height (40.88%). The CCA analysis was slightly negative with temperature and wave height.

CONCLUSION

- The growth is positive allometric while the Von-Bertalanffy model reflects a lower growth compared to studies in the Cantabrian Sea and a higher growth compared to studies in the Mediterranean Sea.
- The sampling area with the highest abundance of *D. sargus* is Santa María del Mar.
- Temperature, wave height and wind were the most influential environmental variables on the abundance of the species, while the presence of algae showed the worst relationship.