INTRODUCTION

The knowledge of the demographic structures of the exploited populations, of which the interpretation for calcified structures constitutes the principal means, is one of the source data for inventory control haliectrics. Indeed, the data on the age and the growth of fish are essential for comprehension of the features of life history from the species and the populations (longevity, age of recruitment, age of sexual maturity, mortality) and being studied of the demographic structure from populations and of their dynamics (for example in the models of estimate based on a structuring in age) (Laurec et Le Guen, 1981).

The aim of this study is to estimate the weight-length relationship and determine growth of Phycis phycis (Linnaeus, 1766) in the Gulf of Tunis.

MATERIALS AND METHODS

A total of 272 individuals were collected monthly between May 2007 and June 2010 from the contributions of commercial fishing in the Gulf of Tunis. In the laboratory, total length (TL in cm) and total weight (TW in grams) were measured for each specimen.

RESULTS

Weight-length relationships

The coefficients of determination (r²) of the total relations length-weight are close to 1, reflecting a good correlation between the two variables. The statistical analysis shows that the type of growth is isometric (r < 1.96; p > 0.05) for females and males, whereas it presents a positive allometry for all individuals.

Symmetry between the right and left otolith

The relationship between the total length (TL) of fish and the weight of the otolith (Wo) did not show a significant difference between the right and left otolith (ANOVA, p>0.05).

Age and growth

The females, reaching L= 73.43 cm, grew faster than the males, which did not exceed 68 cm. The females have the higher predicted asymptotic weight (W∞= 4446.08g) compared to the males (W∞= 3663.26g). The index of performance from growth (Φ) (cm/an) indicates an identical growth between males and females.

REFERENCES