AGE, GROWTH AND AGE AT SEXUAL MATURITY OF THE LONGNOSE SPURDOG, *SQUALUS BLAINVILLEI*, IN THE GULF OF GABES (TUNISIA)

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Abstract
The age and growth data of *Squalus blainvillei*, in the Gulf of Gabès, derived from spines reading, were used to estimate the von Bertalanffy parameters: $L\infty$ =105.7cm, K= 0.11, t0 =−1.12 for females and: $L\infty$ = 91.1 cm, K= 0.14, t0 =−1.42 for males. Ages at maturity for females and males were 7.44 and 4.79 years respectively. The maximum age was 19 years.
Keywords: Growth, Elasmobranchii, Gulf Of Gabes

Introduction
Longnose spurdog *Squalus blainvillei* occurred throughout the Mediterranean Sea up to 700 m depth [1]. Data on its age and growth were scarce in the Mediterranean Sea except those of the Sicilian Channel [2]. Life history parameters, mainly age and growth, are essential for adequate management of shark catches. Thus the aim of this work is to estimate age and growth of *S. blainvillei* using spines.

Materials and methods
115 specimens of *S. blainvillei* fished in the Gulf of Gabès were sampled from May 2004 to July 2005. The second dorsal fin spines (DFS) were removed and prepared [3]. Growth bands were counted in each spine section throughout a specific line transept within the internal dentine layer and using a Microscope and Olympus S2X9 stereomicroscope at x 20 magnification; a band was defined as a pair of dark (opaque) and light (translucent) concentric rings [3]. The TL-at-age data were fitted to the von Bertalanffy growth model (VBGM).

Results and discussion
The total number of bands counted increased with length for both males and females. Estimated parameters of the von Bertalanffy equation were shown in tab 1.

Tab. 1. Growth parameters and age of *S. blainvillei*

Location	Sicilian Channel (Cannizzaro *et al.* 1995)		Gulf of Gabès (Present study)	
Method	vertebral band count		Internal dorsal spine band count	
Sex	♀	♂	♀	♂
L^{∞}: theoretical asymptotic length (cm)	117.9	96.0	105.7	91.1
K: growth rate coefficient(year -1)	0.10	0.13	0.11	0.14
To: theoretical age at zero length (years)	-1.38	-1.39	-1.12	-1.42
A. mat : age at maturity (years)	5.1	3.3	7.44	4.79
A. max: oldest fish (years)	8	8	19	15

Until 8 to 10 years, males grew more quickly than females. After that, females continued to grow faster (Fig. 1). The age at maturity was estimated respectively for females and males at 7.44 and 4.79 years. As shown in table 1, *S.blainvillei* reached a maximum age more important in the Gulf of Gabès than in the Sicilian Channel. These differences may be related to the structure used (spines or vertebrae), the variability between readers, the stock state and fishing pressure and to species confusion, it seems in fact that both *S. blainvillei* and *S. megalops* occurs in the same area.

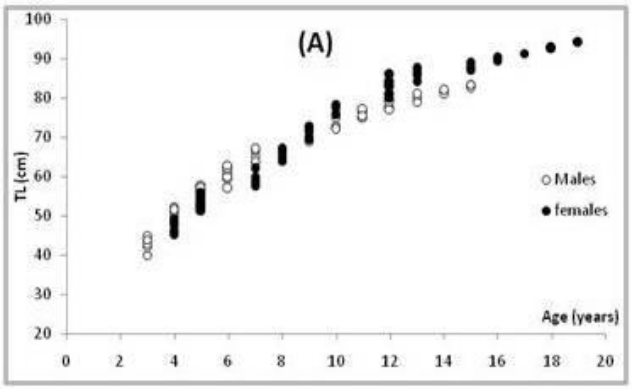

Fig. 1. Von Bertalanffy growth curve in length of *S. blainvillei* from the Gulf of Gabès

References
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