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## Age and Growth Based on the Scale Readings of the two Carangid Species *Carangoides bajad* and *Caranx melampygus* from Shalateen Fishing Area, Red Sea, Egypt

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### Abstract

The study of age and growth of individuals in a population is fundamental for understanding the general biology of the species and in particular its population dynamics. Age and growth of two *Carangid* species *Carangoides bajad* and *Caranx melampygus* from Egyptian Red Sea, Shalateen region (Elba National Park, Marine Branch) were studied based on the scale readings using a non-linear back-calculation method. A total of 1103 specimens (145–515 mm in SL) of *C. bajad* and 795 specimens (145–631 mm in SL) of *C. melampygus* were aged and their maximum life span was 8 and 12 years, respectively. The most dominant age groups in the catch were age groups I (22.7%) and II (36.5%) for *C. bajad*, while for *C. melampygus*, age group 0 was the most dominant one contributing 28% of the total collected samples. The von Bertalanffy growth parameters were estimated as  $L_{\infty} = 575.7$  and  $699.4$  mm for *C. bajad* and *C. melampygus* respectively, while  $K = 0.24$  and  $0.17 \text{ year}^{-1}$  for the two species respectively. It was found that *C. melampygus* was heavier and characterised by a higher growth rate than *C. bajad* for the same length and age. The higher growth in length rate was observed during the first year of life for both species and decreased gradually with the increase in age. These data are the inputs of the analytical models used to achieve the wise management of this potential fishery. Also, more information about the *Carangid* biology and dynamics is needed to establish an appropriate strategy for their responsible fishery development in the Egyptian Red Sea.

**Keywords:** *Carangoides bajad*, *Caranx melampygus*, growth