Some Population Parameters of Aegean Chub, *Squalius fellowesii* (GÜNTHER, 1868) in Dalaman River (Mugla, TURKEY)

Huseyin SASI[1], Daniela GIANNETTO[2]

[1]*BasicSciences Department, Fisheries Faculty, Muğla Sıtkı Koçman University, Turke*
[2]*Biology Department, Science Faculty, Muğla Sıtkı Koçman University, Turkey*
hsasi@mu.edu.tr

Aim of the Study: The Aegean chub *Squalius fellowesii* (Günther, 1868) is a cyprinid species endemic to the Aegean drainages of Anatolia (Turkey) from Eşen, Dalaman, Büyük Menderes, Gediz, Bakır and Madra drainages. The aim of this study was to provide basic information on length-length, length-weight relationships, growth and condition of Aegean chub in Dalaman River (Muğla, Turkey).

Material and Methods: Fish samples were collected by electrofishing from Dalaman River from February 2012 to February 2013. For each fish total length (TL, ±1mm), fork length (FL, ±1mm), standard length (SL, ±1mm) and body weight (W, ±0.1g) were measured. Age was estimated by scalimetry and sex was assessed by macroscopic observation of gonads. SL-TL, FL-TL and TL-W regressions were calculated separated for sexes and for the total sample. The theoretical length growth was estimated separated for sexes by von Bertalanffy's model. Fish condition was estimated by means of relative weight (W_r).

Results: The total sample consisted of 162 fish ranging in TL from 5.9 to 21.2 cm (mean 12.55±3.17cm), in W from 2.11 to 107.80 g (mean 27.83±22.40) and in age from 0+ to 6+ years (mean 3.24±1.31). In total, 86 females and 76 males were caught and the overall sex ratio resulted not significantly different from 1:1 at chi-square test (X^2= 0.62; p= 0.43). The length-length and length-weight equations for the total sample were calculated as follow: $\log_{10}$= -5.315 + 3.179 $\log_{10}$TL (R^2= 0.989); TL= 0.195 + 1.053 FL (R^2= 0.995); TL= 0.809 + 1.113 SL (R^2= 0.988). For females: $\log_{10}$W= -5.380 + 3.208 $\log_{10}$TL (R^2= 0.991); TL= 0.289 + 1.047 FL (R^2= 0.996); TL= 0.839 + 1.115 FL (R^2= 0.989). For males: $\log_{10}$W= -5.265 + 3.157 $\log_{10}$TL (R^2= 0.989); T = 0.121 + 1.057 FL (R^2= 0.995); TL= 0.869 + 1.101 SL (R^2= 0.986). The estimated parameters of von Bertalanffy growth model were: L_∞=36.32, K=-0.097, t_0=-0.983 for females and L_∞= 34.98 cm, K= -0.091, t_0=-0.985 for males. An overall good condition was found (mean W_r= 92.03 for total sample, 91.43 for females and 92.71 for males) but a low condition resulted for the younger fish considering the sample for age classes (age 0+: mean W_r=77.88).

Keywords: Endemic fish, Aegean Region, *Squalius fellowesii*,Growth, von Bertalanffy.