



## Length-Weight and Length-Length Relationships in Three *Serranus* Species from Southern Aegean Sea, Turkey

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### Abstract

In this study, length-weight (LWR) and length-length (LL) relationships were calculated for *Serranus cabrilla* (N= 310), *Serranus hepatus* (N= 504) and *Serranus scriba* (N= 763) specimens collected seasonally via commercial trawl vessel between January-December 2013 and 30-90 meters depth from Gulluk Bay (southern Aegean Sea). LWR equations were calculated as follow:  $W = 0.007 * L^{2.926}$  ( $R^2 = 0.917$ ) for *S. cabrilla*,  $W = 0.022 * L^{2.806}$  ( $R^2 = 0.936$ ) for *S. hepatus* and  $W = 0.009 * L^{3.130}$  ( $R^2 = 0.923$ ) for *S. scriba*. While, *S. scriba* shows positive allometric growth (A+), *S. cabrilla* and *S. hepatus* have negative allometric (A-) growth model. Length-Length relation formulas were calculated as follow:  $FL = 0.933 * TL + 0.298$  ( $R^2 = 0.876$ ),  $SL = 0.877 * TL - 0.497$  ( $R^2 = 0.842$ ),  $SL = 0.939 * FL - 0.759$  ( $R^2 = 0.853$ ) for *S. cabrilla*,  $SL = 0.712 * TL + 0.866$  ( $R^2 = 0.917$ ) for *S. hepatus* and  $SL = 0.998 * TL - 2.768$  ( $R^2 = 0.874$ ) for *S. scriba*. The L-W and L-L relationships provided in this study could serve as a useful tool in the future studies in the wider study area and as a future reference for comparisons of similar parameters estimated in other Mediterranean regions for three *Serranus* species.

### Keywords:

*Serranus cabrilla*, *Serranus hepatus*, *Serranus scriba*, length-weight relationships, southern Aegean Sea

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