

Growth pattern and length-weight relationship of *Scomberoides lysan* (Pisces: Carangidae) from the northern waters of Sri Lanka

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Abstract

Estimating length-weight parameters for food fish is an important component in the population dynamics studies. The present study was carried out to find the length-weight relationship parameters of tropical *Scomberoides lysan* (Forsskal 1775) from the northern waters of Sri Lanka. Weekly samples were collected from the commercial catches during January 2010 to December 2010. A total of 892 specimens (299 males, 354 females and 239 unsexed) were analyzed. Curvilinear relationships of length-weight relationships for male, female and unsexed obtained were $W = 0.0037 * L^{3.1319}$, $W = 0.0058 * L^{3.0048}$ and $W = 0.0179 * L^{2.6496}$, respectively. Comparison of regression co-efficient of male, female and unsexed using GLMANCOVA revealed that the h' values show significant differences ($p < 0.05$) between each other. The exponent values 3.1319 for male and 2.6496 for unsexed were significantly different ($p < 0.05$) from 3, whereas, the value 3.0048 for female did not deviate significantly ($p > 0.05$) from 3. From the statistical analysis it can be concluded that males exhibit positive allometric growth, females exhibit isometric growth and unsexed exhibit negative allometric growth. The parameters obtained from the study are useful fundamental factors applicable in future culture trials as well as in population dynamics studies.

Author keywords

Allometric growth; Cube law; Double spotted queen fish; Drift gill net; Indian ocean; Length-weight relationship; *Scomberoides lysan*

Indexed keywords

GEOBASE Subject Index: allometry; fish; growth modeling; growth rate; length-weight relationship; parameterization; population dynamics; sex-related difference

Regional Index: Indian Ocean; Sri Lanka

Species Index: Carangidae; Pisces; *Scomberoides lysan*