Length-weight relationship in Puntius denisonii (Day)

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ABSTRACT

Puntius denisonii (Day) is an endemic and endangered ornamental fish of the Western Ghats. It is extremely beautiful and locally called 'Chenkaniyan'. In the present account, the length-weight relationship of this species is given. It is found that P. denisonii has an isometric growth. The length-weight relationship was calculated as log W= -1.7032 + 3.04 log L.

The Western Ghats is the richest region in India with respect to endemic freshwater fishes. Presently only a small fraction of the endemic fish biodiversity is being utilised for ornamental purposes. The National Bureau of Fish Genetic Resources has identified 64 species of endemic fishes having good market value that can be taken up for ornamental fish trade (CAMP 1998).

Puntius denisonii is an attractive endemic cyprinid ornamental fish with eye-catching features like scarlet stripe extending from the tip of the snout to middle of the body till below the dorsal fin, the black stripe along the lateral line of the body and the caudal fin tipped with black and yellow bands. It is locally called ‘Chenkaniyan’ or ‘Chuttiparal’ and identified as endangered due to loss of habitat, poisoning and trade (CAMP 1998).

No attempt has been made to study the life history of this species. As part of the NATP on Germplasm Inventory, Evaluation and Gene banking of freshwater fishes, 76 numbers of P. denisonii ranging from 3.5cm to 22.2cm in standard length and weighing 1.5 gms to 77.0 gms were collected from the Bharathapuzha River system in central Kerala during August-December 2000. The length-weight relationship was estimated and presented here. The standard length of the fish was taken from the tip of the snout to the middle of the caudal peduncle to the nearest millimeters, weight in nearest milligrams.

The regression equation for P. denisonii was calculated as logW=1.7032 + 3.04 log L, (n=76; r = 0.99). The analysis of the result shows that the regression equation is not significantly different from 3. In other words, P. denisonii has an isometric growth. This type of relationship is found in fishes, which maintain a constant body shape (Brody, 1945; Lagler, 1952; Rounsfell and Everhart, 1953; Brown, 1957; BalasunderReddy, 1981 and Sunil Kumar et al., 1999). The regression equation derived can be effi-
ciently used for calculating the relative condition factor.

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**References**


