

Effect of Harbour Construction on the Length Weight Relationship of Pony Fish *Secutor ruconius* (Hamilton-Buchanan)

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Gathering baseline data on ecology is essential for sustainable development in order to predict and minimize any future negative effects on living organisms. Dredging of harbour causes loss of benthic habitat and *Secutor ruconius*, (Pug nose pony fish) being a schooling demersal omnivore is a very likely candidate to reflect any effects of harbour building activities. In this study, therefore, the size and length weight relationship of the beach seine pony fish *Secutor ruconius* was examined in the Ampara district, in the month of October, 2010, at a site near the Oluvil harbour, prior to commencement of operations and at a relatively undisturbed control site in Maruthamunai, 20 km north of the harbour site. At each site, according to a stratified random sampling method, two boats were sampled in the morning, at about the same time of the day, to examine intra and inter site variations in estimates. From each boat 100-200 individuals of *Secutor ruconius* were collected for length and weight comparisons. Total length of *Secutor ruconius* was measured to the nearest 0.1 cm using a foot ruler and weight was measured on an electronic balance to the nearest 0.1 gm. The mean lengths and weights of *Secutor ruconius* in samples from undisturbed Maruthamunai site did not differ between boats but those of the disturbed Palamunai boat samples were different between themselves. However, the mean length and weight estimates of *Secutor ruconius* from the disturbed Palamunai site were always higher than those from the undisturbed Maruthamunai site ($P < 0.01$). Length weight regressions for *Secutor ruconius* from all study sites showed a positive correlation and an overall significant relationship ($P < 0.01$). In comparison of regression slopes there was no strong evidence against null hypothesis as P value was always < 0.01 . The regressions of both populations had the same slope but differed in the range of size they occupied. Regression slopes were less than 3 (body length increases faster than weight), ranging from 2.48 to 2.81. These values tally with the findings of other researchers. Apart from their food value, examining pony fish populations for impacts of harbour construction is useful because they play an important role in the food chains of commercially exploited fish species (tuna, mackerel, trevally). However, further monitoring may be worthwhile after the commencement of operation of the harbour. This study is only a preliminary exploratory investigation but it provides important base line ecological data which was hitherto non existent.

Key words: *Secutor ruconius*, Length weight relationships, harbor dredging

