

Relationships between nesting and vegetation of three cichlids in Batticaloa lagoon Sri Lanka

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Abstract

The aim of this study was to investigate the relationship between nesting activity and the vegetation. A line transect, 300 m in length parallel to the western shore was put up. There are total of 30 sites, including 3 *Avicennia*, 7 *Cocos*, 5 *Excoecaria*, 3 *Derris*, 2 *Delicodendron*, 5 *Sonneratia*, and 5 non-vegetational, were included in the study. Quantitative data were collected during a period of one year from an inlet of the Batticaloa Lagoon, Sri Lanka.

This study showed that nesting activity for three cichlids *Etroplus maculatus*, *E. suratensis* and *Oreochromis mossambicus* was considerably high in the area of mangrove vegetation. The presence of mangroves in the lagoon shore had many advantages to the cichlids. Total number of nests of *E. maculatus* and *O. mossambicus* in each site of the transect was significantly different ($F_{29}=1.58$, $p=0.034$) and ($F_{29}=1.79$, $p=0.010$) respectively (One-way ANOVA). The total number of nests of *E. suratensis* that were found in each of the thirty sites was not significantly different ($F_{29}=1.38$, $p=0.101$) (One way ANOVA).

Non-vegetational sites were not preferred by the fish to nest. There were 5 non-vegetational sites in the study area. Both *E. maculatus* and *E. suratensis* had almost all 5 non-vegetational sites in a cluster that consisted of less number of nests. Whereas, *O. mossambicus* had 4 non-vegetational sites in lower numbers in a cluster. In fact, *O. mossambicus* had the highest number of nests found in a non-vegetational site. It showed that all three cichlids need vegetational sites for nesting but *O. mossambicus* seem to nest in the non-vegetational sites as well.

Keywords

nest distribution, site selection, availability