

D - 22    **APPLICATION OF ETHOLOGICAL STUDIES OF THE CICHLID FISH *ETROPLUS SURATENSIS* TO SOLVING A PROBLEM IN ITS CULTURE**

**J. I. Samarakoon**

(Department of Zoology, University of Kelaniya)

*Etroplus suratensis* is one of the two cichlid species indigenous to Sri Lanka and to India. It has been repeatedly suggested as a candidate for domestication and for culture. In Sri Lanka commercial culture of this species is likely to be profitable because it is a preferred food fish.

Sexual monomorphism of *E. suratensis* is a fundamental obstacle to development of a brood stock. It is impossible to distinguish males and females externally. Therefore pairs that could constitute a brood stock cannot be collected from naturally occurring populations by using familiar methods applicable to sexually dimorphic species.

Ethological and ecological studies were done in an attempt to generate testable hypotheses applicable to development of brood stock. Based upon a variety of field data the following prediction was made: "Members of a randomly collected sample of *Etroplus suratensis* in the adult size class would form pairs if they are provided with suitable objects for attachment of eggs."

The prediction was tested in two stages. During the first stage the probability of pair formation was 25%. During the second stage that probability was raised to 65%. The pairs once formed, spawned repeatedly at intervals of 30-45 days and could be used as brood stock. The estimated yield from this procedure is 5,000,000 seedfish/ha/annum.