

Chemotherapy of ectoparasite, *Ergasilus ceylonensis* of Asian cichlid, *Etroplus suratensis*

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Summary

Therapeutic control of crustacean ectoparasite *Ergasilus ceylonensis* on gills of Asian cichlid *Etroplus suratensis* inhabiting Negombo estuary and its tributaries on the west coast of Sri Lanka was investigated using formalin, gammexane, potassium permanganate, 3,4 Dichloropropoanilyde and fenitrothione. Potassium permanganate (3-5 ppm) and 3,4 Dichloropropoanilyde (3-5 ppm) were observed to be successful as therapeutic chemicals. Infected fish were not able to tolerate low concentrations of formalin (50-500 ppm), gammexane (5 ppm) and fenitrothione (0.1-5.0 ppm).

Zusammenfassung

Chemotherapie des Ektoparasiten *Ergasilus ceylonensis* beim asiatischen Cichliden *Etroplus suratensis*
Der zu den Crustacea gehörende Ektoparasit *Ergasilus ceylonensis* befällt die Kiemen des asiatischen Cichliden *Etroplus suratensis*, der an der Westküste Sri Lankas im Negombo-Ästuar und seinen Zuflüssen lebt. Die therapeutische Kontrolle des Parasiten mit Formol, Gammexan, Kaliumpermanganat, 3, 4-Dichloropropoanilyd und Fenitrothion wurde untersucht. Die Behandlung mit Kaliumpermanganat (3-5 ppm) und 3, 4-Dichloropropoanilyd (3-5 ppm) war erfolgreich. Nach der Behandlung mit Formol (50-500 ppm), Gammexan (5 ppm) und Fenitrothion (0,1-5,0 ppm) starben alle Versuchsfische.

Résumé

Chimiothérapie de l'ectoparasite *Ergasilus ceylonensis* de cichlidées d'Asie *Etroplus suratensis*

Le contrôle thérapeutique de l'ectoparasite *Ergasilus ceylonensis* (Crustacea) sur les branchies du cichlidée d'Asie *Etroplus suratensis* de l'estuaire du Negombo et de ses affluents sur la côte ouest de Sri Lanka a été étudié à l'aide de formol, de gammexane, de permanganate de potassium, de 3, 4-Dichloropropoanilyde (3-5 ppm) sont de bons moyens thérapeutique chimiques. Les poissons affectés ne pouvaient pas résister à de faibles concentrations de formol (50-500 ppm), gammexane (5 ppm) et fénitrothione (0,1-5,0 ppm).

Introduction

The pearlspot, *Etroplus suratensis* (Bloch) inhabits the brackish and fresh water environments of India and Sri Lanka (GOPALAKRISHNAN 1972). It is one of the most popular food fishes of the inland water of Sri Lanka (COSTA 1983) and is considered as a suitable species for aquaculture in fresh and brackish water habitats (CHATERGI 1981; GOPALAKRISHNAN 1972; JHINGRAN AND NATARAJAN 1972; SUMITRA VIJAYARAGHAVAN et al. 1981). Recently, it has been observed that *Etroplus suratensis* inhabiting Negombo estuary (7° 10' N, 79° 50' E) and its tributaries in the west coast of Sri Lanka is highly infected with ectoparasitic copepod *Ergasilus ceylonensis* (Fernando and Hanek). It attaches to the gills of the host fish by second pair of antennae which are modified as hooks and digs into the host tissue destructing the gill epithelium (MIGAKI and RIBELIN, 1975). Due to environmental stress following these parasitic infections, large scale mortality of fish has been recorded in ponds and fish farms (SINGHAL et al. 1986). Specially the larval stages and juveniles are highly vulnerable to these infections resulting great damage to aquaculture practices and fisheries (JHINGRAN 1983).