

Identification of gill trematode, *Centrocestus* sp., infected on ornamental fish species in Sri Lanka using morphological characteristics

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Infection of *Centrocestus* sp. makes a considerable impact on the value of fish in fisheries sector of Sri Lanka.

The present study was carried out to identify the parasite up to the species level, using morphological characteristics. The first intermediate host of the parasite, thiarid snails, *Melanoides tuberculata*, were induced for shedding cercaria larvae and 45 days old Koi carps (*Cyprinus carpio*) were exposed to get infected. Infected snails were crushed and examined for developmental stages of parasite. After month of the infection, gills of the fishes were observed for metacercariacysts and 3 chicks (*Gallus gallus*) were fed with infected fishes to complete the life cycle of the parasite. Adult flukes and the eggs were recovered from the feces of chicks after the treatment of Praziquantel. Number of anterior spines of metacercaria and adult stages were recorded and length measurements of all stages were taken. Morphological features of all stages were compared with the available literature for the identification of the parasite. Observed radia larvae were tubular and curved in shape. Cercaria larvae consisted with an oral and a ventral sucker, 2 eye spots, heart shape body and a powerful tail. The encysted metacercaria was oval in shape, spines were possessed with x-shaped excretory bladder. Cysts were composed with 2 walls, the inner one was thin and outer one was thick. Ex-cysted metacercaria was subtly elongated and narrower in the anterior end and possessed 32 spines. The observations of this study helped to confirm the parasite fluke as *Centrocestus formasanus*.

Keywords: *Centrocestus formasanus*, koi carp, gill trematode, *Melanoides tuberculata*, Sri Lanka

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