

Abstract

Digenean flukes, which have multiple hosts in their life cycle, are some of common fish parasites. Most of this species select fish as their indefinite host. Record of Digenian parasites in freshwater fish in Sri Lanka are scarce. Current study was conducted to investigate a fish disease, which was reported from wild guppies living in urban drainage canal in Seeduwa, Western province of Sri Lanka. Random fish samples were collected with a scoop net from July 2013 to October 2013 in four occasions. Water quality parameters of the canal were measured at each visit. Live sample of infected and non-infected fish were transported to the University laboratory. Uninfected fish and infected fish were kept together to identify whether the disease transferred directly from fish to fish. Uninfected fish were kept with snail species collected from the canal to check whether the disease transferred from snails to fish. The snails were examined for the larval stages of digenian flukes. Parasites were stained with borax carmine and observed under light microscope to study the morphology and anatomy. Published literature and keys were used to identify the fish parasite.

The metacercaria stage of the parasite was harboured in the muscles immediately beneath the skin of the fish and visible to naked eye. Among the fish population 5% of the fish were infected. The number of parasites reported in a fish was ranged from one to four. The parasite was creamy yellow in colour. Body is oval, elongated with truncated fore body, wider in gonadal region. Oral and ventral suckers were clearly visible. Oral sucker is small and surrounded by a well-developed oral collar. Pharynx is not observed; oesophagus is very short and bifurcates immediately posterior to level of oral sucker, oesophageal bulb is present. Ventral sucker is larger than oral sucker. Intestinal ceca lateral to ventral sucker and run to posterior end of the body. Anterior testes is triangular in shape and slightly lobed, the posterior testis is triangular in shape and median in position and slightly stretching across intercecal space. Cirrus sac is compressed against left anterior margin of anterior testis.

Parasite did not directly transfer from infected fish to uninfected fish. Also there were no larval stages of digenian flukes were reported from snails collected from the sampling location.

Morphological characteristics of the metacercaria larvae are closely compatible with *Clinostomum marginatum* (Rudolphi, 1819) published in the literature. The Genus *Clinostomum* has not been reported previously in Sri Lanka and this is the first record of the parasite from Sri Lanka.

Key words: *Poecilia reticulata*, *Clinostomum marginatum*, trematoda, digenean fluke