Prevalence, intensity and distribution of the metacercarial cysts of a *Centrocestus* species (Digenia : Heterophyidae) on the gills of gold fish, *Carassius auratus*

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Both exporters and suppliers to local markets experience heavy mortalities of gold fish that are reared in mud ponds at Dambulla and Polonnaruwa areas, when the fish are kept in holding tanks, showing breathing difficulties. Preliminary observations revealed that metacercarial cysts of a *Centrocestus sp.* were present in the gills of moribund gold fish. Therefore point prevalence and intensity of metacercarial cysts of this species occurring on the gills of gold fish *Carassius auratus* collected from grow-out mud ponds at Dambulla, Polonnaruwa and Ratmalana (as the control) areas were investigated. The distribution of metacercaria cysts on the gills was studied. Histopathological studies of infected gills were carried out to observe the morphology of encysted larvae and the structural damages caused due to the infection. The effect of infection on the mortality of gold fish in holding glass aquaria was also recorded.

The point prevalence in the fish obtained from Dambulla was greater (100%) than that of the fish from Polonnaruwa (93%). There were no infected fish in the samples obtained from Ratmalana. The intensity of infection also was significantly higher ($p<0.05$) in the fish obtained from Dambulla than in the fish obtained from Polonnaruwa.

The metacercarial cysts were found on the primary gill lamellae of each gill arch , having an even distribution among the eight gills, although the preferred microhabitat was the dorsal section of each gill. Size of the elliptical metacercarial cysts of the recorded species of *Centrocestus* was between 176 – 219 μm in length and 105 – 124 μ in width. Metacercaria and a terminal oral sucker with a single crown of spines and a ventral sucker positioned at about one third length from the oral end. Encystment was observed in close association with blood vessels and the cartilage of the primary lamellae of the gills which causes structural damages to the secondary lamellae and extensive hyperplasia , harming the respiratory functions of the fish, resulting more than 55% mortality in holding aquaria.