

**Title :** Diversity of Trematodes Larvae Associated with Freshwater Snails, Genus *Bithynia* in the Mae Kuang River Basin, Chiang Mai, Thailand

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## ABSTRACT

Freshwater snails, particularly genus *Bithynia* (Family Bithyniidae), are first intermediate hosts of several digenean trematodes, including the carcinogenic liver fluke *Opisthorchis viverrini* in Thailand. Despite the ecological and socioeconomic importance of the Mae Kuang River basin, parasitological data from this region remain limited. This study aimed to investigate the diversity and prevalence of trematode larval stages in genus *Bithynia* among nine sampling sites within the basin. A total of 281 snails (*B. funiculata*, *B. s. goniomphalos*, and *B. s. siamensis*) were examined for larval trematodes using the crushing method under light microscopy. Trematode larval infections were detected in all three snail taxa. Overall trematode prevalence was 12.46%. Cercariae were categorized into 3 types with the following prevalence values as cystophorous (0.36 %), gymnocephalous (7.12%) and mutabile (0.36%). Metacercariae infections were observed in *B. s. goniomphalos* and *B. s. siamensis*, including echinostome metacercariae with 37-collar-spined at a prevalence of 2.85%, echinostome metacercariae with 45-collar-spined at 1.42 % and unknown metacercariae at 0.36%. Spatial variation in snail abundance and infection rates among sampling sites

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suggests that local environmental conditions may influence transmission dynamics. This study provides baseline data on trematode and *Bithynia* interactions in the Mae Kuang River basin and contribute to regional epidemiological surveillance, improved understanding of parasite ecology, and support future control strategies for snail-borne trematodes of medical and veterinary significance.

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