Tittle

Completion of the Life Cycle of *Tylodelphys mashonense* (Sudarikov, 1971) (Digenea: Diplostomidae) with DNA Barcodes and rDNA Sequences.

Authors

F. D. Chibwana , G. Nkwengulila, S. A. Locke, J. D. McLaughlin, D. J. Marcogliese

Abstract

The life cycle of *Tylodelphys mashonense* (Digenea: Diplostomidae), whose metacercariae occur in the cranial cavity of the widely cultivated catfish *Clarias gariepinus*, was resolved by the application of molecular markers. Both COI barcodes and ITS sequences obtained from diplostomid-like cercariae infecting *Bulinus* spp. from Mindu Dam, Morogoro, matched those acquired from metacercariae from the catfish *C. gariepinus*, and those from adult *T. mashonense* from the grey heron *Ardea cinerea* and the white egret *Egretta alba.* The success in linking the life cycle stages of*T. mashonense* using molecular tools highlights the usefulness of this approach in resolving the complex life cycles of digeneans in the absence of experimental establishment.

Keywords

Life cycle *Tylodelphys mashonense Clarias gariepinus Ardea cinerea Egretta alba Bulinus*spp.