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Biosystematics of freshwater fish tapeworms (Cestoda) from India: major updates and knowledge gaps

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A summary of activities related to the biosystematics of Indian freshwater fish tapeworms, in the last five years, is presented. It includes novel findings related to species composition, vicariance, dispersal, diversification, host shifting etc., using integrative biosystematic approaches. Which not only highlights the importance of Indomalayan region in the context of historical biogeography and the evolutionary standpoint of these tapeworms but also demonstrates that fish hosts that were not studied previously by fish parasitologists, in this region, may harbor interesting parasites. Major fallacies in this field, in India, is highlighted as the dilemma between taxonomic inflation and actual diversity. As these parasites have strict host specificity, thus possibilities on future research, on their (parasites) bio control to benefit the fishery industries as well as implementing them as potential indicators of environmental (/aquatic) health and anthropogenic impact is addressed. Future roadmap for research on Indian tapeworms, especially by using population genomics and metagenomics, along with the possibilities of collaborative research work with other leading research groups in this field from the world is discussed.