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APPLE SNAILS AS VECTORS OF TREMATODES: MOLECULAR IDENTIFICATION OF THE LARVAL STAGES THAT PARASITES THE DIGESTIVE GLAND OF SOME ARGENTINIAN AMPULLARIIDS

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In the context of a broader program dealing with the symbiotic associations of apple snails, we sampled some species of Neotropical ampullariids that occurs mainly in the Paraná-Uruguay river basins (Argentina). Different larval stages (sporocysts, rediae, and cercariae) of flukes are found in the digestive gland of these freshwater snails. *Asolene platae* showed trematode larvae (echinocercariae and xiphidiocercariae) in haemocoelic spaces and connective tissue of the digestive gland. The echinocercaria resembled those of the genus *Echinochasmus*, but lacked sensory hairs on the body and tail whereas the xiphidiocercaria was similar to the Xiphidiocercaria armatae belonging to the Opisthoglyphe type. Also, we described for the first time the cercarial stage of *Stomylotrema vicarium* in the host *Pomacea americanista* from Misiones rain forest, which showed a big stylet in the oral sucker and three pairs of penetration glands. Moreover, a molecular multilocus approach (using the 28S rRNA, ITS1 and *mt*COXI sequences) was used to infer the phylogenetic position and understand their life cycle. The 28S rRNA gene linked the echinocercarial sequences with the polyphyletic genus *Echinochasmus*, while the xiphidiocercarial sequences were linked with the genus *Phaneropsolus*. Sequences of the trematode larval stages from *P. americanista* were grouped (genetic distance ranged 0.02% and 0.05%) with two sequences from adult *Stomylotrema vicarium*. Both ITS1 y mtCOXI sequences confirmed the phylogenetic position of the larvae inside of Echinochasmidae, Phaneropsolidae, and Stomylotrematidae. Finally, the three molecular markers were useful to distinguish cryptic molecular entities from a single echinocercarial morphotype, morphologically undistinguished, in the host *A. platae*.

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