

TESTING THE ENEMY RELEASE HYPOTHESIS IN THE INVASIVE FISH *AMATITLANIA NIGROFASCIATA* (PERCIFORMES: CICHLIDAE) IN MEXICO

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Abstract. The enemy release hypothesis (ERH) posits that invasive species are released from their natural enemies in their introduced range, which promotes their successful invasion. In this study, we tested the ERH in a population of the convict cichlid *Amatitlania nigrofasciata*, an invasive species in Mexico. The ERH predicts that the convict cichlid: a) is not infected by specialist helminth parasites in the introduced range; b) has lower infection parameter values, as measured through richness, prevalence, abundance and diversity of helminths, than a native species—the redband cichlid *Cichlasoma istlanum*; and c) is not affected in its condition factor by the abundance of helminths it carries. The convict cichlid was infected by two (33%) specialist helminths relative to the six specialist helminths that infect the cichlid in its native range. The convict cichlid had lower helminth richness and diversity than the redband cichlid. However, the prevalence and abundance of the parasite species varied between the host fish. While the prevalence and abundance of the nematode *Rhabdochona kidderi* was higher in the redband cichlid, the prevalence and abundance of the trematode *Uvulifer* sp. was higher in the convict cichlid. The condition factor in both host fish was not correlated with helminth abundance. Our results do not agree with the prediction that the convict cichlid is completely released from specialist parasites, nor with the prediction that this invasive species has lower infection parameter values than the native redband cichlid. However, our results agree with the prediction that the abundance of parasite helminths do not affect the cichlid's condition factor. More studies are necessary to determine the advantages that the convict cichlid could have in the introduced range when it is infected with a low richness and diversity of helminths.

Keywords: invasive species, convict cichlid, *Cichlasoma istlanum*, parasites, *Uvulifer*, *Rhabdochona kidderi*

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