

Potential interactions and aggregation in low diversity monogenean and endohelminth communities in *Pseudoxiphophorus bimaculatus* (Teleostei: Poeciliidae) populations in a neotropical river.

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Abstract

1. The role of interspecific interactions in structuring low-diversity helminth communities is a controversial topic in parasite ecology research. Most parasitic communities of fish are species poor; thus, interspecific interactions are believed to be unimportant in structuring these communities. 2. We explored the factors that might contribute to the richness and coexistence of helminth parasites of a poecilid fish in a neotropical river. 3. Repeatability of community structure was examined in parasitic communities among 11 populations of *Pseudoxiphophorus bimaculatus* in the La Antigua River Basin, Veracruz, México. We examined the species saturation of parasitic communities and explored the patterns of species co-occurrence. We also quantified the associations between parasitic species pairs and analysed the correlations between helminth species abundance to look for repeated patterns among the study populations. 4. Our results suggested that interspecific competition could occur in species-poor communities, aggregation played a role in determining local richness, and intraspecific aggregation allowed the coexistence of species by reducing the overall intensity of interspecific competition.

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