

A subtle threat: behavioral and phenotypic consequences of invasive mosquitofish on a native paedomorphic newt

Journal: Biological Invasions

Elisavet A. Toli¹, Christos Chavas¹, Mathieu Denoël², Anastasios Bounas¹,
Konstantinos Sotiropoulos^{1*}

¹Molecular Ecology and Conservation Genetics Lab, Department of Biological Applications and Technology, University of Ioannina, Ioannina, Greece

²Laboratory of Fish and Amphibian Ethology, Behavioral Biology Group, Freshwater and Oceanic science Unit of reSearch (FOCUS), University of Liège, Liège, Belgium

*corresponding author: ksotirop@uoi.gr (tel: +30 26510 07375)

Supplementary

Table S1 Results from LMM and GLMM for moving, immobility and hiding in control and fish treatment for paedomorphic newts. Statistical significant values are shown in bold.

Behavior	Effects	F	NumDf	DenDf	P
Moving	Sex	5.714	1	10	0.037
	Treatment	7.533	1	10	0.020
	Sex*treatment	3.745	1	10	0.081
Immobility	Sex	4.332	1	10	0.062
	Treatment	0.885	1	10	0.368
	Sex*treatment	2.959	1	10	0.114
Hiding	Effects	Chisq	Df	P	
	Sex	0.113	1	0.736	
	Treatment	6.634	1	0.010	
	Sex*treatment	0.039	1	0.843	

Table S2 Pairwise comparisons obtained by “lsmeans package” (Tukey method) of feeding activity for paedomorphic newts in control and treatment with fish. Statistical significant values are shown in bold.

Pairwise comparisons		Estimate	SE	df	t ratio	P
Control Female	Fish Female	3.248	0.979	NA	3.316	0.005
Control Female	Control Male	2.715	0.942	NA	2.881	0.020
Control Female	Fish Male	3.522	1.028	NA	3.424	0.003
Fish Female	Control Male	-0.533	0.793	NA	-0.672	0.907
Fish Female	Fish Male	0.273	0.841	NA	0.325	0.988
Control Male	Fish Male	0.806	0.819	NA	0.985	0.758