Amphibia-Reptilia

Short Note

Melanophore metachrosis response in amphibian tadpoles: effect of background colour, light and temperature

Eduardo José Rodríguez-Rodríguez[1,*,**], Juan Francisco Beltrán[1,***], Rafael Márquez[2,****]

1 - Grupo evolución, ecología y conservación de vertebrados, Departamento de Zoología, Facultad de Biología, Universidad de Sevilla, Calle Profesor García González S/N, C.P. 41012 Sevilla, Spain

2 - Fonoteca Zoológica, Departamento de Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales-CSIC, Madrid, Spain

* Corresponding author; e-mail: edurodrodbio@gmail.com

** ORCID: https://orcid.org/0000-0002-1170-0788

*** ORCID: https://orcid.org/0000-0002-0077-575X

**** ORCID https://orcid.org/0000-0002-2070-860X

Supplementary material

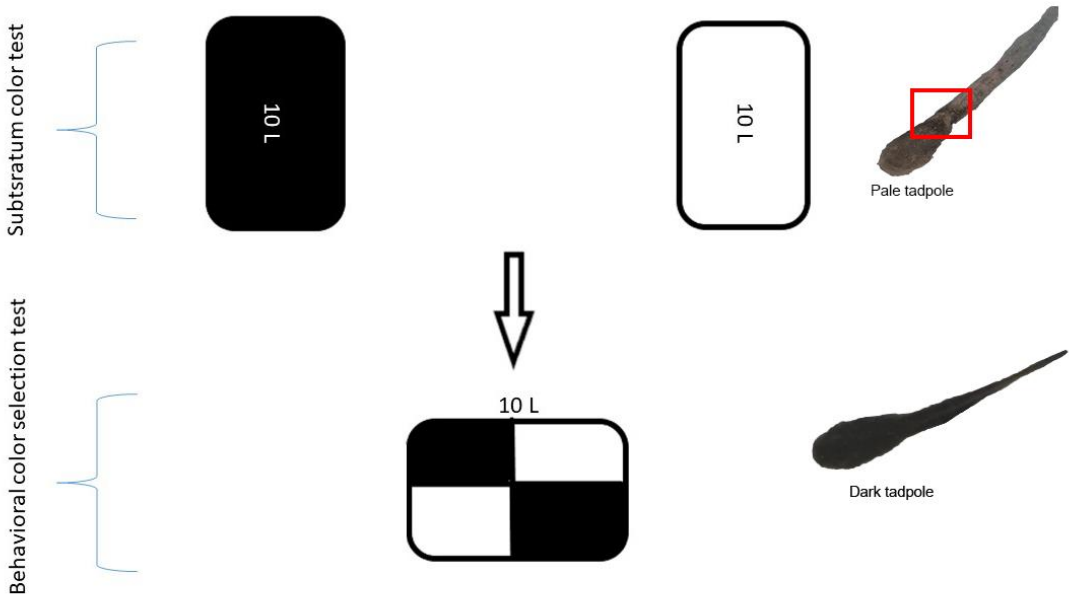

Figure S1. Experimental design of water container for colour change and colour selection experiments. Criteria to classify larvae under dark or pale coloration is also shown. The characteristic “V” of the species was visible only in tadpoles classified as pale.

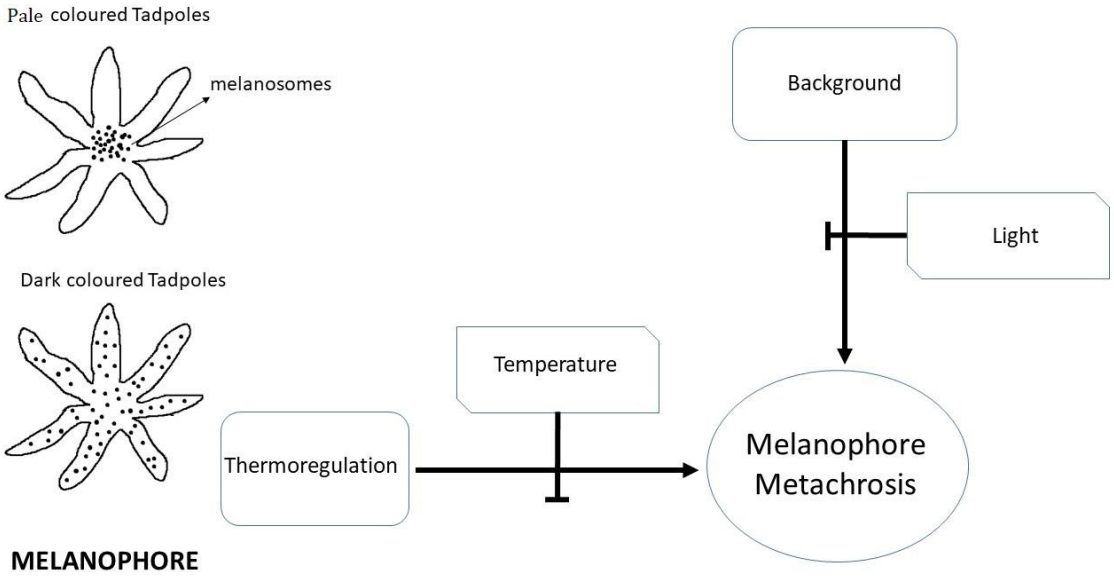

Figure S2. Left: Schematized melanophore metachrosis under both treatments. In pale coloured tadpoles, melanosomes are aggregated in melanophore cell body. In dark coloured tadpoles, melanosomes are dispersed radially by means of microtubules. Right: Proposed environmental model explaining the mechanism implicated in melanophore metachrosis observed in amphibian tadpoles.