



UNIVERSITÀ DI PAVIA

Corso di Dottorato in Scienze della Terra e dell'Ambiente

FORM PER PROGETTI BANDO DOTTORATO

1. Project title

Effects of anthropization on behaviour ecology, learning, personality and animal distribution in amphibians and reptiles

2. Proposer

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4. Key words

(Max. 5 – at least 2)

Anthropogenic disturbance, Anuran amphibians, Reptiles, Behavioural ecology, Animal distribution

5. Abstract

(Max.1.500 characters with spaces)

This study will consider different aspects of animal behaviour in 3 anuran amphibians and 3 reptiles within the framework of developmental plasticity and considering human-induced rapid environmental change (HIREC) as a main factor of interest affecting behaviour. Anuran tadpoles, lizards and snakes represent ideal models to investigate behavioural responses, as to explore how behaviour can be differently shaped during developmental phases, and to quantify possible trade-offs emerging among behavioural traits during ontogeny and in the adult stage.

The PhD aims to evaluate:



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- 1) how plasticity in behaviour and life-history traits vary as function of the environment and across populations;
- 2) how learning performance differs among populations with different degree of anthropogenic disturbance and different contexts of predation;
- 3) the fitness contribution of learning performance achieved during embryonic or larval stage, and how it could affect tadpoles' survivorship during real encounters with predators;
- 4) how learning ability can be affected by environmental variation occurring during development;
- 5) how individual differences in animal personality and behavioural syndrome can affect defensive performance under a real predation threat;
- 6) to assess how individuals tend to disperse to different environments and higher altitudes as a function of climate change in the alpine environment.

Outputs: several publications on peer-reviewed journals in an area of prominent interest; to provide valuable information for amphibians and reptiles conservation strategies and monitoring, possibly supporting the development of long-term conservation planning.