BIOLOGIE
DES ORGANISMES
ET DES POPULATIONS

M2 bop - 2014-2015
Research project

Supervision :

Surname: **Alexandre** First name: **Roulin**

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Funding for student:

☐yes ☐ to be discussed X no

Title of the research project :

Does predation play a role in the evolution of melanin-based coloration in the worldwide distributed barn owl?

Key words :

Barn owl, predation, trophic niche, melanin-based coloration, colour polymorphism

Brief description :

The barn owl is distributed worldwide and hence occurs in many different habitats. Although this owl feeds mainly upon small mammals, it shows pronounced flexibility in its diet. Interestingly, this owl varies in the degree of melanin-based coloration with individuals, subspecies and species varying from white to dark reddish brown. In Europe there are suggestions that the degree of reddish coloration plays a role in camouflage. The aim of the present project is to investigate whether there is a relationship between variation in reddish coloration between barn owl subspecies/species and diet. The student will collect data on barn owl diet analysed throughout the world and relate different trophic indices to coloration.

Literature (2 references):

Taylor, I. R. 1994. Barn owls: predator-prey relationships and conservation. Cambridge University Press.

Roulin, A. & Christe, P. 2013. Geographic and temporal variation in the consumption of bats by European barn owls. Bird Study 60, 561-569.

Roulin A. 2004. The evolution, maintenance and adaptive function of genetic colour polymorphism in birds. *Biological Reviews* **79,** 815-848.

Technical aspects of the research project:

Statistics, rigour, writing a scientific report, literature survey

Essential skills and abilities desired:

Statistics, rigour, ability to work in the field with a team

Return to Professor Frank Cézilly (frank.cezilly@u-bourgogne.fr)