

THE INTRODUCTION OF AN ALIEN FISH SPECIES (*CARASSIUS AURATUS*) AFFECTS THE ALPINE NEWT (*MESOTRITON ALPESTRIS*) THROUGH AN INCREASED USE OF SHELTER AND AN INHIBITION OF SEXUAL ACTIVITY

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The introduction of alien species is one of the major causes of the current and global biodiversity loss. Fish introduction causes threats especially to native amphibian populations, which are declining worldwide. A way for amphibians to persist in such altered environments is to adopt anti-predator strategies especially at a behavioural level (i.e. shelter use). Avoidance behaviour may decrease the probability of being detected by the potential predator but may also reduce breeding opportunities, thus altering the fitness of individuals. In this study, we aimed at testing the hypothesis that adult Alpine newt (*Mesotriton alpestris*) use more often shelters and display less sexual activity in the presence of a goldfish (*Carassius auratus*). To this end, we recorded behavioural patterns in 96 adult newts (48 males and 48 females) in a replicated laboratory design (24 tanks x 10 weeks of replicates). Half of trials involved individuals in direct contact with goldfish (except when newts used a shelter). Consistently through the whole study period, significantly more newts used shelter in the presence of fish than in their absence. Newts also decreased significantly their sexual activity level globally, but specially in the open area where they were in direct contact with fish. These results show that fish presence affects newts in complex ways, by inhibiting their reproduction.

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THURSDAY, 25 APRIL 2013

Ecological consequences of environmental changes

Guest speakers: Jean-Michel Gaillard & Yvon Le Maho

8:30 – 9:15 **Plenary lecture: Demographic responses to climate change: the fall of a successful species in Europe? Jean-Michel Gaillard, LBBE – CNRS, Lyon (p. 49)**

9:15 – 9:30 Noise-dependent acoustic signalling in grasshoppers – mediated by developmental plasticity? - Ulrike Lampe et al. (p. 61)

9:30 – 9:45 The introduction of an alien fish species (*Carassius auratus*) affects the Alpine newt (*Mesotriton alpestris*) through an increased use of shelter and an inhibition of sexual activity - Laurane Winandy et al. (p. 111)

9:45 – 10:00 Host plant range and climate change: predictions for a butterfly - H el ene Audusseau et al. (p. 19)

10:00 – 10:15 Linking behavioural changes to vital rates in a capital breeding mysticete - Fredrik Christiansen et al. (p. 36)

10:15 – 10:30 Long term effects of polycyclic aromatic hydrocarbons on zefrafish behavior and reproduction - Caroline Vignet et al. (p. 109)

Coffee break

10:45 – 11:00 Mercury contamination in a large community of subantarctic seabirds: age class and trophic variation amongst species from the Kerguelen Islands - Alice Carravieri et al. (p. 32)

11:00 – 11:15 Evaluation of a spatially explicit model for predicting exposure of bats to soil-associated metals - B eatrice Hernout et al. (p. 55)

11:15 – 11:30 Effects of mercury on fitness components in south polar skuas and brown skuas - Aur elie Goutte et al. (p. 52)

11:30 – 11:45 Evolution to increased temperature - the influence of mating system on adaptation process and extinction risk - Agata Plesnar-Bielak et al. (p. 84)

11:45 – 12:00 How to make a living in a depleted environment: does loosing fear help? - Soizic Le Saout et al. (p. 63)



9th "Ecology & Behaviour" Meeting

22-26 April 2013 Strasbourg (France)

Program & Abstracts



Strasbourg, April 2013

PROGRAM & ABSTRACTS

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Strasbourg, 22-26 April 2013

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