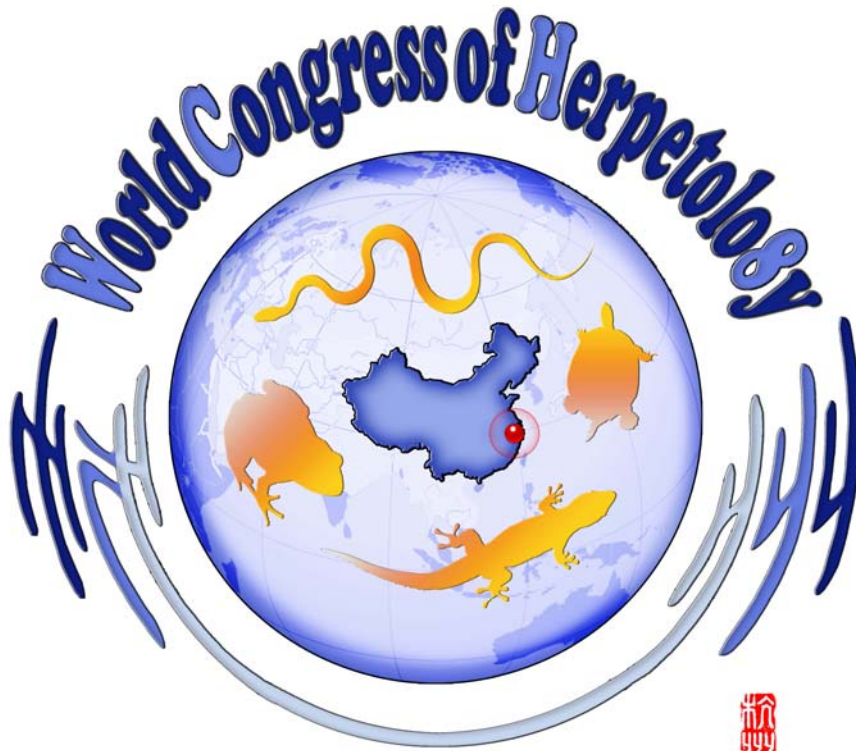


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Abstracts

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Behavioural avoidance of newts in response to an aquatic invader: Context-dependent patterns and fitness consequences

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The introduction of alien species, such as fish, in the natural environment is one of the main drivers of amphibian decline worldwide. The mechanisms behind the resulting distribution of native and introduced species and the consequences on fitness are not well understood yet. In this context, our objectives were to determine whether introduced goldfish induced behavioural avoidance of newts in various environmental contexts and whether goldfish impacted essential activities, such as feeding and reproduction. To this end, we carried out several replicated laboratory experiments in 40 aquariums, including the presence and absence of aquatic and terrestrial shelters in isolated and connected configurations. The study was based on alpine and palmate newts ($n = 256$), two native European species affected by goldfish introductions in the wild. Datasets were analysed by generalised linear mixed models (GLMMs). In all experiments, newts used more aquatic shelters in the presence of goldfish. A part of the populations escaped from risky waters to live on land whereas aquatic shelters favoured coexistence patterns. When an alternative aquatic patch was made available in the mesocosms, almost all newts moved to the safer areas. Although behavioural avoidance allowed newts to avoid risky contacts with fish, it affected vital components of fitness, that means feeding rates, courtship behaviour, and egg laying. These results show that fish presence affects newts in complex ways but in close dependence on environmental heterogeneity. The absence of newts from wetlands is thus not only due to factors such as predation but also to individual choice. Maintaining aquatic shelters and fish-free wetlands may therefore help at preserving biodiversity in impacted environments. Our work also highlights that behavioural conservation is a recent field that could bring new understanding and tools to protect amphibians in a framework of habitat alteration and management.

Keywords: Amphibian decline, behavioural avoidance, fish introduction, invasive species, newts, species coexistence

MEETING ROOM 2 (3RD FLOOR)

Ecology Ethology

- Chair** **Martin J. Whiting**
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 Behavioural avoidance of newts in response to an aquatic invader: context-dependent patterns and fitness consequences **ID027**
- 16:00 PM** **Guy Sion**
 Brain laterality and social status in lizards: Asymmetry of bite scars and dominant leg in the gecko *Ptyodactylus guttatus* **ID028**
- 16:15 PM** **Marco D. Barquero**
 Signal repertoire and contest outcome in the Jacky dragon **ID037**
- 16:30 PM** **Marcus Michelangeli**
 A novel behavioural syndrome and its link to microhabitat selection in an Australian lizard **ID049**
- 16:45 PM** **Eduard Artashesovich Galoyan**
 Do parthenogenetic lizards prefer sex when possible? Ecological, behavioural and cytogenetic features of complex population comprising of two parthenogenetic, one bisexual species and their hybrids of rock lizards (*Darevskia*, *Zauria*) in Armenia **ID055**
- 17:00 PM** **John D. Krenz**
 Blanding's turtles (*Emydoidea blandingii*) use a sun compass during natal dispersal **ID153**
- 17:15 PM** **David A. Penning**
 The king of snakes: performance and morphology of intraguild predators (*Lampropeltis*) and their prey (*Pantherophis*) **ID068**
- 17:30 PM** **Allan Muth**
 Home range estimation for the Coachella valley fringe-toed lizard, *Uma inornata* **ID072**
- 17:45 PM** **Osamu Sakai**
 Do clonal geckos (*Lepidodactylus lugubris*) have personality and increase its variation with growing up? **ID412**
- 18:00 PM** **Vitomir Soltić**
 Reproductive biology of the nose horned viper **ID031**

MEETING ROOM 3 (3RD F)

Genetics Development Morphology Biogeography

- Chair** **Si-min Lin**
15:35 PM **Ben Phillips (MINI-PLenary SPEAKER)**
 Using local adaptation to mitigate the impact of climate change **ID555**
- 16:00 PM** **Martina Gregorovičová**
 Presence of the interventricular septum as a substrate for the ventricular conduction system in monitor lizards **ID087**
- 16:15 PM** **Markus Lambertz**
 Reptilian lungs: keys to understanding the evolution of terrestrial air-breathing vertebrates **ID094**
- 16:30 PM** **John Dale Roberts**
 What determines paternity success in the polyandrous frog *Crinia georgiana*: position, time, body size or testis mass? **ID106**
- 16:45 PM** **Gayani Senevirathne**
 Comparative postembryonic skeletal ontogeny in two sister lineages of Old World tree frogs (Rhacophoridae: *Taruga*, *Polypedates*) **ID257**
- 17:00 PM** **Luke J. Easton**
 Skeletal morphology of New Zealand leiopelmatid frogs: regional variation or cryptic diversity? **ID360**
- 17:15 PM** **Chris Broeckhoven**
 A non-invasive protocol for *in vivo* micro-CT imaging of lizards **ID361**
- 17:30 PM** **Weronika Rupik**
 Ultrastructural differentiation of the thyroid in Squamata **ID413**