

## Fish introduction affects amphibians by increasing avoidance behaviour and inhibiting sexual activity

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Amphibians are currently declining worldwide for a variety of reasons. One of the major causes is the introduction of fish in their natural habitat. Since many amphibian populations do not usually share a common evolutionary history with fish, the detrimental impact of these introductions is understandable. A way for amphibians to persist in such altered environments is to adopt adequate behavioural tactics. However, although it has been shown that avoidance behaviour may decrease the probability of being detected by a potential predator, little is known on fitness consequences, particularly in terms of sexual behaviour. In this study, we aimed at testing the impact of goldfish (*Carassius auratus*) on sexual activity and mating tactics in adult Alpine newts (*Ichthyosaura alpestris*) in risky and safe micro-habitats. To this end, we compared behavioural patterns of newts in function of fish presence in a replicated laboratory design. Consistently through the whole breeding period, there was a significant effect of fish on the behaviour of newts. Fish presence caused an increased shelter use and a decreased sexual activity; this particularly in risky habitats. Moreover in the presence of fish, courtship displays varied and encounters were less successful than in their absence. These results show that fish presence can affect newts in complex ways, including the inhibition of their reproduction. They also highlight the importance of integrating behaviour into conservation studies for a better understanding of the interactions between native amphibians and introduced fish.



# PROGRAMME & ABSTRACTS



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