

**Avoidance of inbreeding through increased migratory activity:  
A comparative study of two populations of *Salamandra salamandra* in  
the Vienna Woods.**

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Inbreeding can have numerous negative effects on animal populations from elevated rates of developmental malformations to higher susceptibility to pathogens, the latter of which is of immediate interest considering the threat of the spreading fungus *Batrachochytrium salamandrivorans*. Spatial dispersal is one strategy to avoid incestuous mating and the most prevalent one in amphibians.

The larvae of the fire salamander (*Salamandra salamandra*) are usually dropped off into slow running water bodies, which often drift off and are consequently dispersed. In one of the two studied populations however, the larvae are dropped in small temporary still water bodies, thus eliminating this dispersal mechanism. Therefore, it is hypothesized that the lack of passive dispersal is compensated by a higher migratory activity after metamorphosis.

To test this claim, data of animal captures from the years 2010 to 2015 will be analysed and compared. This includes GPS coordinates of locations individuals were found at and photos of their dorsal patterns by which they can be – with computer software support (WILD-ID) – identified individually. From this data home range sizes will be approximated and the number of individuals leaving the research area estimated. Depending on the results, this study can suggest existing adaptations for inbreeding avoidance or highlight a possible risk of heightened inbreeding occurrences within the population using temporary still water bodies. Therefore, this study is not only of interest in terms of exploring population regulatory mechanisms but can also add to the conservation efforts of this threatened species.