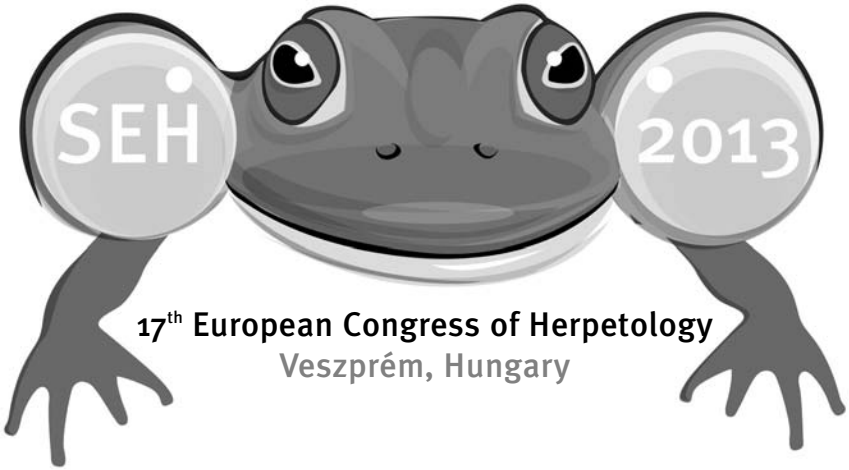

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A camera trap study of mass-hibernation in *Salamandra salamandra* in the Vienna Woods, Austria

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Camera traps are commonly used in animal ecology. The fact that most systems are triggered by motion detection in the infrared spectrum limits their use for poikilothermic species. This is one of the reasons why camera trapping is underrepresented in herpetology, compared to studies in birds and mammals. We tested a self-constructed camera trap that was triggered by a light barrier to monitor the activity of the fire salamander *Salamandra salamandra* in the Vienna Woods (Austria) from mid-October 2011 to mid-June 2012. The camera was installed at the entrance of a burrow that had been previously identified as a mass-hibernation site of *S. salamandra*. Out of more than 20,000 photos that were taken during eight months, over 7,340 showed fire salamanders, representing a total of 214 different individuals. 168 of them were known from a capture-recapture-study, so it was possible do determine the catchment area of this burrow and to compare the sex ratio of the fire salamanders that were found within this area and the sex ratio of the individuals that hibernate together. Based on the photos taken by the camera trap we were able to generate an activity profile for each individual and so we could estimate the number of individuals inside the burrow (up to 189 at the same time). Other vertebrate species were captured on these pictures as well, indicating a syntopic hibernation of *Salamandra salamandra, Ichthyosaura alpestris, Bombina variegata, Bufo bufo, Rana dalmatina, Rana temporaria, Anguis fragilis, Natrix natrix* and *Zamenis longissimus.* Recently, we tested the suitability of this camera for monitoring of an amphibian tunnel. The findings of our study point out the importance of richly structured habitats for amphibians and demonstrate the significance of detailed knowledge on specific characteristics of populations for effective conservation management. Furthermore we show the usefulness of camera traps for herpetological studies.

The effects of competition in two temperate gecko species

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Complex interspecific interactions may be important structuring agents in biological communities. Competition over spatial niche utilisation is one of most common competitive interactions between species in sympatry. We investigated the interspecific interactions between two, ecologically similar, temperate climate, gekkonid species, the Turkish gecko (*Hemidactylus turcicus*) and the Moorish gecko (*Tarentola mauritanica*). We compared populations in sympatry and allopatry on two geographically close Adriatic islands, Hvar (both species present) and Vis (only *H. turcicus*). We also compared populations of *H. turcicus* on Hvar occurring with *T. mauritanica* (in syntopy) and without *T. mauritanica* (in allotopy). We monitored species during their complete diurnal and annual cycle. The relative population density of *H. turcicus* differs depending on the presence/absence of *T. mauritanica*, but relative population densities of *T. mauritanica* are not affected by the presence of *H. turcicus*. Additionally, the two species showed differences in habitat use in sympatry. Moreover, *H. turcicus* showed ecological release in allopatry. Differences in densities between allopatric (Vis) and allotopic (Hvar) populations of *H. turcicus* point to direct competition between *H. turcicus* and *T. mauritanica*, but this competition does not occur over spatial niche since this species exhibits evasive strategies for habitat utilisation when found in sympatry. Observed interspecies interaction patterns may contribute to a better understanding of complex relations in natural communities.