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The effect of floods on habitat selection of the sand lizard (*Lacerta agilis*) in riverside flood zones

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Knowledge on habitat use of animal species is important for its effective conservation. In Slovenia the sand lizard (*Lacerta agilis*) is according to current knowledge distributed mainly in the river valleys. However, the impact of floods on its habitat selection in river valleys is not known. Therefore the main goal of our study was to establish the flood effect of the distribution of the sand lizards at river banks of the river Drava in NE Slovenia. We used the transect survey method with transects located outside the flooded area and in three different flood zones: (1) exceptional floods (every 50 years), (2) occasional floods (every 10 to 20 years) and (3) frequent floods (every 2 to 5 years). The areas with frequent floods have been flooded every year in the last five years as well as during the study year when also a part of the zone with occasional floods has been flooded. Surveys had been conducted in two different seasons (spring and summer) in 2012 and in good weather conditions. We have found out that the distribution of lizards is significantly confined to areas with floods since most of the lizards were recorded in zones with frequent and common floods. No sand lizards were found outside the floodplain. The seasonal differences were observed in adults, which more frequently occupied areas with



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occasional floods in spring and areas with frequent floods in summer. On the contrary, juveniles were present almost exclusively in areas with occasional floods. The direct effect of floods was also observed since in 2012 water covered numerous transects with more than 100 cm. The next day after the water retreat, the transect surveys revealed that the number of lizards corresponds to previous counts before flood event. We suggest that the sand lizards select the floodplains significantly and its population is even able to sustain flood events, therefore the species can be a useful indicator species for assessing the ecological state of river floodplains.

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