Anforderungen an Kleinstrukturen für Zauneidechsen (*Lacerta agilis*) in Zeiten des Klimawandels

Julian Treffler[1], Carolin Feiertag[2], Andreas Zahn[3] & Christoph Moning[4]

[1]Weihenstephaner Berg 17, D-85354 Freising, julian.treffler@hswt.de; [2]Hopfenstraße 4, D-85368 Moosburg an der Isar, feiertag.carolin@gmail.com; [3]H.-Löns-Straße 4, D-84478 Waldkraiburg, andreas.zahn@iiv.de; [4]Weihenstephaner Berg 5, D-85354 Freising, christoph.moning@hswt.de

Requirements for artificial structures for sand lizards in times of climate change

Progressive land use change and homogenization of the landscape are increasingly endangering the sand lizard in Germany. A targeted habitat management is necessary to secure the remaining populations. For this purpose, existing as well as newly created habitats must be optimized, maintained, enhanced and linked to other habitats by steppingstone biotopes. In conservation practice, the creation of artificial structures has proven to be a structurally enriching measure. These include brushwood piles, which are preferred by sand lizards, as evidenced by preliminary studies. This article presents the results of a study, which investigated the use of space by a large population of sand lizards in the BUND-Naturschutz Kiesgrube Heldenstein (district of Mühldorf, Upper Bavaria) and again found the preference of branch piles. The study worked out how branch piles and the surrounding habitat must be designed to be accepted by sand lizards. The species required a heterogeneous habitat mosaic consisting of vegetation of different heights, open grazing areas, and raw soils with diggable substrate. Small structures were accepted by the population in groups, which could be reached within short migration distances and were surrounded by a sufficiently high proportion of old grass (pasture residue) and low shrubs. Climatically particularly exposed dry and hot sites were increasingly avoided within the habitat during the year, while structures over loamy substrate with continuous soil moisture were visited especially in summer. This supports the hypothesis that habitat requirements are shifting due to climate change and that dry soil conditions are more and more avoided. Finally, the findings for future habitat management for sand lizards are summarized and can complement existing practice guides on the creation of artificial structures in reptile habitats. However, the creation of small structures only serves to optimize habitats and is in no way a substitute for area-related compensatory measures.

Key words: Sand lizard, *Lacerta agilis*, habitat management, species protection, climate change.

Zusammenfassung

Der fortschreitende Landnutzungswandel mit einer Vereinheitlichung der Landschaft gefährdet Zauneidechsen-Populationen in Deutschland. Ein zielgerichtetes Habitatmanagement ist notwendig, um die verbliebenen Populationen zu sichern. Dazu müssen bestehende wie auch neuangelegte Habitate optimiert, gepflegt und aufgewertet sowie durch Trittsteinbiotope mit anderen Lebensräumen verknüpft werden. In der Praxis hat sich in strukturarmen Lebensräumen die Anlage von