

Kleinräumige Verbreitungsmuster und Populationsstruktur von Reptilienarten im Lechtal

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Distribution, habitat requirements and population structure of reptile species in the Lech valley

Distribution, habitat requirements and population structure of five reptile species (adder, grass snake, smooth snake, sand lizard, slow worm) in the Lech valley between Donauwörth and Landsberg/Lech (Southern Bavaria, Germany) were studied at 12 sites during 2000 und 2001 in order to obtain basic data for planning a large-scale habitat connection program for reptiles. The three snake species occurred only in low densities, and at few sites, north of Augsburg, while sand lizard and slow worm were found regularly and in reproductive populations. South of Augsburg lived viable snake populations at all sites but one, and sand lizard and slow worm also occurred in individual-rich populations. These patterns can be explained by differences in habitat structure, since both sunny sites along the river and nutrient-poor grasslands were deficient in the sites north of Augsburg. All reptile species mainly inhabited secondary anthropogenous habitats such as dams and river embankments along the Lech and forest edges, because the primary habitats have been destroyed to a great extent. Adder and grass snake populations seem to be overaged due to reduced prey availability for juveniles. The smooth snake population south of Augsburg seem to be vigorous. On the basis of our results, we propose a separation of the study area when planning a large-scale habitat connection. North of Augsburg, it is necessary to induce an increase of the actual populations, while south of Augsburg, where populations reach considerably higher densities, immediate interactive habitat connection measures may be promising.

Key words: Reptiles, Lech valley, patterns of distribution, habitat choice, population structure, habitat connection.

Zusammenfassung

Während der Vegetationsperioden 2000 und 2001 wurden im Lechtal zwischen Donauwörth und Landsberg/Lech im Rahmen einer E+E-Vorstudie in zwölf Untersuchungsgebieten kleinräumige Verbreitung, Habitatnutzung und Populationsstruktur der fünf hier vorkommenden Reptilienarten Kreuzotter, Ringelnatter, Schlingnatter, Zauneidechse und Blindschleiche untersucht. Nördlich von Augsburg konnten nur Zauneidechse und Blindschleiche in individuenstarken Populationen nachgewiesen werden, während die drei Schlangenarten nur sporadisch vorkamen. Südlich von Augsburg lebten noch größere Populationen der drei Schlangenarten. Dieses Muster lässt sich vor allem durch Unterschiede in der Lebensraumausstattung erklären, da in den nördlichen Untersuchungsgebieten sowohl besonnte flussnahe Flächen als