

Bestandssituation und Ausbreitung des Springfroschs (*Rana dalmatina*) auf den rekultivierten Tagebauflächen der Sophienhöhe in Nordrhein-Westfalen – Planung und Umsetzung von gezielten Fördermaßnahmen

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Population size and distribution of the agile frog (*Rana dalmatina*) in recultivated opencast mining areas of the Sophienhöhe in North Rhine-Westphalia – planning and implementation of targeted support measures

In the Rhenish lignite mining area, lignite is extracted in opencast mines. While lignite is extracted on one site of the mining pit, the overburden gained during that process is directly transported to the other site of the opencast mine and deposited there for recultivation purposes. Consequently, the extraction of lignite and the recultivation of the mining site are processes that run simultaneously in the Rhenish Lignite Mining Area. The aim of recultivation is to reclaim areas that have been used for mining, turn them into a useful state and rehabilitate the according ecosystems. In this process, not only superordinate landscape elements such as forests and agricultural areas are taken into account, but also smaller-scale features such as water bodies and special habitats. RWE Power AG has developed its own biodiversity strategy, which intends to support several target species that occur in recultivated landscapes (RWE Power 2018). One of these species is the agile frog. In order to estimate the population size and distribution of the agile frog on the Sophienhöhe, the forestry recultivated heap of the Hambach opencast mine was investigated three times between 2020 and 2023. In the course of the investigation, most of the waterbodies on the Sophienhöhe were examined for the spawn of agile frogs. At the same time, new bodies of water were created, optimised and maintained according to the habitat requirements of the agile frog. The results of the three investigations showed that the agile frog successfully migrated through and settled in most parts of Sophienhöhe. The highest densities of individuals were recorded in sunny, structurally rich waterbodies with large shallow water areas. Within a few years, newly created waterbodies were used not only as stepping stones but also as spawning habitats. Based on the collected results, a favorable conservation status for the agile frog on the Sophienhöhe can be assumed. The current distribution is concentrated on the older parts of forestry recultivation.

Key words: Amphibia, *Rana dalmatina*, population study, habitat requirements, Rhenish lignite mining area, opencast mining, recultivation, Germany.

Zusammenfassung

Parallel zu den Abgrabungen in den noch aktiven Braunkohletagebauen im Rheinischen Revier, westlich von Köln, werden dauerhaft Flächen rekultiviert. Das Ziel der Rekultivierung ist, in Anspruch genommene Flächen wiederherzustellen und damit durch den Abbau verloren gegangene Lebensräume der darin vorkommenden Arten