

## Zum Vorkommen der Bechsteinfledermaus (*Myotis bechsteinii*) im Siegerland (Nordrhein-Westfalen, Rheinland-Pfalz) und Umsetzung integrativer Schutz- und Entwicklungsmaßnahmen

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### The occurrence of the Bechstein's bat (*Myotis bechsteinii*) in the region of Siegerland (North Rhine-Westphalia, Rhineland-Palatinate) and implementation of integrative protection and development measures

#### Abstract

Solitary males of Bechstein's bat (*Myotis bechsteinii*) can be observed all-over the southern part of the Siegerland. However, recently, three nursery colonies were observed in this area. The basis for the described protection concept are the data of two of these colonies.

The core habitats of these colonies are composed of oak and spruce forest. Predominantly the area consists of 81 to 120-year-old forest sections. The density of tree cavities depending on the tree species and age is here about 1.7-8.6 tree cavities/ha (1.7-13.7 trees/ha). During a telemetry survey we found that the animals used mainly woodpecker cavities in spruce and oak trees, as well as bat boxes. Colonies consist of about 50 adult female Bechstein's bat individuals. The main incidence of foraging areas was found in the oak forests, but also in spruce stands and to a small extent in open areas.

Based on the results of this study, integrative protection and development measures in the core habitats of two nursery colonies are presented and it is demonstrated that conservation compensation measures were combined into a successful, target-oriented habitat measures for the bats. These measures were characterized by the establishment of the eco-account-areas, and oak forests and habitat trees have been excluded from silvicultural use in the core ha-

bitats. Furthermore, orchard meadows will be created in the open land areas and the amount of potential habitat trees will be successively increased in future.

#### Keywords

Bechstein's bat (*Myotis bechsteinii*), roost sites, foraging areas, development of population, habitat-protection

#### Zusammenfassung

Seit 2007 wurden im Rahmen verschiedener Untersuchungen Daten zum Vorkommen der Bechsteinfledermaus im Siegerland erhoben. Dabei handelt es sich um ehrenamtliche Erfassungen, aber auch um Untersuchungen im Rahmen von Eingriffsplanungen sowie des Monitorings.

Solitäre Männchen der Bechsteinfledermaus (*Myotis bechsteinii*) können relativ gleichmäßig verteilt über das südliche Siegerland beobachtet werden. Insgesamt sind bis zum gegenwärtigen Zeitpunkt drei Wochenstubenkolonien bekannt. Von zwei Kolonien liegen Daten zugrunde, die in das hier vorgestellte