

## Hibernation in Daubenton's and Natterer's Bats

“Long term individualised monitoring of sympatric bat species and demographic differences in hibernation phenology” is the rather wordy title of a paper by F Meier, L Grosche, C Reusch, V Runkel, J van Schake and G Kerth based on their comparisons of the hibernation of Daubenton's and Natterer's bats. See: <https://bmcecol.evol.biomedcentral.com/articles/10.1186/s12862022019626>

Although their study took place in Germany it is of particular interest to us as the two species are the ones most commonly found hibernating underground in Surrey (as Ross Baker's table above shows). Differences in average length of time hibernating were found not only between the species but also between the sexes and ages for each species. To quote the abstract: “Overall Daubenton's bats entered the hibernaculum earlier and emerged later than Natterer's bats, resulting in a nearly twice as long hibernation duration. In both species adult females entered earlier and emerged from hibernation later than adult males. Hibernation duration was shorter for juveniles than adults with the exception of adult male Natterer's bats whose hibernation duration was shortest of all classes.”



*Hibernating Daubenton's bat*



*Hibernating Natterer's bat Photos, Derek Smith*

Some of the differences were related to differences in feeding. Natterer's bats often take prey by gleaning (that is, picking from surfaces) which they could do in colder conditions when insects are inactive. (Some years ago Paul Hope gave a talk to Surrey Bat Group about bats in Greywell Tunnel, in which he told us that Natterer's bats rouse from hibernation about once a week and analysis of droppings included remains of such unexpected items such as woodlice.) Daubenton's bats are able to fatten up in early autumn, when their insect prey is abundant, ready for hibernation. On the other hand, adult male Natterer's do not even start to fatten up until after the autumn swarming period. The hibernaculum studied was interesting, being a well, 2m in diameter with a depth of 60m. it is situated inside a small wellhouse which bats enter through a window and then crawl through small gaps in the wooden lid. Several thousand bats of seven species use it, the majority belonging to the two species considered here.

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