

## Nature Notes 4: Sleeping Away the Winter

After the excitement of Christmas do you, like me, sometimes wish we could just curl up into a ball and sleep through all the cold, dark, winter days to wake again with the warmth and new life of spring?

Some animals do something similar to this; not only polar bears in Alaskan snow fields and grizzly bears in the Rocky Mountains but closer to home, dormice in their cosy nests made from strips of honeysuckle bark, hedgehogs beneath piles of sticks and dead leaves and bats in caves where the air temperatures stay close to 10 -12 °C.

There are very few natural caves in East Anglia but on Alderford Common we have a man-made alternative: the disused lime kiln, which is a hibernaculum (or winter home) to up to 20-30 bats each winter. As with other hibernating animals they are in a torpid state in which their body temperature falls closer to ambient temperature, their heart rate slows right down, their breathing becomes much more shallow and their whole metabolism is greatly reduced (if they were humans they would be rushed straight into intensive care!!!).



Three species regularly hibernate in the lime kiln last worked by Mr Munford who lived in Uppgate. In December there were 23 Daubenton's (left) and two Natterer's bats but they are often joined by a few brown long-eared bats..

The lime kiln consists of a circular brick tunnel about 10m in diameter, 2m wide and 2.5 m high. Alternating layers of charcoal and marl were burnt in the conical space in the centre; the resulting lime falling down chutes into the tunnel where it was loaded into barrows and hence onto tumbrels pulled by horses and up the path to the Reepham Road, to be spread on the fields.

The bats squeeze into cracks between the bricks of the tunnel or into special "bat bricks" (right) divided into convenient bat-sized "bat bedrooms", designed and built into the walls by John Goldsmith, who also constructed the "bat porch" to facilitate entry by bats but not by exploring children whose body temperature would alter the microclimate and disturb, with possible fatal consequences, the hibernating bats.

Some species such as Natterer's can stay in the same place without moving throughout the winter; others such as Daubenton's, make occasional forays, possibly to have a drink, then may return to another hibernaculum (the bat equivalent of musical chairs) so although there may be no more than twenty to thirty bats in the lime kiln at one time it may be used by considerably more throughout the whole winter.

Other bats also occur in the Parish, including a breeding colony of pipistrelles in the roof of the church. Two retired sisters, who used to live in the cottage at the end of the drive leading to Uppgate house, were attending a service one Sunday morning. Part way through one of the hymns, Margaret turned to Olive and whispered loudly "Olive, there is a bat climbing up my leg". Olive's reply is not recorded, but would have been in character if it had been something like "Oh how interesting, which species is it?" What is known is that the bat was helped to launch itself into the air as they find it difficult to take off from a horizontal surface.

