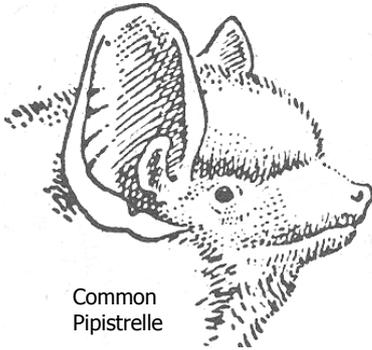


Bats at Tintern Abbey

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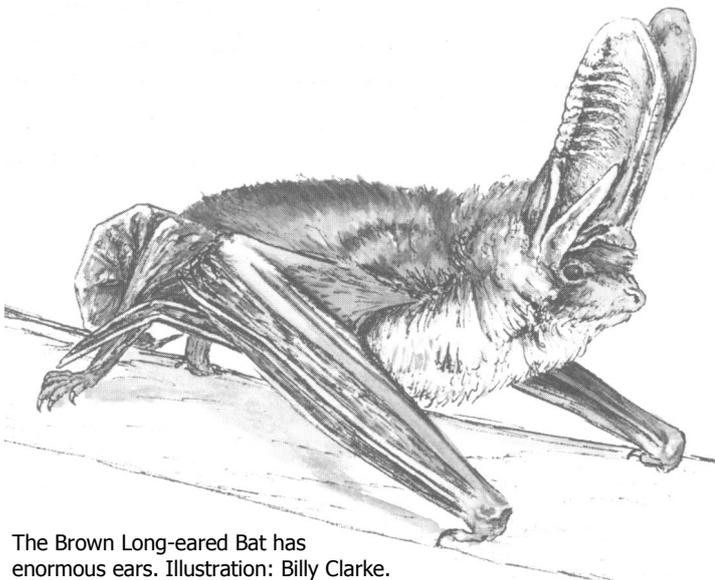
Common Pipistrelle

Some general facts about bats in Ireland

1. Bats are mammals and they are the only Irish mammals capable of true, powered flight.
2. These small furry

animals are not "flying mice"; bats form a totally separate group, quite distinct from rodents.

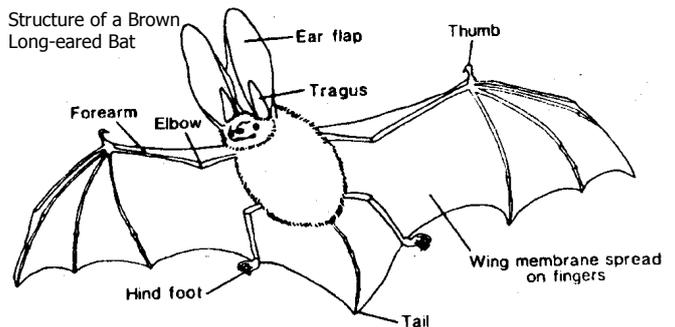
3. Bats are clean animals that groom frequently.
4. Bats in houses do not pose any threat to people or their homes. Unlike some rodents, bats do not spread disease, bring in nest material, or chew cables or wood.
5. Bats hibernate in buildings, caves and hollow trees from mid-November to the end of March.
6. They emerge in spring to feed and to give birth.
7. Bats mate in autumn before going into hibernation but the females delay embryo development until they emerge from hibernation the following spring.
8. During the summer, males tend to live on their own scattered throughout the countryside.
9. In April and May, pregnant females and immature females congregate in groups at maternity roosts; these are often located in people's houses.
10. Each female gives birth to a single baby or pup, normally once a year during June and early July.
11. Pups are born blind and naked and are reared exclusively by their mothers.
12. Mothers suckle their young for several weeks. Pups are independent when they are 6-7 weeks old.
13. Maternity roosts break up in August and are normally abandoned by the end of September.
14. Males set up mating territories from mid-August and the females join them when the maternity roost breaks up.
15. The lifespan of a bat in the wild is believed to be 7-8 years but individuals over 15 years have been found.



The Brown Long-eared Bat has enormous ears. Illustration: Billy Clarke.

16. Bats rest by day and emerge at dusk to feed thereby avoiding competition with birds for food.
17. Bats are not blind. They can see by day but at night they use a sophisticated sonar system called echolocation to find food and to avoid objects.
18. Bats echolocate very loudly in a frequency range 30-140kHz. That range is above the hearing ability of most human ears. A bat detector is used to lower these ultra-sounds into a range that our ears can appreciate.
19. In addition to ultra-sounds produced for hunting and navigation, bats have a range of squeaks and social vocalisations called "bat chatter" that our ears can hear.

Structure of a Brown Long-eared Bat



20. Bats' wings are membranes of skin extending across their arms and hands. Their extremely long fingers hold the membrane open. The wing extends from the tip of the little finger to the ankle and on to the tail. The thumb and toes are free for crawling and climbing.
21. To hold the membrane open, some bats have a bony spur called a calcar extending from their ankles towards the tip of their tail.
22. Bats look big when their wings are spread but when their wings are folded several Irish species can fit neatly in a matchbox.
23. Bats do not fly into your hair.
24. Bats do not make nests like mice but find small crevices or gaps to roost in.
25. Bats are not harmful, instead, they are very beneficial as natural insecticides.
26. All Irish bats are insectivores, that is, they eat insects.
27. Bats have a high metabolic rate: some species need to have a daily food intake of ¼ their body weight. Consequently, one small bat can consume up to 3000 midges and other small insects per night.
28. Bats also eat small moths, caddis flies, mayflies, flies, bugs, earwigs, lacewings, Daddy-long-legs, beetles, and spiders.
29. Bat droppings are mouse-like but are not greasy. They are dry and crumbly and often glisten due to the high content of shiny insect wings in them.
30. Ten species of bat have been recorded in Ireland.
31. Numbers have declined in recent years because of a decline in insects and loss of roosting sites.
32. All Irish bats and their roosting sites are protected under the *Wildlife Acts*, 1976 and 2000.

If you want to know more about bats, how to manage a roost in your house, or how to deal with a bat flying around your bedroom, the National Parks and Wildlife Service (NPWS) of the Department of the Environment, Heritage and Local Government has a telephone helpline at freephone **1800 405 000** to answer specific queries.

Sources of more general information include the NPWS website at www.npws.ie and those of Bat Conservation Ireland at www.batconservationireland.org and the Cork County Bat Group at www.corkcountybatgroup.ie.

Bats at Tintern Abbey

At least seven of the ten species of bat known to occur in Ireland have been recorded at Tintern Abbey and in the adjoining woodlands. These seven species are listed below; the three other species are the Lesser Horseshoe Bat (confined to the western seaboard south of Sligo), Nathusius' Pipistrelle (a recent colonist, first recorded in Ireland in 1997), and Brant's Bat (Ireland's rarest bat; known from very few locations).

In 1994 Tintern Abbey was classified proposed Natural Heritage Area (pNHA), Site Code No 000711, to help conserve the bats living there.

All of the bats found at Tintern Abbey belong to the vesper bat family, the Vespertilionidae.

The small, mouse-eared or *Myotis* bats are represented by the following three species.

★ **Whiskered Bat** *Myotis mystacinus*. This bat is one of Ireland's rarest mammals. It has a dark face and long whiskers on its lips and at the corners of its mouth. A colony of 30 individuals was recorded in the roof of a workmen's shed at Tintern Abbey on 20 July 1987. The colony represented 10% of the known national population at the time. One individual was identified in 2008 among several bats caught in a mist net while emerging at dusk from maternity roosts in the former stable block.

★ **Natterer's Bat** *Myotis nattererii*. Named after its discoverer the

Austrian naturalist Johann Natterer (1787-1843). Emergence counts of 70-80 individuals from the stable block indicate that Tintern Abbey is a site of national importance for this species. A maternity roost in the roof of the Dumper Shed is the subject of on-going research by the Centre for Irish Bat Research, an initiative of bat researchers at University College Dublin, Queen's University Belfast, and the National Parks and Wildlife Service.

★ **Daubenton's Bat** *Myotis daubentoni* commemorates the French naturalist Jean Daubenton (1716-1800). Also known as 'the water bat', this species hunts over the surface of slow-flowing or still water. It emerges 30-60 minutes after sunset and trawls the water surface for caddis flies and midges. It hunts by aerial hawking, by gaffing with its clawed feet, and by scooping with its tail. It has been recorded hunting between Abbey Bridge and the Old Tintern Bridge when the flow rate in the stream is low and the water is consequently slack. The site is monitored as part of a Bat Conservation Ireland research project.

★ **Leisler's Bat** *Nyctalus leisleri*, the largest bat found in Ireland, flies early. Named after a German scientist, it emerges at dusk or just before it. A lone male was found roosting in a bat box in the woods at Tintern and the hunting calls of individuals flying high over the woodlands have been recorded on infrequent occasions. On a bat detector, Leisler's Bat ultrasounds at 25kHz are converted to a series of loud 'plip-plop' sounds with background crackle somewhat like that of frying eggs.

Pipistrelles (Latin: 'little squeakers') are represented by two species.

★ **Common Pipistrelle** *Pipistrellus pipistrellus* lives in the abbey complex and is regarded as one of the most common bat species in Ireland. It echolocates loudest at a frequency of 45kHz.

★ **Soprano Pipistrelle** *Pipistrellus pygmaeus* is a shade smaller than the Common Pipistrelle and is, therefore, probably Ireland's smallest bat. It echolocates at a higher frequency (peak 55kHz), hence its English name. It is by far the more common of the two species of pipistrelle that occur at Tintern Abbey. There are maternity roosts in the buildings. On the afternoon of 27 August 2009 six individuals were roosting in the bat box attached to the wall immediately outside the door of the Tea Rooms.

★ **Brown Long-eared Bat** *Plecotus auritus* gets its name from its most obvious characteristics: its enormously long ears and its fluffy, buff to mid-brown fur. Maternity roosts have been recorded in the roof spaces of the former Colclough stable complex and individuals have been found in the tunnel under the cloister garth.

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Main information sources

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Hayden, T. and Harrington, R. 2000. *Exploring Irish Mammals*. Dublin: Town House.
Marnell, F. 2009. *Bats in Houses: Guidance for Householders*. Dublin: National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government.



Photo: Jim Hurley