

About cats

Cats tend to get one of two responses – the favourable appreciation of a treasured pet or the not-so-friendly view of a wildlife killer. But how much do we really know about the effects of cats on our wildlife? It seems that some in-depth science is needed in order to assess the full-scale impact of these much loved yet much chastised animals.

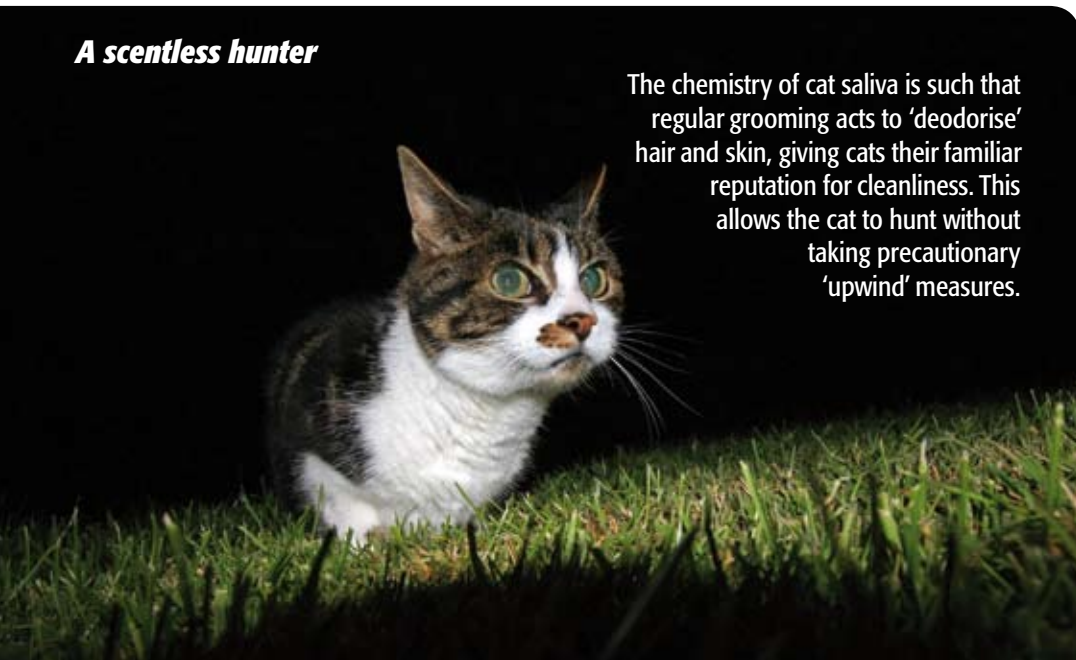
Cats and humans

Genetic descendants of the African Wildcat, domestic felines have been associated with humans for almost 10,000 years. There are thought to be some nine million cats in Britain today with particularly high densities occurring in urban areas. One study estimates there can be as many as 230 cats within a one kilometre square area.

A few thousand years of domestication has not been sufficient to undo millions of years of evolution. Natural selection has lead to a finely tuned, precision predator that is very good at catching small animals. Despite our best efforts, hunting behaviour is an innate and inevitable product of the domesticated cat's genetic make-up. Crucially, studies have found that hunting tendency is not related to hunger. In fact, pet cats are just as likely to hunt and catch small animals as feral or semi-wild farm cats that actually rely on them for sustenance. Combine a high density of well-fed, well cared-for cats with an urban garden environment designed to attract small birds and the result can be distressing.

A scentless hunter

The chemistry of cat saliva is such that regular grooming acts to 'deodorise' hair and skin, giving cats their familiar reputation for cleanliness. This allows the cat to hunt without taking precautionary 'upwind' measures.



An unwelcome gift

Many cat owners will be well acquainted with 'prey-presentation' when dead and uneaten gifts are brought home. This behaviour is poorly understood and may skew our perception as to how much damage cats do, especially when compared to other predators.



The cat as a predator of small birds

The domestic cat is an effective ambush predator, using its compact size and fast reflexes to surprise and capture small prey. The effectiveness of this predator and its hunting technique has had particularly devastating effects in some parts of the world, particularly on oceanic islands, where endemic species have not evolved alongside it. Animals can learn to fear the cat as a hunter, but deeply ingrained instincts or particular morphological quirks, such as the tendency to nest on the ground or flightlessness in birds, can make them especially susceptible to attack. As such the cat is thought to be responsible for the near extinction of many critically endangered birds, particularly in Australasia.

The Wild Cat (*Felis silvestris*) is indigenous to Britain and our native avifauna has a long and shared evolutionary history with them. The problem with Domestic Cat (*Felis catus*) predation, however, is that it takes place to an unnatural extent. In a balanced ecosystem, prey and predator species effectively regulate each other. Their populations are dependent on one another, with predators reliant on prey availability to maintain numbers and populations of prey species fluctuating in response to changing levels of predation pressure.

A problem arises because Domestic Cats do not hunt small animals to sustain themselves but are unnaturally supplemented by human provisioned food. This results in what is known as 'hyperpredation'. Any decline in prey numbers has no effect on a cat population composed of individuals able to return home to be fed. This can be particularly problematic in urban areas where cat densities are high.

The impacts of cat predation in the UK

Individual cats vary widely in the number of prey they take. Many take few or no prey but, collectively, their impact is potentially a large one. Studies suggest that cats are responsible for around 275 million animal deaths every year in the UK. This includes a wide variety of prey species such as small mammals, reptiles, amphibians, butterflies and birds. One urban study found an average kill rate of 21 prey items per cat, with Wood Mouse the most commonly caught species.

It is thought that some 55 million birds are killed by cats in Britain every year. What is currently unknown is how this affects birds at a population level. Given the number of gardens in the UK, their importance as habitats for nesting and feeding, the potential for bird losses is great. For some bird species, urban populations make up a significant proportion of the national population, including those of conservation concern such as Starling (54% breeding in urbanized habitat) and House Sparrow (62%). With House Sparrows featuring as one of the most commonly caught bird species, this has the potential to amount to a serious detrimental removal of valuable breeding individuals.

Predation of birds is at its peak in spring and summer, as cats take advantage of the inexperience of juveniles. Those species most at risk appear to be Robin and Dunnock, perhaps in part due to their shrub nesting habits, ground feeding behaviour and general abundance in gardens. Birds always fledge more young than will ultimately survive, and the question is how many of the youngsters killed by cats are surplus to those that would otherwise be recruited into the population. It may be that predation by cats reduces competition for food for those newly fledged birds that avoid capture, increasing their chance of survival and reducing over-winter starvation. Many bird species populations remain stable, yet there is the possibility that, for those exhibiting sustained decline, cat predation may be adding to other downward pressures.



BTO Garden BirdWatch Membership Form

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Learn more about your garden birds



Join Garden BirdWatch today for just £15 and get the acclaimed 'Gardening for Birdwatchers' free.

Gardens are great places in which to find out more about birds and their behaviour, making garden birdwatching a very pleasurable pastime. For example, did you know that some of your wintering Blackbirds will have come from Poland, Germany and even Russia!

The British Trust for Ornithology monitors the changing fortunes of those birds that use our gardens through the BTO Garden BirdWatch. The project involves more than 16,000 garden birdwatchers, all collecting simple information on the birds using their gardens throughout the year. This information also enables us to find out how birds use different types of gardens and how this use varies across Britain and Ireland.

Garden BirdWatch is the largest year-round study of garden birds (and other garden wildlife) anywhere in the World. Membership of Garden BirdWatch costs just £15 a year. Being a member of Garden BirdWatch offers you:

- A quarterly magazine on garden birds.
- The chance to find out more about the different birds that visit your garden.
- The opportunity to participate in an important national project and to contribute valuable information that can be used to help conserve the birds of Britain and Ireland.
- Access to expert advice to help you identify and look after the birds in your garden.



How can I protect my birds?

- Cats rely on cover to approach prey and launch surprise attacks. Positioning feeding stations in the open, with a good distance between them and trees or bushes, can give birds the space they need to spot a rushing predator.
- Many birds employ distress and alarm calls which others can learn to respond to. Attracting groups of birds to your garden feeding station helps to guard against predators by ensuring a multitude of eyes are watching for danger. Splitting feeding stations over a wider area in the garden may encourage groups of birds to gather at different points in the garden, spreading their vigilance efforts and covering more ground with sentinels. This also prevents overcrowding in one small space where social distraction can leave birds vulnerable to attack.
- Nest boxes can be protected by careful placement and, additionally, by placing chicken wire of a suitable gauge around them. For example, don't place a nest box near the roof of a shed where it will be within easy reach of a cat. Chicken wire can also be used to protect the nests of open-nesting species like Blackbird or Song Thrush. Protection for nests can also be provided by planting thorny bushes in which birds can nest, and which are more difficult for a predator to penetrate. More information on nest box design and placement can be found in the BTO leaflet on '**Nest boxes for garden birds**', while information on suitable plants can be found in '**Gardening for Birdwatchers**', a 96-page book available from the BTO.

- There are various cat deterrents on the market, some of which appear to work better than others. A sonic device, triggering an unpleasant sound when a cat crosses in front of it, may be one option, though such devices should be moved around the garden periodically to ensure the cat does not simply avoid that route.

What can I do as a cat owner?

Cat owners themselves can also do small things to help reduce the amount of hunting impact their pets have. Cat owners further gain from reducing hunting as it can help to reduce flea and worm infestations.

- Limiting the time spent outdoors during the early bird breeding season could help to reduce nest raiding.
- Bells fitted to collars have been shown to reduce the number of successful prey catches by providing warning to wary prey. This effect can diminish after time, as some cats have been found to mediate its effectiveness through careful movements. Bells can also lose their sound clarity as continuous friction wears them down and dulls their sound. Regular replacement of old bells, particularly with those of slightly different design, may refresh their effect.

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Photographs by Rebecca Nason, Unity Norwak, Jill Pakenham, Paul Standcliffe and Mike Toms.

About the BTO – making your birdwatching count



The BTO (British Trust for Ornithology) is a partnership of birdwatchers and professional ornithologists, all keen to understand what is happening to birds within the United Kingdom. By supporting the Trust financially and by contributing to national surveys, members provide valuable information on Britain's birds and their habitats; research that forms a basis for sound conservation. Thousands of BTO members and other volunteer birdwatchers are involved in this monitoring work, coordinated by local organisers and scientists based in offices in Norfolk and Stirling. To learn more please visit the BTO website at www.bto.org, write to BTO, The Nunnery, Thetford, Norfolk, IP24 2PU, telephone 01842-750050 or email info@bto.org. Registered Charity No. 216652 (England & Wales), SC039193 (Scotland).



Cats and garden birds



A BTO Garden BirdWatch Guide