



Improving the welfare of both wildlife and domestic cats

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Emma qualified as a veterinary nurse in early 2019 and now works in a small animal practice, where she is the cat and wildlife advocate. She has an interest in medical nursing as well as wildlife nursing and conservation. Emma has volunteered in the UK and abroad, including working with monkeys, rhinos, pangolins and a host of British wildlife. She enjoys extending her knowledge and experience of wildlife nursing.



ABSTRACT Hunting behaviour is often considered normal for domestic cats and the impacts on wildlife are often discussed. Estimated figures are often published and some of these have been included in this article. Several wildlife rescues were contacted for their data. These data are for prey known to have been caught by a cat. Therefore, the number could be substantially higher, and other prey animals could have sustained injuries from cats or subsequently died before being taken to a wildlife rescue. By understanding cat owners' perspectives on their pets' hunting behaviour, suitable changes may be made to reduce predation on wildlife, thus improving the welfare of both wildlife and cats. Veterinary nurses can aid in responsible cat ownership to help minimise the impact on wildlife.

Keywords domestic cats, responsible pet ownership, wildlife, predation, welfare, wildlife-friendly, cat behaviour, wildlife casualties

Introduction

The dynamic between domestic cats and wildlife is often an emotive topic, with conflicts arising from both cat and wildlife enthusiasts. The debate normally focuses on whether cats should be kept indoors or allowed to roam freely outside. As registered veterinary nurses (RVNs), we may speak to new cat owners about the advantages and disadvantages of both lifestyle options for their pet. However, we may not mention the impact cats can have on wildlife. In this article I will cover cat owners' perspectives on hunting behaviour, the data for cat-attack victims in wildlife rescue centres in the UK, and what cat owners can do to help reduce wildlife predation. With this information we could help improve the welfare of both cats and wildlife.

Cat owners and cat behaviour

There are 10.9 million pet cats living in the UK, with 72% of cats having access to both indoor and outdoor environments (PDSA, 2020). A cat's hunting behaviour is often considered normal and natural, and something for which cat owners may not take individual responsibility for preventing or reducing (Crowley et al., 2019). This is probably due to the historical role of cats in pest control and their subsequent 'self-domestication' (Crowley et al., 2020a). A study by Baker et al. (2005) revealed a mean predation rate of 21 prey/cat/annum. This would mean that around 229 million prey animals may have been caught and brought home by cats in 2020 alone. Some prey could appear unharmed and are immediately released, but many are injured and some may be presented for treatment in wildlife rescues or veterinary practices (Saunders, 2016), which is likely to result in welfare implications for these prey animals.

In the PAW report (PDSA, 2020), 14% of cat owners said one pet behaviour they would like to change was bringing wildlife into the house/killing wildlife. A recent study identified five types of cat owners:

- Concerned protector (who focuses on their cat's safety)
- Freedom defender (who prioritises their cat's independence)
- Tolerant guardian (who allows outdoor access but dislikes their cat's hunting behaviour)
- Conscientious caretaker (who feels some responsibility for managing their cat's hunting behaviour)
- Laissez-faire landlord (who is unaware of the issues surrounding roaming and hunting behaviour in cats)

(Crowley et al., 2020b)

By understanding the owner's perspective of their cat's predation on wildlife, we could encourage owners to make changes that still align with their views and beliefs.

Wildlife casualties due to cat attacks

The author contacted several wildlife rescues to obtain current data on wildlife casualties which the finder or wildlife centre considered to be due to cat attacks. HART Wildlife Rescue reported that around 17% of its total patient admissions in 2020 were known cat-attack victims. HART Wildlife Rescue also reported that 1 in 5 of their avian admissions, and 1 of 4 of their rodent, lagomorph and bat admissions, were known cat-attack victims. Of all cat-attack admissions across the wildlife rescues, the most common species were birds, at 82–88%. Rodents were a smaller percentage at 10% (across a couple of wildlife rescues). Secret World Wildlife Rescue reported that 77% of its cat-attack victims were brought in between March and August, with 85% being birds. Tiggywinkles Wildlife Hospital reported that, between March and June in 2020, nearly a quarter of all bird admissions were the result of an attack by a cat or dog.

The percentage of rodent cat-attack victims presented to wildlife centres could be low because rodents are mainly caught at night, whereas birds are caught in the day when owners are more likely to see them. Another factor could be owners perceiving rats and mice as pests or vermin, so they may not attempt to rescue these animals. This in itself may be a welfare concern. An additional possibility is that owners do rescue the prey but then release them, perceiving them as unharmed. Many of these animals are likely to suffer protracted deaths. Cats can cause penetrating wounds that are often more extensive than external examinations show and can be contaminated with

Pasteurella multocida (Müldorfer et al., 2011).

Small birds and mammals can sustain thoracic and abdominal injuries from cat attacks and may require fluid therapy, broad-spectrum antibiotics, pain relief and treatment of dyspnoea (Mullineaux & Keeble, 2016). Wound management may also be required for these wildlife casualties and, in cases with extensive damage, euthanasia may be indicated (Mullineaux & Keeble, 2016).

A study by Baker et al. (2018) highlighted several factors affecting the likelihood of surviving cat-attack victims being released. These were the species, age and the time it took for the bird to be transported to a wildlife centre. The welfare of these cat-attack victims could be improved if owners, rehabilitators and veterinary professionals were able to effectively identify life-threatening injuries during triage (Baker et al., 2018). This could be achieved by veterinary practices and wildlife rehabilitators working more closely and sharing knowledge. The author would encourage veterinary practices to ensure that a full and thorough clinical examination is provided during the triage process for all cat-attack victims. Veterinary surgeons have a duty to provide first aid and pain relief to prevent suffering to all species, which may include euthanasia (RCVS, 2021). The author recommends veterinary practices have a list of drug doses for pain relief and antibiotics for birds, rodents and bats.



Data from one wildlife rescue centre revealed that 31% of cat-attack victims were released. The author believes more can be done to reduce predation, which would result in fewer animals being admitted into wildlife rescues and veterinary practices, and could improve the welfare of these animals.

How cat owners can reduce predation on wildlife

One way predation could be stopped altogether would be to keep cats indoors. However, the author understands that this may not be suitable for all cat owners, due to their personal beliefs or if the cat already has access to the outdoors. A study by Crowley et al. (2020b) highlighted that cat owners in the UK currently feel outdoor access is fundamental and a component of cat care. All five types of cat owners disagree that cats should be kept solely inside to stop them hunting, while three of the types felt strongly that cats should have outdoor access (Crowley et al., 2020b).

RESTRICTED OUTDOOR ACCESS

Owners who would like their cat to have access to the outdoors but are concerned about the risks to their cat could consider fencing their garden or providing an outdoor cat enclosure. Cats can climb fences so the fence would need to be at least 2 metres in height to be effective (Cats Protection, 2021d; iCatCare, 2018a). The fence should be close-boarded to ensure the cat cannot get through the fence, and this will also be safer for any wildlife that tries to visit the garden. The author suggests providing a small gap (13 cm x 13 cm) in the fence, to allow hedgehogs to pass freely. This size of gap is often too small for pets but will allow hedgehogs to continue their usual nightly walk to find food and a mate (Hedgehog Street, 2021). An outdoor cat enclosure may be built as an alternative.

Cat owners unwilling or unable to make changes to their gardens could consider restricting access to the outdoors at night. Cats are generally more active from dusk until dawn, and this is a prime time for most wildlife. According to the latest CATS report, 46% of cats given outdoor access are able to come and go freely during the night (Cats Protection, 2021b). Cats Protection and International Cat Care recommend keeping cats indoors at night to keep them safe from dangers like road traffic accidents (Cats Protection, 2021c; iCatCare, 2018b).

Bats are known for being active at night. It is estimated that over 30% of bats rescued by bat carers have been attacked by cats (Bat Conservation Trust, 2021). Only 14% of these are released, with 56% not surviving and 30% unable to return to the wild. Bats caught by cats can sustain patagial injuries, which can range from small holes in their patagium to large tears. These injuries can lead to wound infection and/or subcutaneous emphysema (Couper, 2016). The most important time to keep cats indoors at night is from mid-June until the end of August, as adult bats will be caring for their young during this time (Bat Conservation Trust, 2021). The Bat Conservation Trust suggests that if cats cannot be kept indoors all night, they should be brought indoors half an hour before sunset and kept in for an hour after sunset.

CAT COLLARS

A study conducted by the Royal Society for the Protection of Birds (RSPB) found that cats with a bell collar returned 41% fewer birds and 34% fewer mammals than those with a plain collar (Nelson et al., 2005). Those with an electronic sonic device on their collar returned 51% fewer birds and 38% fewer mammals (Nelson et al., 2005). However, it has been noted that some cats can learn to stalk without activating the bell, and a study by Cecchetti et al. (2021) said cat bells have no discernible effect. In this study, the Birdsbesafe® cat collar reduced the numbers of birds caught and brought home by 42%, but had no discernible effect on mammals. Some cat owners are concerned about the potential safety risks of a collar, the potential effects on the cat's welfare and the potential intolerance of a collar by their cat (Crowley et al, 2020b).



DIET AND ENRICHMENT AT HOME

In the 'indoor versus outdoor access' debate, physical risks such as road traffic accidents are often raised against outdoor access, whereas risks to the emotional wellbeing of a cat are highlighted against an indoor-only lifestyle (iCatCare, 2019). Problem behaviours, such as scratching furniture, can be caused by boredom or frustration, so cat owners with indoor-only cats are encouraged to take more responsibility for providing a rich and stimulating environment (iCatCare, 2019). It has been noted that outdoor cats tend to be slimmer than indoor-only cats (iCatCare, 2019), and one way to combat weight gain and boredom is by using puzzle feeders. Conversely, a study by Cecchetti et al. (2020a) found a 33% increase in predation on wildlife when using puzzle feeders for outdoor cats. However, this was attributed to device novelty, insufficient training of owners and/or cats, or the inability to easily access food, resulting in hunger or frustration. The study also revealed that households that introduced a grain-free food with high meat-derived proteins saw a decrease

of 36% in wildlife captured and brought home by cats (Cecchetti et al., 2020a). Another study by Cecchetti et al. (2021) revealed that cats rely on food from their owners even if they frequently kill wild animals. The persistence of hunting therefore may be a physiological or behavioural need that is unmet by their environment and/or diet (Cecchetti et al., 2021). Well-fed cats will still hunt and, even in cats with some nutritional deficiency, hunting is unlikely to alter their macronutrient intake, as cats often only consume a small amount of their prey (Cecchetti et al., 2021).

When cats display hunting behaviour they release endorphins. Playing with a cat to encourage them to stalk, pounce and chase can replicate this hunting behaviour and keep them mentally stimulated (Cats Protection, 2021a). Fishing-rod toys with feathers can be a good way to mimic prey, but it is important to periodically allow the cat to 'catch and kill' the toy to avoid frustration (Cats Protection, 2021a). A bond can develop between cats and their owners during play, which often has a positive effect on both parties' wellbeing. In the study by Cecchetti et al. (2020a), there was a decrease of 25% in animals captured and brought home by cats when 5–10 minutes of daily play with a feathered toy was introduced.

NESTING SEASON AND FLEDGLING BIRDS

Baker et al. (2005) found that predation on birds was greatest in spring and summer, and probably reflected the killing of juvenile individuals. Minimum predation rates for the house sparrow, dunnock and robin were moderately high (Baker et al., 2005). House sparrows are on the Red List of Birds of Conservation Concern (Stanbury et al., 2021), and Baker et al. (2005) believe the impact of cats on this species warrants further investigation.



Based on the data provided by several wildlife rescues, the author also believes the percentage of birds attacked by cats could be reduced by providing clients and members of the public with more information on the nesting season and fledgling birds. In the spring and summer, it is common to find young birds sitting on the ground or hopping about without their parents (RSPB, 2021b). The most familiar fledgling birds are juvenile garden birds that are old enough to leave the nest but are still supported by their parents. These fledglings often spend a few days on the ground while their flight feathers complete their growth (RSPB, 2021b). This makes them more likely to be targeted by cats as they are unable to fly away. The RSPB states that cats should be kept indoors until the fledgling is airborne because, in a conflict of interest between wild and domestic animals, the domestic pet must give way (RSPB, 2021b).

WILDLIFE- AND CAT-FRIENDLY GARDENS

To reduce the chances of cats catching garden birds, it is advisable to avoid feeding birds at ground level and to place feeders high off the ground (RSPB, 2021a). Bird feeders encourage birds to congregate more than usual, which increases the transmission of diseases and infections (BTO, 2021). It is therefore recommended that feeding stations and bird baths are regularly cleaned with a suitable disinfectant (BTO, 2021). Some diseases can cause death, which may lead to wider population decline (BTO, 2021), and cats may be more likely to predate on weakened birds.

Where nest boxes are provided, they should be carefully located to ensure cats cannot reach them or sit by them. Placing spiny plants or an uncomfortable surface beneath bird feeding stations and nest boxes has been suggested (RSPB, 2021a).

Cats and wildlife benefit from fresh water and shelter in gardens. If ponds are present, these should have sloping sides to provide an escape route for both cats and wildlife (Trevorrow, 2019). Log piles and tree stumps can provide a refuge for wildlife and a scratching surface



for cats (Trevorrow, 2019). Some garden hazards can be harmful to both cats and wildlife. These include garden chemicals such as wood preservatives for fences, and pesticides such as slug pellets (Trevorrow, 2020). To create a hedgehog-friendly garden, any product that kills slugs, snails or insects should be avoided (Hedgehog Street, 2017).

Conclusion

Not all cats are hunters, and some may be more proficient and prolific hunters than others. Although there is no scientific evidence of the impact of cat predation on bird population decline (RSPB, 2021c), and the frequency of individual killings is low, the cumulative effect may be more severe in areas with a high density of cats (Cecchetti et al., 2021). The welfare of birds and small mammals is likely to be greatly compromised as a result of hunting by cats. Veterinary professionals, especially RVNs, can support and provide guidance to cat owners – during consultations, through display boards and via social media posts – to encourage responsible cat ownership that includes considering wildlife. Awareness of cat-attack data, alongside owner-type identification, may encourage change. By suggesting positive ways to improve the welfare of cats and wildlife, more progress could be made in this subject area.

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Further reading

The Cats, Cat Owners and Wildlife project sponsored by SongBird Survival. Available at: <https://www.exeter.ac.uk/research/esi/research/projects/cats/>

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