

WILDLIFE IN VETERINARY PRACTICE : AN EVIDENCE-BASED APPROACH

In the first article in our new wildlife series, presented in association with Wildlife Rehabilitation Ireland (WRI), co-authors Eimear De Souza MVB, WRI volunteer, and Vicki Baldrey BVSc BSc(Hons) DZooMed(Avian) FHEA MRCVS, WRI course instructor and consultant, senior lecturer in exotic species and small mammal medicine and surgery, Beaumont Sainsbury Animal Hospital, Royal Veterinary College, London provide an evidence-based overview of the approach to wildlife in general practice

Wildlife cases can provide challenge and reward in equal measure. The fact that a free-living wild animal has not evaded capture, is an indication of the critical nature of the presenting complaint, the debilitation level of the patient, or both. This article aims to highlight how evidence-based triage can maximise success in appropriate candidates. Under the Veterinary Practice Act 2005, veterinary practitioners have a duty of care to provide emergency care or euthanasia to any species of animal to relieve suffering, including out of hours. The law does not require the treatment to be free of charge, though many vets provide treatment either pro bono or on a cost basis.

For a rehabilitator to possess a wildlife casualty (injured, disabled, or orphaned) with a view to tending and later releasing it back into the wild, a license is required under the Wildlife Act(s) 1976-2023. Its release is subject to the conditions set out in the licence, issued by the National Parks and Wildlife Service (NPWS).

Three common species are not protected by that legislation: red fox, rabbit, and grey squirrel, the latter classed as an invasive alien species. However, all species are protected

by the Animal Health and Welfare Act 2013, which ensures needs are met in captivity and protects from unnecessary suffering.

The authors and WRI appreciate the inclusion of wildlife in the Veterinary Council of Ireland (VCI) Code of Professional Conduct for Veterinary Practitioners¹. Some of its key points include:

- other than if euthanasia is warranted, one should consult with the National Parks and Wildlife Service (NPWS) or an NPWS-licensed rehabilitator regarding chances of successful rehabilitation and release;
- if one suspects wildlife is affected by an environmental issue, e.g., water pollution or habitat destruction, this should be raised with the relevant authorities;
- if infectious disease or novel pathogen is suspected, consider whether it is notifiable; and,
- invasive species must not be released.

Veterinary Ireland's Policy Document on Captive Wild Animals² highlights the "Five Domains" model of behavioural needs of wild animals, which safeguards their health and provides a positive welfare experience. It recommends wild animal facilities are licensed for all species, with compulsory manager training. Readers are advised that the information provided here is not a substitute for reading and adhering

Notable Irish mammals

Hedgehog

Red fox

Otter

Pine marten

Badger

Irish stoat

Red squirrel

Pygmy shrew

Wood mouse

House mouse

Lagomorphs

Irish hare

Rabbit

Deer

Red

Fallow

Sika

Bats

9 species

Seals

Harbour seal

Grey seal



A pine marten. Photograph courtesy of Andrew Kelly.

Figure 1: Irish mammals presenting at veterinary practices.

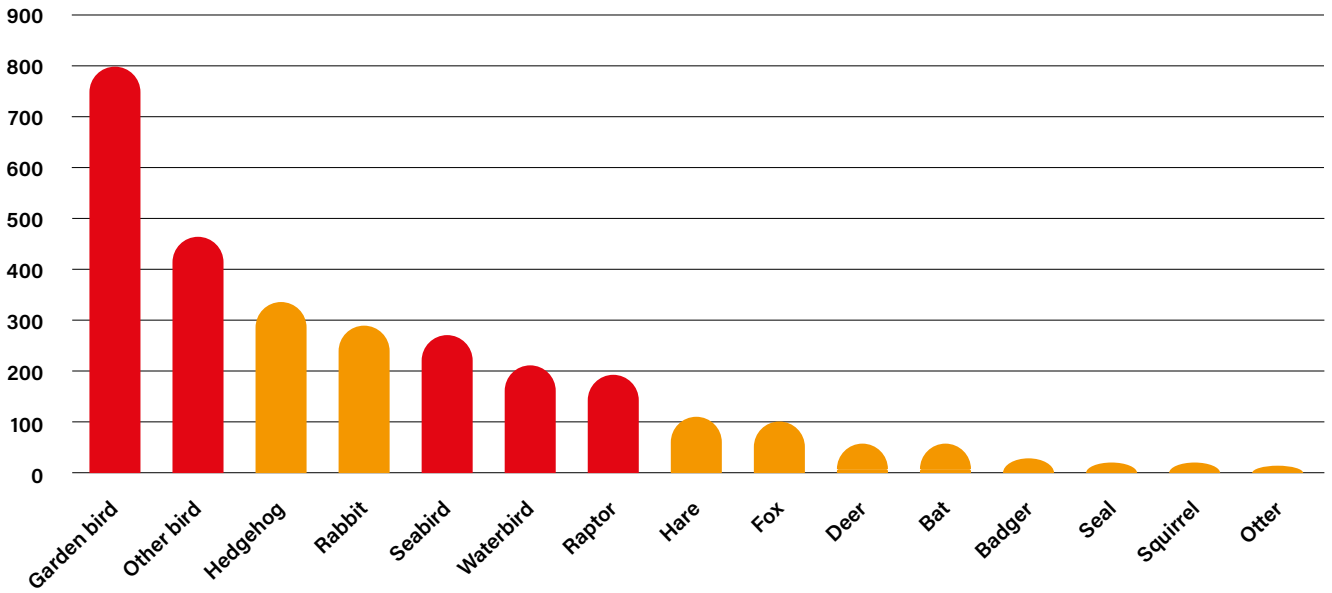


Figure 2: Wildlife cases presented to Irish veterinary practices in 2012.

to the relevant legislation, along with the VCI Code and Veterinary Ireland’s Policy Document. Certain diseases, if suspected or confirmed in wildlife, must be notified to the Department of Agriculture, Food and the Marine (DAFM), including avian influenza, avian paramyxovirus, avian chlamydiosis (psittacosis), tuberculosis and rabies.

Advance preparation

The benefits of advance practice discussion and team planning cannot be overstated. Practically, it means appropriate housing, feed, and equipment can be sourced and stocked. Restraint techniques for less familiar species can be reviewed. It is helpful to consider where wildlife casualties will be housed, e.g., in a quiet isolation area, to minimise stress. A written practice protocol is helpful. From an ethical perspective, emotionally-charged debate in practice is not uncommon in wildlife decision-making. While each case requires an individualised approach, the

risk of welfare-compromising delays during triage can be minimised if the team has proactively engaged in evidence-based discussions about ethical considerations beforehand. The primary aim of wildlife casualty treatment is to release the animal back into the wild in a fully fit state, as rapidly as possible, without compromising welfare³. However, an interim period of rehabilitation is often required, notably for juveniles and orphans. Advance planning allows links to be annually reformed with accessible, trained, and licence-holding rehabilitators for commonly encountered wild species.

Commonly encountered species

Challenges arise from the wide variety of wildlife species in Ireland, home to 27 species of land mammal⁴ (see Figure 1), numerous marine mammals and over 450 avian species⁵. Awareness of likely species to present is helpful. WRI analysed data from approximately 3,000 wildlife cases presented to Irish veterinary practices in 2012⁷. Of these, approximately two thirds were avian and one third

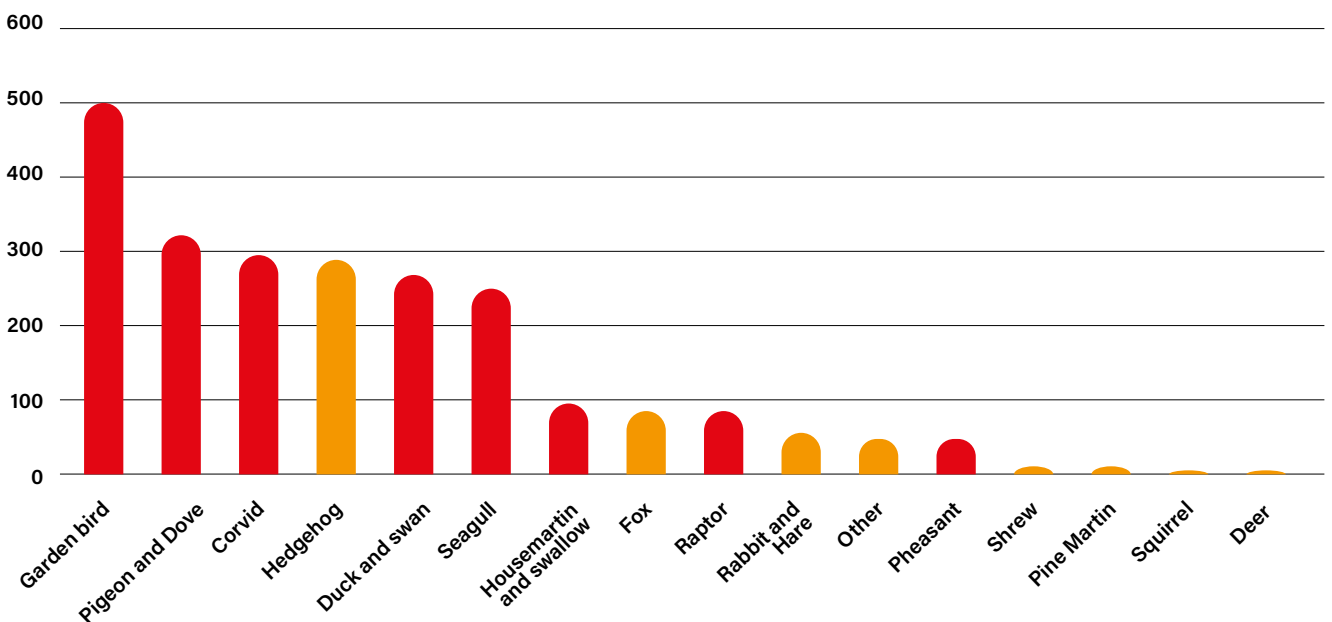


Figure 3: Cases presented to WRI National Wildlife Centre in 2021.

Collapse, unresponsive, moribund
Emaciation
Open fracture, spinal fracture, pelvic fracture (female), fracture involving a joint
Missing limb or wing or permanent loss of function, loss of deep pain sensation
Multiple pathological fractures (pigeons/doves with metabolic bone disease)
Chronic arthritis/injury predisposing to arthritis
Sight eye loss, hearing loss
Severe myiasis
Rabbits/hares with abnormal dentition
Myxomatosis
Significant injury to jaw or beak
Loss of canine teeth, excessive dental wear
Severe sarcoptic mange (foxes)
Hydrocephalus (otter, fox, pine marten)
Suspected avian influenza
Severe trichomoniasis (pigeons)
Paramyxovirus (pigeons)
Permanent feather damage or loss of waterproofing

Table 1: Indications for immediate wildlife euthanasia.

mammalian. Hedgehogs were the most frequently presented mammal (11 per cent of all wildlife cases), followed by rabbits and hares and then foxes. Deer, bats, and badgers followed in decreasing order (see Figure 2).

These findings align with a key study at WRI's National Wildlife Centre in Ireland, a one-year emergency response project to address the casualty load in 2021. Focused on managing a large volume of cases during the Covid-19 pandemic, the project provided critical relief to veterinary practices and rehabilitation facilities (see Figure 3).

These trends are echoed in a recent comprehensive 10-year study at a large UK wildlife rescue centre, where 69 per cent of cases were avian. Interestingly, a total of only nine species made up 57 per cent of all admissions, and again, hedgehogs were the most common mammal, followed by rabbits⁶. As the range of wildlife species presented in Ireland is wide, it is helpful to focus initial staff training and practice preparation on those commonly seen⁶, notably hedgehogs, lagomorphs, pigeons, doves, gulls, corvids, other garden birds, and waterfowl⁷.

Unsurprisingly, most wildlife casualties present in summer (49 per cent) and spring (26 per cent)⁶. This may reflect seasonal population expansion and high-risk breeding-related behaviours and activities in spring-summer⁶. Of the reasons for admission to Irish veterinary practices, collision (e.g., window strike) accounts for 24 per cent, road traffic accidents for 19 per cent, bites for 11 per cent and 'orphan' for 7 per cent⁷.

What we need to know and where to find it fast

A vital resource provided free by WRI to practices is the Irish Wildlife Matters website⁸ www.irishwildlifematters.ie. Easily accessible, it offers information about common presentations and their treatment, provides sources of



Figure 4: A feral pigeon exhibiting torticollis.

specialist equipment, and lists rehabilitators. WRI courses for veterinary professionals are regularly provided⁹, with CVE credits recognised by the Veterinary Council of Ireland.

What to ask the finder – clinical history

Presented wildlife typically has limited clinical history. While the patient is temporarily kept quiet, warm and dark, essential information to obtain includes:

- exactly when found – time of day is often relevant, e.g., nocturnal species found out in daytime;
- exactly where found – relevant to potential release;
- reason for 'rescue' – bearing in mind inappropriate rescues are common, e.g., fledglings, fawns, leverets;
- behaviour prior to finding – active, hiding, recumbent;
- history of trauma or clues as to cause of injury (cat attack, RTA, near road, strimmer);
- any treatment or food given;
- finder's contact details.

Standard admission forms help avoid key omissions. A sample WRI form is downloadable free⁹.

Evidence to inform triage and early decisions

'Triage' of individual wildlife casualties is the process of decision-making as to whether to treat or euthanase³ and should take place within as short a time as possible following admission. The prognosis for these presentations is often guarded. Only animals with a good chance of survival back in the wild should be rehabilitated¹⁰. Irish and UK studies have shown that less than half (35-43 per cent)^{6,7,10,11} of all presented wildlife casualties will survive to release, with around 43 per cent being euthanased and 11-19 per cent dying^{6,7}. This should be borne in mind during the triage process.

Wildlife triage should determine:

- urgency of treatment;
- whether treatment and/or rehabilitation is required; and,
- whether a release outcome is reasonably likely.



Figure 5: An emaciated red fox with severe sarcoptic mange.

To be suitable for release, a wild animal must have a chance of survival equal to that of its wild conspecifics, requiring both physical and behavioural fitness to cope normally with a free-living existence³. If this is unlikely, euthanasia is often the most welfare-positive outcome, and expectations of all stakeholders/parties involved need to be managed⁶. It is noteworthy that the reason for admission has a marked impact on prognosis, which is significantly better for orphaned animals than for those admitted because of injury, as might be expected^{1,12-15}.

Rehabilitation facilities should be licensed, show high welfare standards, have staff with proven expertise, and use robust, evidence-based protocols¹⁶. If such facilities are not available, this must be an essential factor in early decision-making regarding whether to treat or euthanase. Permanent captivity should not be considered a positive outcome and should be strongly discouraged. For a free-living wild animal, the fundamentals of the 'five freedoms' of animal welfare – including the capacity and scope to exhibit natural behaviour, the company of its own species, and freedom from fear and distress – cannot be adequately achieved in captivity, particularly in close proximity to humans⁷. If an animal does not have a good chance of rehabilitation and release, euthanasia should be undertaken promptly, to reduce undue stress and suffering.

The conservation status of the animal should not, in principle, factor into the triage process as individual animal welfare is the priority. While it may factor into resources allocated, it is vital that conservation-based decisions are not at the expense of welfare³. For information on conservation status, websites of organisations such as WRI⁹, National Biodiversity Data Centre¹⁷, the NPWS¹⁸, and Birdwatch Ireland⁵ can be consulted. The authors note from the VCI's Code of Professional Conduct for Veterinary Practitioners that where a wild species is "categorised as threatened or endemic, care of that individual animal also plays a role in the conservation of that species"¹¹.

'Rescued' wildlife is exposed to the stress of the initial adverse event, followed by stress due to transport, treatments, captivity, and release¹⁶. Captivity involves novel stimuli and close proximity to humans, both of which are likely to induce stress^{10,19}.

Potential distress needs to be pragmatically weighed against the benefits of survival for the individual and species. Animals released with reduced likelihood of survival present a potentially serious welfare concern, e.g., they may be



Figure 6: A rabbit with myxomatosis.

more susceptible to threats than wild conspecifics¹⁶. Prompt euthanasia will be indicated in some cases and should not be viewed as failure²⁰. Again, the pivotal role of initial veterinary triage cannot be underestimated. Poor triage equals poor welfare. Table 1 gives some common indications for immediate euthanasia and three such scenarios can be seen in Figures 4, 5 and 6.

Updated scientific understanding developed the 'five freedoms' to the 'five domains' model, with increased focus on mental state and behaviour. Boredom and restricted choice are negative factors to avoid, while free movement, exploration, and foraging/hunting are some of the positive factors needed^{21,22}. This is rarely achievable in permanent captivity.

Summary

There are numerous benefits to animal welfare through veterinary treatment, licensed and trained rehabilitation, and release of wildlife casualties. However, there is a possibility of welfare harms through inappropriate selection of candidates for treatment or where rehabilitation facilities of appropriate standard and/or suitable release sites cannot be sourced.

One useful approach is to focus initial staff training and practice preparation on commonly seen species, notably hedgehogs, lagomorphs, and the avian species noted. Rehabilitation facilities should be of high welfare standard, have trained staff, use evidence-based protocols, and must hold relevant licences. If such a facility is not available, this is key in early decisions.

Triage, with early euthanasia where necessary, has been shown to be of critical importance. Veterinary triage, along with examination and trauma management skills, is more important than extensive knowledge of wildlife diseases. However, solid understanding of species-specific ecology and biology is essential for welfare-positive triage. If an animal is unlikely to have an equal chance of survival to that of its wild conspecific counterparts upon release, its period in captivity will be prolonged and euthanasia is often the most welfare-positive outcome. For this reason, expectations of veterinary staff, rehabilitators, and the public require careful management.

Wildlife Rehabilitation Ireland holds a series of regular educational webinars on wildlife topics. The next one takes place at 7.30pm on Wednesday, March 26. The

topic is "Sniffing out solutions: how detection dogs are revolutionising wildlife conservation" and is presented in partnership with Ciaran Cronin of Wildeye. Free to attend but booking is required. For more information, contact enquiries@wri.ie and to book a place, visit <https://wri.ie/webinar>

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