



Pine marten in Midlands setting.
Photograph: Maurice Flynn

A native enigma: the pine marten

Ruth Hanniffy, Vincent Wildlife Trust, reports on new research on the pine marten

As one of Ireland's most elusive creatures, the pine marten is much admired yet often shrouded in myth and misunderstanding. A species native to Ireland and present since after the last ice age, it is sometimes assumed to have been a recent introduction. Perhaps this is because we are once more observing them in the wild as they slowly recover from near extinction.

In the past, pine martens were widely distributed throughout Ireland but they declined to a few isolated populations in the west and in counties Meath and Waterford. Death by persecution, strychnine poisoning and being hunted for their fur was exacerbated by loss of woodland, their natural habitat. In response to this decline they were legally protected in 1976 under the Wildlife Act and later under the EU Habitats Directive. This, coupled with afforestation, has seen numbers recover slowly.

The pine marten is the most arboreal or tree-loving member of the mustelid

family, which is also known as the weasel family – perhaps contributing to the misconception that weasels are found in Ireland. Our other native mustelids are the otter, badger and Irish stoat. Ireland also has non-native

mustelids – the American mink and the ferret – which were introduced for their fur and for hunting rabbits, respectively.

The pine marten is undoubtedly a beautiful creature. It is the size of a domestic cat with a slim body, dark ▶



Pine marten den box



Pine marten hairs are collected for DNA analysis using a hair tube, which is sticky inside, attached to a tree trunk. *Photograph: Ruth Hanniffy*

brown coat and a fluffy tail – which becomes thicker and bushier in winter. Often confused with mink when seen at a glance, the most distinguishing feature of a marten is the creamy patch or 'bib' on its throat and chest. Similar to a human fingerprint, the markings on this bib are unique to each individual.

Pine martens have prominent rounded ears fringed with pale fur and a pointed face. The marten's Irish name, 'cat crainn' or tree cat, belies its supreme adaptation to woodland habitat, its powerful claws and flexible ankle joints enabling extraordinary agility. They are not strictly 'pine' martens, however, being at home in both conifer and broadleaf woodland as well as the scrubby woodland of the Burren, while actively avoiding open habitats.

Dens are selected from an array of environments, to balance the threat of predators with the marten's energy availability. They include bird's nests, squirrel dreys, tree hollows, underground burrows, upturned tree root-plates and the canopy of wind-blown trees. There are some reports of martens taking up residence in attics of houses, and on the Vincent Wildlife Trust website you will find guidance detailing how to exclude a pine marten from an attic space, while complying with the law.

We can also provide pine marten 'den boxes' – which are artificial denning sites – where natural opportunities are

lacking, or for the opportunity to study the species in more depth, and our website has detailed guidance on how to construct a den box. We do not provide the box itself except for specific projects we are involved with, such as in Ardan Wood, Co Westmeath, in conjunction with the Native Woodland Trust.

The pine marten is considered a slow breeder – females do not breed until their third year, mating in the summer and giving birth to one or two kits the following spring. Although predominantly nocturnal creatures, they are often seen or recorded on trail cameras during the day, particularly when the mother is weaning her kits.

After six months, the kits disperse to set up their own territories and, while a marten can live for up to ten years in the wild, many die in their first year, often on the roads. Contrary to the belief that pine martens have no predators, they have a natural predator in the wild – the fox – and a man-made one – the motor car.

Martens are solitary and highly territorial by nature. An adult will not tolerate another adult of the same sex in its home range, which can cover from 20 to 3,000+ hectares, depending on the habitat.

When it comes to their diet, pine martens are opportunistic, making the most of whatever is available. Prey can range from small mammals – wood

mice, bank voles and pygmy shrews – as well as rabbits, squirrels, carrion, birds' eggs, insects, honey, fruit, nuts, fungi, frogs and even the contents of rubbish bins, where they are accessible. Their choices reflect the seasons – carrion of larger mammals can become important in winter and early spring when small mammal populations are at their lowest, while eating fresh berries in autumn. A marten can take domestic



A pine marten den box being placed in a tree. *Photo: Ruth Hanniffy*



Close-up of pine marten. *Photograph: Maurice Flynn*

fowl and game, getting through even narrow gaps underneath a door or fascia. The most effective way to prevent this is to 'marten-proof' a shed, pen or coop, ensuring any gaps are blocked and by ensuring good animal husbandry. Outdoor pens should be protected from above where they are overhung by trees, which can be climbed easily. The Vincent Wildlife Trust is currently trialling techniques with a gun club in the midlands to exclude pine martens from game poultry pens. We are using electrified netting powered by a rechargeable leisure battery as a means of testing the effectiveness of this system against a range of predators, including pine marten.

There is need for research on the species, particularly in an Irish context, as our mammal species inhabit different niches to those in Britain and on the continent. Britain has a larger assemblage of small mammal species – including the short-tailed field vole, hazel dormouse, common shrew and water shrew. There are two additional native mustelids – the weasel and polecat – with which to co-exist. Mammals are at the north-western limit of their geographical range in Ireland, with its milder climatic conditions and different landscape availability – the

Republic of Ireland has under 10.5% forest cover, of which under 2% is native woodland,¹ some of the lowest cover in Europe.

The evolving nature of the natural world has been illustrated by the link between pine martens and squirrels. Scientific evidence published in 2014 by Dr Emma Sheehy and Dr Colin Lawton from the National University of Ireland, Galway, established a relationship between the recovery of pine martens and the disappearance of the grey squirrel from certain areas.² This enabled the return of the red squirrel to places from which they had long been absent. The mechanism is not fully understood and is the subject of current research, for example as part of the predator-prey project by Dr David Tosh of Queen's University, Belfast. His team is studying the behavioural response of red and grey squirrels to pine martens, and the composition of red and grey squirrel remains in pine marten scats.

Estimates of pine marten density in Ireland are based on studies from 2005.³ A new pine marten population assessment got underway last spring and is using non-invasive genetic survey techniques to produce an updated national abundance for pine marten in the Republic of Ireland. The study,

which is led by Dr Declan O'Mahony from the Agri-Food and Biosciences Institute, Northern Ireland, with Dr Catherine O'Reilly and Dr Peter Turner from the Waterford Institute of Technology, will be used to assess the conservation status, management requirements and future monitoring of the pine marten in Ireland.

This native, elusive, alluring creature appears to be returning, albeit slowly, to the Irish landscape. The findings of the new population assessment will help us better understand the extent of this recovery, which is a testimony to the value of our national wildlife legislation and of increased woodland cover. The natural recovery of a species which once faced extinction is a feat in today's world, where we are losing species at 1,000 to 10,000 times the natural rate of extinction.⁴ Through research, we are working to better understand the pine marten in Ireland, to develop sustainable solutions to issues which may arise, and to raise awareness of these techniques. This woodland specialist is an important indicator of the health of our environment, an environment which will only enrich us when we can live in harmony with it.

➤ Visit the **Vincent Wildlife Trust** website at www.mammals-in-ireland.ie ■

1: Department of Agriculture, Food and the Marine, 2015. *Ireland's Forests: Annual Statistics 2015*. 2: Sheehy, E, Lawton, C, 2014. Population crash in an invasive species following the recovery of a native predator: the case of the American grey squirrel and the European pine marten in Ireland. *Biodiversity and Conservation* 23, 753-774. 3: O'Mahony D, O'Reilly C, Turner P, 2006. National pine marten survey of Ireland 2005. *COFORD Connects. Environment* 7, 1-8. 4: IUCN.org.