

The secret life of

Catherine Keena
Environment specialist,
Teagasc Crops, Environment
& Land Use Programme



Extending to an estimated 689,000km, which is 90% of the distance to the moon and back, hedges define Ireland's lowland agricultural landscapes. These landscapes have been shaped by human hand with nature providing the raw material; a creative tension between ecology and agriculture.

Hedges and fields are complementary – one defines the other. These features give character to a particular landscape and identity to a townland or county. The way we view hedges is enriched by an understanding of history, ecology, rural society or farming practices, all of which stimulate interest and deepen our aesthetic appreciation.

Hedges are ecosystems where native flora and fauna co-exist in harmony as they have done for centuries. They mark the seasons of the year with bud burst heralding the breaking of dormancy. Shrubs flower in line with nature's unerring sequence – catkins, blackthorn, primrose, whitethorn, elder, woodbine and ivy.

The timing of flowering and fruiting in perfect harmony with the life cycle of associated native Irish fauna.

Birds

Of 110 bird species regularly recorded during the breeding season in the Countryside Bird Survey in Ireland, 55 use hedgerows. Of these, 35 species nest in hedgerows which provide cover from overhead and ground predators.

Hedges provide nesting and feeding opportunities for many farmland birds, some of which are becoming increasingly threatened in otherwise intensively-managed farmland.

For example the yellowhammer is "Red" listed on the Birds of Conservation Concern in Ireland (BoCCI), which is an assessment of the conservation status of all regularly occurring birds on the island of Ireland. Yellowhammer are now mainly found in the eastern half of Ireland. They prefer cereal fields and nest on or near the ground under hedgerows.

While the robin is a common and widespread species they are "Amber" listed due to short-term population



Hedges define Ireland's lowland agricultural landscape and provide a larder of food in autumn.

declines associated with two recent cold winters, but populations appear to be recovering.

The singing of the blackbird and the song thrush (both "Green" listed) is recognised in folklore and praised in song and poetry. The song thrush is known for its habit of smashing snail shells on a favourite stone.

Mammals

Hedges are important for many mammals as movement corridors, as well as feeding and nesting sites. Hedge invertebrates are feed for insectivores such as hedgehogs.

Hedgehogs build day nests, which are flimsy structures, in hedgerows. Their hibernation sites, also located in hedgerows, are more robust structures with a short tunnel leading to a chamber composed of compacted leaves. This is where they undergo true hibernation from October until March.

While some hedgehogs may remain dormant for the entire hibernation period, others may arouse a number of times and move to a new "hibernaculum".

Unlike the grey squirrel which was introduced to Castleforbes, Co Longford, in 1911 and is considered an invasive alien species, the red squirrel has been here since prehistoric times. Red squirrels are still widespread, but scattered, and are absent from areas of the midlands where the greys have been longest established.

Bats

Being capable of flight, many may not think of the bat as a mammal but it is, and suckles its young. There are nine resident species of bats in Ireland all feeding exclusively on insects.

The common pipistrelle, weighing only 4g to 8g, will eat up to 3,000 insects every night, to build up fat in its body to survive the winter deep in hibernation.

Bees

Hedges provide food and nest sites for bees. In Ireland, there are 77 solitary bees, 21 bumble bees and one honey bee species. Solitary bees are often very efficient pollinators. Research has shown that one female red mason

hedges

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solitary bee does the pollination work of between 120 and 160 honeybees.

Eighty per cent of solitary bees are mining bees who nest in bare ground or south/east facing banks where there is bare earth. Solitary bees can travel up to 1km but commonly forage within 100m to 200m of their nest. An increase in distance between nesting sites and food plants can reduce the number of viable offspring.

Bumblebees can travel up to 5km, but commonly forage between 1km and 2km of their nest. A queen may have to visit 6,000 flowers each day to get enough nectar.

Moths and butterflies

There are over 1,400 species of moths in Ireland. The scalloped oak moth feeds on a number of deciduous trees and shrubs and is commonly found in hedges. The swallow-tailed moth is a highly distinctive moth with its swallow like tails. It usually feeds on ivy.

The 35 Irish butterfly species belong to the same grouping as moths. Butterflies are generally colourful and fly during the day, while most moths are duller and prefer to fly at night.

Speckled wood butterflies perch on sunlit places within hedges and eggs are laid on grasses including cock's foot and Yorkshire fog.

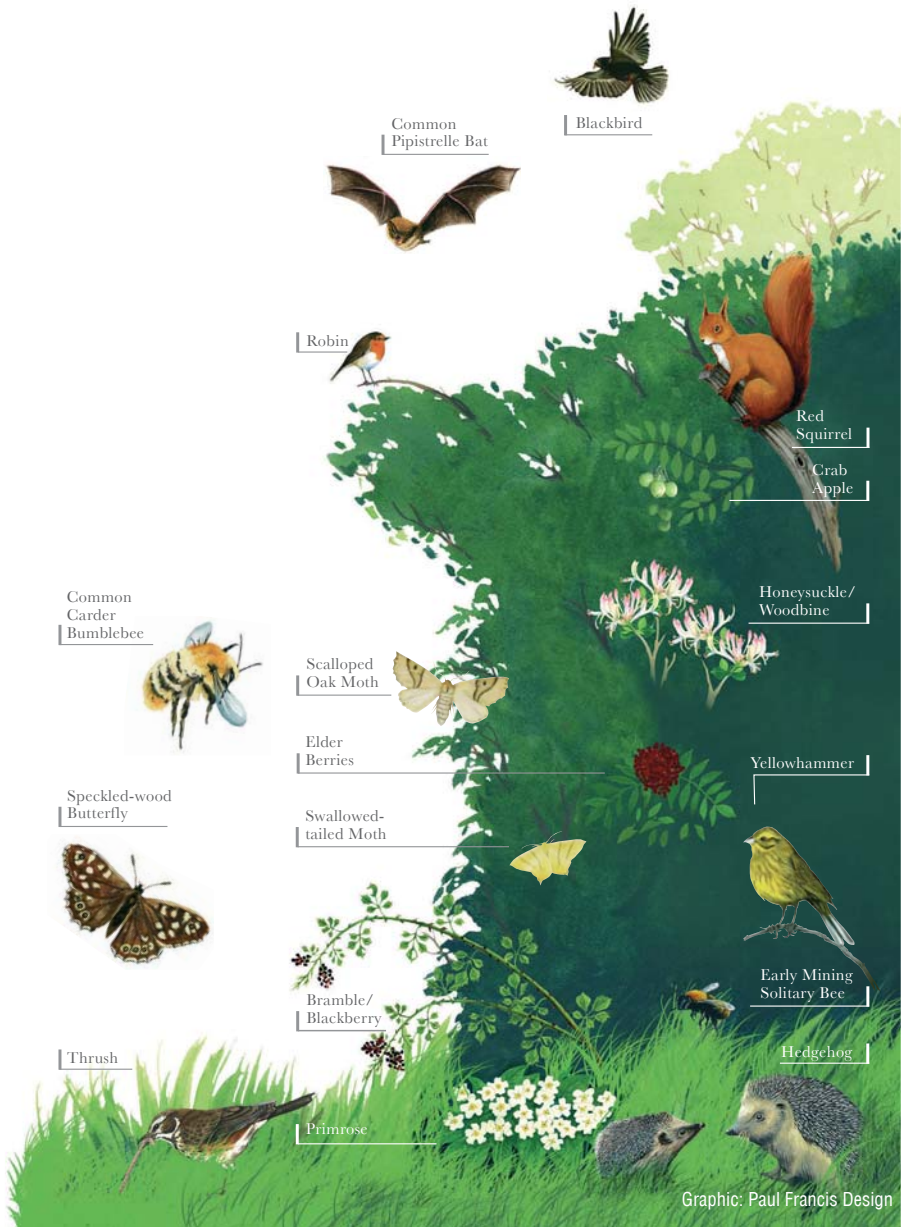
Carbon

Work is under way to quantify soil carbon and biomass accumulation associated with hedgerows including the impact of management on biomass accumulation.

The aim is to develop a hedgerow carbon accumulation model to quantify carbon removal and a modified soil model to account for soil organic carbon under hedgerows systems.

Considering the secret life of hedges, with all these values – new native Irish hedges should be planted by this generation of farmers.

• In December, Teagasc Hedge Week 2020 will focus on planting new hedges.



Graphic: Paul Francis Design

Food for free

There is a growing interest in foraging for wild plants, berries, nuts and fungi to enhance our diet deliciously. In Ireland, there are lots of edible wild foods to forage and enjoy, both on land and along the seashore.

These plants were really important to our ancestors and are potentially donors of resistant genes to modern cultivars. Of all Irish flora species, 119 have historically been used for food. Many are found in hedges.

Crab apples are used widely for making jellies, cider and wines. These trees are descended from the true wild species, while the cultivated apple tree comes from Asia. Blackberries are used in jams, jellies, pies and wines. There are over 80 species of blackberry or bramble in Ireland.

The flowers and fruit of the elder are widely used for food and drinks. Elder has historically been used to treat coughs and colds.