

## **Habitat Helping Hand**

### **Sign 1**

#### **Bird feeders-**

Winter can be a difficult time for wildlife. Temperatures plummet and food becomes difficult to find. Regular visitors to Simmons park enjoy:

Goldfinch, siskin, redpoll – smaller seeds like nyjer

Greenfinch, tits – sunflower hearts

Sparrows, woodpigeon, collared dove – large grains

Woodpeckers, tits, starling – fat balls and peanuts

Robin, thrushes – mealworms and live foods

Thrushes, Blackbird – windfall fruit

#### **Hedgehog house**

Hedgehogs hibernate during the winter to conserve energy. A well-insulated hedgehog house can help them survive the cold months. Hedgehogs need a safe and secure place to give birth and raise their hoglets. A hedgehog house can provide the ideal spot for nesting. Hedgehogs face threats from predators such as foxes and badgers. A purpose-built hedgehog house can offer protection against these threats. By providing shelter for hedgehogs, you encourage them to stay in your garden, where they can help control common garden pests like slugs and snails. We feed the hedgehogs special hedgehog food that is easy for them to digest outside of hibernation months.

#### **Bat box- QR code**

Bat box provides a safe roost for bats. Bats play a crucial role in our ecosystem, but their populations are declining due to loss of natural habitats and use of artificial lighting. One way to help these nocturnal creatures is by providing them with artificial roosts, such as a bat box. Bats are natural insect predators, consuming a large number of moths and insects. The park contains a number of different bat species, use the QR code to identify which ones you see.

#### **Owl box**

Tawny Owls (*Strix aluco*) are skilled hunters and can consume up to 12 mice in a single night. They are resident in Simmons park and highly territorial, they are responsible for the most commonly heard owl sound, the classic, nocturnal 'twit twoo' call, which can be heard most nights in the park. They take readily to artificial sites such as purpose-built nestboxes.

#### **Bug hotel**

A well-built hotel can shelter a wide variety of creatures from frogs, toads, newts, lizards to insects like solitary bees and wasps. Bug hotels provide shelter and nesting sites for native and migratory solitary insects. These little creatures play a crucial role in our ecosystem and many plants depend on them for pollination. As gardeners know, it's essential to protect vulnerable pollinators. By creating a bug hotel, you can attract beneficial insects that aid in pollination and help maintain a healthy garden.

## Sign 2

### River

#### **Dippers**

Dippers forage for small invertebrates in and along the margins of fast-flowing freshwater streams and rivers. They perch on rocks and feed at the edge of the water, but they often also grip the rocks firmly and walk down them beneath the water until partly or wholly submerged. They have a characteristic bobbing motion when perched beside the water, giving them their name. While under water, they are covered by a thin, silvery film of air, due to small bubbles being trapped in their plumage. They use their wings as flippers to swim underwater. They have a nasal flap to prevent water entering their nostrils and Dippers have a third, transparent eyelid called a 'nictitating membrane' that they can close, enabling them to see underwater.

#### **Grey Wagtails**

The Grey Wagtail is a colourful and cheerful bird with a continually bobbing tail. These year-round residents nest along fast-flowing rocky rivers in hilly, forested areas in the breeding season but descend to lowland habitats each winter. Grey Wagtails spend most of their time on the ground, walking about and wagging their tails as they search for food. They often perch on rocks in streams, Grey Wagtails hunt for insects and small aquatic invertebrates. Flies and midges dominate their diet, although they eat a variety of organisms, including snails, shrimp, beetles, dragonflies, and spiders. They find most of their food on the ground but may catch prey in shallow water or flight. Grey Wagtails usually nest along streams and rivers, building their nests in the riverbank, on a small rock ledge, among tree roots, or in suitable artificial sites like bridges and rock walls. Their nest is a cup of plant material and animal hair.

#### **Salmon & trout**

Salmon and Sea trout have both been seen in Autumn making their way upstream to spawn during high water levels. Both go to sea to feed and grow to adulthood, returning mostly to their natal rivers to spawn. Salmon travel long distances to ocean feeding grounds whilst sea trout migrations are much more variable and range from short coastal hops to much longer distances at sea.

#### **Kingfisher**

These small to medium-sized, brightly coloured birds are known for their remarkable fishing abilities. They make dry, loud screeching sounds. Female kingfishers are more colourful than males. While searching for food, they fly over water, hover with rapid wing flaps to maintain stability, and can spot their prey from a remarkable distance of up to 40 meters, thanks to their keen eyesight. They close their eyes as they dive into the water, so they are fishing blind. These birds make their homes near bodies of water like rivers and lakes, where they can easily access abundant food. Kingfishers often constructing their nests within riverbanks or sandbanks, meticulously excavating lengthy tunnels leading to a nesting chamber.

#### **Otter**

Otters can be found throughout the UK, though with lower densities in England due to historic pollution. Otter hotspots include the west coast of Wales and South West England.

Otters will live wherever there is clean freshwater with plenty of food and secluded areas of vegetation to rest and raise young. Otters tend to live in a holt, which is normally a hole in a river or lakeside bank or in a tree root. Otters are carnivores that feed mostly on fish like trout and eels. They happily eat

amphibians, crustaceans and waterbirds like moorhens and coots too. Sometimes they will look for food on land, selecting birds, eggs, insects and small mammals to satisfy their appetite - otters will usually eat more than 2lbs of food a day. Otters are mostly solitary except when they come together to breed. They mate year-round, though most cubs, also known as pups, are born between May and August. Otters have been noted on the river in the park with a mobile trap camera.

## Sign 3

### Meadow

#### **Early purple orchid**

The Early Purple Orchid is a herbaceous perennial that grows to a height of 20 to 50 centimetres. It is one of the first orchid flowers to bloom during spring. It is often found in habitats with non-acidic soils, such as hedgerows, banks, ancient woodland, and open grassland. The pinkish-purple flowers appear on a spike of medium height. The Early purple orchid can display up to 50 dark purple flowers, which are arranged in a dense, cone-shaped cluster on a tall spike. The lower lip of each flower has three lobes and the upper petals form a hood. They appear from January onwards. When the flowers first open in early spring, their sweet smell attracts bees and other insects to pollinate them, despite having no nectar. The Early purple orchid gives off a strong and unpleasant smell once the flowers have been fertilised.

#### **Small blue butterfly**

Not only is the Small Blue the UK's smallest butterfly, but it also demonstrates a remarkable adaptability to different environments. This tiny butterfly, the smallest in the UK, thrives across diverse habitats, forming vibrant colonies. Its unique behaviours, including cannibalistic caterpillars and the meticulous process leading to the adult stage, illustrate the complexity of nature in miniature form. The journey of the Small Blue begins with cannibalistic caterpillars, which are prone to consuming each other if they hatch together on the same flower. Although subtle, differences exist between males and females, primarily in wing coloration. Males boast dark brown dorsal sides with a scattering of bright bluish scales, while females lack this speckling. Both sexes share a pattern of black spots and a silver ventral side when their wings are closed. A distinctive light blue tint is present at the base of the male's wings. The flight of the Small Blue is remarkably fast, belying its small stature.

#### **Comma butterfly**

Comma butterflies can be identified by their prominent orange and dark brown/black dorsal wings. Females are notably larger than males. The journey of the Comma butterfly, from a cleverly disguised caterpillar to a master of camouflage as an adult, is a fascinating story of adaptation and survival. The larvae of the Comma butterfly are easily identifiable by their spiny bodies adorned with white, black, and orange patterns, mimicking bird droppings to deter predators. In the final larval stage, the white colour fades, enhancing their camouflage mimicking dead foliage. The chrysalis of the Comma butterfly is a masterpiece of natural disguise hanging upside down from trees, featuring a green and pinkish-brown hue adorned with gold and silver spots, blending seamlessly with its surroundings. The dorsal sides of their wings showcase a brownish-orange colour with distinctive black marks when unfolded. In contrast, the folded position reveals a brown and black palette that resembles a dead leaf, highlighted by a white curve reminiscent of a comma. This unique feature not only lends the butterfly its name but also serves as an effective defence mechanism during hibernation, as their yellow-brown coloration merges perfectly with dead leaves. These butterflies exhibit a fluttering flight pattern, which, combined with their coloration, aids in evading predators.

## Sign 4

### Ponds

#### **Frogs & Toads**

The terms "frog" and "toad" are informal and do not reflect any underlying physical differences. The term toad is used to describe species that have rough, warty skin. The term frog is used to refer to ones that have smooth, moist skin. Many frogs have large, muscular back limbs that enable them to launch themselves into the air. The common frog varies in colour enormously, from green to brown and even red or yellow. It has smooth skin, a dark 'mask' behind the eye and long back legs, covered in dark bands. It hops and jumps rather than walks, and lays spawn in large jelly-like clumps. Frogs feed on insects and other invertebrates. Many frogs wait for their prey to come within range and then lunge after them. The life cycle of a frog consists of three stages: Egg/Spawn, tadpole, and adult frog/toad. As the frog grows it moves through these stages in a process known as metamorphosis. The common frog is a regular visitor to garden ponds across the country, where they feast on slugs and snails. In winter, they hibernate in pond mud or under log piles.

#### **Common newts**

Unlike frog and toad tadpoles, newt larvae develop their front legs first, then their back legs and feathery external gills behind their heads. Once they have absorbed their gills and left the water, they are known as 'efts'. As they grow, Common newts shed their skin once a week. Both males and females are brown in colour with spotty, orange bellies. These black spots extend up the throat. During the breeding season, males have a wavy crest along their backs. Adults can reach up to 10cm long from nose to tail. In late summer, both juvenile newts and adults leave the water. They can often be found sheltering in damp soil beneath logs and rocks. Common newts can be found in a variety of habitats outside the breeding season, inhabiting deciduous woodland, wet heathland, bogs, marshes, gardens, parks and farmland. They prefer standing water with plenty of weeds, such as lake margins, ponds and ditches, in which to breed.

#### **Pond skaters**

Pond skaters can dash across the water at up to a hundred body lengths per second. Pond skaters are insectivorous and use their feet to sense the vibrations of insects trapped by the surface tension of the water. The shorter front legs are used to catch and hold prey. Pond skaters have piercing, sucking mouthparts called a rostrum or 'beak'. Pond skaters are small, thin black-brown insects found on ponds, marshes, streams and slow-moving waters. The pond skater undergoes five different nymph stages in its life cycle, each of which lasts up to 10 days and ends with the insect molting its skin. It reaches the adult phase in its life cycle after two months or so. Many species have a lifespan of only about a year, which gives them a single chance to reproduce before they die. The typical pond skater is a wingless insect because wings would tend to weigh down the body and make it more difficult to stay afloat. Newly born pond skaters can develop long or short wings out of necessity giving the pond skater the ability to fly away and seek out new water sources if conditions become crowded or dry. It is attracted to pretty much any reflective surface it can find.

#### **Damselflies and Dragonflies**

Long before dinosaurs walked the earth, there were dragonflies in the sky. They were some of the first winged insects to evolve, around 300 million years ago. Back then oxygen levels were much higher, allowing giant dragonflies to evolve, with wingspans like eagles. But in the modern day Damselflies are delicate insects, with eyes on each side of their rectangular head. They have a fluttering flight, with the front and back pairs of wings equal size. When the damselfly is resting, the wings are usually held closed.

Dragonflies are larger and more robust, with eyes that meet in the middle of their spherical head. Their front wings are narrower than their hindwings and when resting, both pairs are held wide open. They're fast flyers, with some of the larger hawkers able to fly at 15 metres a second.

Eggs are laid in the summer onto reeds and other pond plants just below the water level, these then hatch and become nymphs. They emerge from their eggs tiny and tadpole-like, they spend their larval period which can last 2 years eating as much as they can, growing and moulting. They shed their skins 5-14 times before they are ready to leave the water. They then go through a transformation as their outer layer of skin breaks away and emerging from this is a winged dragonfly.

As adults, they take a range of small insects in flight (hawker dragonflies will even take butterflies), but in their larval form as nymphs they live a subaquatic life, preying on underwater insects, other nymphs, tadpoles and even small fish.

### **Water Hawthorne**

A fascinating South African aquatic plant which seems to flower unpredictably. The white blooms are hawthorn scented, giving them their common name, and the first flush appears from mid-spring onwards with a break in mid-summer. During a mild winter they may continue to appear intermittently.

### **Water mint**

Water mint, also known as *Mentha aquatica*, is a perennial flowering plant in the mint family. It grows in moist places and is native to much of Europe, northwest Africa, and southwest Asia. It is a favourite among many gardeners due to its ability to attract butterflies and pollinating insects. It has a beautiful aroma, a mix of menthol and aniseed, and imparts this lovely flavour when crushed and added to dishes or made into a tea. Water mint produces stunning floral displays during the summer. It's a fantastic plant for wildlife, as the globose flowerheads are accessible to a number of pollinators, including butterflies, bees and hoverflies, beneficial insects, moths, and other pollinators. It has nectar/pollen rich flowers and provides shelter and habitat

## Sign 5

### Flower Beds

#### **Buddleia**

A single buddleia plant can produce over 1 million seeds per year. Buddleia is a popular garden plant that was introduced into the UK from China in the 1890s and has now become widely naturalised on waste ground, along railway cuttings and in urban areas. Its familiar purple flowers bloom from June to October and attract all kinds of butterflies and moths looking for nectar sources. When the sun shines these lush and fragrant panicles (each floescence consisting of many hundreds of tiny flowers) attract the attentions of a wide variety of insects, but especially butterflies. The wildlife friendly Buddleia flowers are nectar-rich making it a magnet for beneficial pollinators – especially butterflies including Brimstone, Comma, Large White, Meadow Brown, Painted Lady, Peacock, Red Admiral, Small Tortoiseshell & Small White as well as many moths, bees and hoverflies.

#### **Camellia**

Camellias are popular evergreen shrubs that produce a beautiful display of flowers from late winter to early spring, when little else is in flower. Nectar from camellias, sometimes the only flowers in bloom, giving honeybees a head start on spring feeding after a long winter. They flower during important seasons in the life cycle of bees, when there are few other plant species in flower. The park contains a beautiful white and also pinky red Camellia

#### **Lupins**

The term *lupine*, from the Latin for “wolf,” derives from the mistaken belief that these plants depleted, or “wolfed,” minerals from the soil. The opposite is true: lupines aid soil fertility by fixing nitrogen from the air in a soil form useful for other plants. Lupine is a family of about 200 species of herbaceous and partly woody plants in the pea family. They flower during important seasons in the life cycle of bees, when there are few other plant species in flower. Its nectar-rich flowers attract various pollinators, including bees and butterflies. Its seeds serve as a valuable food source for a range of wildlife, including birds and small mammals although they are deer resistant. The lupine flowers are not edible, but the seeds are. The nut-like seeds were once a favourite food for traveling troops in ancient Europe. Lupine seeds can be ground into flour, and in Europe this flour is used in baking.

#### **Bats and moths**

There are 18 species of bat in the UK, from the tiny pipistrelle to the chunky noctule. The loss of old buildings, woodland and ancient trees have led to a decline in their habitat. And because they rely on woods and hedgerows to navigate, bats are often left lost and disorientated when landscapes are flattened for development. Flowers that release their scent in the evening are a big draw for moths so planting them is a great way of attracting moths and also add sweet perfume, striking silhouettes and luminous glow. Planting of evening-scented flowers such as honeysuckle attracts night-flying insects like moths - a favourite food of bats.

- Plants with petals that form narrow tubes, such as honeysuckle, provide food for long-tongued insects like moths and butterflies.
- Open, daisy-like flowers with many florets provide nectar to short, tongued insects including flies
- Pale blue and white coloured flowers are easier to see in low light so will attract night flying insects
- Wide blooms, like those in the carrot family, allow many insects to gather together at once

#### **Verbena**

*Verbena* is known for attracting bees, birds, butterflies, moths and other pollinators. It has nectar and pollen rich flowers and has seeds for birds, it's a superb butterfly plant, rivalling even buddleja. The hummingbird hawkmoth is a small, day-flying hawk-moth. It is a summer visitor to the UK, migrating from Southern Europe hovering like a hummingbird as it feeds on the nectar of honeysuckle. It can also be found along woodland edges, and on heathland and scrub. Adult hummingbird moths hover and flit about, feeding on the **nectar** of various flowers including phlox and verbena. Like most moths, hummingbird moth pollinators use their long mouth parts to feed on nectar. For this reason, hummingbird moth facts suggest that these insects actually prefer flowers with long trumpet-shaped blooms. These moths with many other varying species of moth and butterfly are regularly seen in the park. Other pollinators like butterflies and bees will often stop at these multi-floreted flowers, along with other birds like goldfinches that may visit to eat their seeds.

### **Laburnum tree**

The Common Laburnum is an important tree for several species of moths and butterflies, which feed on its leaves and nectar. The tree's seeds are also a food source for several bird species. It flowers in May and June when it produces large, hanging bunches of bright yellow flowers, giving this beautiful tree its other common name of 'Golden rain'. The flowers are highly scented; however, the scent is an interesting and perhaps a heady one rather than a sweet perfume. As a member of the pea family, the fruits of this species are typical 'pea pods' but are twisted and black. All parts of Common laburnum are extremely poisonous



## Sign 6

### Woods

#### **Woodpecker**

There are three species of woodpecker that nest in Britain, but only one that you're likely to hear drumming – the great spotted woodpecker. It's our most common species, found in many woodlands and parks. They hammer their beak against a tree trunk at incredibly high speeds – up to 40 strikes per second. The drumming of a lesser spotted woodpecker is slightly slower than that of a great spotted, with the individual strikes more clearly heard. The green woodpecker is a chunky bird with a moss green back and a bright red cap. They often forage on the floor, probing for ants with their long, sticky tongue. They rarely drum and when they do it's hard to hear – a soft series of rapid taps. They prefer to display with their loud, laughing calls.

#### **Nuthatch**

The Nuthatch is a plump bird about the size of a Great Tit that resembles a small Woodpecker. It's blue-grey on top and whitish below, with chestnut on its sides and under its tail. It has a black stripe on its head, a long black pointed bill and short legs. The species possesses a range of loud whistling calls. Nuthatches nest in tree holes or nest boxes, reinforcing the nest entrance with dried mud. Nuthatches climb up and down tree trunks in mature woods and parklands, feeding on insects, seeds and nuts, such as hazelnuts and beechmast. Nuthatches are the only UK bird that can climb headfirst down tree trunks, holding on with their powerful toes.

#### **Wild garlic**

Wild garlic contains vitamin A, C, calcium, iron, phosphorus, sodium, and copper. The amount of vitamin C is 20 times the amount of vitamin C in lemons! Wild garlic lowers blood pressure and has antibacterial and antibiotic properties. Wild garlic flowers early in spring, so is an important early bloom for the bees and other insects which pollinate them.

#### **Oak trees**

Oak trees live up to 1,000 years. They support more wildlife than any other tree in the UK – it provides food and shelter for a whopping 2,300 species, some of which rely solely on it for survival even its fallen leaves support biodiversity. They are host to hundreds of insect species, supplying many birds with an important food source. In autumn, mammals such as squirrels, badgers and deer feed on acorns.

Flower and leaf buds of English oak are the food plants of the caterpillars of purple hairstreak butterflies.

The soft leaves of English oaks break down with ease in autumn and form a rich leaf mould beneath the tree, supporting invertebrates such as the stag beetle, and fungi, like the oakbug milkcap. Holes and crevices in the tree bark are perfect nesting spots for the pied flycatcher, redstart or marsh tit. Bats also roost in old woodpecker holes or under loose bark, as well as feeding on the rich supply of insects in the tree canopy.

#### **Deer**

There are six main species of deer in Britain: Red, Sika, Fallow, Roe, Muntjac and Chinese Water Deer; the largest being Red Deer and the smallest being Muntjac. Deer can have a substantial impact

on woodland vegetation and play a significant role in woodland ecosystem function. Red and fallow deer have been spotted in the park and also spotted on the mobile trap camera drinking in the river.

## **Rowan**

Rowans produces a lasting crop of berries that in bumper years can see birds through for several months. They're a favourite of mistle thrushes which will guard them jealously from other hungry visitors. Ivy is also a good plant to encourage, its late-ripening berries offering food through the colder months and its evergreen leaves provide the perfect larder for wrens to search out hibernating insects.