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Other Bees

Little Buzzers – Big Helpers



Britain's Overlooked Native Bees



Aside from honeybees and standard bumblebees, the United Kingdom is home to nearly 250 species of **solitary bees** and 6 species of **cuckoo bumblebees** (plus various solitary cuckoo bees), making up roughly 90% of all British bee varieties.



This instructional lesson plan has been designed to provide you with information and facts to help give you a basic understanding of different bee species.

MINING BEES (*Andrena* and others)



Mining bees are small, solitary bees, and you will normally find them nesting in burrows in lawns, banks and in open soil, they are evident in spring, mainly March – June, when you will often see small volcano-shaped mounds of earth. They normally finish nesting within a few weeks. Mining bees do not form a colony and very rarely sting.

- Description: The largest group of wild bees in the United Kingdom (over 60 species). They look like small honeybees or tiny wasps, 0.8 – 1.5cm long in size.
- How to Identify: Look for the Tawny Mining Bee which has a thick, fox-red furry coat, or the Ashy Mining Bee with striking black-and-grey-silver stripes.
- Habitats: Soft soil, garden lawns, flower beds, and sandy banks.
- Greatest Populations: Widely distributed across England and Wales, especially in gardens and lowland parks
- Fact: Mining bees – are also commonly called burrowing bees, ground bees or miner bees
- Fact: Mining bees don't form colonies, build wax comb, or make honey, and there are no worker bees defending a hive. Females dig their own individual small burrows in the soil.
- Fact: Mining bees don't generally sting. Male mining bees cannot sting. Females are very docile and although theoretically can sting, in practice this doesn't tend to happen and as they are so weak they would not normally be able to break human skin.

TAWNY MINING BEE (*Andrena fulva*)

This is one of the easiest mining bees to recognise. They are about the size of a honeybee but are often mistaken for a small bumblebee and the females have a deep ginger / fox red coloured fur, males are smaller and more brown in colour. This bee is prominent around March until May and will be active making small soil mounds in borders and lawns. These bees are very docile.



ASHY MINING BEE (*Andrena cineraria*)

This mining bee is the size of a Honeybee but the distinct colour differentiates them as they are black with two pale blue-grey stripes across the thorax. They tend to nest in banks, lawn areas, pathways and loose soil, being most active between April and June.

OTHER MINER BEES

The remaining *Andrena* bees are smaller and more brown in colour, they are often quite difficult to tell apart, you may therefore need a special viewing lens to fully identify them. These bees behave in the same manner as the other miner bees, they are solitary, they are harmless, nest on the ground and are prevalent during the spring months.



Fact: If you are trying to determine if a bee is a honeybee or a miner bee the following is a good indicator of what type of bee it is: If the bee is slimmer, amber in colour and is flying in a direct stream to a fixed point with other bees, such as a roof void or a chimney, the bee is probably a honeybee. If the bee is flying to and from soil mounds then it is probably a miner bee.

MORTAR / MASON BEES

(*Osmia spp.* / *Anthophora plumipes*)



Mortar bees, Mason bees and hairy footed flower bees are small bees that often can be seen disappearing into brick, walls or stone joints where they nest. These are three closely related solitary species that use crevices and holes that exist in soft mortar.

- Description: Sturdy, compact solitary bees that use mud and clay to build tiny nest partitions. They are normally 0.8 to 1.5cm long in size. Their diet consists of Pollen and Nectar from oil seed rape and fruit trees.
- Habitats: Old walls, soft mortar, hollow plant stems, and artificial bee hotels.
- Greatest Populations: Common in urban and suburban gardens throughout southern and central Britain

RED MASON BEE (*Osmia bicornis*)



This is the most common. The female bee has an orange, red abdomen and brown thorax. The bee is a little bit bigger than a honeybee. It tends to be most active in the Spring months between March and June.



HAIRY-FOOTED FLOWER BEE

(Anthophora plumipes)

The males are a ginger – brown colour and fly much quicker than the females. The Female bee is jet black in colour and they tend to buzz very loudly so you can hear them at a distance. They tend to be most active in the Spring months March to May



WOOL CARDER BEES BLUE MASON BEES

These bees are less common but they will often be found in the same locations as the other mason and mortar bees. They are all solitary.

Fact: Mason bees tend to come and go using the same wall crevice(s) or space. Each female has her own nest tunnel. One bee will enter, usually stay for one or two minutes then leave, this will continue over a period of time.

Fact: Mason bees nest in pre-existing crevices and cannot dig through rock, brick or mortar. They don't enter living spaces, and each tunnel is about 6cm long.

Fact: A single female mason bee can visit up to 15,000 flowers in her short but very busy five to six week lifespan.

Fact: Mason female bees are regarded as being up to 80 times more efficient than a comparable honeybee, this is because she carries dry pollen on her belly rather than wet pollen thus she transfers more pollen per flower visited.

Fact: Mason bees are considered to be the single most efficient pollinator of fruit trees in the United Kingdom.

Fact: If you have a Bee Hotel within your garden or land, mason bees will use it, and can also help pollinate near-by fruit trees.

LEAFCUTTER BEES (*Megachile*)



- Description: Medium-sized solitary bees famous for their neat, specialised nesting habits.
- How to Identify: Dark, robust bodies resembling small dark honeybees. You can spot them carrying semi-circular pieces of green leaves back to their nests.
- Habitats: Garden borders, hedgerows, and dead wood with pre-existing holes.
- Greatest Populations: Widespread in English and Welsh gardens, parks, and brownfield sites from June to August

Megachile centuncularis often called the rose leafcutter or patchwork leafcutter is the most numerous of the leafcutter bees making up about 90% of the total. There are a total of 7 leafcutter species in the United Kingdom.

Leafcutter bees are important cultivators of late season fruits and vegetables, including commercial crops such as alfalfa, blueberries and carrots. Leafcutter Bees either build their nests in existing cavities, such as beetle tunnels or reeds, or excavate tunnels from soft rotting wood.

Typically, a Leafcutter female will create a dozen nesting cells, which she will line with circles of leaves she has carefully cut from plants, which is where Leafcutter Bees get their name. Males hatch first, and mate with females as soon as they emerge. They die shortly after mating. Females can live for two months or more and begin to create their nesting cells late spring or early summer.

FACT:

Leafcutter bees are some of the most efficient pollinators in the UK garden. A single female visits roughly 8,000-12,000 flowers in her 6-week adult life — comparable to honeybees in volume but each flower visit results in transfers of far more pollen.

FACT:

Leafcutter bees are the dominant pollinator for soft fruit plants: strawberries, blackberries, raspberries, and this is especially true for those being grown commercially.

FACT:

Leafcutter bees are invaluable with reference to the growth and production of vegetables such as beans, sweet peas, and due to their size they are able to access the keel shaped flowers which other bees may not be able to access.

FACT:

Leafcutter bees need pollen and nectar from late May through to August.



FLOWER BEES (*Anthophora*)

- Description: Fast-flying, chunky bees that mimic small bumblebees.
- How to Identify: The Hairy-footed Flower Bee shows sexual dimorphism: males are ginger-brown with pale faces, while females are velvety black with bright orange-yellow hairs on their back legs.
- Habitats: Urban parks, old stone walls, and deep soil banks.
- Greatest Populations: Heavily concentrated in southern England and urban gardens rich in lungwort and dead nettles



CUCKOO BEES (*Bombus* cuckoos and *Nomada* species)

- Description: Brood parasites that do not build nests or gather pollen. Instead, females infiltrate host nests (like those of carder bees or mining bees), replace the host queen, and trick the workers into raising the cuckoo's young.
- How to Identify: Cuckoo bumblebees look like regular bumblebees (e.g., the Southern Cuckoo Bumblebee) but have shinier, less hairy abdomens, dark-tinted smoky wings, and no pollen baskets on their hind legs. Solitary cuckoo bees like *Nomada* look remarkably like tiny yellow-and-black wasps.
- Habitats: Wherever their specific host bee species live—woodlands, heaths, and gardens.
- Greatest Populations: Widespread across the UK in smaller localized numbers tracking healthy host populations.



Best Plants for Kent Gardens



- **Field Scabious (*Knautia arvensis*):**

Vital for specialised solitary mining bees (*Andrena hattorfiana*) that exclusively feed on scabious pollen.



- **English Lavender (*Lavandula angustifolia*):**

Thrives in Kent's chalky or well-drained soils, providing rich mid-summer nectar for leafcutter and mason bees.

- **Foxglove (*Digitalis purpurea*):**

A woodland edge native perfect for long-tongued solitary bees.



- **Common Knapweed (*Centurea nigra*):**

Thrives in Kent's chalky or well-drained soils, providing rich mid-summer nectar for leafcutter and mason bees.

- **Red Mason Bee Favorites (e.g., Lungwort and Cotoneaster):**

Early spring bloomers that support early-emerging solitary species.



Planting Seeds: When and How

- **Hardy Annuals (e.g., Borage, Cornflower):**
Sow seeds directly in bare soil during **March–April** after the last heavy frost, or in **September** for early spring growth.
- **Perennials (e.g., Scabious, Knapweed):**
Start seeds indoors in trays in **February–March**, or sow directly outside in a prepared seed bed in **May** when the soil has warmed up.
- **Depth:** Lightly press tiny seeds into the soil surface (they need light to germinate) or cover larger seeds with 3mm (1/8 inch) of fine soil.



Watering Guidelines

- **Seeds and Seedlings:** Keep the soil consistently moist but not soggy. Water gently with a fine-rose watering can every 1 to 2 days if there is no rain.
- **Established Plants:** Reduce frequency to encourage deep roots. Provide a heavy soaking of 1 inch of water once a week during dry summer weather rather than shallow, daily splashes.
- **Drought-Tolerant Herbs (Lavender, Oregano):** Require minimal watering once established and will suffer if left in waterlogged soil.



This Instructional Lesson Plan is one of a series of learning materials offered through the BeeSkilled – BeeSocial project. The aim of the project is to protect bees and help people to understand these essential pollinators. We want to increase bee populations due to the fact that many species are endangered or at risk.

The BumbleBee Alliance CIC has been funded by the National Lottery - Heritage Fund to manage this very important project, we therefore permit free use of this instructional lesson plan for teachers, community workers, youth workers, individuals and members of the public who have an interest in bees.



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