RHS Invisible Garden

MUSHROOM SPORE PRINTS (*Agaricus bisporus*)

Mushrooms or fungi produce millions of spores. Can you see the tiny spores in this spore print? Each spore can develop into a new mushroom.

- Most plants rely on fungi in or on their roots to help with water and nutrient uptake.
- Fungi are the main decomposers of organic material, providing an essential service in compost heaps, in the garden and on the planet by recycling essential nutrients for plant growth.
- Fungi provide us with foods, medicines, and enzymes important to industry.
- Fancy a pint? Brewer's yeast helps to make beer.

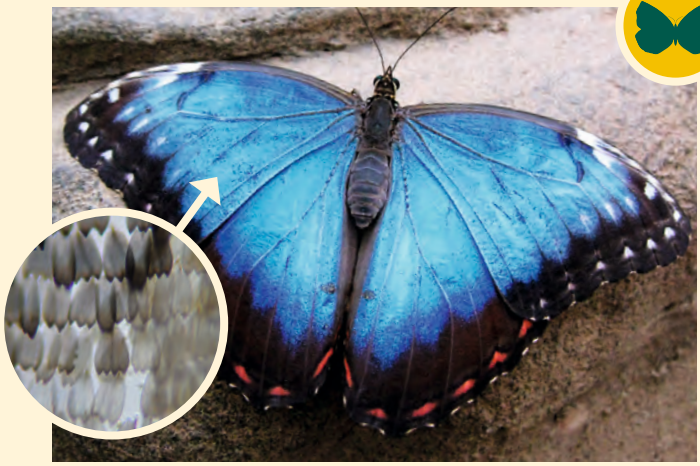
RHS / BETHANY CLARKE, ANNA PLATONI (INSET)

RHS Invisible Garden

BUTTERFLY WINGS: THE BLUE MORPHO (*Morpho peleides*)

Why are the wings of butterflies and moths dusty? Look closely and you should be able to see **tiny scales** on the wings – it is these scales that create the dust. The scales give butterflies and moths their **colour**, help them **fly**, keep them **warm** and some even produce **pheromones** – chemicals used to communicate between individuals.

- Butterflies can **pollinate flowers** in our gardens.
- Butterflies **add colour** to our gardens.
- Butterfly wings have inspired us to:
  - Design novel **solar panels**.
  - Develop brighter, more readable, **lower-power displays** in mobile devices.
  - Create **Morphotex**, a dye-free coloured fabric.



RHS / REBECCA ROSS, ANNA PLATONI (INSET)

RHS Invisible Garden

CLEAVERS (*Galium aparine*)

Cleavers is a botanical **climber** and hitchhiker. Look for the **small hook-like hairs** on their fruits, leaves and stems. These sticky hooks attach to **dogs and clothes** and spread this plant **over long distances**.

- Cleavers is **edible**. The leaves and stems of the plant can be cooked as a **leaf vegetable**, while the seeds are sometimes **roasted to make a coffee substitute**, as this plant is related to the coffee plant.
- Well known to herbalists for its **medicinal properties**.
- It provides **entertaining fun** for children (and some adults!) who throw and stick the plant on each other's clothing.
- Its **many common names** include goosegrass, beggar's lice, kiss-me-quick, stick-a-back and sticky willy.

RHS / BARRY PHILLIPS, FORNAX (INSET)

Royal Horticultural Society

Sharing the best in Gardening

#RHSHampton

rhs.org.uk/science

Registered charity no: 222879/SC038262

RHS Invisible Garden

LACEWING LARVAE (*Chrysoperla carnea*) EATING APHIDS

If you're lucky you might see a lacewing larva **eating an aphid**. The larvae seize aphids with their jaws and **suck out their juices**!

- The lacewing is **a voracious predator** of many garden pests and is **excellent for pest control**.
- Lacewing adults feed on **nectar and pollen** and can play a role in **pollinating plants**.
- Some lacewing larvae **camouflage themselves** by placing **sucked-out aphid skins** among the bristles on their upper surface. Adult lacewings are vegetarian and eat pollen and nectar.

JINFENG ZHANG, RHS / ERIC STEINERT (INSET)

RHS Invisible Garden

STINGING NETTLE HAIRS (*Urtica dioica*)

The **stinging nettle** evolved stinging hairs to protect it from being eaten. Look for the **two different types of hairs** (stinging and non-stinging). Stinging hairs are **much longer and thicker**. The upper part of each stinging hair **breaks off at the slightest touch**. This resembles a **hypodermic needle** injecting poison into its victim.

- Nettle patches attract pollinators such as the **small tortoiseshell**, **comma**, **peacock** and **red admiral** butterflies.
- Nettles attract **ladybirds**, a true gardeners' ally for keeping aphids in check.
- Nettle leaves can be used to make a **free liquid plant food**.
- The young shoots can be cut and added to soups and stews or **cooked as a vegetable**.
- The leaves can be boiled up in water to make **a refreshing tea**.
- Chemicals in nettle have been researched to look at their effectiveness in **combating the pain associated with arthritis**.
- Fibres from nettles are **used in clothing**. Recently a bikini has been made out of nettles.

RHS / BARRY PHILLIPS

RHS Invisible Garden

HONEYBEES (*Apis mellifera*)

Like all insects, the honeybee has a body in three parts, a **head**, a **thorax** and an **abdomen**. It has three pairs of **jointed legs**, feelers or **antennae**, two pairs of **wings** and **five eyes**.

- Honeybees and other flower visitors such as **bumblebees**, **solitary bees** and **hoverflies** play a vital role in **pollinating plants**.
- Honeybees produce **delicious, sweet honey** that many of us enjoy.
- **Beeswax** is used in the production of **candles**, **polishes** and **food**, as well as in **skincare and cosmetics**.
- Honeybees are used extensively for the **pollination of crops** to increase yields.

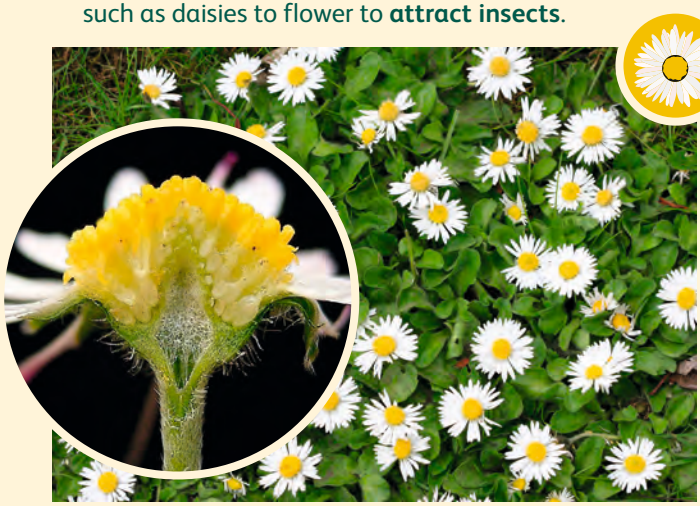
RHS / ANDREW HALSTEAD

RHS Invisible Garden

DAISY (*Bellis perennis*)

Look closely, and you will discover that what appears to be a single flower is made up of lots of flowers called **florets**.

- Plants, like people, are grouped into their **related families**. The daisy plant is in the ***Asteraceae*** plant family, also called the ***Compositae*** family. The word *Compositae* describes the way the daisy flower is a composite of **lots of tiny flowers** (florets).
- The name **daisy** comes from Old English and means **'day's eye'**. This is because the daisy flower will **close up at night** and **opens in the day**. Sometimes however if the day is **dull and dark** the daisy will still remain closed.
- Allow your **lawn to grow a little longer** to allow plants such as daisies to flower to **attract insects**.



RHS / BARRY PHILLIPS, FRANK VINCENTZ (INSET)

Royal Horticultural Society

Sharing the best in Gardening

#RHSHampton

rhs.org.uk/science

Registered charity no: 222879/SC038262