#### **BENEFICIAL INSECT POLLINATORS AND PREDATORS**

Pollinating insects help boost your harvest.

#### Ladybirds

What: Ladybird larva. Grey/black some with orange or white markings. Some spiny.Around 10mm in lengthBenefit: Predator of aphids and some other insects like scale insectsLikes: Adults need sheltered sites for overwintering

## Violet ground beetle

What: Violet ground beetle. Ground beetles range in size, up to 25mm. Often black, sometimes metallic Benefit: Predators of ground and soil dwelling insects including vine weevil larvae Likes: Log piles, leaf litter and compost heaps

## Marmalade hoverfly

What: Marmalade Hoverfly
Around 50mm, striped. Hoverflies dart in flight, hovering on the spot. Larvae are semi transparent maggots
Benefit: Adults act as pollinators. Many hoverfly larvae eat aphids
Likes: Flowers with open centres, pollen and nectar

#### Parasitiod wasp

What: Parasitiod wasp. Lay eggs inside other insects, several species inside aphids Benefit: Larvae eat their hosts from the inside leaving them as papery husks Likes: Adults eat flower nectar and pollen as well as aphids' fluids

#### **Common wasp**

What: Common wasp. Black and yellow, striped, winged insectsBenefit: Hunts caterpillars and other insects in summer to feed grubsLikes: Colonies live in papery nests in the ground or hanging from trees. These die out each year

## Springtail

What: Springtail. Less than 6mm long. Various colours. Many are able to jumpBenefit: Helps in the process of breaking down organic matterLikes: Often found in damp places such as leaf litter, compost heaps and decaying material

#### **Green lacewing adults**

What: Green lacewing adults. Pale green bodies. Transparent, veined wings. Larvae to 8mm tapered, bristled body

Benefit: Larvae eat other insects especially aphids

Likes: Crevices, leaf litter and evergreen shrubs for hibernating. Aphids for laying eggs nearby

# Bumblebee

What: Bumblebee. A hairy, striped and rotund social bee with four wingsBenefit: Pollinates flowersLikes: Some like nesting holes in the ground or tree bases. Nectar-and pollen-rich flowers from March to October

## Centipedes

What: Centipedes. Slender 2-6cm yellow or brown, long bodies. One pair of legs per segmentBenefit: Hunts soil prey on or below soil surfaceLikes: Soil prey. Dark damp areas such as log piles and leaf litter with lots of prey.

## **Beneficial insects and bugs / RHS Gardening**

https://www.rhs.org.uk/advice/beneficial-insects-and-bugs

# What are the main aphid predators?

## **Ladybirds**

There are more than 50 species of ladybird in the UK. They range in size from less than 1mm to over 10mm. They come in a variety of colours including yellow with black spots, brown with cream spots, red with black spots and black with red spots. The number of spots can vary from none to more than 24 and some species are very variable in colour and spot number.

Ladybird larvae are up to 12mm long and usually greyish-black with variable amounts of orange-red or white markings. Some species have spiny bodies. A majority are predatory on aphids and other insects but some species feed on mildews and a few species on plants. The two spot ladybird is available from some suppliers of <u>biological controls</u>.

## **Hoverfly larvae**

Hoverfly larvae are legless maggots with flattened, relatively broad bodies up to 12mm long. They often have semitransparent bodies so internal structures, such as the gut, can be seen. There are more than 260 hoverfly species in Britain and just under half of them have larvae that feed on aphids. The green larvae of one species, *Sphaerophoria rueppelli* is available from some suppliers of <u>biological controls</u>. Adult hoverflies feed on nectar, honeydew and pollen and are useful <u>pollinating insects</u>. Adult hoverflies are important <u>pollinators</u> and can be encouraged by providing lots of flowering plants.

## Lacewing larvae

Lacewing larvae eat aphids and other small insects, which they seize with their curved jaws. They are up to 8mm long with tapered rear ends. Some lacewing larvae camouflage themselves by placing sucked-out aphid skins among the bristles on their upper surface. Adult lacewings have a similar diet to adult hoverflies. Lacewing larvae are available from some suppliers of <u>biological controls</u>.

## Predatory midge larvae

Predatory midge larvae, *Aphidoletes aphidimyza*, are yellowish orange maggots up to 3mm long when fully grown. They insert their mouthparts into the aphid's body and suck out the contents. When fully fed they go into the soil to pupate and emerge as tiny flies, which feed on honeydew. This midge is available from some suppliers of <u>biological controls</u>.

# Parasitic (Parasitoid) wasps (various species)

These insects are more accurately termed parasitoids as they kill the host, something parasites do not usually do. The adults of several species of small parasitic wasp lay single eggs inside the bodies of young aphids. The egg hatches into a small grub that feeds within the host insect's body. Eventually the parasite grub kills the aphid, usually by consuming the

body contents and pupates inside the aphid's body. By then the parasitized aphid's body has become whitish brown and has a characteristic inflated appearance and is often called an aphid mummy. The adult parasite emerges through a hole cut in the aphid's body. Some parasitoid wasps are available from some suppliers of <u>biological controls</u>.

# Earwigs

<u>Earwigs</u> are omnivorous, feeding on small invertebrates and plant material. On fruit trees they can give useful control of fruit aphids and do not cause damage to the trees or fruit. Providing shelters such as flower pots loosely stuffed with hay in trees can help increase numbers.

## **Predatory beetles**

Some ground and rove beetles climb plants to feed on aphids, the rove beetle *Atheta coriaria* is available from some biological control suppliers for control of aphids and some other glasshouse pests.