

Spitfires (larvae)/steel blue sawfly (adult) *Pezomachus dorsalis*



Order: Hymenoptera

Where to find: Clumps of larvae often seen on eucalypt leaves in warm months. Adults encountered less frequently on leaves and flowers.
Appearance: Adults are a metallic blue-green wasp 2 cm long. Larvae are dark grubs with light hairs.
Facts: Larvae wave and regurgitate defensively. Primitive wasps.

Ant lions *Myrmeleontidae* family



Order: Neuroptera

Where to find: Adults are nocturnal and often found near lights.
Appearance: Soft-bodied larvae have large, sickle-like jaws. Adults similar to dragonflies but hold their complexly veined wings along their body and have clubbed antennae.
Facts: Predatory larvae build conical traps in loose sand.

Green carpenter bee *Xylocopa aeratus*



Order: Hymenoptera

Where to find: Nesting in dead, standing banksia trunks and yacca flower-spikes in western KI.
Appearance: Large, metallic green-blue bee 2 cm long.
Facts: 'Buzz-pollinator' of native flowers from spring to autumn. Regionally endangered on KI and extinct on mainland SA.

Christmas beetle *Anoplognathus* spp.



Order: Coleoptera

Where to find: Visits lights on early summer evenings. Fly above mallee trees on hot days.
Appearance: Large scarab beetle around 2 cm long. Shiny, tan-yellow, green-tinged body. Spiny legs end with large hooks.
Facts: Larvae live underground eating plant roots.

A wingless diurnal cockroach *Polyzosteria* spp.



Order: Blattodea

Where to find: Mainly in bushland under rocks. Sometimes attracted to light.
Appearance: Wingless. Oval-shaped body with obvious black segments with a purple-blue tinge. Small head with long thin antennae.
Facts: Mainly active during the day. Eats dead organic material. Not a pest.

Enigma moth *Aenigmatinae glatzella*



Order: Lepidoptera

Where to find: Walking over the growing tips of native pines in October along the Dudley Peninsula coast.
Appearance: Small moth 5 mm long. Dark metallic purple-gold body with a yellow-brown head.
Facts: Belongs to a new primitive moth family. First discovered on KI in 2009.

Scorpion fly *Harpobittacus* spp.



Order: Mecoptera

Where to find: Adults are often seen flying around or resting on vegetation and flowers in spring.
Appearance: Look like a large red and black wasp. Have a long abdomen, two pairs of large clear wings and obvious pointed mouthparts.
Facts: Predatory insect. The male feeds the female prey during mating.

Termites *Nasutitermes* & *Coptotermes* spp.



Order: Isoptera

Where to find: Mound nests in bushland; either inside or outside repairing the nest.
Appearance: Adults have white-brown, soft bodies and can resemble ants. Wings shed easily.
Facts: Key decomposers. Winged adults fly on warm evenings. Form colonies with a queen.

Fiery sun moth *Synemon ignita*



Order: Lepidoptera

Where to find: Active by day during January. Found near the sedge *Lepidosperma viscidum* which it feeds on, west of the Dudley Peninsula
Appearance: Adults look like a dark butterfly with flashes of red when flying.
Facts: Larvae feed in the base of *Lepidosperma viscidum* clumps.

A robber fly *Neorattus fercules*



Order: Diptera

Where to find: Often seen or heard flying or resting on bare perches during summer.
Appearance: Very large fly about 3 cm long with a long thin abdomen. Large spiky mouthparts surrounded by bristles. Large eyes. Legs red and black.
Facts: Predatory insect. Larvae live in sandy ground.

Yellow-winged locust *Gastrimargus musicus*



Order: Orthoptera

Where to find: Easily disturbed from the ground in grassy areas in summer.
Appearance: Large grasshopper with big hind legs. Forewings have two dark bands. When flying, adults make a clicking sound and their yellow hind wings are visible.
Facts: Eats vegetation and can occur in very large numbers.

Bird-of-paradise flies *Callipappus* spp.



Order: Hemiptera

Where to find: Bushland, especially where banksias grow.
Appearance: Males have many long, white threads from abdomen, string-like antennae and wings. Females have soft, sack-like bodies, no wings, small legs and antennae beneath their body.
Facts: Sucks food from plants through needle-like mouth. Is a bug not a fly.

Australian green mantid *Orthodera ministralis*



Order: Mantodea

Where to find: On vegetation in bushland and gardens.
Appearance: Green, elongate, robust insect. Thin, string-like antennae as long as thorax. Holds front legs against the thorax when standing. Juveniles look like small adults without wings.
Facts: Ambushes live insects. Attracted to lights at night.

Tau emerald *Stereum firsutum*



Order: Odonata

Where to find: Flying near water or perched on vegetation.
Appearance: A large black and yellow insect. Clear wings have complex veins and are held perpendicular to the body at rest. Small hair-like antennae.
Facts: Juveniles live in freshwater. Pursues live insects, such as mosquitos, for food.

Bull ants, Jumper ants *Myrmecia* spp.



Order: Hymenoptera

Where to find: On the ground, tree trunks and vegetation in bushland.
Appearance: Medium to large ants. Curved jaws are as long as head. Antennae are bent halfway along.
Facts: Often create mounds covered with sticks and rocks. Forage alone. Mainly nocturnal. Some are aggressive to people, some are timid.

Large eastern bronze azure butterfly *Ogyris fulmataria*



Order: Lepidoptera

Where to find: Only in Flinders Chase National Park.
Appearance: Medium-sized butterfly, looks dark when flying. Wings shiny, deep blue-purple, female has cream patch on forewings. Underside of wings have brown-grey markings.
Facts: Larvae live in ant nests. Rediscovered in 2014 after 80 years.

Blue-banded bee *Amegilla chlorocyanea*



Order: Hymenoptera

Where to find: Usually seen visiting blossoms using quick, hovering and darting flight. Nests in earthen banks. Widespread.
Appearance: Abdomen has a blue-green hair stripe on each segment. Thorax has yellow-brown hair.
Facts: 'Buzz-pollinator' of native flowers and horticultural crops.

Lycid beetle *Metriorrhynchus* spp.



Order: Coleoptera

Where to find: Visits flowers from late spring to early summer. Often seen flying.
Appearance: Red-brown forewings have raised ridges. Triangular-shaped thorax and head are both black. Large antennae have eight side projections.
Facts: Distasteful to predators. Colour mimicked by many other insects.



Insects of Kangaroo Island



Natural Resources
Kangaroo Island



Why is KI important?

Of all agricultural regions in South Australia, Kangaroo Island has the highest percentage of native vegetation. This vegetation is an important refuge for insects, including rare species such as the large eastern bronze azure butterfly and species now extinct elsewhere, for example, the green carpenter bee. New species like the enigma moth are still being discovered on KI. This moth is the only surviving member of a new primitive moth family and is of global scientific importance.

Insect populations are decreasing around the world. By clearing native vegetation the amount of habitat available to insects has diminished. The use of pesticides in agriculture and home gardens and the spread of alien species and diseases have destroyed wild insects too.

You can help insects by:

- » Planting native trees, shrubs and flowers in your backyard for insect food and habitat.
- » Incorporating organic matter into your garden soil to benefit useful insects.
- » Avoiding the use of bug zappers and insect sprays which also destroy beneficial insects.
- » Reducing the use of pesticides and buying organic produce and materials.
- » Minimising native vegetation clearance, including fallen branches and logs, to save insect habitat.

Further Information

**Natural Resources Centre
Kangaroo Island**

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Kingscote SA 5223

Ph: (08) 8553 4444
Email: kinrc@sa.gov.au

Related Websites:
www.naturalresources.sa.gov.au/kangarooisland
www.environment.sa.gov.au

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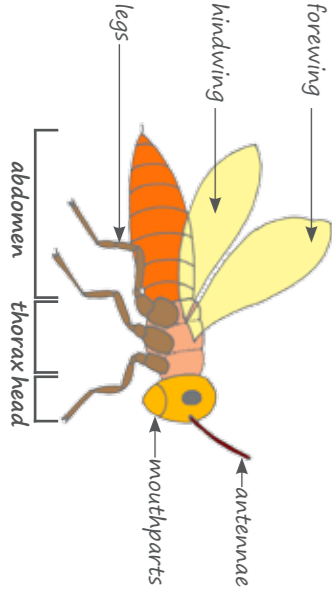


Built for their environment

Insect bodies are extremely diverse but all are divided into three main parts: the head, thorax and abdomen. Insects have six legs, one pair of antennae and one or two pairs of wings.

Most insects have chewing mouthparts for eating plant and animal matter or sucking mouthparts for nectar, blood and plant fluids. Some insects, like flies, have sponge-like mouthparts for soaking up liquids. Some insects are wingless, such as cockroaches, fleas and silverfish. Some have only one pair of wings, for example flies, and some have tiny wings.

The thorax is divided into three parts (pro, meso and meta-thorax). Each part has a pair of legs. The fore and hind wings attach to the meso and meta-thorax respectively. The abdomen holds vital organs for digestion and breeding and often has chemical secreting glands to mark an insect's trail or attract a mate.



Insects – essential for life

Without insects life as we know it would not exist. Insects play an essential role in the web of life in every environment. They are the pollinators, undertakers, leaf litter sweepers, garbage collectors, soil conditioners and natural fertilizer producers of nature.

About 80% of all flowering plants on earth are pollinated by insects. Pollinating insects improve the yields of 75% of crops and up to 94% of wild flowering plants depend on insect pollinators to reproduce. Without insects we would not have the fruits, flowers and vegetables we depend on, nor the honey, beeswax, silk and other useful products insects produce. However, some insects are agricultural pests, for example, locusts feeding on crops, and aphids and thrips spreading crop viruses.

Insects, such as termites, are key decomposers of dead wood and plant litter, enabling their nutrients to be recycled. Many insects are parasitic and their consumption of other insect species controls their populations.

Animals, including people, eat insects making them an essential part of the food chain. They are a rich source of protein, vitamins and minerals.

What is an insect?

Insects are an ancient group of animals that have been on earth for at least 360 million years. There are more types of insects than any other type of animal on the planet. This amazingly diverse group of animals live in all types of environments.

- All insects have:
- » a hard external shell or exoskeleton to protect their soft internal organs
 - » a body made up of the head, thorax and abdomen
 - » antennae on their head
 - » six legs.

Insects tend to be small but can vary in size from 0.1 mm to over 50 cm long. Insects generally hatch from eggs but some give birth to live young. Young insects are called nymphs or larvae. As insects grow they moult or shed their old exoskeleton and grow a new one.

Scientists divide insects into different groups called Orders based on their common physical features. Dragonflies, grasshoppers, stick insects, praying mantids, cockroaches, earwigs, termites, parasitic lice, aphids, thrips, ant lions, beetles, fleas, butterflies and bees all belong to different Orders.

This brochure describes some of the native insects found on Kangaroo Island (KI).