WELLINGTON DISCOVERY FOREST
WATCHING WILDLIFE GUIDE

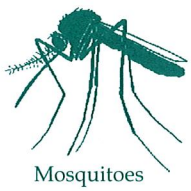
Watching Invertebrates

Lifeform, Lifestyle and Lifecycle

There are over 200,000 species of invertebrates in the Australian bush of which only about 10,000 have been described. They display an incredible diversity of lifeforms and functions. The major groups of invertebrates are the beetles and weevils, moths and butterflies, dragonflies and damselflies, flies and mosquitoes, ants and termites, spiders, grasshoppers and crickets, bees and wasps, cicadas and leafhoppers. Here in Wellington Discovery Forest you can find representatives of each of these major groups and many others.

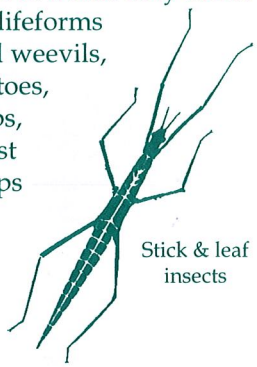
Dragonflies & damselflies

Cockroaches



Mosquitoes

Termites



Stick & leaf insects

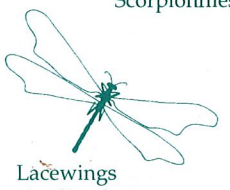
Bugs, cicadas, leafhoppers, lerps & aphids

Beetles, weevils & leaf eating bugs

Bees, wasps, ants & sawflies

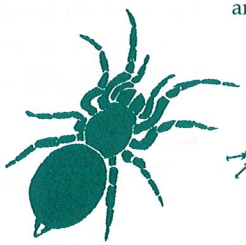
Flies

Scorpionflies



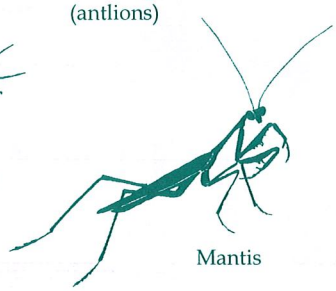
Lacewings (antlions)

Butterflies



Spiders

Grasshoppers & crickets



Mantis

The "Jarrah Trail" is a good place to take a stroll watching for evidence of the invertebrates found within this jarrah forest community. Provided here is a key to identifying the creatures that make the holes, scribbles, scratches, blotches and brownings on leaves and the burrowings into wood and soil. If you are observant and fortunate you may see the creatures responsible.

Invertebrate shapes reflect functions such as locomotion (flying, crawling or hopping) and feeding (biting, sucking, chewing and boring) on plants and animals (including other invertebrates).

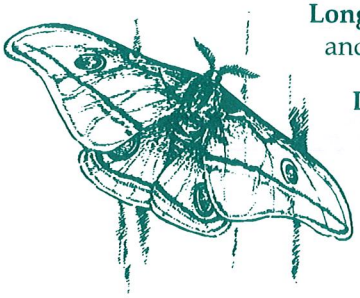
Some have intriguing lifecycles with many metamorphosing (changing shape) from a larval stage as a grub or caterpillar to a winged creature; others shed their exoskeleton (inflexible skin) as they grow bigger.

Department of Conservation and Land Management

Looking for Clues

You can look for invertebrates and identify them by shape or you can look for evidence of them.

Evidence on the trunks and branches



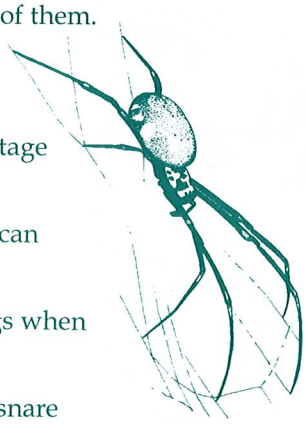
Helena Gum Moth

Long horned or longicorn beetles are 'borers' in their larval stage and are known as bardi grubs.

Daddy-long-leg flies rest on the trunks and branches but can also be seen flying around.

Moths are camouflaged to blend into their surroundings when resting to avoid predators.

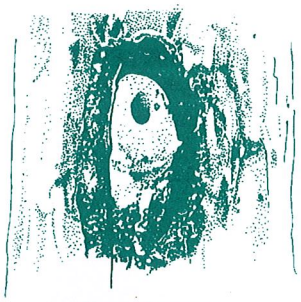
Spiders build webs between trunks and branches to ensnare flying creatures and are often found beneath the bard.



Orb weaver

Bardi gub

Longicorn beetle



Borer damage

Daddy-long-legs fly

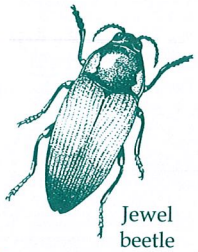
Day flying moth

Seen on the flowers and in the air

Day flying moths suck nectar from flowers.

Hover fly

Hover flies are also known as bee or drone flies because they are stoutly built like bees. They are swift fliers, hovering, apparently motionless, in the air. They are impõrtant plant pollinators. The larvae (maggots) of some species are predators of other insects such as aphids and lerps.



Jewel beetle

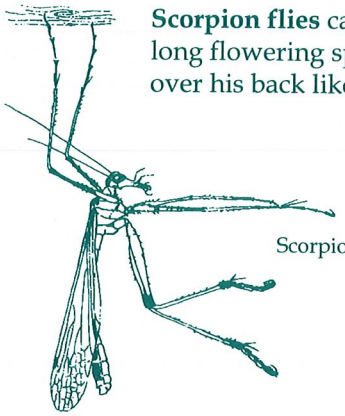
Orange and blue-black beetles feed on nectar and are distasteful to birds that might prey on them. Like the jewel beetle (and some moths) they mimic the look of toxic creatures to discourage predators.

March flies

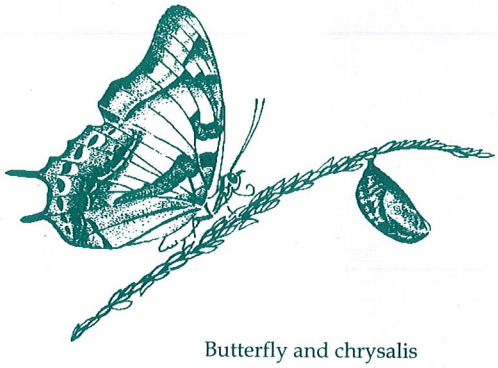
March flies or Horseflies suck the blood of humans, kangaroos and other mammals. They are prolific in early spring and less abundant during autumn.

Butterflies vary in shape, size and colour and feed on flower nectar. The colours may be used for concealment and for warning that they are poisonous to predators.

Scorpion flies can sometimes be seen hanging by their forelegs from the long flowering spikes of the balga (the grass tree). The male curls his tail over his back like a scorpion's sting.



Scorpion fly



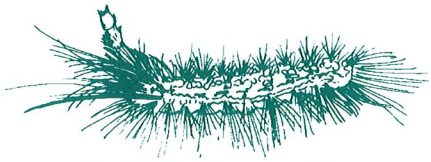
Butterfly and chrysalis

Evidence on the leaves

The 'scribble trails' on marri leaves are made by **leaf mining caterpillars** feeding on the leaves. The 'shark fin' serrations on other leaves are made by **leaf eating beetles and weevils**. Weevils also make holes in the leaves. Browning on some of the leaves is caused by the weevil larvae that are black, slug-like caterpillars. If you look at the leaves of the young jarrah trees you can see holes surrounded by brown blotches indicative of the **jarrah leaf miner**.

Leafminer damage

Weevil



Leaf skeletoniser caterpillar

Evidence on the ground

Termites build sandy surfaced tunnels in which they travel to avoid sunlight. You can see these on the stumps and trunks of trees. They link these fibre-food sources to the nest of the termite colony. Termite nests are constructed from wood fibre, saliva and termite dung.

Termite nest

Worker ant

Termites

Most **ants** construct underground nests in which they live.

Sticknest ant nest

Sticknest ants construct a conical nest of sand and sticks for the drier months. During winter they live underground. In spring they reconstruct another conical nest in a different spot from the previous nest site.

Trapdoor spiders live in web-lined tunnels in the ground and prey on passing creatures.

Wolf spiders are dramatically coloured with contrasting shades of yellow, browns, and grey or black.

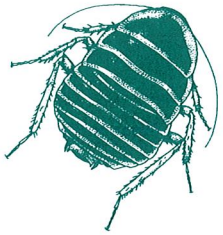
Trapdoor spider

The **antlion**, the larval stage of the lacewing, constructs a conical pit in the ground and lies buried at the bottom with just its open jaws protruding. Any insect that tumbles into the pit is immediately seized and eaten. If the prey tries to escape, the antlion flicks sand at it, causing a miniature landslide which makes the prey fall to the bottom of the pit.

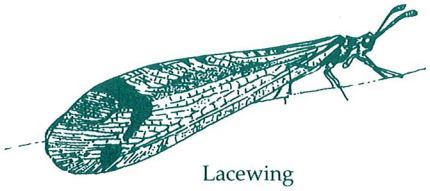
Antlion

Native cockroaches, unlike their domestic cousins, live in and on rotting wood and debris on the forest floor.

Grasshoppers are mostly foliage feeders. Many camouflage themselves with elaborate cryptic resemblances to leaves, twigs, bark and stones.



Native cockroach



Lacewing

Grasshopper