

Gumnut Gazette

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Insiders on Insects

What's an Insect?

Insects are arthropods. What does this mean?

This means that they have: a hard external skeleton, called an 'exoskeleton', a segmented body, and at least three pairs of jointed legs.

There are different classes of arthropods including: crustacea (crabs, crayfish, prawns), Arachnida (spiders, mites, scorpions), Myriapoda (millipedes and centipedes), and Insecta (insects).

Insects are also known as invertebrates, which means they don't have a backbone.

We love insects because they do lots of jobs for us and our environment. Some of these jobs are pollinating flowering plants, being a source of food for animals, and helping with the decomposition of plants and animals.

Keep reading to find out about some cool insects we have here at Cleland Wildlife Park.

Photo credit above to Cleland Wildlife Park staff

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Acknowledgement to country

The Department for Environment and Water acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep

spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country.

The Department works in partnership with the First Peoples of South Australia and supports their Nations to take a leading role in caring for their Country.

FUN FACT

The study of insects is called 'entomology.'



Fun and games

Bugs Galore!

Find-a-word

G	E	I	A	N	T	E	N	N	A	A	L	T	P
E	X	O	S	K	E	L	E	T	O	N	G	R	O
N	A	A	E	R	H	G	E	A	E	A	A	E	I
L	A	R	V	A	E	N	G	E	E	N	H	N	N
X	A	R	O	H	T	M	A	T	U	R	E	T	H
S	P	W	L	A	I	E	E	T	R	N	X	O	E
D	N	O	T	T	G	H	S	E	L	N	E	M	A
I	N	V	E	R	T	E	B	R	A	T	E	O	D
N	W	N	V	R	V	G	A	V	D	B	I	L	E
T	I	A	A	L	R	E	D	I	P	S	E	O	G
L	N	N	E	I	C	O	B	T	L	N	I	G	E
A	G	B	D	O	P	O	R	H	T	R	A	Y	U
N	S	U	T	R	C	A	B	D	O	M	E	N	R
D	P	G	T	C	E	S	N	I	E	A	P	U	P

INSECT

BUG

IVERTEBRATE

EXOSKELETON

ARTHROPOD

WINGS

SPIDER

ENTOMOLOGY

EGG

LARVAE

PUPAE

MATURE

HEAD

THORAX

ABDOMEN

ANTENNA

Quiz Time!

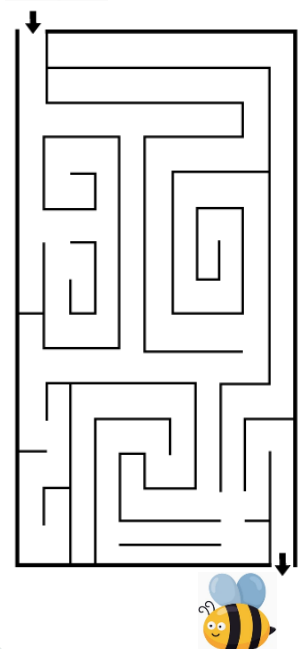
Q. How many legs does an insect have?

A. _____

Solve the Maze!



Help the bee find his friend!



Quiz Time!

What are the three main body parts of an insect?

H _ _ D
T _ _ _ X
A _ _ _ _ N



Bull ant colony at Cleland Wildlife Park Credit to: Cleland Employee

Did you know?
 Female ants lay both fertilised and unfertilised eggs. Fertilised eggs turn into female ants, and unfertilised eggs turn into male ants.

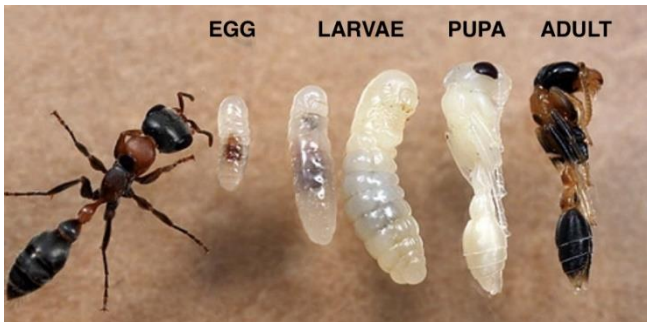
Bull Ants & the Cycle of Life

A story of Complete Metamorphosis

Bull ants, like most insects, have **four stages** in their cycle of life. Firstly, the female ant lays an **egg**. Then it hatches into the **larvae**, a small white grub with only a mouth, that feeds on prey brought to it by other ants in the colony. Once the larvae have grown big enough, they will start to grow a cocoon and enter the **pupae** stage. After fully developing, growing all their legs, antenna and eyes, bull ants will emerge as **mature** adults and find their place in their colony.

The full transformation from egg to adult can take several months and then worker bull ants can live for about 1-2 years.

Bull ants can be found throughout south-eastern Australia in city areas, forests and woodlands. They have powerful jaws and the ability to sting - their venom is one of the most toxic in the insect world! But not to worry, their diet consists of sweet substances like nectar, only their larvae is carnivorous. If you leave bull ants and their nests alone, you should be fine!



Stages of ant development Credit to: antastic.com.au



An Insect's Body

There are many different shapes and sizes of bugs, but to know for sure if it is a true insect or not it will have some defining features. Such as:

- Insects have three main body parts. This includes the head, thorax (their middle), and the abdomen (their bottom).
- Insects do not have an internal skeleton, meaning they have no bones! Instead, they have a hard shell on the outside, called an exoskeleton, which protects their soft insides.
- All insects have six legs and a pair of antennae on their head.
- Most insects will have one or two pairs of wings, except there are a special few like lice and fleas that have no wings!

Did you know?
 Insects are the only invertebrates with wings!

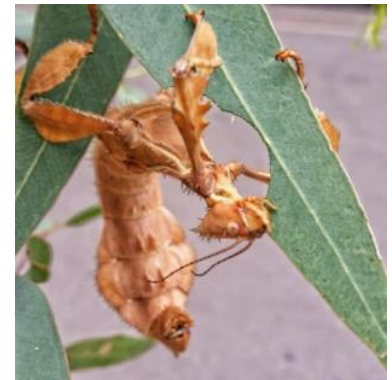
Masters of Disguise...

Can you see me?



Goliath stick insect

Photo credit for goliath stick insect and spiny leaf insect to Cleland Wildlife Park staff.



Spiny leaf insect



Margin-winged stick insect

Goliath stick insects catch their frass (poo) with tiny threads at the end of their body and flick it several metres away! This stops predators locating them by finding their droppings.

Spiny leaf insect (*Extatosoma tiaratum*)

Spiny leaf insects live in forests and woodlands, camouflaging into their environment, and can be found in eastern New South Wales and Queensland. They are herbivores and eat mainly eucalyptus leaves. Males grow up to 11cm long and are thinner and shorter than females. The females have large, round bodies almost twice the size! They are also covered in thorn-like spikes for defence and to help them camouflage.

Goliath stick insect (*Eurycnema goliath*)

Goliath stick insects are found in tropical forests of New South Wales and Southern Queensland. Their emerald-green bodies help them to camouflage in the lush forest vegetation. They are also herbivores, that eat eucalyptus or acacia leaves. They can grow up to 25cm long! Males and females both have fully developed wings but only the male likes to fly.

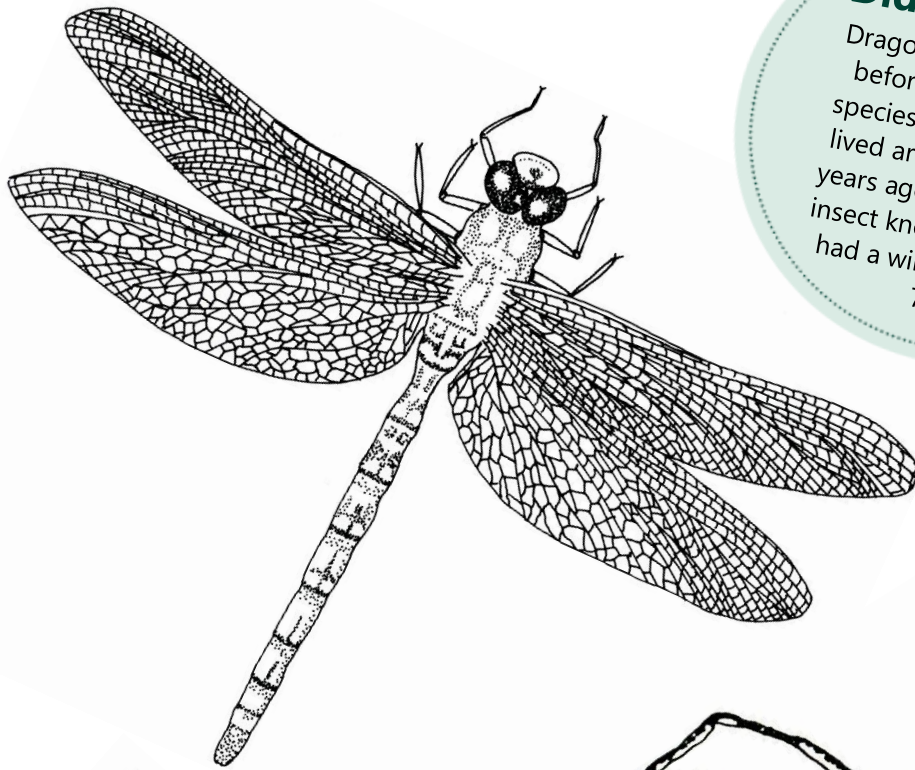
Margin-winged stick insect (*Ctenomorpha marginipennis*)

Margin-winged Stick Insects can be found in south-eastern Australia in woodlands, along the coast and further inland. They only eat eucalyptus leaves so you'll most likely find them hiding in eucalyptus trees. The adults look just like eucalypt twigs, where young stick Insects are bright green to camouflage with the leaves!

We have all three of these species of insects above at Cleland Wildlife Park in our invertebrate wall enclosure.



Colour Me!



Did you know?

Dragonflies were around before dinosaurs! One species of dragonfly that lived around 250 million years ago was the largest insect known to exist and had a wingspan of over 70cm!



Did you know?

Beetles have two sets of wings. The forewings are hard and are like a sheath protection for their delicate hindwings.



Did you know?

Just like humans, spiders don't like to be outside in the rain! Which is why you might see some in your house on a rainy day.

Drawing credit to: Department of Environment and Water