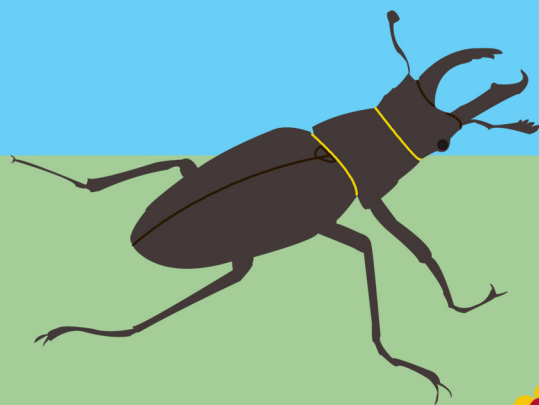


meet
the
stag beetle



About the stag beetle

The stag beetle is Britain's biggest beetle. Many of us know what the male looks like with its large antlers and chestnut colour, but what not so many people know is that the numbers of stag beetles are falling.

We are not sure why the numbers are falling but it is probably because of changes in climate and the fact that people no longer leave rotting wood around, an essential part of the life cycle of the stag beetle.

Stag fact!

The proper name for the stag beetle is *Lucanus Cervus*.

Stag fact!

Stag beetles mainly live in gardens, not in woods.

Stag fact!

They are mainly found in the south of England.

Stag fact!

You can see stag beetles flying on warm summer evenings. Males fly more often than females.

Life-cycle

Egg

Eggs are laid by the female near rotting wood in late summer. They are about 3mm long. They hatch out 2-3 weeks later as tiny larvae. The female can lay up to about 20 eggs.



Stag fact!

When they hatch, the larvae are completely white. It takes about a day for the head to go orange.

Larva

The stag beetle larva is cream with an orange head and orange legs (3 pairs like the adult), and has small brown antlers. It lives in rotten wood, which it eats. It takes up to 6 years to reach full size (approx. 8 cm). The plural of larva is larvae.



Stag fact!

To grow, the larva sheds its skin. It has to do this 5 times as it grows.

Pupa

After 6 years, the larva leaves the wood and makes a 'cocoon' in the soil. Next it turns into a pupa. This happens in late summer or autumn and lasts a few weeks. Then the pupa turns into a fully grown beetle which stays under the ground until the next summer when it comes out as an adult.



Adult

The fully grown male stag beetle flies in the evening, looking for a mate. It can be up to 7cm long, including its antlers. The stag beetle mates lots of times then dies.

Stag fact!

Adult stag beetles only live for about 6 weeks. Their only job is to find a mate and for the female to lay eggs.



The female stag beetle is smaller than the male (approx. 5cm). She is often seen on the ground looking for somewhere to lay her eggs. She lays them near rotten wood then dies shortly afterwards.



Stag fact!

The males use their antlers to fight with other males to win a female. The loser is the first one to get bored - they don't kill each other.

Stag fact!

Stag beetles don't need to eat although sometimes they will lick up sap or fruit juice.

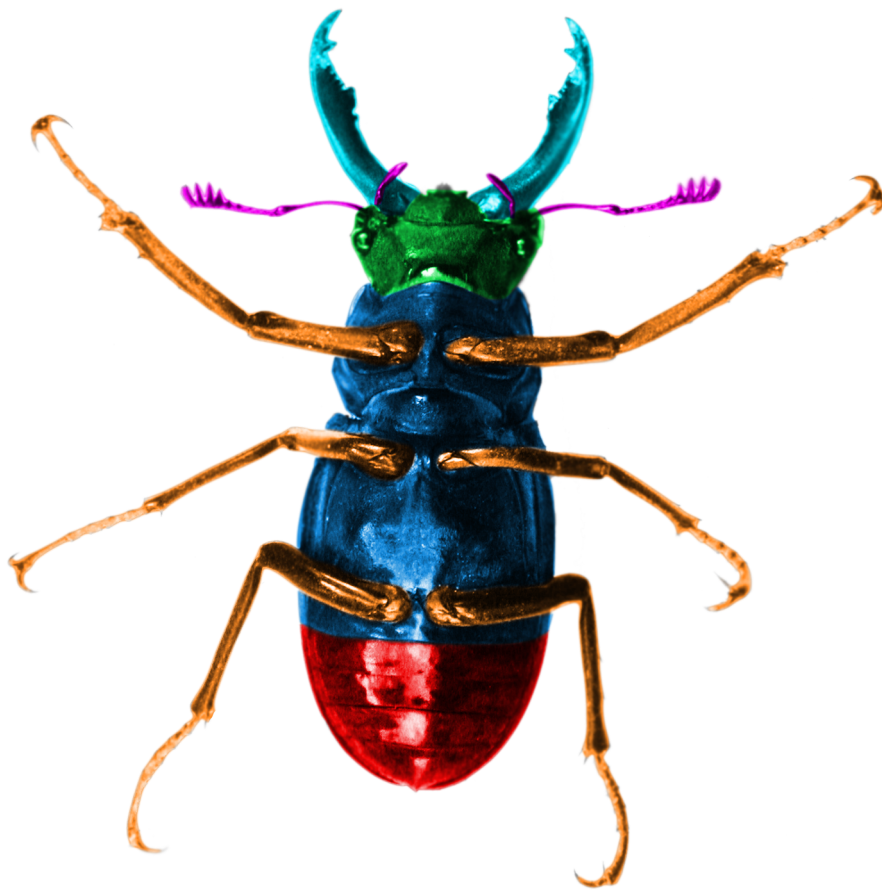
How do we know it's an insect?


Like all insects the adult stag beetle has three body parts: a head, a thorax, and an abdomen. It also has three pairs of legs.

This picture shows all the different parts of the stag beetle:

Stag fact!

Beetles are adults and can't grow any more even though they come in many sizes like us.



- | | |
|--|---|
|  Mandibles |  Head |
|  Antennae & palps |  Thorax |
|  Legs |  Abdomen |

A closer look...



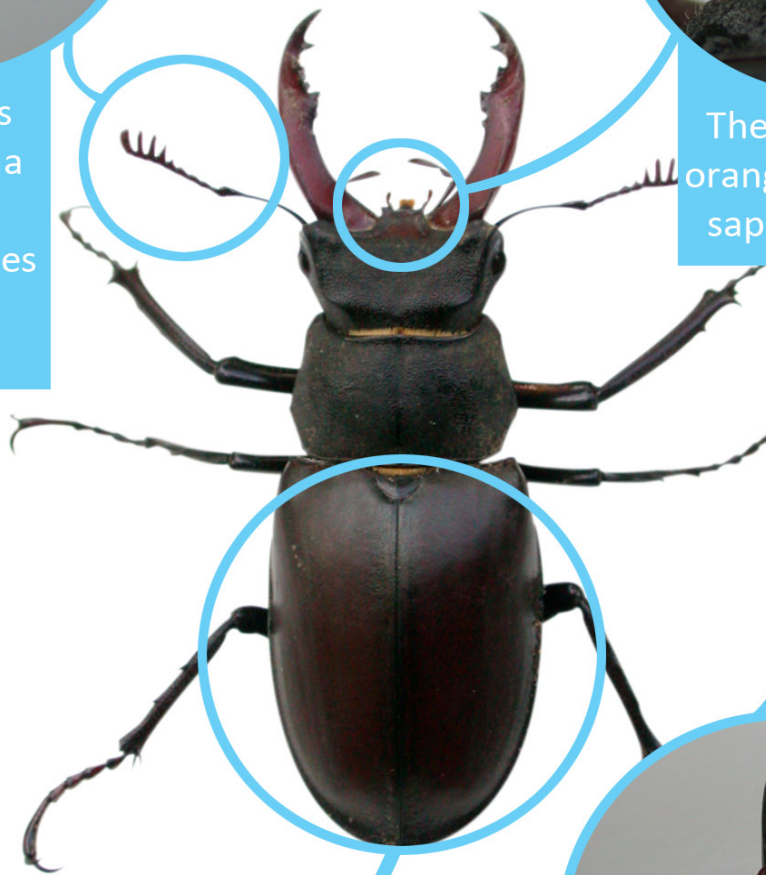
The antenna

The beetle uses its antenna like a nose to smell things like females and its home.

The tongue



The beetle uses its orange tongue to lick sap and fruit juice.



The wings



The beetle keeps its wings neatly folded under the wingcases.

The foot



The stag beetle has sharp hooks on its feet for gripping on to things.

A closer look...

The wingcases

Both the male and female have tough wingcases to protect their delicate wings.

The mandibles

Unlike the male, the female has very little mandibles.

The front legs

The female has big front legs that help it to dig down into the soil to lay its eggs.

The eyes

Like all insects, stag beetles have compound eyes. This means they can see in all directions.

Stag fact!

The beetles will only bite if they're frightened.

A closer look...

The legs



The larvae have 6 legs. They can rub them together to 'talk' to other larvae.

The spiracles



Spiracles are tiny holes that the larvae breathe through. They don't have lungs like us. The adult beetles also have spiracles.



The mandibles

The larvae have very strong mandibles which they use to chew through the rotting wood that they live in.

Stag fact!

The larva's skin is see-through, so all the dark bits you can see are the rotting wood and earth it's eaten.

A closer look...

The mandibles

This is the first stage where you can easily tell the male and female apart by the size of the mandibles. This pupa has big mandibles, so is a male. Female pupae have small mandibles.

The eyes

This is the first time that the eyes can be seen clearly. The pupa cannot see as the eyes don't work yet.

Stag fact!

The larva makes itself a cocoon from soil, wood and a special 'glue' it makes. It turns into a pupa inside this cocoon.

The wings

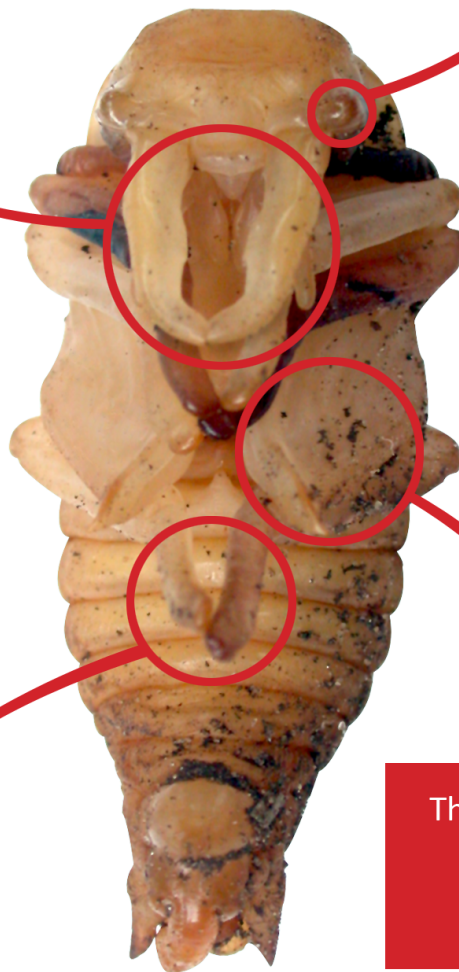
The flaps on the side of the pupa will turn into the wingcases.

The legs

The legs can be seen on the outside of the pupa. They're now about the size they'll be when it turns into a beetle but are folded up. As with all insects, there are three pairs.

Stag fact!

Just before the pupa turns into a beetle it starts to go black.



Where does it live?

The larvae live about 30cm underground in and around rotting wood. They feed on the rotting wood, making lots of large tunnels through the wood as they go.

When it gets cold, the larvae make a plug of chewed-up wood behind them to keep them warm.

Stag fact!

The larvae are not only found in old tree stumps - they can also be found in wooden fence posts and piles of woodchip.



Stag beetle larvae used to live in this log. You can see the tunnels they have made through the wood.

Stag fact!

The female goes back to lay her eggs in the same wood she hatched and lived in as a larva.

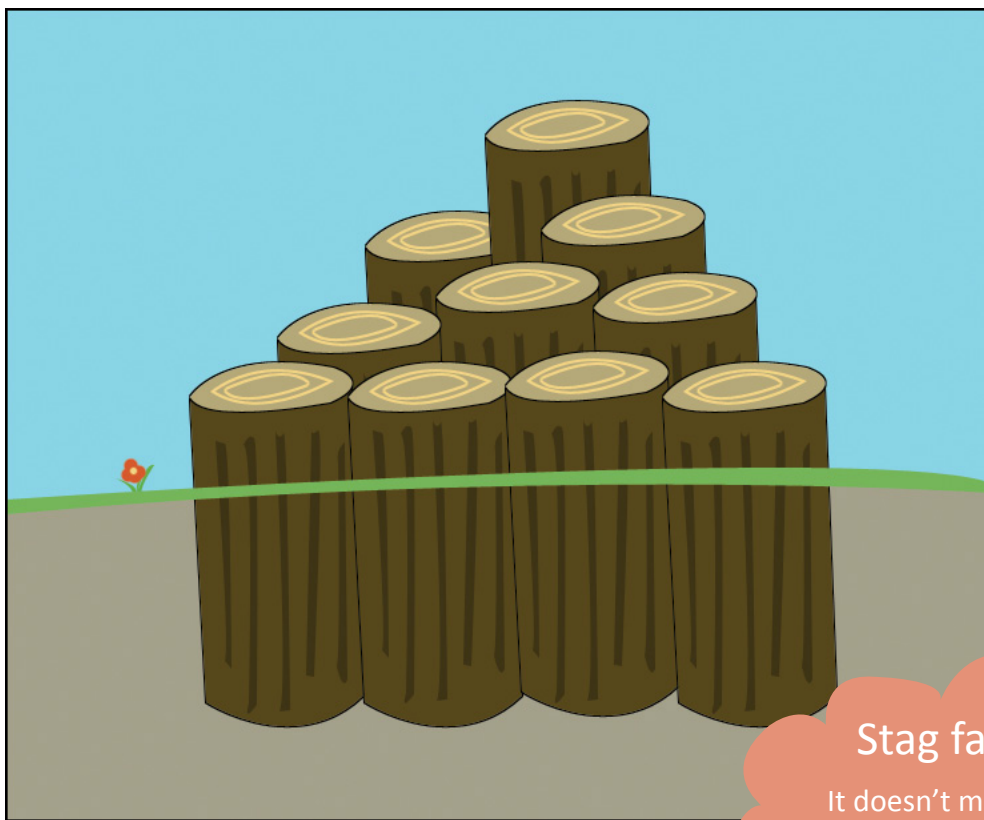
Stag fact!

Stag beetles are found mostly in gardens and parks NOT in woodlands.

What can you do to help?

The female stag beetle lays her eggs near rotting wood and, once they hatch, the larvae live in and around the wood. You can help by leaving any rotting wood or tree stumps in your garden, making a log pile or by taking part in the “Bury Buckets 4 Beetles” scheme.

How to make a log pile...



Stag fact!

It doesn't matter what type of tree the wood's from. Stag beetles aren't fussy!

To make a log pile:

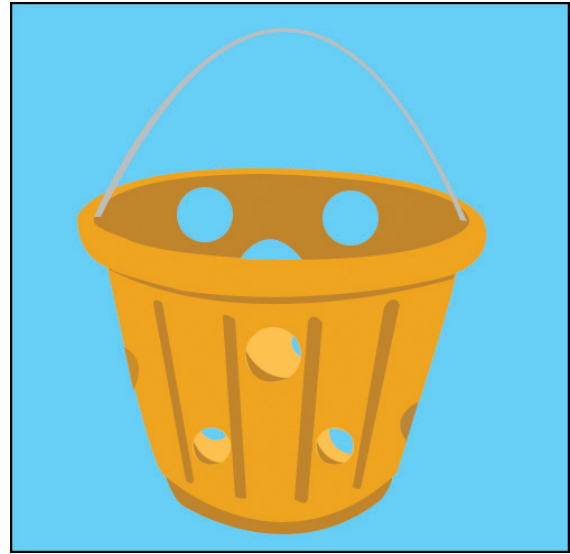
- Find a place that is not too sunny but not too shady or very damp and overgrown
- Dig a hole about 60cm (24 inches) deep
- Put in a log so that most of it is buried, but a little bit still sticks up above the ground
- Fill in the hole around the log with a mix of soil and some woodchip (if you have any)
- Leave it alone and hope stag beetles move in!

Bury a Bucket for Beetles...



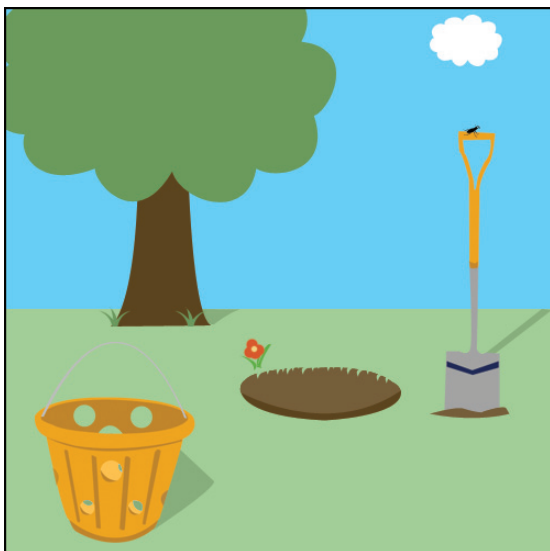
Step 1:

You need a bucket, a place to bury it, something to make holes in it with and some woodchip (Not the type used for animal bedding).



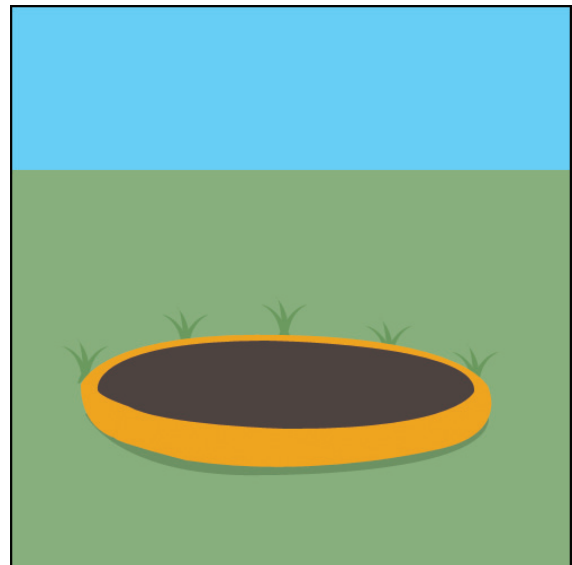
Step 2:

You have to make holes, about 3cm in diameter, in the bucket so that animals can get in and out. You'll have to use something very sharp for this bit so you'll need to get an adult to help you.



Step 3:

Dig a hole big enough to put the bucket in. The bucket needs to be buried somewhere that is neither too shady nor too sunny.



Step 4:

Put the bucket in the hole so that the its rim still shows above the ground. Fill the bucket with a mixture of soil and woodchip (about half and half of each). Leave the bucket alone and hope stag beetles move in!

For information on how to maintain and monitor your bucket, visit stagbeetlehelpline.co.uk and www.ptes.org/bb4b

Meet the Stag Beetle...

is a fun and informative booklet aimed at children at Key Stage 2 level. It links into section 5 of the National Curriculum ("Living things in their environment") – helping children to learn about the adaptation of plants and animals to their habitat, and about ways in which living things and the environment need protection.

This booklet is accompanied by a wide variety of other downloadable resources for students and teachers.

If you would like further information about any of these resources, please email stagpacks@stagbeetlehelpline.co.uk.



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people's trust for
**endangered
species**

