



Do you know...

the most

Scary



Hairy

Creepy



Insects

and Spiders

... in the World?

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CHAPTER 1

GRASSHOPPERS & CRICKETS



How do katydids stay hidden?



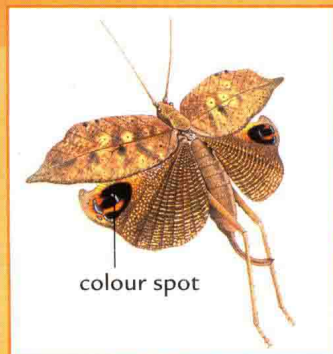
A katydid disguised as a leaf.

Katydids are crickets with long antennae, or feelers. They are named after the sound of their calls. They call by making a series of clicks that sound a bit like someone saying, “Katy did! Katy didn’t!”

Katydids are nocturnal; that is, they are active at night. Most of them eat plants and spend their nights munching on leaves. Several katydids have a clever way of staying hidden from hunters – they pretend to be leaves themselves. The insects’ long front wings are green and leaf shaped. The wings also have a pattern of branched lines that makes them look just like the surfaces of leaves.

Do you know...?

Some katydids pretend to be dead leaves, so they have brown wings instead of green. If the disguise fails, the katydid spreads its wings to fly away. The hind wings, which are normally hidden under the front wings, have colourful spots on them. The spots look like eyes and surprise an attacker for long enough for the insect to escape.



What's the difference between a cricket and a grasshopper?

Crickets and grasshoppers form a group of insects called the Orthopterans. The name orthopteran means 'straight wing', and all grasshoppers and crickets have two pairs of long, narrow wings that stretch along the length of their backs. However, there are

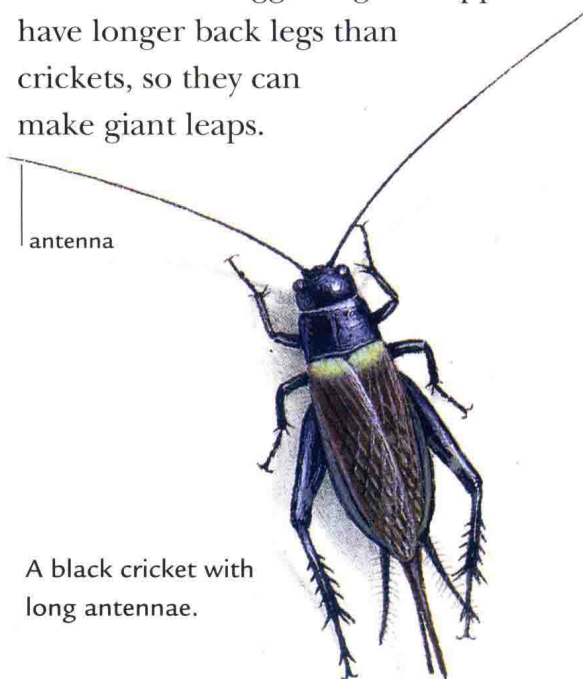


A grasshopper sits on a leaf.

several differences between the two types of insect. Grasshoppers have short antennae, or feelers, that point forwards. A cricket's antennae are longer and thinner, and they often sweep back over the insect's body. Strange as it may sound, crickets have ears on their legs, while grasshoppers hear through their sides. And finally, as their name suggests, grasshoppers have longer back legs than crickets, so they can make giant leaps.

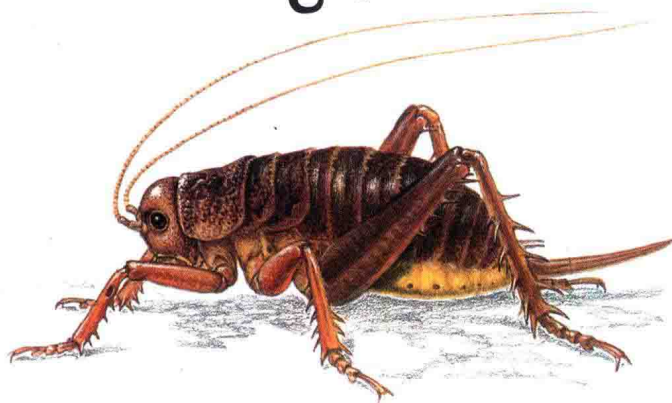
Do you know...?

A tree cricket cuts a body-sized hole in a leaf and then fits itself into it. When the cricket sings, or makes rasping calls, the leaf acts like a loudspeaker to broadcast the noise throughout the forest.



A black cricket with long antennae.

How do wetas survive being frozen solid?



A Stephens Island weta from southern New Zealand.

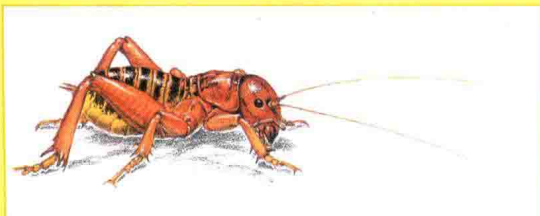
New Zealand has some unusual wildlife. Many of the animals that are common across the world, such as mice, dogs and squirrels, do not live there naturally. However, many of these animals have now been brought to New Zealand by people.

Wetas are large crickets that took the place of mice. Just like mice, wetas live in burrows and eat almost anything they find lying

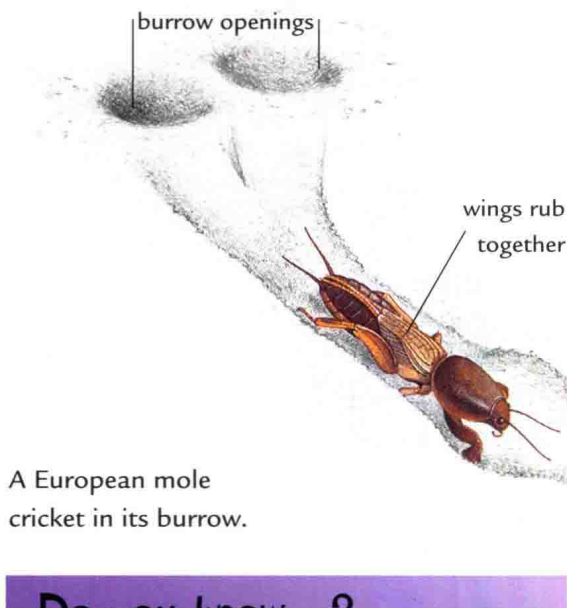
around. However, there is something a weta can do that no mouse could manage. Wetas can hibernate in cold areas by squeezing into deep burrows. In the high mountains, some wetas are frozen solid in their winter dens! In spring, the insects thaw out and are perfectly fine. The wetas have antifreeze that stops ice from damaging their bodies.

Do you know...?

Jerusalem crickets (below) are relatives of wetas that live in North America. This species has a rather rough mating ritual. The male attracts a female by drumming his legs in his burrow. When his mate arrives, the pair make clicks with their jaws and begin to bite each other. After mating, the female often eats the male.



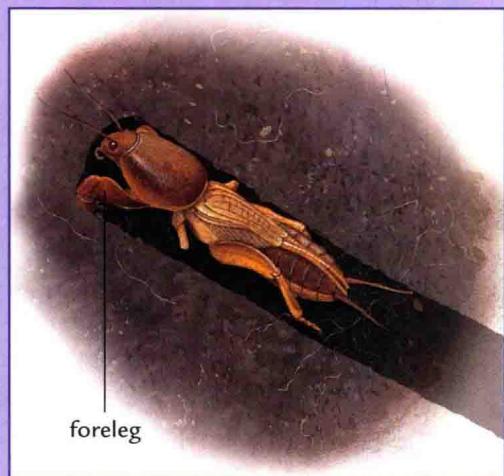
Why are mole crickets so noisy?



A European mole cricket in its burrow.

Do you know...?

Mole crickets spend much of their time under the ground. They tend to burrow in damp soil. During dry spells, when the soil dries out, the crickets head to deeper areas. The crickets dig with wide forelegs.



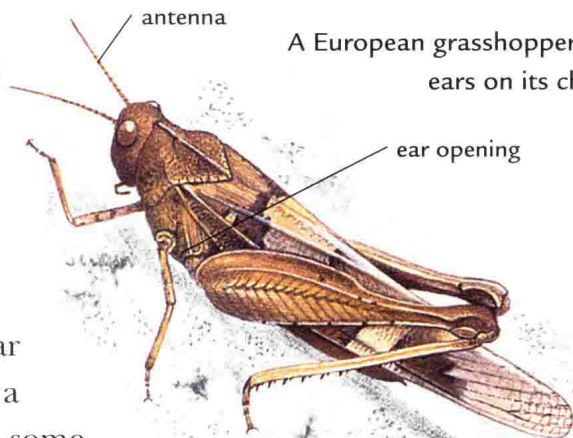
Mole crickets are burrowing insects. They dig through the soil to find food, such as roots and insect grubs. Mole crickets have shorter feelers than other crickets because there is no room for them in tight burrows. Mole crickets

are one of the noisiest insects in the world. The male calls to attract mates. These calls can be heard hundreds of metres away – not bad for an insect only 3 centimetres long! The crickets rub their forewings together to make high-pitched clicks. Their burrows make the calls louder. Each burrow has two rounded openings that form a 'Y' shape. The openings work like horns to send the calls out into the air.

Do crickets hear with their knees?

Many insects make a lot of noises, but few are louder than grasshoppers and crickets. They sing by rubbing their wings or legs together to make clicking noises. But how do they hear their songs? A close look at a cricket's head will show you some eyes and a pair of sensors called antennae. But where are their ears? You are looking in the wrong place.

Crickets have ears on the lower section of the leg, just below the 'knee' joint. Grasshoppers have ears on the chest area, between the front and middle legs. An insect's ear works in a similar way to your ear. It has an eardrum that wobbles back and forth when sound waves hit it. Sensors around the eardrum pick up these wobbles and send information to the brain.



A European grasshopper has ears on its chest.

Do you know...?

Pygmy grasshoppers (right) are less than 2 centimetres long. Some are just 8 millimetres in length, making them the smallest grasshopper of all. Most of the pygmies live on the ground. They are grey and brown, which helps them to stay hidden among fallen leaves.

