

Junior Conservation Club Best Animal Spotter

Field guide



This guide will help you identify what little critter you have found. It doesn't include all insect and arachnid species, only the ones that are listed in the Best Animal Spotter competition. The list on the next page shows the amount of points given by each animal during the competition.

If you have questions about a specific animal, please feel free to send us an email at sophie@zoosafrika.com and we'll gladly answer !



BORN IN AFRICA

List of critters

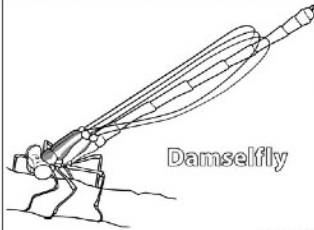
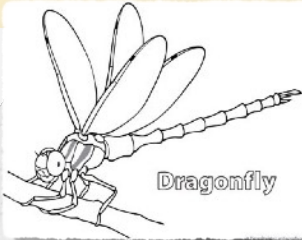
Animal	Points
Ant	1
Moth	1
Caterpillar	1
Termite	2
Cockroach	2
Jumping spider	2
Shongololo	2
Bee	3
Ladybug	3
Woodlouse	3
Cricket	3
Snail	4
Wasp	4
Rain Spider	4
Grasshopper	4
Earthworm	5
Dung beetle	5
Scarab beetle	5
Gecko / Lizard	5

Animal	Points
Butterfly	6
Bee fly	6
Carpenter bee	6
Earwig	6
Shield bug	7
House centipede	7
Praying mantis	7
Dragonfly	7
Damselfly	8
Stick insects	8
Water strider	8
Lily weevil	9
Longhorn beetle	9
Cicada	9
Antlion	10
Camel Spider	10

Dragonfly & Damselfly



Where to find them ?
usually near water



Identification



Fast-flying, often brightly coloured insects. Head with small antennae and huge eyes. Four similar-sized, gauge-like wings, which at rest are held out sideways in dragonflies and beside the abdomen in damselflies.



Size



Length 20-115 mm
Wingspan 20-140 mm

Food



Adults eat flying insects, nymphs eat water insects, tadpoles and small fish.

Habits



Active during the day, perching on prominent viewpoints and darting after prey.



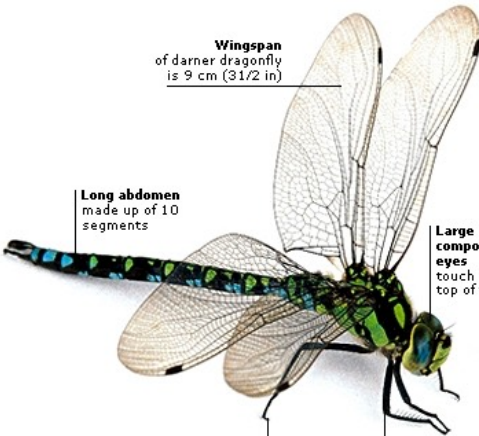
Wingspan
of darter dragonfly
is 9 cm (3 1/2 in)

Long abdomen
made up of 10
segments

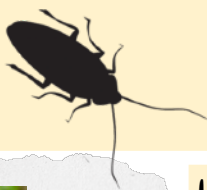
Large
compound
eyes
touch on
top of the head

Claw-like
foot

Jointed leg,
with spines
that grip food



Cockroach



Where to find it ?
under stones, logs,
leaf litter, bark.

Identification



Flattened insects with long bristly legs. The head has long, swept-back antennae and is covered with a large shield-like plate. Fore-wings are leathery, overlapping when folded flat over the abdomen. Some species, especially the females, have no wings.



Size



Length 5-50 mm

Food

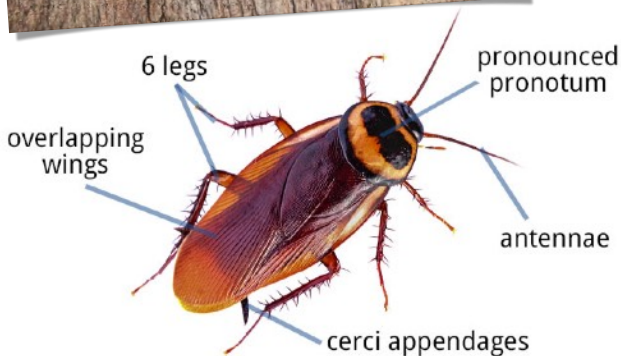


Plants, dead leaves and human food.

Habits



usually concealed by day, emerging at night to feed. Native species may feed in leaf litter during the day. Species with wings are often attracted to light at night.



Termite



Where to find it ?

In wood, trees or nests built on the ground.

Identification



Termites live in large colonies. They are creamy-white, soft-bodied insects with relatively large brown heads and straight, bead-like antennae. The body has no waist. Reproductive males and females have four wings that are shed after a brief flight. Soldiers have large mandibles.

Size



Length 3-20 mm

Food



Grass, humus, dead wood, dry manure and paper.

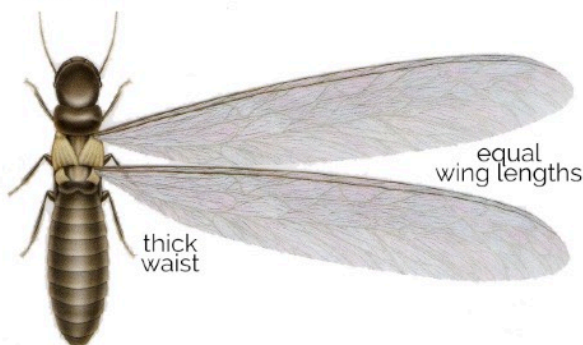
Habits



They forage for food from the cover of nests which they build on the ground, on the trunks of trees or in the open. Some species can also live in houses where they use the furniture as nests. They often fight with ants for territory.



straight antennae



equal wing lengths

thick waist

Praying Mantis



Where to find it ?
Among vegetation.
Flowers, tree trunks...



Identification



Strong, spiny forelegs adapted for catching and holding prey, held folded as if prayer when at rest. Triangular head, very mobile, with large eyes and thread-like antennae. The forewings are leathery and fold flat over the abdomen. Females of some species are wingless. Body and legs may resemble leaves.

Size

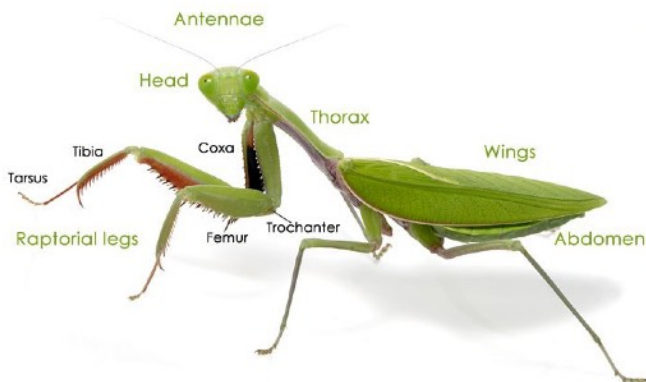


Length 20-125 mm

Food



Other insects



Habits



Remain motionless, waiting in ambush for prey. Often walk with a swaying motion when disturbed. Attracted to light at night.

Cricket



Where to find it ?

Beneath logs, stones,
in burrows.

Identification



Cricket antennae are often longer than their body. Two cerci at the end of the abdomen. Hind-legs strongly developed for jumping. Specially adapted fore-wings are rubbed together to produce loud chirping songs. Wings fold to form a box-like cover over the abdomen.



Size



Length

10-70 mm

Food



Omnivorous

Habits



Cricket's spend the day concealed in hiding places, emerging at night to feed. They often enter houses.



Grasshopper



Where to find it?
Trees, bushes, grass



Identification



very varied in appearance. Often green, brown or yellow. Antennae relatively short. The hind-legs are well adapted for jumping. There are both winged and wingless species. The forewings are tougher and narrower than the hindwings. There are ears on each side of the first abdominal segment.

Size



Length 10-87 mm

Food

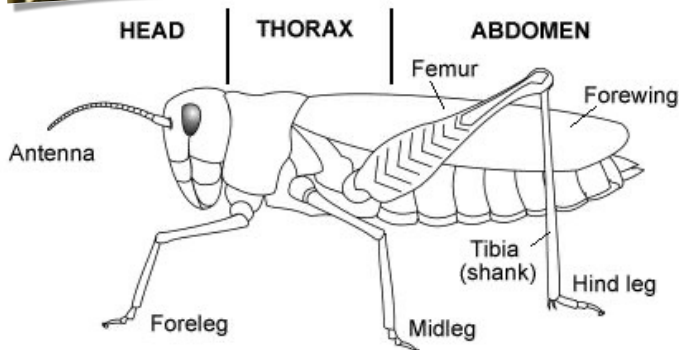


Leaves and grass

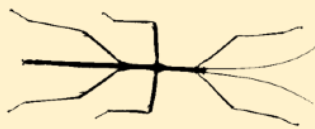
Habits



Active during the day (diurnal). Many species stridulate, rubbing a row of small pegs on the inner face of the femur against the hardened edge of the forewing.



Stick Insect



Where to find it ?
Trees, bushes, grass



Identification



very long, thin, stick-like bodies. All legs are long and thin. Some species are winged, fore-wings are much smaller than the fan-shaped hind-wings.



Size

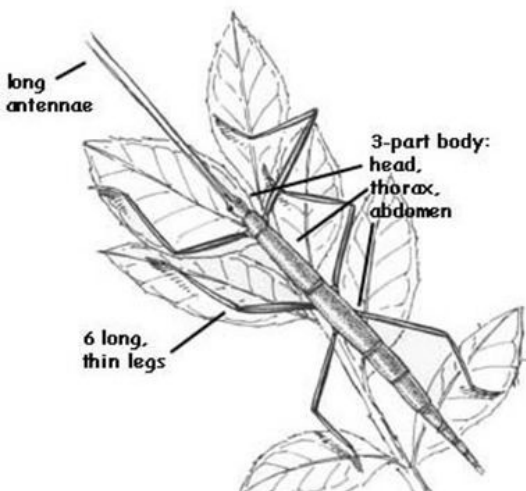


Length 10-250 mm

Food



Plants



Habits



Motionless during the day, moving about at night to feed. If disturbed they may drop to the ground and feign death. Winged species flash their brightly coloured hind-wings in self-defence. Fore-legs are held out together in front of the insect.

Cicada



Where to find it ?
Trees, bushes



Identification



Broad insect with large head, four membranous wings folded roof-wise over the body. Often attractively coloured.

Size



Length 10-50 mm

Food

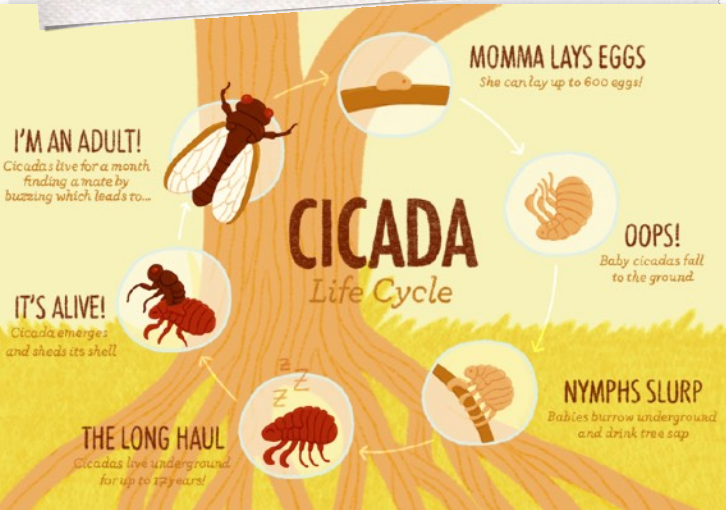


Plant juices or sap.

Habits



Cicadas spend much of their time resting on the branches of trees, shrubs and other plants, where they feed by piercing the bark with their probosces. Males produce shrill, rasping songs.



Antlion



Where to find it ?

Among vegetation, in the ground for larvae

Identification



Adults have a long, thin abdomen and four similar membranous wings that fold roof-wise over the body. Wings may be clear or marked with black and yellow. Antennae are relatively long and jointed. Larvae have large mandibles and are wingless.

Size



Length 13-80 mm

Food



Adults are either predatory or feed on pollen. Larvae feed on other insects.

Habits



Antlions are slow, inefficient fliers, resting among foliage during the day. They are sometimes attracted to light. Larvae live in sand from where they ambush prey. Some lie in wait at the bottom of small conical pits which they dig, catching insects.



Dung Beetle



Where to find it ?
On or close to fresh animal dung

Identification



Robust beetles with rounded backs and shovel-shaped heads for cutting out pieces of dung. Usually black or brown, some are metallic green. The fore-legs are broad and adapted for digging. Most species can fly.



Size



Length 5-50 mm

Food

Dung.



Habits



Adults bury dung as food for themselves or their larvae, either in burrows dug below the dung mass or by making balls to be rolled away for burial at a more secluded site. There are day-flying and night-flying species. The latter are often attracted to light.



"I always say ... if you're doing something you really like, it doesn't feel like work."

Ladybird



Where to find it ?
On plants infected
with aphids



Identification



Round beetles, usually red, orange or yellow with black markings. Some have reversed colours, black with orange or red markings.

Size



Length 0,5-10 mm

Food



Aphids, scale insects, ants and thrips.

Habits



Ladybirds drop to the ground when disturbed and exude a poisonous, yellow fluid if handled. Their bright colours are a warning of their unpleasant taste. Many species gather in rock crevices in large numbers to pass the winter.

Bee Fly



Where to find it ?
Hovering over or
resting on flowers

Identification



Hairy, stout-bodied flies that look like bees. They have a long, thin proboscis which projects forwards, and slender, delicate legs. Wings may be clear or attractively marked.

Size



Length 3-30 mm

Food

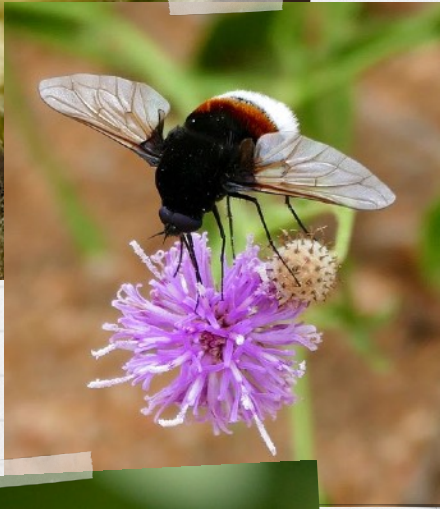


Adults feed on pollen and nectar. Larvae feed on eggs of other insects.

Habits



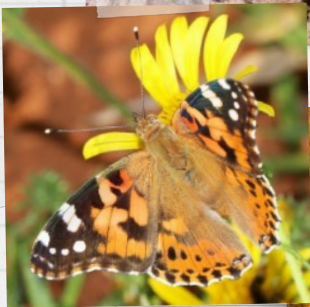
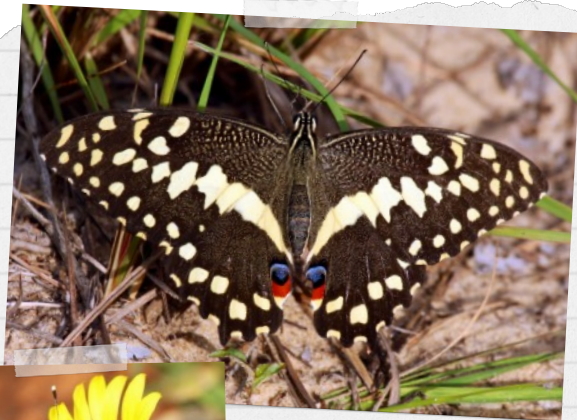
They sound and look like bees when hovering. They are able to shoot eggs into the entrances of open burrows and the nests of solitary bees and wasps while hovering over them.



Butterfly & Moth



Where to find them ?
various habitats



Identification



Adults have four wings covered with tiny scales, either brightly coloured (butterflies) or drab (moths). At rest wings are held vertically in butterflies, while moths hold them roof-wise over the body. Mouthparts form a long tube for sucking up liquids, coiled up when not in use.

Size



Wingspan 3-190 mm

Food

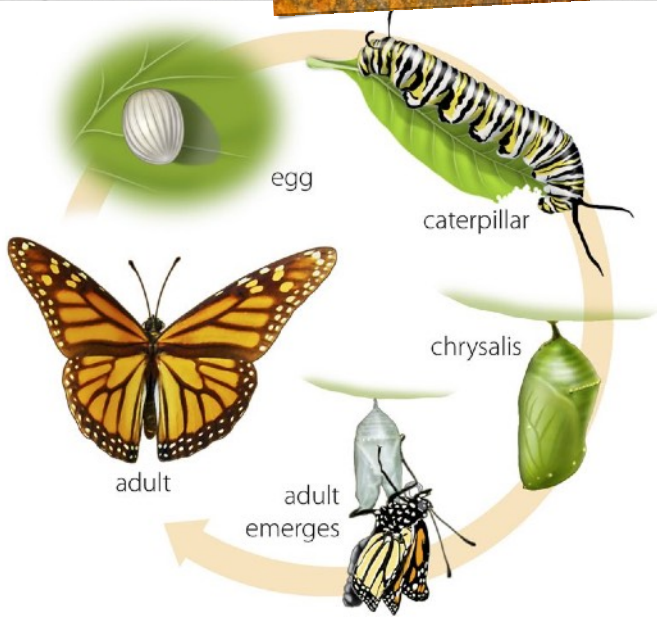


Caterpillars eat plants. Adults drink nectar, plant sap or old fruits. Some adults don't eat at all.

Habits



Butterflies are day-flying, visiting flowers for nectar. Moth moths are night-flying, resting on vegetation during the day, often relying on camouflage to hide.



Winged Ant

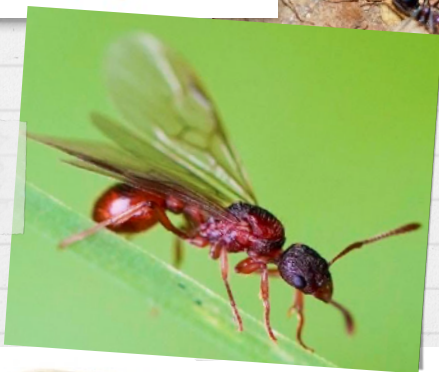
Queen (female)



Male



Worker (female)



Where to find it ?
Around ant colonies

Identification



Ants have a one- or two-segmented waist between the thorax and abdomen. The head is modified according to the caste. Soldier ants tend to have very large heads. Workers and soldiers are wingless, sterile females. Males and reproductive females have wings. The colour ranges from black to yellowish.

Size



Length 1-20 mm

Food



Animal and plant material, living and dead.

Habits



Ants are colonial insects, foraging in parties. Nests are underground, in rotten wood or in vegetation. Winged ants do not harvest, they only breed. Once the females have mated, they lose their wings and start their new ant colony by laying eggs.

Carpenter Bee



Where to find it ?

Flowers, trees, dead branches and timber

Identification



Rotund bees, usually black and often with bands of yellow or white hairs, or with red hairs on the thorax. Males of some species are uniformly covered with yellow or rufous hairs.

Size



Length

10-35 mm

Food

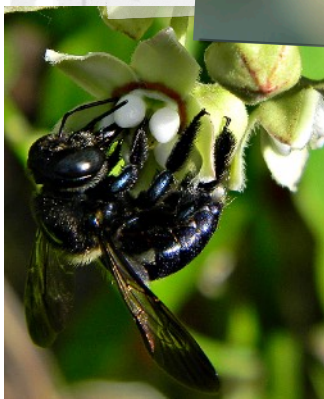
Nectar



Habits



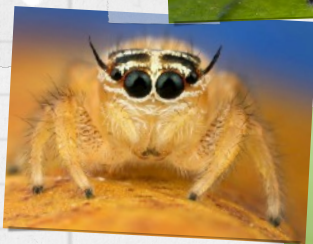
Females bore wide tunnels in dry, rotten wood or in thick plant stems in which they place cells end-to-end. Each cell is provisioned with a pollen and nectar mixture. Females guard their burrows, flying aggressively round an intruder.



Jumping Spider



Where to find it ?
Almost everywhere



Identification



Jumping spiders have 8 eyes and one of the best vision of all insects and arachnids. They often have brightly coloured abdomens which they use in courtship, 'dancing' for females. Jumping spiders are usually quite small but very agile and terrific hunters. They do not build spider webs.

Size



Length 4-18 mm

Food



Insects and sometimes nectar.

Habits



Jumping spiders are diurnal hunters. They can jump several times the length of their bodies. Before a jumping spider jumps, it tethers a filament of silk (or dragline) to whatever it is standing on to protect itself if the jump should fail.

Shongololo

Where to find it ?
Forests, coastal areas



Identification



Shongololos are millipedes, they have numerous little legs, around 250, two pairs per segment. Their body is segmented and covered by a strong exoskeleton which acts like an articulated armour. Most species are black, sometimes with red markings.

Size



Length 10-385 mm

Food



Detritivore, eating decaying leaves and other dead plant matter.

Habits



Shongololos curl up into a tight ball when threatened, to protect their soft underparts. When attacked, some species secrete an irritating liquid from pores on their body.

Bee



Where to find it ?
Forests, coastal areas



Identification



Bees have a pair of big compound eyes and three little eyes in-between. They smell and taste with their antennae, and can also detect sound. They are covered in hair, even on their forelimbs that they use to collect pollen. These structures are called pollen baskets or corbiculae.

Size



Length 2-39 mm

Food



Nectar and pollen.

Habits



Not all bees live in a hive. Some species such as bumblebees are solitary. Honey bees live in colonies that can contain up to a few thousand individuals. Most bees are simple workers, they answer to the queen of the hive.

Woodlouse

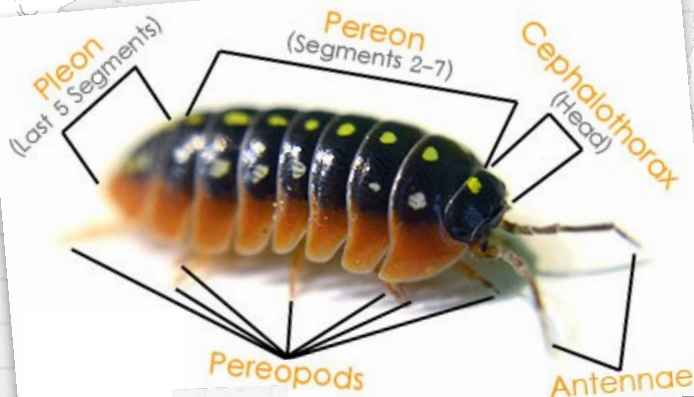


Where to find it?
underneath old wood,
flower pots...

Identification



The woodlouse has an exoskeleton which it must progressively shed as it grows. Its body is segmented and holds 7 pairs of legs. Some species are brightly coloured.



Size



Length 8-20 mm

Food



Detritivore, feeding mostly on dead plant matter.

Habits



Some woodlouse species can roll up into a roughly spherical shape as a defensive mechanism. Some species care for their young and stay with their mother for a while. Woodlice (plural) are crustaceans, just like crabs, and need humidity to survive.

Wasp



Where to find it ?

Flowers, water points,
around vegetation

Identification



variable in appearance.
Most species are slender,
with short or long waists,
some brownish others black
and yellow or black with red
or white tips to the abdomen.
Two pairs of wings, clear.

Size



Length 1-45 mm

Food

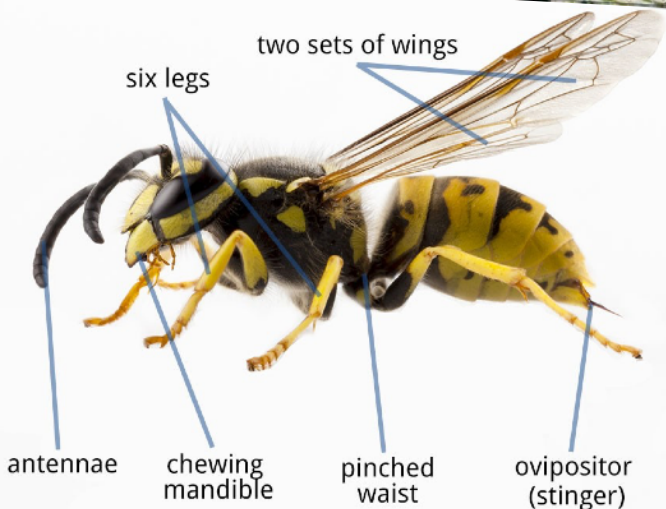
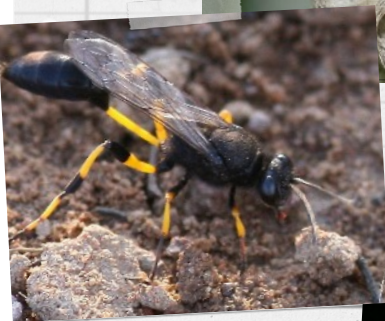
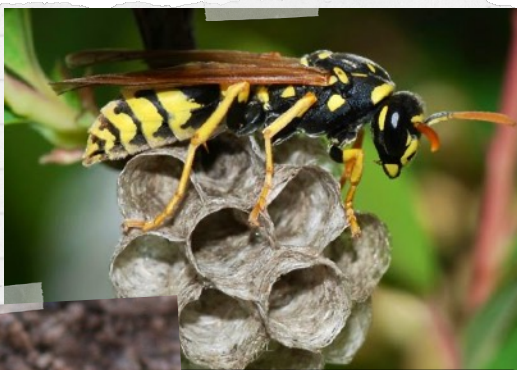


Nectar or other insects.

Habits



Build nests or burrows, in
the ground or in tree
trunks, buildings or leaves.
Each nest have one or more
cells to grow the young.
Some wasps capture other
insects to feed their young.

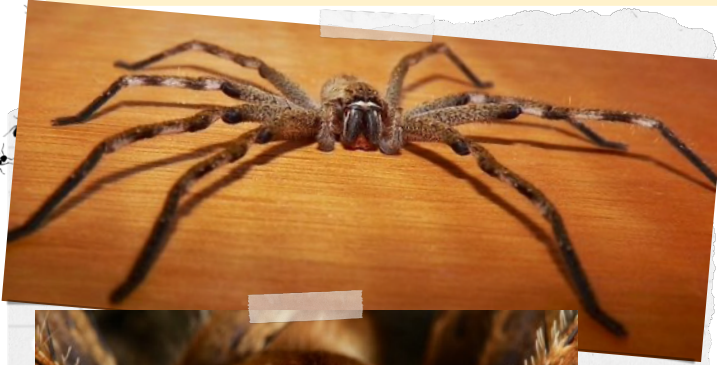


Rain Spider



Where to find it ?

Houses



Identification



Large brown spider. The underside of the legs is banded with black and yellow. Their top side is covered in tan to dark tan velvety hair.

Size



Length

100-145 mm

Food



Geckos, lizards, insects

Habits



After mating in the early summer, the female makes a 60- to 100-mm sac out of silk, with twigs and leaves woven into it. She constructs the sac over 3-5 hours, then aggressively guards it until the spiderlings chew their way out about three weeks later.

Earthworm



Where to find it ?
Soil



Identification



Segmented worm. Each segment carries hairs, used to anchor the body during movement. Earthworms do not have eyes nor lungs. They breathe through their skin.



Size



Length 10-360 mm

Food

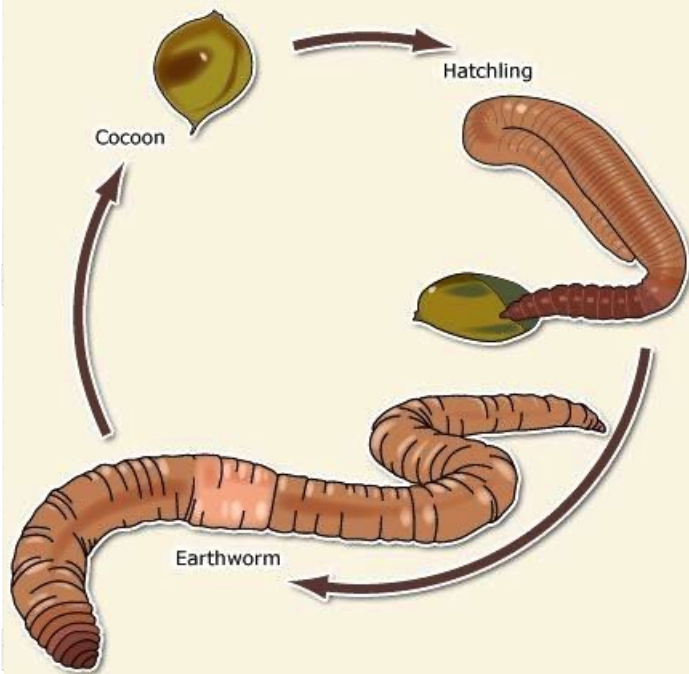


Live and dead organic matter in soil (old leaves, dead plants...)

Habits



If they are cut in half, earthworms can regenerate ! By eating, digging galleries and moving in the ground, earthworms aerate and mix the soil. It is very beneficial to plant growth. As a result, earthworms are often favoured by gardeners.



Scarab Beetle



Where to find it ?

Forest, gardens,
under logs, on plants

Identification



Scarabs are stout-bodied beetles, many with bright metallic colours. They have distinctive, clubbed antennae that can be compressed into a ball or fanned out like leaves to sense odours. The C-shaped larvae, called grubs, are pale yellow or white.

Size



Length

1,5-160 mm

Food



Scavengers. Recycle dung, dead plants, or carrion.

Habits



In some species males (and sometimes females) have prominent horns on the head to fight over mates or resources. Adults are usually nocturnal, active at night, except the flower chaffers that can be found on flowers during the day.



Gecko



Where to find it ?
Gardens, houses

Identification



Small lizards. Geckos have specialised toe pads that enable them to climb smooth and vertical surfaces. They don't have scales but modified hairs.

Geckos have about a hundred teeth in their mouth and are capable of replacing them as many times as they would like.

Size



Length 1,6-60 mm

Food



Insects, spiders

Habits



Most geckos don't blink, they use their tongue to clean their eyes. Unlike the other lizards, geckos make a lot of different sounds to communicate.

Nocturnal species have very acute vision, much better than a human's in a low light environment.



Lizard



Where to find it ?

Gardens, rocky environments



Identification



There are numerous lizard species in South Africa, most of which are small. They usually have scales covering their bodies and can be brightly coloured. Lizards typically have rounded torsos, elevated heads on short necks, four limbs and long tails. The skin is shed as the animal grows.

Size



Length

1-30 cm

Food



Insects, spiders, small invertebrates. Some species eat plants.

Habits



The majority of lizards is active during the day (diurnal). Some of them can sacrifice their tail to a predator and regrow it later. The detached tail continues to writhe after detaching, distracting the predator's attention from the fleeing prey.

House Centipede

Where to find it?
Gardens, houses



Identification



Small, typically yellowish-grey centipede with up to 15 pairs of long legs. Its body is yellowish-grey and has three dark dorsal stripes running down its length. Unlike most other centipedes, house centipedes and their close relatives have well-developed eyes.

Size



Length 25-35 mm

Food



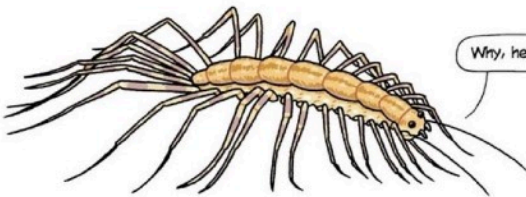
Insects, spiders, small invertebrates.

Habits



House centipedes are very fast hunters, reaching speeds of up to 0.4m per second. To capture prey they either jump onto it or use their legs in a technique called "lassoing". When the centipede is in danger, it can detach any legs that have become trapped.

This is a House Centipede.



Why, hello there.

Do these harmless critters make you nervous? Try imagining them with fancy legs.*

So fancy!



Do their fast movements scare you? Picture them with cool rollerblades.

So cool!



Still nervous? House Centipedes eat roaches and other pests. Picture them with tiny silverware.

So tasty!



PERFECT.

*15 pairs, to be accurate.

Longhorn Beetle



Where to find it ?
On old rotten wood

Identification



Longhorn beetles have very long antennae which are often as long as or longer than the beetle's body. They are often brightly coloured and some species even mimic other insects such as ants and wasps.

Size



Length 10-167 mm

Food

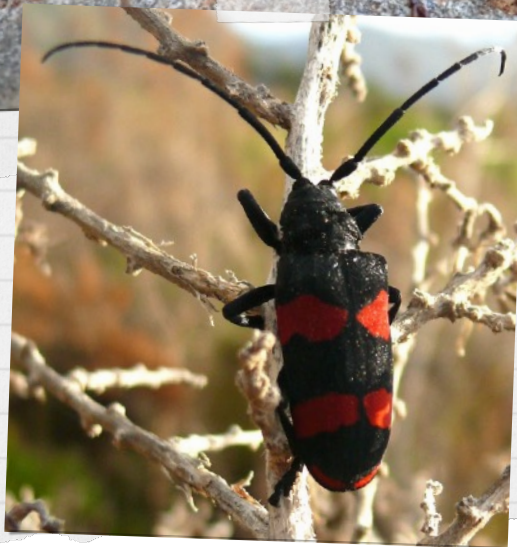


Wood for larvae. Plant matter for adults. Some adults don't eat at all.

Habits



According to specialists, these long antennae are used to stabilise the insect during flight.



Camel Spider - Solifugae

Where to find it ?

Desert, sandy or rocky areas

Identification



Also called sun spiders or wind scorpions, solifugae are neither spiders nor scorpions. They are only cousins. They can't spin webs and they don't have a tail like a scorpion's. The mouth has two very large chelicerae that serve as jaws. They only have four pairs of legs, the first pair being modified antennae.



Size



Length

10-150 mm

Food



Small insects and invertebrates.

Habits



Solifugae means 'afraid of the sun'. These animals often stay in the shade and travel fast in open areas, looking for hiding places. They are active hunters and their bite is very powerful, even if harmless to humans. Males are smaller than females.



Snail



Where to find it ?
Hidden in fresh and humid places



Identification



Contrary to slugs, snails have a shell on their back. The shell can be rounded or even pointed depending on the species. They can also be brightly coloured, but they are more often brown to camouflage themselves in between leaves and soil.

Size



Length 0,2-30 cm

Food



Leaves, grass. Some snails are predators and eat insects and small lizards.

Habits



Snails get out of their hiding spot when the weather is rainy and the ground is wet. They need the moisture to keep hydrated. When threatened, they hide inside their shell, only coming out when they can sense no movement around.

Earwig



Where to find it ?
underneath stones,
logs and bark

Identification



Earwigs have a pair of pincers at the end of their body, which makes them easy to spot ! They are usually brown in colour, with thread-like antennae. Some species have wings, others not.

Size



Length 8-50 mm

Food



Small insects and plants.

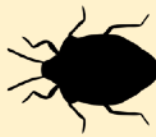
Habits



Females earwig take care of their young : they lay their eggs in burrows and guard them until the babies hatch. The young earwigs look like adults, but smaller and paler in colour.



Shield Bug



Where to find it ?
On any plant



Identification



Shield bugs are usually brown or green. They have a rounded, or shield-shaped body, with a sort of triangular 'shield' between their wings. They can fly, even if they often choose to run instead !

Size



Length 4-25 mm

Food



Sap (juice) from plants or fruits.

Habits



Careful when handling them : shield bugs produce very strong-smelling secretions when disturbed. It is a protection to deter predators !

Water Strider

Where to find it ?
Surface of ponds and
rivers

Identification



They have a long brown or black body, with four legs sticking out. In truth, they have six legs, but two of them are very short and can't be seen from a distance !

Size



Length 5-20 mm

Food



Small insects and
invertebrates.

Habits



Water striders 'skate' on the water surface, as if they were walking on water. They are on the lookout for small insects that might fall into the water.



Lily Weevil



Where to find it ?

On the ground, or on lilies and aloes



Identification



Weevils are robust little insects, with a long snout. They are mostly brown, although some can be brightly coloured. Their wings are fused, so they cannot fly.



Size



Length 5-60 mm

Food



Leaves and bulbs of aloes and related succulents.



Habits



When weevils are hit or attacked, they play dead. But if left alone for a couple of minutes, they will get up again and resume what they were doing !