

SPIDERS TEND TO INCITE more fear than favour and even provoke phobias for some. And many a visitor to our shores has been more than a little worried about our venomous eight-legged friends.

It's true that we have some of the most venomous spiders in the world - but Australia's spider reputation is bigger than its bite: records show no deaths from spider bites here since 1981.

"The fact is that, from a human perspective, spiders just aren't that dangerous" says Dr Aaron Harmer, arachnid researcher Macquarie University. "While many spiders can give you a nip, in most cases it is less troublesome than a bee sting."

Spiders less dangerous than bees

Spiders are the most widely distributed venomous creatures in Australia, with an estimated 10,000 species inhabiting a variety of ecosystems. But even though spiders live around us, from our urban centres to the bush, bites are infrequent. In fact, spiders are less life threatening than snakes or sharks, or even bees.

"There are more deaths from allergic reactions to bees" says Dr Geoff Isbister, a researcher specialised in envenoming at the University of Newcastle. He points out the extent of our irrational fear of spiders: "While we all still happily get in our cars (about 1000 people die each year in car crashes), then we can't really worry about spiders."

Antivenom for two of our more dangerous spiders, the funnel-web and the redback has been available since the 1950's and 1981, respectively. It is only administered when the Envenomation is really severe, which is rarely the case.

Spider venom contains a cocktail of chemicals, some of which can be harmful to humans - but humans are not really the intended victims. Spider venom is designed for small prey and delivered in small quantities that, while often fatal to tiny creatures, can be handled by bigger organisms. When injected to a horse, for instance, spider venom triggers the animal's immune system to produce antibodies to fight the effect of the toxin.

Redback spider



Redback spiders are found throughout Australia, in many habitats, including urban areas. They often hide in dry, sheltered places such as garden sheds, mailboxes and under toilet seats.

Numbers of redback spider bites are uncertain, but about 2000 are reported each year and about 250 people receive antivenom. No deaths have been recorded since redback antivenom became available in the 1950's.

Most serious bites are from the female redback spider, which measures about 1 cm long (bigger than males) and is recognisable by the well-known red stripe on its back, from which it gains its name.

Their venom affects the nervous system, which is potentially dangerous for humans, but their small fangs make many of the bites ineffective. Envenomation

can cause various effects, but the main symptom is severe and persistent pain - which can last hours to days depending on the person's sensitivity to the venom - and may include nausea, malaise and lethargy.

Cupboard spiders are often mistaken for redback's and they produce similar symptoms, though their venom is less potent. Redback venom is effective against these bites.

The mouse spider



There are eight species of mouse spider found all across Australia and they're typically found in burrows, often near rivers or waterways, and can occasionally be found in suburban areas.

Their venom is similar to the funnel-web spiders, although no deaths have been attributed to them; only one case of severe Envenomation has been recorded. Studies have shown the funnel-web spider antivenom to be effective for mouse spider Envenomation; and because it is sometimes difficult to tell the two species apart, the bites should be treated with the same precaution.

Mouse spiders are rather lethargic and rarely aggressive. The females generally remain in their burrow, while the males wander looking for them, generally in late summer to early winter.

Unlike other spiders, mouse spiders are often active during the daytime, while other species from the same family prefer to wonder at night to avoid the heat and the day-active predators.



Trap door spiders

These spiders are named after their habit of camouflaging the entrance of their burrow to trick their prey into falling inside. They measure about 1.5 to 3 cm long and as is often the case, females are distinctively larger than males but males tend to be more aggressive when feeling threatened.

Found throughout Australia's natural or urban environments, trap door spiders cause only minor symptoms for humans, generally inflicting only localised pain, but sometimes nausea, lethargy and malaise.

Just like the mouse spiders, trap door spiders are often mistaken for funnel-web spiders, especially since the early effects of their bites are similar; these spiders should therefore be treated with caution.

While most spiders live for about one year, trap door spiders can live between five and 20 years.



Sydney funnel-web

With highly toxic venom produced in large amounts and large fangs to inject it, the Sydney funnel-web is without a doubt the deadliest spider in Australia, and possibly the world.

Found in New South Wales, in forests as well as populated urban areas, they burrow in humid sheltered places. They can wander in backyards and sometimes fall into swimming pools, and though they're not often encountered, they can be quite aggressive when threatened.

Though just 1.5-3.5cm big, the Sydney Funnel-web has fangs larger than a brown snake's and so powerful they can even pierce through nails and toenails. Their venom has a compound that can attack the human nervous system and alter the functioning of all organs and,

when coming from a male, can kill. One in six bites causes a severe reaction, but since the antivenom has been made available, in 1981, no fatalities have been recorded



Other funnel-webs

There are about 40 species of funnel-web spiders in Australia, but only six have been reported to cause severe Envenomation, with victims generally around southern Queensland and northern New South Wales.

The impressive northern tree funnel-web spider, (4-5 cm long) and the smaller southern tree funnel-web spider probably count as the most dangerous ones. Half their bites result in severe envenoming.

Every year, up to 30-40 people are bitten by funnel-web spiders. But antivenom is available and proved very effective.

They feed on prey ranging from beetles to frogs and appear to be generally more active in the warmer months, between November and March

SPIDER CONTROL



Trapdoor spiders are usually not aggressive although they will bite if provoked.

Treatment by spraying is not practicle.

Spiders are an important part of the food chain, getting rid of unwanted insects and being food themselves for birds and other animals, so Cairns Pest Control do not really advocate removing them.

However we can treat them inside and outside if the numbers become to great and are making a mess.

This little fellow is a Silver Orb Spider. Harmless. Please do not kill them. Their bright silver shinning web is a wonderfull spectical in the garden.



White-tailed spiders

Is found in natural and urban areas across southern Australia, from south Queensland to Tasmania and from east to west coast, and in eastern Australia. Unlike burrowing spiders, white-tailed spiders are vagrant hunters and wander about at night, hunting other spiders.

Though white-tailed spiders have a reputation for releasing necrotising (flesh-eating) venom, the scientific evidence doesn't support this assertion. More likely, the spiders were wrongly held to blame for difficult to diag-



Huntsman spiders

Huntsman spiders are widespread in Australia. They are famous for being the bit (up to 15cm leg-span) scary, hairy, black spiders bolting out from behind the curtains. In reality, they are reluctant to bite and more likely to run away when approached and their venom isn't considered dangerous for humans. Despite their intimidating size, huntsman spiders can be an ally in the house; they help with pest-control by eating smaller insects.



Recluse spider

Also known as a fiddleback spider, the recluse spider has potentially dangerous venom that can be haemotoxic, damaging the blood and skin as well. Alarming emails have circulated about this spider inflicting terrible damage to human tissue but this was only a hoax meant to scare people.

In 20 years that fiddleback spiders been known to exist in Australia, their range hasn't increased

and not a single Envenomation case has been reported here, so despite the myth, this spider can hardly be considered dangerous in Australia.

First Aid For Spider Bite (This is an extract from St. Johns Ambulance)

<http://www.stjohnqld.com.au/en/contact-us/contact-us-mainmenu-67.html>

Only 2 Australian spiders, the red back and the funnel web, pose a threat to human life. Medical treatment is usually not required for white tailed spider bites, although ice packs may relieve acute pain. Clinical experience appears to be limited with mouse spider bites, but funnel web spider antivenom could be useful in severe cases.

If someone is bitten by a **funnel web spider**, follow these rules.

- **DO apply a broad pressure bandage to the limb immediately, particularly over the bite site, and immobilise with a splint.**
- **DO get the victim to a hospital or medical centre, preferably by an ambulance that has resuscitation facilities and antivenom for funnel web spider bites.**
- **DO NOT remove the bandage** — this will result in spread of the venom through the system.

The bite of a **red back spider** is immediately painful. If someone is bitten by a red back spider, follow these rules.

- **DO apply an ice pack to lessen the pain (the pressure-immobilisation technique is not used in this case as the venom acts slowly and any attempts to stop its movement tends to increase local pain, which may become excruciating).**
- **DO get the victim to a hospital or medical centre, preferably by an ambulance that has resuscitation facilities and antivenom for red back spider bites.**

TARANTULAS

New World tarantulas (those found in the Americas) possess 'urticating' hairs on their abdomen. As a defense mechanism, the tarantula uses its legs to fling these barbed and irritating hairs at potential danger. When accessing the enclosures that house tarantulas in the Aquarium, we must be careful not to get urticating hairs in our eyes. "Australian tarantulas are often known as whistling or barking spiders because of the sounds most species can produce.

Alternative Name/s:

Whistling spiders; Barking spiders; Bird-eating spiders.

Identification:

The Australian tarantulas belong to four genera, They have a large, heavy body, which varies in colour from dark chocolate-brown to pale fawn, often with a silvery sheen. *Selenotypus plumipes* is the only species that has long hairs on the rear legs, making it easily identifiable. However, it can be difficult to identify the other Australian tarantulas to species with many species as yet undescribed. Size range Body length: 6 cm; Leg span: 16 cm; Fangs: 1 cm long.

Distribution:

The genus *Selenocosmia* is known from Queensland, New South Wales, South Australia and Western Australia. *Selenocosmia stirlingi* is the most southerly (reaching into north-western Victoria) and widely distributed species. It spans the continent in habitats ranging from rainforest to desert but is not found in the northern tropics. The species that is most often kept as a pet is often sold as *Selenocosmia crassipes*. However, many of the large petshop spiders come from the north Queensland areas around Cairns and are incorrectly identified. They are likely to be undescribed species of the Asian genus *Phlogiellus*. *Selenocosmia crassipes* has its main distribution further south in mid-east Queensland. *Selenotholus* and *Selenotypus* are found in north-western Queensland and the Northern Territory respectively.

Habitat:

Adult female Australian tarantulas live in web-lined burrows in the ground. Younger stages and males may use flimsy silk retreats under rocks and logs. The burrows may have a flange of grass or leftover soil from burrow excavation around the outer rim. Some burrows may even have a thin film of web around or across the entrance. Burrow size usually correlates with the size of the spider, however the depth of the burrow can vary considerably (40 cm -100 cm deep), without relation to the size of the occupant. The temperature of the burrow remains fairly constant, with the minimum temperature for activity (20 degrees C) only being exceeded during the months of September to May, which is the feeding and growth season for these spiders. Burrows are sometimes plugged during the colder months and during the hottest part of summer.

Feeding and Diet:

Australian tarantulas rarely eat birds, despite often being called 'bird-eating spiders'. Occasionally, hatchlings may be taken from nests on the ground, however the spiders mainly eat insects, lizards, frogs, and other spiders.

Other behaviours and adaptations :

Selenocosmia stirlingi, like other theraphosid spiders, sometimes constructs a cradle or hammock of webbing on which the spider lies when moulting. Moulting takes place with the spider lying on its back, and can take from under one hour in spiderlings up to several hours for large mature females. Growth depends on the availability of food and moisture, with tropical species generally reaching maturity more quickly and in fewer steps than species with less reliable food and water supplies. Females continue to moult when sexually mature, while males will not moult again once mature. Males can be distinguished by their swollen palps (pair of front sensory/mating organs).

Communication:

Australian tarantulas are often known as whistling or barking spiders because of the sounds most species can produce by rubbing rows of modified spines on the basal segments of their palps (front pair of limb-like sensory/mating organs) against opposing spines on their jaw bases (the stridulating organ). The whistling or humming noise is most readily produced when the spider is disturbed and takes up a threatening defensive pose - it may act as a deterrent against predators.

Life cycle:

The female lays about 50 eggs into a 30 mm diameter sac, which is stored in the burrow and protected by a tough cover of silk. The spiderlings moult once within the egg sac before leaving it via a single hole. They will moult again before leaving their mother's nest as free-living individuals. Spiderlings have been observed feeding upon an insect provided by their mother, indicating some degree of maternal care in this

species. Females may live up to twelve years, but the males usually die after mating at around five years of age. Females tend to be larger than males.

Mating and reproduction:

The female Australian tarantula spends most of her life in her burrow. During spring and early summer, males approach the females' burrows, enticing them out to mate at the entrance. The male has to signal to the female that he is not potential prey, by drumming his palps (mating organs) on the ground and on the female's carapace (hard outer body covering). She will rear up in an aggressive stance while the male advances upon her, pushing her further backwards. He then inserts his palps one by one into the female's genital opening, before retreating. Attacks on the males have not been observed, and the males of *Selenocosmia stirlingi* do not possess spurs to secure the female's fangs while mating (as found in other tarantula species and unrelated groups like Funnel-web Spiders). This may indicate that males are much less likely to be killed during the mating process than the males of many other spider species.

Conservation Status :

There is growing concern that collecting these spiders for the pet trade may have a negative impact on populations of Australian tarantulas in northern Queensland. By removing the large adults from small local populations, collectors may be inadvertently endangering species that have not been properly studied or described yet and which may have limited distributions. A few traders are developing captive breeding programs to supply the pet market. This should be encouraged in the interests of conserving these fascinating spiders.

Danger to humans and first aid:

Although large, Australian tarantulas are not usually aggressive, but if provoked will 'rear up' and appear rather menacing. The bite is painful, as the fangs are large and as long as those of many snakes. Severe illness sometimes results and nausea and vomiting for six to eight hours have been reported from bites. It is possible that the growing popularity of keeping these spiders as pets may be responsible for an increase in reported bites. People who keep Australian tarantulas as pets must not attempt to handle them and should be very careful when cleaning their containers. Seek medical attention if symptoms persist. Collect spider for a positive identification. -



Australian species



These two species are from the Americas and show how large and colourful these spiders can become. Not as much study has been carried out on the unknown species of Australia.