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Redback Spider, *Latrodectus hasselti*

Redback Spider

Scientific name: *Latrodectus hasselti*

Alternative name/s:

Red-back Spider

Similar species:

Grey House Spider, Cupboard Spider



Red back spider, female Image: Mike Gray



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Fast Facts



Classification

Species	<i>hasselti</i>
Genus	<i>Latrodectus</i>
Family	Theridiidae
Order	Araneae
Class	Arachnida
Phylum	Arthropoda
Kingdom	Animalia



Size Range

1 cm (female); 3 mm - 4 mm (male)



Habitats

peridomestic, pest



Life history mode

sedentary



Feeding Habits

arthropod-feeder, carnivorous, insectivorous, predator

Introduction

Redback Spiders are found throughout Australia and are common in disturbed and urban areas.

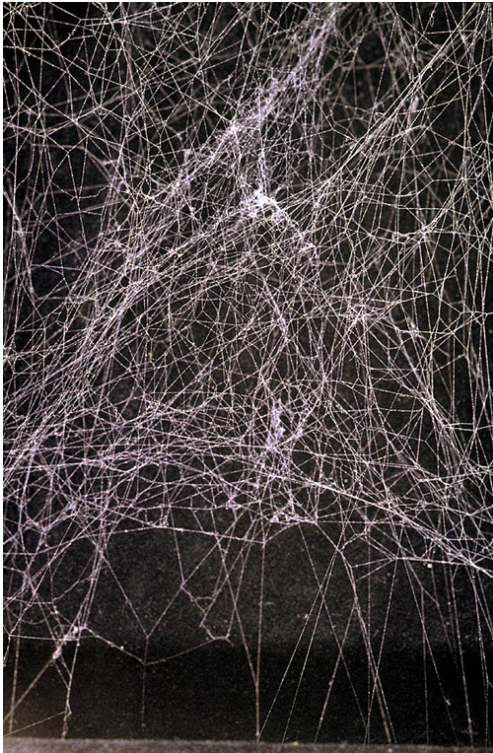
Identification

Redback spiders (*Latrodectus hasselti*) belong to the Family Theridiidae, which is found worldwide. The notorious Black Widow Spider (*Latrodectus* sp) of the United States is a close relative of the Redback Spider, and only differs in appearance by the absence of a red dorsal stripe. Other species of *Latrodectus* occur in Africa, New Zealand (the Katipo), the Pacific Islands, Europe and North and South America.

Female Redback Spiders are black (occasionally brownish) with an obvious orange to red longitudinal stripe on the upper abdomen, with the red stripe sometimes being broken, and an "hourglass"

shaped red/orange spot on the underside of the abdomen. Juveniles have additional white markings on the abdomen. Females have a body about the size of a large pea and slender legs.

The males' red markings are often less distinct. The body is light brown with white markings on the upper side of the abdomen, and a pale hour-glass marking on the underside.



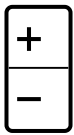
Habitat

Webs consist of a tangled, funnel-like upper retreat area from which vertical, sticky catching threads run to ground attachments. The Redback Spider favours proximity to human habitation, with

webs being built in dry, sheltered sites, such as among rocks, in logs, shrubs, junk-piles, sheds, or toilets. Redback Spiders are less common in winter months.

Distribution

They are found Australia-wide and will live almost anywhere as long as there is adequate food, a sheltered web site and warm enough for breeding. They are especially common in disturbed and urban areas, in association with human habitation.



Feeding and diet

Insects are the usual prey of Redback Spiders, but they are capable of capturing quite large animals, such as male trapdoor spiders, king crickets and small lizards, if they become entangled in the web.

Prey-stealing is also common, with large females taking stored food items from others' webs.

Life history cycle

Once the female has mated, she can store sperm and use it over a period of up to two years to lay several batches of eggs. She spends much time producing up to ten round egg sacs (1cm diameter), which are white, weathering to brown over time. Each egg sac contains approximately 250 eggs and only one to three weeks need to pass before more eggs can be laid. These sacs are suspended within the web. Sometimes small ichneumonid wasps parasitise them, puncturing each sac with tiny holes. The young spiderlings hatch in two to four weeks. Spiderlings are cannibalistic and will eat unhatched eggs and other spiderlings. The spiderlings disperse by ballooning to another suitable nest site on long silk threads that are caught by air currents.

Females mature on average in about four months. The smaller male matures on average in about 90 days. Females may live for two to three years, whereas males only live for about six or seven months.

Breeding behaviours

Male Redback Spiders do not produce a web, but may be found on the fringe of a female's web, especially during the summer mating season. The male has to make overtures to the female to discover whether she is ready to mate, which can prove fatal if she mistakes him for prey. It has been found that in order to occupy the female's attention during mating, the male spider offers her his abdomen by standing on his head and 'somersaulting' his abdomen towards her mouthparts. The female begins to squirt digestive juices onto the male's abdomen while the first palp is inserted. If he is not too weak, he will manage to withdraw, and then insert the second palp. She will continue to 'digest' his abdomen. Most males do not survive this process, which seems to be unique to *Latrodectus hasselti*.

Predators

Daddy-long-legs Spiders and White-tailed Spiders are known to catch and kill Redback Spiders.

Danger to humans

Redback bites occur frequently, particularly over the summer months. More than 250 cases receive antivenom each year, with several milder envenomations probably going unreported. Only the female bite is dangerous. They can cause serious illness and have caused deaths. However, since Redback Spiders rarely leave their webs, humans are not likely to be bitten unless a body part such as a hand is put directly into the web, and because of their small jaws many bites are ineffective. The venom acts directly on the nerves, resulting in release and subsequent depletion of neurotransmitters.

Common early symptoms are pain (which can become severe), sweating (always including local sweating at bite site), muscular weakness, nausea and vomiting. Antivenom is available. No deaths have occurred since its introduction.

Apply an ice pack to the bitten area to relieve pain. Do not apply a pressure bandage (venom movement is slow and pressure worsens pain). Collect the spider for positive identification. Seek medical attention.

Evolutionary relationships

It was once thought that the Redback Spider, *Latrodectus hasselti*, was a sub species of the Black Widow Spider but it is now known to be a distinct species.

Recent research on the DNA sequences of all recognized *Latrodectus* species indicates that the Redback is a distinct species, most closely related to the New Zealand Katipo, and probably an Australian native.

Redbacks have most likely become much more common since European settlers started providing them with lots of the kinds of places they like to make webs in.

References

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