Margaret Humphrey - March 2004 Platform Weavers - Spiders on Trampolines

AABR members in Sydney were recently treated to a fascinating talk on platform spiders. As our speaker, Dr Margaret Humphrey from the university of Sydney described the presence of this spider and the size of its web, most of us were amazed even a little bit sceptical, especially as it was almost April 1st. However one slide of small spider webs, covered with dew, on a lawn brought murmurs of recognition from the audience.

The platform spider commonly found all through the lower half of Australia is *Corasoides australis*. They may be recognised by creamy white spots on the abdomen.

Their most fascinating chacteristic is their web, which is a platform, but very elastic like a trampoline. The spider has a burrow in the ground, which then has a funnel which goes from the burrow to the platform. In the Sydney region, this funnel may be arched and can be quite long - 50 – 80 cms. They can also be quite common with 1 per square metre in some areas.

The spider is also called the labyrinth spider as on top of the funnel/platform there is a loose web of silk.

So why have we all worked this long in the bush and not been aware of them? The silk which makes the platforms is not very visible, so the webs are difficult to see. The best time to see them is going on a search early in the day taking a water spray. The spray is used to cover the web with a fine mist, and increase the visibility of the webs.

(AABR members will now be known by their searching in bushland with misting sprays at hand!)

Feeding

When an insect falls into the web, there is no way of holding the insect onto the web, as it is not sticky. Thus the spider has to be very quick to rush out of its burrow and catch the insect. The spider sits in the burrow with its rear out and feels with its back leg when something lands on the web.

The platform seems to favour jumping insects as opposed to flying insects. The spider can go around a month without a meal, although they would prefer to eat once a week. In captivity they eat 1 fly /week. The dried carcasses are dropped off the end of the platform.

If there are good food sources, the webs can be as dense as one per square metre. The level of food dictates their survival. Once females reach maturity, predation is rare.

The platform section of the web has a very regular weave. The width of the web varies with the age of the spider and the shrubbery around it. The web of a young spider is small and like a dish or flat.

Life cycle and breeding

Inside the burrow, females will excavate the ceiling and hang an egg sac – only one at a time. There are 60 – 100 eggs in a sac. The egg sacs are unusual, however, as this spider builds a layer of soil around them and then another layer of silk which is then decorated with sand, humus and dust. This is regarded as an anti-parasitic weapon.

They breed well in captivity so it is easy to follow their life cycle – they are seasonal and hatch usually in October/November.

The females remain in the web, when the males go looking for females to mate. The males will usually be dead by Christmas, while the females will continue to produce eggs all summer. The females will die in autumn before the babies hatch.

These spiders seem very susceptible to fire. The adults prefer undisturbed areas. They are also seen in disturbed areas, but these are only the juveniles in late autumn and early winter. Larger ones are seen in undisturbed areas in spring.
The spider buils a small burrow on the first night.
Night 2: builds a small platform.
Night 3: builds the labyrinth.
Then the platform is enlarged and then the burrow is enlarged.

Distribution of platform spiders

The distribution of *Corasoides australis* is the coastal areas of eastern, southern and western Australia and inland for up to 300 km. Other species in the genus are also present in rainforests in the Daintree, the Border Ranges areas of NSW/Queensland, the top of Clyde Mountain, NSW and New Guinea. These rainforest populations are considered remnant Gondwanan populations which are not adapted to arid conditions like *C. australis*.
With other species of this genus, the males go and live with the females. The first male which arrives at the 'virgin' female, mates and then 'glues' the female up so they cannot breed with any other males.

The rainforest species do not build a burrow, but build their platform in the trunks and buttress roots of rainforest trees.

So what is the labyrinth for? In captivity, the spiders do not build this, so it is not necessary for the construction of the web. If it is damaged it is not usually rebuilt. However with the rainforest species it appears that the labyrinth caught debris which falls from the rainforest trees, leaving the platform clean and able to catch insects.

Other Interesting Spider Observations and Facts

Golden Orb weavers: This spider retains the remains of old dinners in its web. Observation shows that 99% of the remains are of feral bees. This may be why orb weavers seem to increasing in number.

White tailed-spider: This has a undeserved reputation for producing necrosis from its bites. Research of 130 bites positively associated with this spider showed that not one had resulted in necrosis. These spiders only eat other spiders – a favourite is the black house spider, hence the white-tailed spider can be found where the black house spider is found.

Necrosis and spider bites: Any spider bites can possibly cause necrosis and become easily infected. The bite will puncture the flesh and can be the site for subsequent infection. This can be from bacteria or fungus from the spider fangs themselves or can be from scratching the bites which have become itchy.

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