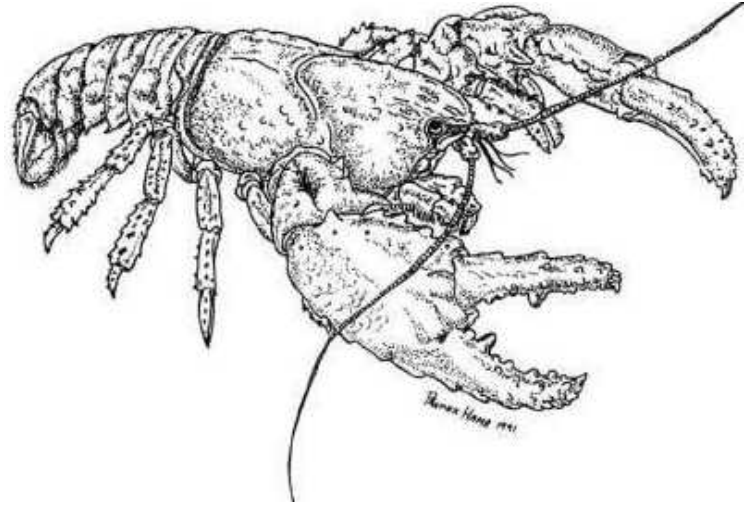


# Disjunct Naturalists

WEBSITE OF THE CENTRAL NORTH FIELD NATURALISTS



## *Case Moths*

by Sarah Lloyd



1. Case moth on Banksia

There is something fascinating about animals that make their own shelters.

In the wet forest at Black Sugarloaf, Birrilee, the slender conical cases (approximately 20 mm long) made of finely woven silk dotted with tiny fragments of bark and lichen are often observed attached to the trunks of dogwood (*Pomaderris apetala*) where the animals graze on algae or crustose lichens; the micro-epiphytes that create patterns on the dogwood trunks. In other higher rainfall areas in Tasmania a group of related species graze on the smooth-barked wet forest species including sassafras (*Atherosperma moschatum*), silver wattle (*Acacia dealbata*) and musk (*Olearia argophylla*).

The species responsible are case moths currently in the genus *Narycia* (subfamily Taleporiinae). There are at least eight and possibly up to 25 species of Taleporiinae in Tasmania. Unlike some case moths that have wingless females that never leave their larval cases female *Narycia* case moths are fully winged. Many are yet to be scientifically described and named, a process made difficult because the small adult moths are rarely attracted to light traps and because many of the adults emerge in late winter and thus avoid detection. Many *Narycia* species are weak flyers and are on the wing in the late afternoon especially on relatively mild, wind-free evenings in the winter months between May and August; other species fly in late spring. When at rest most *Narycia* species roll their wings around their body and appear very twig-like.

In mid summer many of the 20mm long cases were attached to the rough bark of banksias, dead understorey plants and even some rusty wire on an old fence post. Some did not appear to be alive, (around 50% of case moth cases are parasitised by brachonid or ichneumonid wasps) while others had the pupal shell visible at the posterior end indicating the successful emergence of the adult moth.

In late January two tiny animals barely 10mm long were seen moving along the leaves of cutting grass (*Gahnia grandis*) and during a CNFN trip to Black Sugarloaf in early February numerous of these tiny cases were seen on the bark of the dogwoods. This led to some discussion as to whether the small cases were young animals yet to attain their full length or whether they were a different smaller species. (Most adult *Narycia* species have a wingspan of between 12 and 20mm. A smaller species with a wingspan of only 9mm has been collected in Tasmania as has a larger species with a 25mm wingspan.) A different species (pix 1) with a similar but longer case of approximately 30mm decorated at the anterior end with tiny twigs was observed on a banksia one evening but has not been seen again.

What makes these animals intriguing is not only what species they are, but how they construct their cases and what goes on inside them.

The cases have two openings. In the tiny case moths seen on the cutting grass the head of the larva could be seen protruding from the anterior end as it made its way down the leaf. Another small animal seen a few weeks later caught in a spider's web was making desperate attempts to escape its fate and it too was visible. Once the animals find a suitable location they use silk to secure the anterior end of their case to a branch or trunk where they feed or collect material to attach to their case. When they are about to move to another location the larvae cut the silken threads. Faecal pellets are expelled from a small opening at the posterior end of the case.

Some species of case moths lay large numbers of eggs (a West Indian species *Oiketicus kirbyi* lays about 13,000 eggs). When the eggs are laid inside the case the first instar larvae use silken threads to lower themselves through the posterior opening. They spin silk and probably use some of it like a balloon to be carried by a breeze to a new plant. The larvae then fashion a conical silken case to which they attach fragments of plant, lichen or detritus. As the larvae grow they enlarge the anterior end of the case by attaching various materials characteristic of the species.

Just before ecdysis (i.e. shedding of exoskeleton) the larvae secure the case to a twig or other object and close the aperture with silk. How many times the larvae undergo ecdysis is difficult to determine because they eat their shed skins. But based on how many times the larvae close their case for ecdysis, observations of the aforementioned species *Oiketicus kirbyi* suggests that they undergo 12-14 instars.

When the larvae mature they tie the anterior end to a twig or similar object, close the anterior aperture and spin a dense cocoon within the case. Before

pupation the larvae reverse themselves in the cocoon to direct the head towards the posterior opening.

Before the final ecdysis (known as eclosion) the pupa (in both sexes of the Taleporiinae and the males of Psychinae) protrudes from the posterior opening of the larval case. The females of some species sit on the outside of the case awaiting copulation.

Unlike the Taleporiinae species that feed mostly on lichens, Psychinae case moths are often polyphagous and feed on herbs, shrubs and fruit, ornamental and forest trees. Some of the more common and visible species belong to the genus *Clania*. *C. tenuis* makes a cylindrical case to which it attaches twigs of a similar length cut from its host plants including *Eucalyptus*, *Callistemon* and *Leptospermum* species. Another *Clania* species use twigs of a similar length except for one longer twig. *Hyalarcta nigricans* makes a silken case with prominent longitudinal ribs.



2 *Narycia* sp.



3 *Hyalarcta nigricans*



4 case moth in web



5 *Clania* sp. on eucalyptus

We thank Peter McQuillan for providing information about the *Narycia* species and identifying the species on the orchid flowers as possibly *Helioscoma* species.

#### References

- Common, IFB (1990) *Moths of Australia*. Melbourne University Press, Melbourne. CSIRO (1970)
- *Insects of Australia*. CSIRO, Canberra.

Page URL: <https://www.disjunctnaturalists.com/articles2/case-moths.htm>

[Back to top](#)

[Home](#)

[Why 'disjunct'?](#)

[Membership](#)

[CDs & Books](#)

[Contact Us](#)

[Articles](#)

[Acoustic Bird Monitoring](#)

[Walks & events](#)

[Links](#)