

# Sun-Moth Fact Sheet



Photo. D. Pike

## What are sun-moths?

Sun-moths are moths that are strictly diurnal (fly during the day) and often only fly in bright sunshine during the hottest part of the day. Because they are diurnal and brightly coloured, they are often mistaken for butterflies. Sun-moths are camouflaged when settled, displaying only their black-brown forewings, but when they fly their brilliant red, orange or yellow hind-wings are exposed and they are easily recognized.



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## How to tell the difference between sun-moths, night moths and butterflies.

Night flying moths usually have 'feathery' antennae, pointed at the end while butterflies and sun-moths have slender clubbed antennae. Moths (including sun-moths) usually rest holding their wings flat to their sides as opposed to butterflies which hold them up like a sail (Figure 1). Moths often look more hairy or furry than butterflies.



**Fig 1.** Butterflies hold their wings up like a sail. Photo: © M.F. Braby

## Where are they found?

There are 45 species of sun-moth in Australia, with more than 20 in Western Australia. The first sun-moth described was *Synemon sophia* collected on the south coast and is one of a few sun-moth species found in the vicinity of Walpole (Figure 2). Sun-moths are most common in heathlands, woodland and sometimes in open parts of the forest where their 'foodplants' (grasses, sedges and mat-rushes) are found. They normally fly close to the ground and males of some species are territorial, defending them in open areas (<10m) such as firebreaks, from fellow sun-moth intruders. They are easiest to observe when perching on dead stems where they bask in sunshine. The vast majority of species fly during spring, that is, between September and December.



**Fig 2.** *Synemon sophia* collected on the south coast of WA in 1841.

## Life cycle

The 1-2 year life cycle: egg → larva → pupa → adult moth. The eggs are laid at the base of the food-plant. The larvae (caterpillars) that hatch from the eggs live entirely within or alongside the underground parts of the plant. The adult moths are only active for 2 to 10 days, but the adult moths at a particular site will appear over a four-week.

## Endangered !

There is currently a Department of Environment and Conservation project, to conserve the Endangered Graceful Sun-Moth *Synemon gratiosa*, on the Swan Coastal Plain. The aim is to identify key habitat for conservation of the Graceful Sun-Moth, refine knowledge of the species' distribution and habitat requirements, to re-assess its threatened status, and resolve potential conflict between GSM conservation and urban development. Another aim is to collect sun-moths throughout the state to clarify the taxonomy of the group, hence collection on the 'south coast'.