

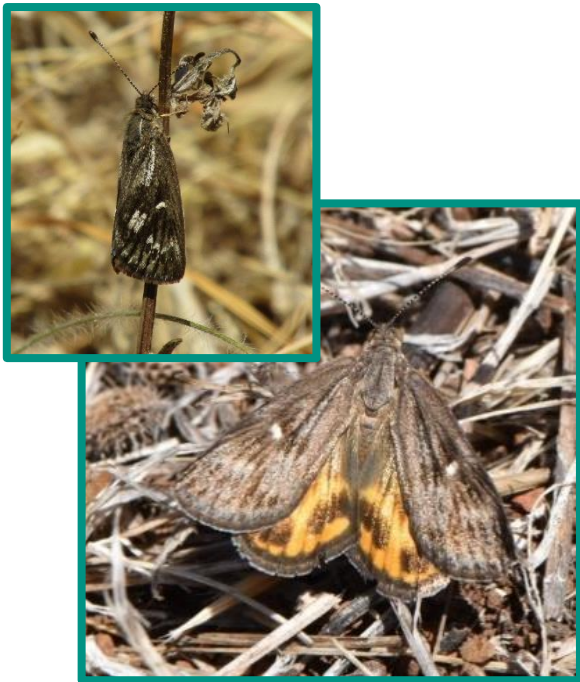
Cryptic sun moth

Factsheet | March 2025

The cryptic sun moth (*Synemon theresa*) is a highly threatened day-flying moth, with the species stronghold now predominantly in the Adelaide hills face area.

Species description

The cryptic sun moth is relatively small with an average wingspan of 30 to 35mm (males) and 32 to 36mm (females). The upper sides of the 2 front wings are predominantly brown with lighter brown spotted markings and a small central white spot. In the female, the spotted areas on the 2 front wings are lighter brown to pale grey. The upper sides of the back wings are dull orange with a row of brown spots near the outer edges, however it is common that back wings are not visible when animals are resting on the ground or on a plant.



Cryptic sun moth (*Synemon theresa*). Photo: Adrian Uren & Heath Hunter

Habitat

Observations of cryptic sun moths in the field suggest that they prefer low open grassy areas with little tree canopy.

Figures 1 to 3 show current examples of sun-moth habitat in the Adelaide hills face zone.



Figure 1: Waite Conservation Reserve



Figure 2: Coach Road



Figure 3: Magill Stone Mine

Larval host

There are several native grass plant species upon which sun moth caterpillars rely on for food.

- slender wallaby-grass (*Rytidosperma racemosum* var. *racemosum*)
- common wallaby-grass (*Rytidosperma caespitosum*)
- hairy wallaby-grass (*Rytidosperma pilosum*)
- kangaroo grass (*Themeda triandra*)

Other possible host plants

- spear grasses (*Austrostipa* spp.)
- native wheat-grass (*Anthosachne scabra*)

Lifecycle

Native grass host plants are vital for sun moth survival. Once eggs are laid on the stem of the host plant, eggs hatch and caterpillars move down into the base of the plant. Caterpillars may live underground at the base of the host plant for 2 to 3 years.

After caterpillars pupate and emerge from the ground, it is thought that the adults live for less than 10 days and they do not feed during this phase of their life.

Adult behaviour

Cryptic sun moth adults are most likely to be found from November to February.

They fly during the daytime in mostly sunny, warm to hot weather.

Females tend to be more sedentary, while males are active, periodically flying looking for females.

They make short flights just above native grasses and drop to the ground when threatened, where they can be hard to detect.

Threats

The greatest threat to this species is the modification or loss of open grassy habitats.

Key threats include:

- loss of grasslands and grassy woodlands
- habitat degradation by the planting of trees and / or shrubs in core grassland habitats
- limited and fragmented range
- inappropriate fire regimes
- overgrazing, thatching, inappropriate slashing
- disturbance effects associated with urbanisation
- changes of land management practices
- weeds altering habitat structure or food plant availability

Distribution

Understanding population distribution and finding key sites is very important for this species.

The cryptic sun moth once occurred in a much broader area across Victoria, where it is now presumed extinct.

Populations has recently been rediscovered near Clare in South Australia.

The species current core range is the hills face zone of the Mount Lofty Ranges, with a known range of less than 100km².

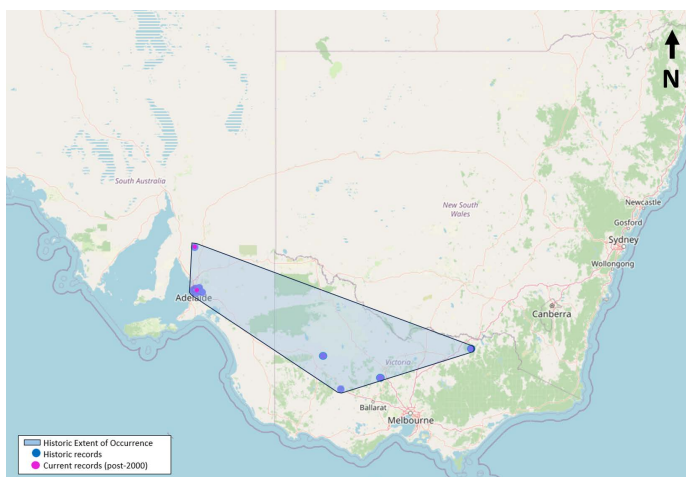


Figure 4: Cryptic sun moth population distribution.

Help us detect populations!

There is still much to learn about the cryptic sun moth.

For the best chance of spotting one yourself, search native grasslands on sunny days between November and February for adult moths. Surveys can be undertaken by walking along tracks and looking for the flying sun moths.

Adult cryptic sun moths may be confused with similar species, including other sun moth species and butterflies such as common xenica (*Geitoneura klugii*), meadow argus (*Junonia villida calybe*) and skippers, but platforms such as [iNaturalist](#) can be used to upload photos for help with identification. Logging observations on iNaturalist also helps with building a better understanding of where the species survives.