

endangered

by Tim Gamblin, Carly Bishop,
Matthew Williams and Andrew Williams



Graceful sun-moth

Unless you move in entomological circles or are an attentive autumnal bushwalker, it's unlikely you would have heard of the graceful sun-moth (*Synemon gratiosa*). And yet during 2010, the fate of this rare moth may be decided when decisions regarding land development will be made which will potentially have a significant impact on the species.

In March 2010, researchers, volunteers, environmental consultants and land managers prowled through a number of Perth's urban bushland remnants with butterfly nets poised, searching for this protected moth.

The graceful sun-moth can only be observed for a few weeks each year, from mid-February through March. This small, brightly coloured day-flying moth can then be seen darting along tracks on the western half of the Swan Coastal Plain from Perth's far northern suburbs south to Mandurah and Yalgorup National Park.

There are currently few known populations of this species, which is listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, and as specially protected fauna under the Western Australian *Wildlife Conservation Act 1950*. This is largely due to habitat destruction and fragmentation from urbanisation of Perth and surrounds. The remaining populations in small, isolated bushland remnants are thought to be subject to a high risk of local extinction.

Diurnal and brightly coloured, sun-moths are often mistaken for butterflies. Whereas most moths are night-flying, with 'feathery' or pointed antennae, butterflies and sun-moths fly during the day and have slender, clubbed antennae. Moths usually rest holding their wings flat to their sides, while butterflies hold them up like a sail.

For most of the year the graceful sun-moth larvae (caterpillars) live underground where they feed on the subterranean parts

of only two closely related mat rushes, *Lomandra maritima* and *L. hermaphrodita*. The distribution of these plants is the major determinant of potential graceful sun-moth habitat.

The habitat of the graceful sun-moth includes much of the greater Perth and Peel areas, including many areas zoned for future development. This has created an urgent need to determine habitat and distribution of the species to resolve any potential conflict between the species' conservation and urban development.

A Department of Environment and Conservation Specific Nature Conservation Project is conducting surveys of the graceful sun-moth and its habitat to better determine its distribution and habitat requirements. This will provide essential information for its conservation. For more information about the graceful sun-moth email carly.bishop@dec.wa.gov.au.

**Habitat photo by Carly Bishop,
graceful sun-moth photo by David Pike**

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Prepress and printing GEON, Western Australia.
 © ISSN 0815-4465

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Please do not send unsolicited material, but feel free to contact the editors.

Published by the Department of Environment and Conservation, 17 Dick Perry Avenue, Kensington, Western Australia.

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