

Progress Report SP 2010-006

Conservation of the graceful sun-moth

Animal Science

Project Core Team

Supervising Scientist	Matthew Williams
Data Custodian	
Site Custodian	

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Project Team	granted
Program Leader	granted
Directorate	granted

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M Williams, A Williams

Context

This project focuses on a high-profile threatened invertebrate that was listed as an Endangered species under the federal *Environment Protection and Biodiversity Conservation Act 1999*, and as Scheduled Fauna under the *Western Australian Wildlife Conservation Act 1950*. The graceful sun-moth (*Synemon gratiosa*) is a day-flying moth restricted to the Swan Coastal Plain, and is threatened by urban and other development. This project will obtain information to resolve potential conflicts between conservation of the species and the impacts of land clearing. By involving community organisations and environmental consultants, it extends cooperative partnerships with the community.

Aims

- Undertake research to determine the distribution and habitat requirements of the graceful sun-moth.
- Develop survey techniques to accurately determine the presence of the species, and to assess its abundance in bushland areas.
- Document or identify which factors determine the realised niche of the species, using habitat suitability modelling.
- Review the conservation and taxonomic status of the graceful sun-moth using molecular genetic methods.
- Identify land clearance management strategies to enable effective conservation.

Progress

- Completed surveys and monitoring of graceful sun-moth populations.
- Ongoing maintenance of the Department's Lepidopteran collection.

Management implications

Information on the distribution, abundance and habitat requirements of the graceful sun-moth has enabled the conservation status of the species to be downgraded from Vulnerable to a non-threatened status (Priority 4). Monitoring will be continued by regional staff until 2017 to ensure that the population is stable and to confirm the appropriateness of the conservation status it has been afforded.

Future directions

- Maintenance of sun-moth dry collection.
- Further examination of hybrid populations between the coastal graceful sun-moth (*S. gratiosa*) and inland claret sun-moth (*S. jcaria*).
- Publication of habitat model and genetic results.