

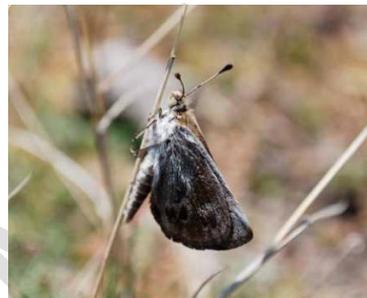
KELLEHERS AUSTRALIA

In-House Memorandum

A Strategy for the Golden Sun Moth

The Golden Sun Moth¹ is a rare and unique species, known for its distinctive clubbed antennae. It is found nowhere else in the world but in NSW, ACT and Victoria. Currently the moth is critically endangered, both in Victoria and nationally². For these reasons, as well as for the protection of biodiversity, it is crucial to protect the moth.

The Golden Sun Moth (*Synemon Plana*) is a diurnal insect, which means it is active during the day and asleep at night. The moth spends most of its life as a juvenile, nestled at the base of *Austrodanthonia* grass tussocks (common to Melbourne's west). Larvae remain feeding underground on grass roots, before digging a vertical tunnel to the surface where the pupa remain for six months until the adult moths emerge. Unable to feed, the adult life of the Golden Sun Moth is brief. It spends a flurid 48 to 120 hours finding and procuring a mate; then it perishes.



Protecting the Golden Sun Moth relies on protections for its habitat. In Melbourne, much of the moth's habitat lies within the path of urban growth, particularly in the western, north-western and northern suburbs. Its protection rests upon a strategy prepared by the Department of Environment and Primary Industries (DEPI). This strategy purports to implement a Commonwealth prescription for the moth's protection under Commonwealth Endangered Species Legislation³. The strategy claims to have been undertaken based on strategically planned surveys.

The long term target is permanent protection of 80% of the highest priority habitats within the Victorian Volcanic Plains to the west and north-west of Melbourne's CBD. The Commonwealth Prescription for the Golden Sun Moth⁴ restricts clearing of native vegetation on a land parcel confirmed to support moth habitat until there is at least 80% protection across the relevant bioregion of the total area of places where 'high contribution to species persistence' and 'confirmed habitat' intersect⁵.

In the north-western growth corridor, due to an absence of species records, no areas have yet been identified, despite the presence of some small areas of high contribution habitat. In the northern growth corridor, habitat is assessed as poor and protection considered to be imperative. Two large areas of high contribution habitat have been confirmed⁶. In the north, there is an abundance of species records. In the western growth corridor, seven conservation areas have been established⁷. The *Delivering Melbourne's Newest Sustainable Communities* report⁸ has committed to establishing 15,000 hectare Western Grassland Reserves, with smaller reserves to manage the risk to the moth from potential catastrophic events in the large reserves.

The onward progress of urban expansion presents a significant risk to the Golden Sun Moth. Relevant authorities must ensure robust measures for habitat conservation.

Cameron Algie, 15 May 2014

¹ The name 'Golden Sun Moth' originates from the colouring of the female, whose forewings are a bright golden brown. The moth is known for its distinctive clubbed antennae, which differ from most Lepidoptera (moths).

² DSE, 2009a; Part 10, Environment Protection and Biodiversity Conservation Act 1999 (Cth) ('EPBC Act'); the moth is also listed as threatened under the Flora and Fauna Guarantee Act 1988 (Vic).

³ The Commonwealth Environment Minister approved the prescription for Golden Sun Moth on 16 April 2010.

⁴ Appendix 1, Sub-Regional Species Strategy for the Golden Sun Moth, (DEPI, 2013) pp.27-28

⁵ Exemptions apply if the 80% target is not reached across the bioregion. In such cases, clearing may be permitted in the following circumstances:

⁶ Kalkallo (west of the Hume Highway) and Mickleham Road / Mount Ridley Road.

⁷ Conservation areas for the Golden Sun Moth are set out in Table 1, Sub-Regional Species Strategy for the Golden Sun Moth, (DEPI, 2013) pp.17-18

⁸ *Delivering Melbourne's Newest Sustainable Communities* (Victorian Government, 2009).

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KELLEHERS AUSTRALIA: www.kellehers.com.au / e: kellelegal@kellehers.com.au

497 Swan Street, Burnley, 3121, Victoria, Australia