

# LANDCARE IN FOCUS

MAY 2025



Landcare  
Australia

**Cover Story:**  
Planting 1,500 Trees  
on Phillip Island



**Sustainable  
Ag Win for  
Farming Family**

**Healing the  
Land with  
Community**

**Farm Dams  
for Wildlife in  
Upper Goulburn**







# Uncovering an invertebrate haven

**T**he Mt Piper/Broadford region has emerged as a significant stronghold for insect biodiversity in Victoria. This area harbors Australia's only listed threatened Lepidoptera community, known as Butterfly Community No. 1 (Jelinek, 2003). It is the only location in Victoria where the Large Ant-blue butterfly (*Acrodipsas brisbanensis*) and the Small Ant-blue butterfly (*Acrodipsas myrmecophila*) coexist. The region boasts a recorded 41 butterfly species and supports a crucial population of the Golden Sun Moth (*Synemon plana*) (Mata & Smith, 2021).

The Threatened Species Conservancy (TSC) has played a crucial role in uncovering and safeguarding the invertebrate biodiversity of the Mt Piper region. As a dedicated non-profit organisation, TSC focuses on researching, monitoring, and conserving Australia's most at-risk species.

For the past seven years, TSC has been investigating the distribution of the Ant-blue butterflies within Mt Piper and across Victoria. This research has primarily focused on their host ants to better understand ecological relationships, breeding biology, population density, and distribution. The organisation's persistence has provided invaluable insights into the interdependent relationship between these butterflies and the Coconut Ants (*Papyrius* spp.). These surveys have contributed data to aid legislative protection efforts and provide insight into the ecological relationships between these butterflies and their host species.



Despite their significance, records of *Acrodipsas* butterflies at Mt Piper have been sparse in recent decades. The most recent Victorian Biodiversity Atlas (VBA) records date back to 1995. Before TSC's extensive fieldwork, there were no VBA records of Coconut Ants in Victoria, with only limited records from the Atlas of Living Australia (ALA). The organisation's dedication to filling these knowledge gaps has been instrumental in advancing conservation strategies for these species.

**Hero** *Amegilla albiceps* roosting on grasses

**Top right** Coconut Ants (*Papyrius* spp.)

**Bottom right** Large Ant-blue butterfly (*Acrodipsas brisbanensis*)



In 2018, TSC commenced field surveys across Victoria in key areas, systematically searching for *Papyrius nitidus* nests. These ants build distinctive ‘byres’—woven coverings made from plant debris that protect their nests and foraging trails. Thanks to the relentless efforts of TSC researchers and volunteers, three significant nesting sites were identified in the Mt. Piper region. The discovery of *Acrodipsas* eggs beneath the bark at one of the sites confirmed active butterfly breeding. A really significant discovery!



TSC’s fieldwork demonstrates that Coconut Ants are more widely distributed around Mt Piper than previously thought and continue to play a vital role in the lifecycle of Ant-blue butterflies. While no nests were found directly within the Mt Piper Nature Conservation Reserve, ongoing surveys using novel search methods, such as detector dogs, are expected to confirm their presence.



In early 2023, during follow-up surveys at a previously documented Ant-blue breeding site, TSC researchers made an unexpected and significant discovery—the elusive *Amegilla* (*Asaropoda*) *albiceps* bee. This species, rarely recorded in Victoria, was meticulously documented through photographs and video recordings, capturing both male and female specimens.

The female bee’s nesting behaviour was particularly interesting. It was seen burrowing into bare earth beneath a mistletoe (*Amyema* sp.). Given the lack of knowledge surrounding *Amegilla albiceps*’ reproductive ecology, this finding provides valuable insights into its lifecycle and potential ecological relationship with mistletoes. Such discoveries further highlight TSC’s essential role in shedding light on lesser-known species and their conservation needs.

**Above** Coconut ant nest and byre  
**Left** Hatched eggs of *Acrodipsas* sp. Each egg is 0.8 mm in diameter  
**Right** *Amegilla albiceps* roosting on grasses





The identification of *Amegilla albiceps* and further documentation of *Acrodipsas* butterfly breeding habitats reinforce the importance of the Mt Piper/Broadford region as a significant refuge for invertebrate biodiversity. Despite comprising over 80% of Earth's animal life and serving vital ecological functions, insects remain underrepresented in conservation efforts. Recognising and protecting invertebrate-rich habitats is essential for integrating them into broader conservation strategies and environmental policies.

TSC remains steadfast in its mission to document, advocate for, and protect these critical habitats. By engaging local communities, volunteers, and emerging entomologists, the organisation ensures that conservation decisions are grounded in rigorous scientific research and contribute to long-term ecological resilience. The hard work of TSC and its dedicated team continues to drive meaningful change in the protection of Australia's most vulnerable species.

For more information, please visit [www.tsconservancy.org](http://www.tsconservancy.org)

Words by **Abi Smith**, Chief Executive Officer | Threatened Species Conservancy

### Acknowledgements

A grant was supplied by the Department of Energy, Environment and Climate Action, the Department of Climate Change, Energy, the Environment and Water and Landcare Australia which is gratefully acknowledged, as is the support of volunteers and the local community.

### References

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