

Alpine Redspot Dragonfly – *Austropetalia tonyana*

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Aquatic Ecosystems Unit, Port Stephens Fisheries Institute



Figure 1: Adult female Alpine Redspot Dragonfly (Photo: G. Theischinger)

Introduction

The Alpine Redspot Dragonfly is one of three species in the genus *Austropetalia*. All three species are endemic to south-eastern Australia and have rounded reddish-brown spots on the leading edges of their wings.

The Alpine Redspot Dragonfly is a habitat specialist, occurring only within very specific geographic locations. It is naturally rare, with few recordings of the species in New South Wales since the 1950s.

Due to its natural rarity, high degree of habitat specialisation and a number of threatening processes (see 'Why is the Alpine Redspot Dragonfly threatened?'), the species is listed as a

vulnerable species in NSW. There are heavy penalties for harming, possessing, buying or selling them, or for harming their habitat (see 'Legal implications').

Description

The Alpine Redspot Dragonfly is a moderate-sized dragonfly. The larvae grow to 32-35mm long and adults grow to 70-80mm long.

Individuals possess reddish-brown spots on their wings and long pairs of yellow stripes on top of each abdominal segment. A yellow stripe also runs across the front of the face and the eyes are close together on top of the head.

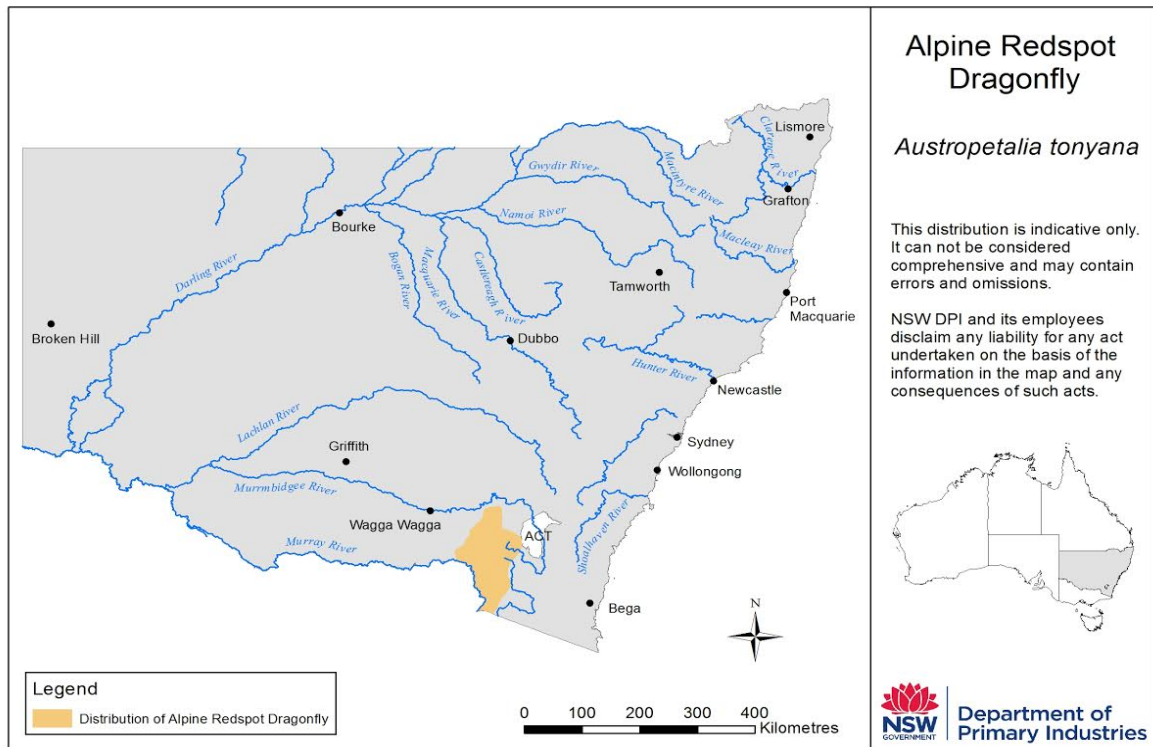


Figure 1: Distribution of the Alpine Redspot Dragonfly in NSW.

Habitat and Ecology

- In NSW, the Alpine Redspot Dragonfly is restricted to mountainous regions below 35°S that reach above 600 – 1,800 metres above sea level.
- Individuals have extremely specific habitat requirements in that they only occur amongst rocks, logs and moss within the splash zone of waterfalls or in the nearby stream edge.
- Their flight period is thought to occur between October and January.
- All dragonflies are predatory. The larvae stalk or ambush aquatic prey while the adults capture prey while flying.

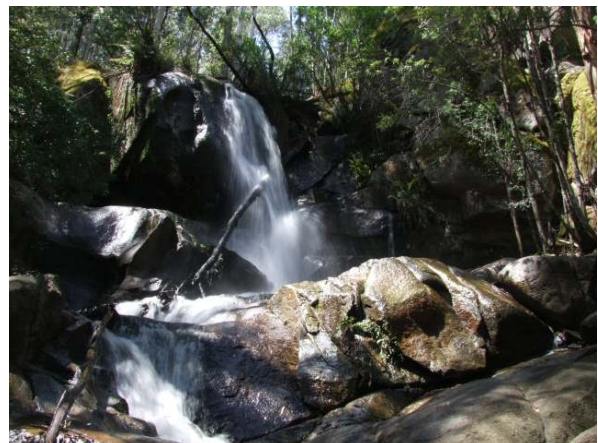
Why is the Alpine Redspot Dragonfly threatened?

- Habitat modification due to the effects of climate change, including global warming and reduction in precipitation.
- Degradation of habitat resulting from reduced stream flow associated with forestry development.
- Chance events such as natural disasters (drought or fire) may eliminate remaining local populations. Local extinctions could greatly affect the survival of the species as a whole due to their natural rarity.
- The capture of wild dragonflies by humans for collection and rearing is increasing in many countries and places pressure on the species.

Conservation and recovery actions

- Educate the public about the identification and protected status of the Alpine Redspot Dragonfly.
- Conduct urgent research into the life history and population assessment of the species.
- Protect the few remaining sites that still support the species, and address key threats such as habitat degradation.
- **Report any sightings of the species via the NSW DPI online form:**
www.dpi.nsw.gov.au/fisheries/species-protection/report-it/threatened-species-sighting-form

Figure 2: The Alpine Redspot Dragonfly only occurs amongst rocks, logs and moss within the splash zone of waterfalls or in the nearby stream edge (Photo: R. Richter)



Legal implications

It is illegal to catch and keep, buy, sell, possess or harm Alpine Redspot Dragonflies (or any other threatened species in NSW) without a specific permit, licence or other appropriate approval, and significant penalties apply. For vulnerable species these penalties can include fines of up to \$55,000 and up to 1 year in prison.

There can also be significant penalties for causing damage to the habitat of a threatened species without approval through actions such as dredging riverbeds.

Clearing that constitutes a routine agricultural management activity, and certain routine farming practice activities (other than clearing) are permitted, provided the activities are to the minimum extent reasonably necessary and all other relevant statutory approvals or authorities have been obtained.

The impacts of developments or activities that require consent or approval in accordance with the *Environmental Planning and Assessment Act 1979* must be assessed and considered by consent or determining authorities. Where such actions are likely to result in a significant impact on a threatened species or its habitat, a detailed species impact must be prepared.

Strategies to be adopted for promoting the recovery of the Alpine Redspot Dragonfly must be set out in the NSW DPI Priorities Action Statements.

A recovery plan may be prepared in accordance with the provisions of the *Fisheries Management Act 1994* to promote the recovery of the species to a position of viability in nature.

Bibliography and further reading

Fisheries Scientific Committee (2014) *Austropetalia tonyana* – Alpine Redspot Dragonfly as a Vulnerable Species. Final Determination.

Hawking, J. & Theischinger, G. (2004) Critical species of Odonata in Australia. *International Journal of Odonatology* 7: 113-132.

Theischinger, G. & Hawking, J. (2006) *The complete field guide to dragonflies of Australia*. CSIRO Publishing, Australia. 366 pp.

For further information

See the NSW DPI website: www.dpi.nsw.gov.au

Contact the NSW DPI Threatened Species Unit:
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Figure 3: Male Alpine Redspot Dragonfly (Photo: R. Richter)

