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Utilizing ecological fire management to enhance purple copper butterfly habitat**Colleen Farrow**

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The purple copper butterfly (*Paralucia spinifera*) is a threatened species that is only found in the Central Tablelands of New South Wales. All known populations reside above 900 meters, predominantly on north facing slopes that receive occasional snowfalls. The butterfly is believed to utilize only one species of native shrub, the native blackthorn (*Bursaria spinosa ssp. lasiophylla*) and relies on a mutualistic relationship with a native ant (*Anonychomyrma itinerans*). Habitat clearing, competition from weeds and a lack of native blackthorn regeneration continue to threaten purple copper butterfly populations. Over the past three years, ecological fire trials have been implemented as a tool to regenerate native blackthorn shrubs. Fire is emerging as an important tool for threatened species across Australia and implementing carefully managed trials on purple copper butterfly habitat is providing a new approach to managing the complex issues surrounding this species. This project has yielded promising results, with significant basal shoot growth and lichen reduction recorded across trial sites. Such outcomes result in an increase of additional food sources for larvae and potential enhancement of habitat areas. While this is a positive outcome and provides management options, additional investigations are required. Studies on the relationship between the butterfly and the native ant will enhance knowledge of their relationship and its role in population dynamics, as will further ecological fire trials and ongoing larvae monitoring counts.

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