

CHAINED AND BURNT FUELBREAKS IN THE MALLEE: The immediate environmental effects on vegetation

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Chaining and burning to create fuelbreaks is practiced rotationally on the perimeters of public land in the Mallee region of North West Victoria. Chaining vegetation creates a continuous fuel layer from patchy vegetation enabling the break to be burnt under mild weather conditions. The long-term effects of this treatment on mallee and heath communities are unknown. It has been suggested that such intensive management may cause changes in the floristic and structural characteristics of the landscape. This study investigates the ecological impact associated with chaining and burning in areas first chained between 2002 and 2004.

Floristic surveys of chained and burnt fuelbreaks, unchained and recently burnt vegetation and unchained and long unburnt vegetation were conducted in the two vegetation communities of Heathy Mallee and Sandstone Ridge Shrubland. Thirty-five sites were located on the boundary of the Big Desert / Wyperfeld landscape in North West Victoria. Data was collected on species richness, floristic composition, community structure and vegetative cover.

Chained and burnt treatments were found to be similar in species richness, floristic composition, weediness and structural characteristics to recently burnt vegetation, for both Heathy Mallee and Sandstone Ridge Shrubland. Across all treatments and ecological vegetation classes, weeds were found to be infrequently represented. Vegetation found in the unchained and long unburnt treatment was the least diverse in species richness, floristic composition and structure indicating that time since last burnt was a more important factor than the recent chaining treatment.

The application of only one treatment of chaining and burning may account for the absence of significant adverse environmental effects. However, regular repeated disturbance may disadvantage species lifecycles and thus adverse effects may become more apparent with successive treatments. For this reason monitoring will continue, enabling the long-term consequences of chaining and burning to be understood.

Key Words

Chaining, fuelbreak, Mallee.