

Fire history mapping of remnant urban bushland near Perth, WA

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Abstract

The fire history since 1948 at Star Swamp Bushland Reserve is interpreted from aerial photographs. Fire scars were traced separately from the 18 sets of aerial photographs available for the period. Fire frequency and the number of months since fire, were calculated for 185 survey points used for vegetation mapping as well as 32 permanent plots used for monitoring vegetation dynamics. The effect of fire frequency on the canopy of the dominant tree species *Eucalyptus gomphocephala*, composition and distribution of plant communities, and weed invasion was analysed using the geographic information system ARC/INFO, correlative and multivariate techniques. It is shown that mapping fire history can be a valuable aid for the management of urban reserves requiring special fire protection.