

Responses of biodiversity to prescribing burning in urban woodlands

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Bush remnants in urban landscapes hold a wide range of social and ecological values, but maintaining these values can be challenging. Prescribed burning to reduce fire risk to human life and infrastructure is often necessary within bush remnants, and fire may be an important restoration tool for target species and communities. We used a transdisciplinary approach, involving community groups, land and fire managers and researchers, to understand the impacts of prescribed burning on non-target biodiversity attributes in an urban bush remnant. Paganoni Swamp woodland reserve (700 ha) has high biodiversity values within the Perth Metropolitan Region, and contains one of the few remaining large populations of tuart (*Eucalyptus gomphocephala*). The area had been unburnt for more than 30 years, and a prescribed burn to part of the reserve was administered by the Department of Environment and Conservation following consultation with community groups and researchers. We established five paired monitoring sites in the burnt and unburnt regions. At each site we examined floristic composition, vegetation structure and reptile community composition. Within the first year of the prescribed burn, floristic composition was significantly different between burnt and unburnt sites and vegetation cover was lower in the burnt sites. Fewer reptile species and abundances were detected in the burnt sites. In addition, fewer juveniles of the common dwarf skink *Menetia greyii* were detected in burnt sites. We hope that the continued collaboration between community groups, researchers and land managers will facilitate an adaptive management strategy for prescribed burning within bush remnants.