



## Burning threatens the food supply of the South-eastern Red-tailed Black-Cockatoo

The South-eastern Red-tailed Black-Cockatoo (SERTBC) is listed as 'Endangered' under the *Environment Protection and Biodiversity Conservation Act 1999*. The Cockatoo has a limited range, occurring only in the south east of South Australia and south-western Victoria.

Its critically small population — around 1500 individuals — is believed to be declining as a result of the ongoing loss and deterioration of the Cockatoo's key habitats. Unlike other subspecies of the Red-tailed Black-Cockatoo, the SERTBC is an ecological specialist that feeds on the seeds of only three species of trees — Desert and Brown Stringybarks and Buloke.

### Food shortages are the greatest threat to the cockatoo.

Over half of the SERTBC's feeding habitat has been cleared since European settlement, with remaining habitats subject to further loss and decline due to clearance of food and nest trees, planned burning regimes that clash with the needs of the birds, catastrophic wildfire, inappropriate agricultural practices, invasive woody weeds and the impacts of pathogens and pests on the health of food trees.

Since 1997, the national Recovery Team for the South-eastern Red-tailed Black-Cockatoo has been working collaboratively with state and federal governments, partner organisations, community groups, schools and farmers to manage and restore critical habitat, reduce key threats and halt the rate of decline.

Each year, the on-ground actions of over 200 volunteers assist the Recovery Team in monitoring the population, providing information on sightings and nest sites, and managing and improving habitat conditions. Since 2014, around 300 primary school students from six schools have been actively involved in helping to grow and plant stringybarks as part of the 'Kids helping Cockies Project'.

However, the effort of hundreds of volunteers can't keep ahead of the impact caused by the ongoing burning of large areas of the Cockatoo's key stringybark feeding habitat, particularly across south-western Victoria.

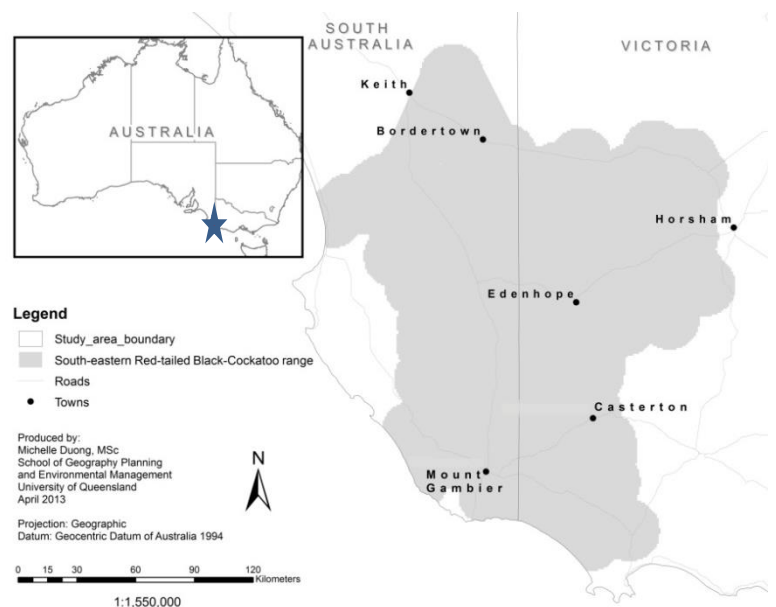


Figure 1: Map of the SE Red-tailed Black-Cockatoo's range in SA and Victoria



Figure 2: Tenison Woods College have grown over 1000 SERTBC food trees.

## Fire presents a major threat to the recovery and survival of the SERTBC.

Extensive and intense bushfires and inappropriate planned burning of the Cockatoo's stringybark feeding habitat can seriously affect the seed production of these trees, and therefore the availability of food for the Cockatoos, particularly where the canopy is scorched.

Stringybarks that have been subject to canopy scorch produce an average of 50% fewer seeds for ten years after being burnt. Availability of food is the main factor limiting the population size of the SERTBC, so any reduction in food availability poses a key threat to the population.

The Recovery Team has calculated that the current SERTBC population can tolerate up to 15% of their food trees across the range having reduced productivity in any 10 year period, **but no more**. Any increase in canopy scorch beyond an average of 15% is likely to result in further population reductions.

In June 2014, the Victorian Department of Environment, Land, Water and Planning (DELWP) reported that the proportion of SERTBC habitat that had been subject to canopy scorch in the last 10 years had risen to 24.3%. This is nearing almost twice the agreed maximum of 15% and is nearly double that considered sustainable to support the current population of Cockatoos.

The Recovery Team have continued to highlight the need and urgency to reduce burning and scorch across stringybark habitats in south west Victoria. Discussions with the Victorian environment department saw the area of habitat proposed to be burnt over 2014-15 reduced by around 6000 ha (from 10000ha to 4000ha); still 2000 ha above the historical average area of stringybark habitat burnt per year.

A reduction in burn coverage from both planned burns and bushfire has helped to decrease scorch to 23.1% (reported as of the end of June 2015). This figure is still very high and with observed food availability the lowest in the last seven years, we believe further reductions are needed to reduce scorch down to the threshold of 15%.

A population viability analysis (PVA) completed for the taxon in 2015 reinforced our previous understanding of the impacts of fire on the SERTBC. The PVA modelling demonstrated that fire (through its impacts on food availability) has a marked effect on population performance.

In particular, the probability of extinction was shown to increase significantly with increasing area burnt, with extinction rates significantly higher under a 5% burning scenario (5% habitat burnt per year as representative or more recent levels of burning) compared to that of more historical rates (1.5% habitat burnt per year).

The modelling has reinforced the need to further reduce scorch and maintain a burning regime which ensures that no more than 15% of SERTBC habitat is burnt in a 10 year period. Any increase in the incidence of canopy scorch beyond the historical average of 15% will likely have a significant negative impact on the population.

The Recovery Team is aware that planned burning occurs across the range of the cockatoo. The impact of planned burning in South Australia also needs to be taken into consideration when reviewing scorch.



**Figure 3: Important stringybark habitat of the SERTBC severely scorched during a planned burn in Tooloy-Lake Mundi Wildlife Reserve (west of Casterton) in May 2014, where only weeks earlier a flock of 370 birds was recorded in the adjacent State Forest. The stringybark woodlands of the Casterton district represent some of the Cockatoo's most important feeding habitat, regularly supporting large flocks.**

### **Recommendation:**

To prevent further population declines and return the 10-year extent of scorched stringybark in the SERTBC range toward the recommended maximum of 15% **it is imperative** that DELWP continue to reduce the area of SERTBC habitat scorched during planned burning operations across public land in Victoria.

The SERTBC Recovery Team, in partnership with BirdLife Australia, is committed to working with DELWP to reduce the threat of fire in SERTBC habitat.