

FAUNA

GOING, GOING, GONE! VETERAN AND STAG TREES: A VALUABLE RESOURCE

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Since European settlement in Western Australia, millions of hectares of forest and woodland have been cleared for agriculture, cities, towns, timber production and mining. Thus millions of ancient trees that provided places where birds, reptiles and mammals could sleep, rear young, shelter from the weather and evade predators have been destroyed.

In the south-west of this State only about 10% of the original primary vegetation remains. Sadly the urban, agricultural, forest and woodland landscapes now contain far fewer trees with hollows than they did when Perth was first settled. Hollow formation in our unique south-western hardwoods (e.g. jarrah, marri, karri, wandoo, tuart and salmon gum) is an excruciatingly slow process relying on a myriad of fungi and invertebrates such as termites and other insects to decompose and excavate the heartwood. Hollows generally only appear when a branch or top of main trunk snaps off, or the tree is damaged by fire. This extremely slow process, combined with the fact that our hardwoods live up to 500 years, means that hollows can be quickly lost, but not easily replaced.

Recent studies have shown that hollows suitable for our large cockatoos do not begin to appear in eucalypts until they are at least 230 years old. A number of nest trees used by forest red-tailed black cockatoos and Baudin's and Carnaby's cockatoos are estimated to be between 300-500 years of age.

This clearly shows that the large old and decaying trees used as nesting sites by our black cockatoos in the south-west began growing well before Captain Stirling sailed up the Swan River.

It is now very evident that the loss or decrease in hollow bearing trees in the south-west of WA is one of the most important factors to overcome in fauna conservation. Apart from the dwindling supply of hollows in some landscapes, hollow users must also compete with the introduced feral European honey bee that is infesting hollows throughout the entire south-west region at a very rapid rate. Some species can make do with alternatives, e.g. tree martins around Perth now nest in large numbers in street light fittings and there are several records of owl nightjars breeding in tractor exhaust pipes in the wheatbelt.

Are artificial nest hollows the solution to our declining hollows? Not really. In some cases nest boxes and pipe hollows have been used very successfully for glossy cockatoos on Kangaroo Island and for Carnaby's cockatoos here in Western Australia. Nest boxes are, however, not a panacea - they can attract introduced species (such as feral European honey bees) and invading superabundant species (such as galahs and corellas) and are relatively expensive to erect and monitor. Also, further research into size, shape and placement of artificial hollows needs to be undertaken and with it a responsibility to discourage introduced and feral species from using the hollows. There is no doubt,

however, that PVC pipe hollows could be used effectively for the recovery of Carnaby's cockatoos in parts of the wheatbelt where there is a scarcity of suitable hollows. It is impossible, however, to fully replicate all the habitats provided by veteran and stag trees.

Overall we must start growing the next generation of veteran and stag trees now, especially in urban and agricultural areas, and develop guidelines for selecting suitable trees for retention for hollow-using species. In recognition of this, one of the "Cockatoo Care" project objectives is to encourage habitat enhancement through tree planting, revegetation of degraded areas and the protection of remnant bushland with large trees.

Land owners and land managers must whenever possible retain their veteran and stag trees, which not only give character to the Australian landscape, but are crucial for the long-term survival of much of our wildlife.

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*Did you
know?*

... that before modern transport, a new species used to become established on Hawaii every 25,000 to 50,000 years - now one is recorded every 18 days. Global Invasive Species Programme