Trees With Hollows

What is a tree hollow?

Tree hollows are cavities formed in the trunk or branches of a live or dead tree. Such hollows are usually more characteristic of older, mature to over-mature trees but may form in earlier growth stages depending on tree species. Trees with hollows are termed 'habitat trees'.

Hollows usually take a long time to form, and in particular, large hollows may only occur in very large, old trees (100 – 150 years plus in age).

Hollows or cavities in trees are usually formed as a result of wind breakage, lightning strike or fire and/or due to termite, insect or fungal attack.

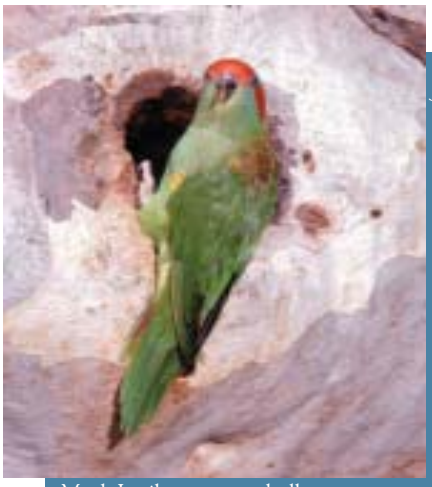
They may vary in size, both in cavity opening diameter and cavity depth and volume, from small openings of 2 – 6 cm to very large with entrance diameters of 18 – 30 cm or more.

Such diversity caters for the wide range of animal species which utilise tree hollows from small insectivorous bats weighing less than 10 grams to large forest owls such as the Powerful Owl, cockatoos such as the Glossy Black Cockatoo and possums such as the Squirrel Glider, Yellow-bellied Glider and Greater Glider.

Why are tree hollows important?

Trees provide resources for wildlife for foraging, shelter, roosting and nesting. However, trees which contain hollows are particularly important for those species of animals, including many threatened species, which specifically require such hollows for shelter and nesting. These animals are termed 'hollow-dependent' in that they require hollows as a key component of their habitat either on a daily or seasonal basis.

The importance of tree hollows for a range of animal species is well documented with an estimation that some 70 animal species occurring in forests of north-eastern NSW are hollow-dependent. These animals comprise some 20 bat species, 12 arboreal (tree living) mammal species, 26 bird species and 14 reptile species (Smith 1993).



Roly Paine

Musk Lorikeet at nest hollow

For these species the availability of hollow-bearing trees across the landscape is a key limiting factor to their on-going survival. The occurrence of a natural range of hollow sizes, depths, volumes and positions helps to ensure that a diversity of hollows is available to cater for the special ecological requirements of all of these animals.

Timber harvesting and clearing, particularly of older mature to over mature trees, can reduce the number of hollows available across the landscape.

Any decrease in the availability and natural diversity of hollows can lead to significant loss of hollow-dependent animal species diversity and abundance and in some cases may result in local extinction of these species.

For example, where older trees with hollows die out or are removed and regrowth trees prevail, animal diversity is drastically reduced.

Hollow-bearing tree definition

"A hollow-bearing tree is generally an old tree which is live or dead which contains one or more visible hollows (cavities within the trunk or branches) suitable for the occupation of hollow-dependent fauna as nesting, roosting and/or denning sites".

Photographs: John Turbill

Hollows may occur in tree branches as well as the trunk. Hollows also include fire scars in the butt of trees and fissures or cracks in the branches or the main trunk.

What can you do?

The retention of hollow-bearing trees, both in abundance of trees with hollows and their distribution across the landscape, is extremely important in retaining animal biodiversity. When undertaking routine agricultural activities efforts should be made to avoid and protect all hollow-bearing trees, including the retention of dead standing trees where ever possible.

Additionally, the retention of an adequate number of recruitment hollow-bearing trees across the landscape is important. Recruitment hollow-bearing trees are those trees which over time have the potential to develop hollows. This ensures that an adequate number of tree hollows will be available in the future to protect animal species diversity and abundance. Protecting a range of developing habitat trees to replace current hollow-bearing trees as they are lost through old age, fire or storm damage ensures continuity of an extremely important habitat resource.

In areas where natural tree hollows are scarce (e.g. forests with few older trees) nest boxes can be used as artificial hollows for many hollow dependent fauna species. Whilst nest boxes can increase habitat for many fauna species they should not be considered a replacement for natural tree hollows. For further information on nest boxes contact the DEC. Information on nest boxes is also available on the internet, for example the website: www.zoo.com.au/education/imagedir/nestboxes.pdf

References and Further Reading

- Smith, A (1993), *Habitat Tree Retention in the Wingham Management Area.* Report to Department of Planning, Sydney.
- Gibbons, P & Lindenmayer, D (2002), *Tree Hollows and Wildlife Conservation in Australia,* CSIRO.
- For a list of hollow-dependent fauna species refer to Advisory Note 8 "*Old Growth Forests on Private Land*".
- DEC website: www.environment.nsw.gov.au

John Turbill

Spotted Tailed Quoll - a threatened hollow dependent species.

Further Information

Environment Protection and Regulation Division
North East Branch
Department of Environment and Conservation
24 Moonee Street
COFFS HARBOUR NSW 2450
Phone: 6651 5946

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