

**OBSERVATIONS ON A NESTING HOLLOW OF YELLOW-TAILED BLACK COCKATOO, AND THE FELLED TREE THAT HOSTED IT, IN NORTH-EASTERN TASMANIA**

*Mark Wapstra<sup>1</sup> and Niall Doran<sup>2</sup>*

<sup>1</sup>Forest Practices Board, 30 Patrick Street, Hobart, Tasmania 7000  
Email: mark.wapstra@fpb.tas.gov.au

<sup>2</sup>Threatened Species Unit, Department of Primary Industries,  
Water & Environment, GPO Box 44, Hobart, Tasmania 7001

**INTRODUCTION**

The yellow-tailed black cockatoo (*Calyptorhynchus funereus* Shaw, 1794) is one of Tasmania's most familiar birds, its common name aptly describing its distinctive black plumage with yellow undertail. The species is gregarious and is usually seen in family groups or small parties and occasionally congregates in large flocks (Forshaw and Cooper, 1981). In north-eastern Tasmania, large flocks are a familiar sight and sound in areas of extensive softwood plantation.

The yellow-tailed black cockatoo is native to Tasmania and is widely distributed throughout the State (Brown and Holdsworth, 1992). It is nomadic and covers large distances in search for food, which comprises seeds, nuts, fruit or berries from a wide range of native trees and shrubs such as eucalypts, banksias, acacias and hakea but also a large range of insects and larvae, and seeds and nuts of introduced flora such as pines.

There are few reported observations of breeding behaviour of the yellow-tailed black cockatoo in Tasmania (Brown and Holdsworth, 1992) but the species is known to use large hollows in over-mature (often dead) eucalypts, in (primarily wet) sclerophyll forests. Haseler and Taylor (1993) provide information on a nest tree from dry sclerophyll forest in north-eastern Tasmania. Here we present observations of yellow-tailed black cockatoos using a tree hollow near Scottsdale in north-eastern Tasmania in 1999.

**OBSERVATION**

On 18<sup>th</sup> January 1999, on a mild clear day, in the early afternoon, a yellow-tailed black cockatoo was observed flying into a large hollow in a stag in riparian forest in north-eastern Tasmania. The bird emerged at the hollow entrance a few moments later and perched on a bole about one metre above the hollow entrance for several minutes. Two adult birds then flew onto the scene and started "attacking" the perched bird with their claws. The perched bird did not depart

but the two adult birds flew off and did not return in the observation period (30-45 minutes).

About one year later (on 3<sup>rd</sup> February 2000), the nest tree was found felled (presumably for firewood collection based on the type of cross-cutting that had occurred post-felling). Most of the tree was undamaged (apparently the felled tree was not suitable for firewood as it contained a significant amount of dry rot), which provided an opportunity to record the specific details of the hollow that had been observed in use the previous year (fortunately the tree had fallen hollow side up).

The details of the site, the tree and the hollow are provided below. The appearance of the tree and the hollow are shown in Figure 1.

*Location details*

**Site:** Ruby Creek south of Jensens Road about 5 km ENE of Scottsdale.

**Grid reference:** Scottsdale Tasmap (5444) 548700m E 5445100m N (AGD).

**Vegetation:** *Eucalyptus obliqua*, *E. ovata* and *E. amygdalina* over dense *Melaleuca squarrosa*, *Acacia verticillata* and *Todea barbara*.

**Topography:** Gently-sloping riparian zone in a north-east flowing stream.

**Altitude:** Approximately 170 m a.s.l.

*Tree characteristics* (see Figure 1)

**Tree species:** unknown (entirely dead) but most likely to be *Eucalyptus obliqua* (the dominant eucalypt in the riparian zone).

**Condition of tree:** Dead.

**Tree height:** Approximately 40 m.

**Diameter at breast height over bark:** Approximately 120 cm.

**Height at base of hollow:** Approximately 26 m.

**Aspect of hollow:** southwest.

*Hollow characteristics* (see Figure 1)

**External (max.) height:** 56 cm.

**External (max.) width:** 30 cm.

**Diameter of bole at lowest point of hollow:** 72 cm.

**Diameter of bole at midpoint of hollow:** 80 cm.

**Wall thickness (where measurable near hollow entrance):** 12.5 cm, 9.5 cm, 5.5 cm, 13 cm, 12 cm.

**Depth of hollow:** difficult to measure exactly due to condition of tree (part disintegrated on felling) but a minimum of 65 cm below lowest external point of hollow.

---

NESTING HOLLOW OF YELLOW-TAILED BLACK COCKATOO

---

**Appearance of hollow entrance:** natural shape with evidence of beak marks.

**Internal appearance:** base of hollow filled with dry crumbly rotten wood, evidence from chainsaw crosscuts below hollow indicates that much of the trunk below the hollow was filled with dry rot.



**Figure 1.** The tree and its hollow occupied in 1999 by a yellow-tailed black cockatoo near Scottsdale, north-eastern Tasmania.

### DISCUSSION

The yellow-tailed black cockatoo is one of the largest members of the tree hollow-dependent fauna in Tasmania. It uses large hollows in over-mature eucalypts and it is likely that nest trees are greater than about 150 years old (Nelson and Morris, 1994; Higgins, 1999). Hollow-dependent fauna are particularly susceptible to the potential effects of forestry activities that can result in a reduction

in the number and distribution of suitable hollow-bearing trees (Gibbons and Lindenmayer, 2002). In the case of the yellow-tailed black cockatoo, aspects of its breeding biology may exacerbate the potential impacts of forestry activities that reduce hollow availability. These include the fact that there may be only about 90 breeding pairs within north-eastern Tasmania (Fox and Brereton, 2004), the species is long-lived with a slow rate of reproduction and low mortality (Forshaw and Cooper, 1981), and they may return to traditional breeding areas annually (Higgins, 1999) and attempt to breed, even after major disturbance (Saunders, 1982).

Firewood harvesting is a significant activity in Tasmanian forests, and has been identified as a significant threat to hollow-dependent fauna (Bryant, 2002). Both commercial and domestic firewood collection often target the types of trees used by hollow-dependent fauna (i.e. over-mature trees or standing dead trees). While commercial firewood collection must occur in accordance with the provisions of the *Forest Practices Code 2000* (Forest Practices Board, 2000), which includes provisions to manage “habitat trees”, our observation highlights the potential impact of illegal or opportunistic firewood collecting on sensitive species such as the yellow-tailed black cockatoo (for which there are few known nest sites).

## REFERENCES

- Brown, P.B. and Holdsworth, M.C. (1992). The status of cockatoos in Tasmania. *Tasmanian Bird Report* **21**: 4-12.
- Bryant, S. (2002). Impact of Clearing Old Growth Elements on Tasmania’s Woodland Vertebrates. In *Firewood Conferences. Papers Presented: A Burning Issue, Bendigo June 2000 and Armidale May 200; A Biodiversity, Consumer and Human Health Issue, Launceston June 200; No Smoke Without Fire, Adelaide June 2002*. Natural Heritage Trust Bushcare National Projects.
- Forest Practices Board (2000). *Forest Practices Code 2000*. Forest Practices Board, Hobart.
- Fox, J. and Brereton, R. (2004). Yellow-tailed black cockatoo (*Calyptorhynchus funereus*). In *Linking Landscape Ecology and Management to Population Viability Analysis, Report 2: Population Viability Analyses for Eleven Forest-Dependent Species*. A report by the University of Melbourne, prepared for Forestry Tasmania.
- Forshaw, J.M., and Cooper, W.T. (1981). *Australian Parrots*, 2<sup>nd</sup> Edition. Lansdowne, Melbourne.
- Gibbons, P., and Lindenmayer, D. (2002). *Tree Hollows and Wildlife Conserva-*

---

NESTING HOLLOW OF YELLOW-TAILED BLACK COCKATOO

---

- tion in Australia*. CSIRO Publishing, Collingwood.
- Higgins, P.J. (ed.). (1999). *Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbird*. (Oxford University Press, Melbourne).
- Nelson, J.L., and Morris, B.J. (1994). Nesting requirements of the yellow-tailed black-cockatoo, *Calyptorhynchus funereus*, in *Eucalyptus regnans* forest, and implications for forest management. *Wildlife Research* **21**: 267-278.