

BLACK COCKATOO BREEDING HOLLOW INSPECTION, COATES GULLY, WUNDOWIE.

Tony Kirkby

The purpose of the survey was to undertake a detailed inspection of possible black cockatoo *Calyptorhynchus* spp. breeding hollows. The hollows were located at the Great Eastern Highway, Coates Gully, Wundowie. All hollows assessed were located in a previous survey undertaken by Biologic 2021.

General black cockatoo information.

Three species of black cockatoo occur in the south west of Western Australia, Carnaby's Cockatoo *Calyptorhynchus latirostris*, Baudin's Cockatoo *C. baudinii* and the Forest Red-tailed Black Cockatoo *C. banksii naso*. Carnaby's and Baudin's Cockatoos are known collectively as 'white-tailed black-cockatoos'.

Both Baudin's and Carnaby's Cockatoos are listed (Endangered) under the *Biodiversity Conservation Act 2016* (BC Act), and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Forest Red-tailed Black Cockatoo is listed as Vulnerable under the BC Act and the EPBC Act.

All three species occur at the survey area but only Carnaby's Cockatoo and Forest-Red tailed Black Cockatoo breed in the region. The nearest known breeding of Baudin's Cockatoo occurs approximately 140 km to the south at the 31 Mile Brook area.

Possible breeding trees in the survey area.

To be large enough to provide a breeding hollow for black cockatoos most trees need to have reached a Diameter at Breast Height (DBH) of 500mm. The exceptions are Salmon Gum *Eucalyptus salmonophloia* and Wandoo *Eucalyptus wandoo* which require 300mm DBH (*Department of the Environment and Energy, 2017*). The hollows need to have an entrance size of at least 120mm diameter and lead to a suitably sized and sheltered nest chamber of approximately 300mm diameter or larger.

Trees at the survey area which could provide a black cockatoo breeding hollow are Marri *Corymbia calophylla*, Jarrah *Eucalyptus marginata* and Wandoo *E. wandoo*.

Methods and timing.

Hollows were first inspected from ground level for signs of use such as chewing or wear at the hollow entrance. Hollows which were deemed suitable were then inspected using a pole camera if it was safe to do so.

The survey was undertaken on the 8th and 9th June 2021.

Personnel.

The survey was undertaken by Tony Kirkby who has over twenty years of experience conducting black cockatoo surveys in the south-west of Western Australia.

Results. Tree numbers from Biologic 2021.

A total of 70 hollows located in 40 trees were assessed. Note that four trees, 001, 015, 134 and 137 were lost to fire since the original survey.

49 hollows were too small at the entrance (<120 mm diameter) to be used by black cockatoos as a breeding hollow.

21 hollows had apparent suitable entrances when viewed from ground level.

One was horizontal and unsuitable.

When inspected with a pole camera, 17 were found to be blocked and not actual hollows or had insufficient floor space.



Example of shallow blocked hollow. Tree 326.

A hollow in Wandoo tree 229 had a suitable and worn entrance and is possibly a black cockatoo breeding hollow. The hollow was too close to powerlines to be inspected with a pole camera.



Hollow in tree 229.

A hollow in Jarrah tree 289 had a suitable hollow with slight chewing at the entrance is possibly a black cockatoo breeding hollow. Due to high winds and dead branches the hollow could not be inspected with a pole camera.



Hollow with chewing at entrance. Tree 289.

A hollow in Wandoo tree 138 had a good entrance and was chewed at the entrance and internally. It is highly likely to be a black cockatoo breeding hollow.



Chewing at hollow entrance. Tree 138.

A hollow in Wandoo tree 171 had a good entrance and was chewed at the entrance and internally and is highly likely to be a black cockatoo breeding hollow.



Hollow in tree 171.

Tree details and locations.

Tree number	Species	Coordinates		No. hollows	T. Kirkby comments
TCOG-001	Wandoo	-31.76717	116.40465	0	Tree lost to fire
TCOG-015	Wandoo	-31.76697	116.40862	0	Tree lost to fire
TCOG-068	Unknown dead	-31.77869	116.39606	1	Hollow too small
TCOG-082	Unknown dead	-31.79399	116.38536	1	Too small - not a hollow
TCOG-091	Jarrah	-31.79051	116.38875	1	Hollow too small
TCOG-092	Jarrah	-31.79047	116.38879	1	Hollow too small
TCOG-130	Wandoo	-31.80735	116.36377	1	Hollow too small
TCOG-134	Wandoo	-31.76723	116.40449	0	Tree lost to fire
TCOG-137	Wandoo	-31.76741	116.40416	0	Tree lost to fire
TCOG-138	Wandoo	-31.76832	116.40255	5	1 likely breeding hollow and 4 too small
TCOG-140	Wandoo	-31.76851	116.40229	1	Hollow too small
TCOG-142	Wandoo	-31.76847	116.40212	1	Hollow too small
TCOG-148	Wandoo	-31.76878	116.40172	2	Hollows too small
TCOG-158	Wandoo	-31.76964	116.4013	3	1 blocked hollow and 2 too small
TCOG-159	Wandoo	-31.77001	116.40131	4	Hollows too small
TCOG-160	Wandoo	-31.76996	116.40116	1	Hollow too small
TCOG-171	Wandoo	-31.7712	116.40086	4	1 small hollow, 2 blocked, 1 Likely breeding hollow
TCOG-173	Wandoo	-31.77155	116.40088	1	Hollow too small
TCOG-184	Wandoo	-31.78724	116.39128	2	1 too small. 1 Grass growing from hollow/blocked
TCOG-194	Wandoo	-31.79021	116.38948	5	2 blocked hollows and 3 too small
TCOG-196	Wandoo	-31.78933	116.38989	2	1 hollow with no floor space. 1 horizontal and unsuitable
TCOG-205	Unknown dead	-31.79096	116.3891	1	Not a hollow. Grass growing from hollow
TCOG-206	Unknown dead	-31.79182	116.38866	1	Hollow too small
TCOG-211	Wandoo	-31.79321	116.38686	1	Hollow too small
TCOG-213	Wandoo	-31.79381	116.38627	3	Hollows too small
TCOG-214	Wandoo	-31.79384	116.38621	4	Hollows too small

TCOG-217	Wandoo	-31.79415	116.38591	2	Pruned stumps - no hollows
TCOG-218	Wandoo	-31.79426	116.38578	2	Small parrot hollows only
TCOG-229	Wandoo	-31.79638	116.38352	1	Hollow with good entrance - worn. Possible breeding hollow
TCOG-231	Wandoo	-31.79668	116.38319	1	Hollow too small
TCOG-267	Marri	-31.7694	116.42029	1	Hollow too small
TCOG-276	Marri	-31.76896	116.42137	2	2 blocked hollows
TCOG-289	Jarra	-31.76714	116.42365	1	Possible hollow. Slight chewing at entrance
TCOG-303	Jarra	-31.76594	116.42294	1	Blocked - not a hollow
TCOG-326	Wandoo	-31.76705	116.42297	1	Blocked - not a hollow
TCOG-350	Wandoo	-31.76417	116.43025	1	Blocked - not a hollow
TCOG-357	Marri	-31.76644	116.42658	2	2 blocked - not hollows
TCOG-393	Wandoo	-31.75986	116.43467	1	Too small internally. Uneven floor
TCOG-421	Unknown dead	-31.75785	116.43757	1	Hollow too small
TCOG-426	Marri	-31.75758	116.43797	1	Hollows too small internally
TCOG-441	Wandoo	-31.76666	116.40644	1	Blocked - not a hollow
TCOG-452	Unknown dead	-31.76757	116.424	3	Hollows too small
TCOG-475	Marri	-31.76018	116.43483	1	No hollow - pruned and healing stump
TCOG-490	Unknown dead	-31.75886	116.4365	1	Hollow too small

12th July 2021