



Department of  
Environment and  
Conservation

Our environment, our future

## RECOVERY TEAM ANNUAL REPORT

### THREATENED SPECIES AND/OR COMMUNITIES RECOVERY TEAM

#### PROGRAM INFORMATION

##### Recovery Team

Carnaby's Black-Cockatoo Recovery Team

##### Reporting Period

Submission date 31 March

DATE FROM: 1 January 2012

DATE TO: 31 December 2013

#### Current membership

	Member	Representing
<b>Chair</b>	David Mitchell	DEC, Swan Region
<b>Exec Officer</b>	Geoff Barrett	DEC, Swan Region
<b>members</b>	Alison Doley	Community/landowner, Koobabbie, Coorow
	Peter Mawson	Perth Zoo
	Rick Dawson	DEC, Nature Protection Branch
	Ron Johnstone	WA Museum
	Brett Beecham	DEC, Wheatbelt Region
	Manda Page	DEC Species and Communities Branch
	John Ingram	CSIRO
	Cheryl Gole	BirdLife Australia
	Stephen Davies	Murdoch University & Curtin University
	Brad Barton	DEC, Warren Region
	Tracey Scroop	Dept. Planning
	Christine Groom	DEC Species and Communities Branch
	Kath Howard	World Wide Fund for Nature
	Kim Williams	DEC, South West Region
	Anthony Desmond	DEC, Mid West Region
	Sarah Comer	DEC, South Coast Region

<p><b>Dates meetings were held</b></p>	<p>7th February 2012 and 7th August 2012</p>
<p><b>Highlights of achievements</b> for the previous 12 months suitable for publication in <i>WATSNU</i> and contribution to DEC annual report. Provide 1-2 paragraphs summarising total number of new populations located, surveys completed, list major management actions etc</p>	<p><b>Recovery Plan:</b></p> <ul style="list-style-type: none"> <li>• After several years, and several authors, a new recovery plan for Carnaby's cockatoo was completed in 2012 and endorsed as Western Australian Wildlife Management Program No. 52. This plan has also been forwarded to the Commonwealth SEWPAC for endorsement as a recovery plan under the EPBC Act. It is thought that this endorsement will occur during 2013 following assessment by the Commonwealth Threatened Species Scientific Committee and a period of public comment.</li> </ul> <p><b>Great Cocky Count:</b></p> <ul style="list-style-type: none"> <li>• The fourth Great Cocky Count was held in April 2012, with 206 sites surveyed by 252 volunteers, including 48 sites surveyed outside the DEC Swan Region (new roosts). 39 new sites confirmed as roosts across the southwest, 19 of these within Swan Region, and 31% of sites surveyed found to be occupied on the night of the GCC (64 sites 206 sites).</li> <li>• Numbers of roosting birds were similar to the 2011 count in the DEC Swan Region (around 4,000 birds counted). This is still down on the 2010 count of 6,600 birds. The number of birds per roost was also similar to 2011 (114 birds), there being a slight increase in larger roosts since 2011. Monthly follow-up surveys were also held. The next Great Cocky Count was on April 7th 2013 and will continue to promote roost counts outside of the DEC Swan Region.</li> </ul> <p><b>Revegetation projects:</b></p> <ul style="list-style-type: none"> <li>• BirdLife Australia CfOC Perth Region NRM Carnaby's Cockatoo revegetation and habitat management and protection project is underway, prioritizing sites for restoration, for example, planting food species close to Carnaby's Cockatoo roosts, Working with local governments and community groups, WALGA, DEC and Curtin University. In 2012 approximately 95 ha of Carnaby's feeding habitat was improved by providing management advice (and also some tree planting).</li> <li>• The ongoing BirdLife "South Coast Project" is a program of retention and increase of feeding habitat near breeding areas. During 2012 this project worked to protect breeding and feeding habitat of Carnaby's habitat in 1500ha over 25 properties in the southern Wheatbelt.</li> <li>• A Masters research project was completed in late 2012 (2013), looking at food preferences of Carnaby's cockatoo from Yanchep to south Waroona (48 transects). All habitats are currently being used and 80% of what is handled by Cockatoos is consumed. Many more seeds being consumed per bird than originally thought (e.g. &gt; 100 banksia cones per bird per day). During drought years, many more cones required per bird because of the poor seed set.</li> <li>• The number of road killed Carnaby's cockatoos is increasing. Road warning signs were designed and have been erected in some hot spots. Additional liaison with Main Roads WA to identify "black spots" where Carnaby's cockatoo are being hit by cars for signage purposes.</li> </ul>
<p><b>List of recovery actions coordinated by Recovery Team</b> Detail under the headings below the recovery actions undertaken during the reporting period. Provide separate detail for each species/community against each action. For species/community-specific recovery teams, the generic activity types below can be replaced by the specific recovery actions from the recovery plan where appropriate.</p>	

Recovery actions for 2012 were taken from the Carnaby's black-cockatoo (*Calyptorhynchus latirostris*) Recovery Plan 2002-2012 (Western Australian Wildlife Management Program No. 36. Cale, B. (2003). This recovery plan had five primary strategies as outlined below.

During 2013 a new recovery plan was completed for Carnaby's cockatoo which will provide the basis of future recovery actions.

**Habitat management within priority breeding areas**

- **Identify priority areas**
- **Management of breeding habitat within priority areas**
- **Management of feeding habitat within priority areas**

**Working with rural landowners:**

- The ongoing BirdLife "South Coast Project" includes a program of retention and increase of feeding habitat near breeding areas.
- This BirdLife project, also referred to as 'Carnaby's Black-Cockatoo recovery in a globally significant IBA (Important Bird Area)', is currently working to protect breeding and feeding habitat of Carnaby's habitat in 1,500ha over 25 properties (Sandra Gilfillan). Area that actual on-ground works are taking place in is 700ha, within the southern Wheatbelt IBA and the number of farmers involved is 18.
- Actions completed to date (2012 period):
  - Nesting surveys completed, identifying three new breeding sites and 10 new feeding sites.
  - Carried out site and property assessments across 25 properties.
  - Priorities for action have been identified.
  - Nest competitor control is occurring at one key site (mostly galah control).
  - Fencing of important habitat and revegetation works are underway at five priority sites (on five properties).
- There were no nest hollow repairs in 2012, this was however, identified as a priority and so BirdLife will gear up for 2013 hollow repair and maintenance work.
- Galah, corella and other nest competitor culls ongoing in some sites.
- Competition with honey bees is still a major problem affecting hollow availability but also causing chick deaths. Feral bee trials have not progressed during 2012.
- BirdLife has engaged a contractor to establish photo monitoring points at sites in the southern Wheatbelt where recovery actions have been previously undertaken, and gather anecdotal evidence from relevant landowners, on the level of use by Carnaby's of the revegetation sites.

**Land acquisition:**

- Through the development offset process, 14 land purchases have occurred, bringing a total of 9,803 hectares of Carnaby's Cockatoo habitat into the conservation estate (from private land).

**Management of feeding habitat in non-breeding areas**

- **Native feeding habitat**
- **Non-native feeding habitat**

- The BirdLife Australia State NRM project 'Conserving Black-Cockatoos on the Swan Coastal Plain (SCP, Tamra Kabat) is focussed on improving habitat management for cockatoos at seven key roost sites and nest locations on the SCP. The target is to improve management across 300ha, working with the Dieback Working Group (DWG). BirdLife's work on Carnaby's habitat improvement is focussed in 95ha, the rest of the area is the focus of the DWG.
- A Masters research project completed in late 2012 (2013), looking at food preferences of Carnaby's cockatoo from Yanchep to south Waroona (48 transects). All habitats are currently being used and 80% of what is handled by Cockatoos is consumed. Many more seeds being consumed per bird that

	<p>originally thought (e.g. &gt; 100 banksia cones per bird per day). During drought years, many more cones required per bird because of the poor seed set.</p> <p><b>Restoration and improvement of habitat:</b></p> <ul style="list-style-type: none"> <li>• The Jandakot Banksia Woodland Restoration project is a large offset project that has restored 16 ha of banksia woodland through topsoil transfer and planting of a further six hectares of Carnaby's feeding habitat (banksia woodland). Over the next three years, the project will create approximately 40 hectares of Carnaby's habitat, control weeds over approximately 800ha and fence approximately 1,000ha of carnaby's feeding habitat.</li> <li>• The DEC Jandakot Banksia Woodland Restoration project is currently carrying out a number of trials to identify best practice for restoring (creating) banksia woodland in collaboration with Murdoch University, trials are underway to establish best practice for restoring banksia woodland through topsoil transfer and planting. Trails are also under way to identify dieback resistant banksia strains.</li> </ul>
<p><b>Monitoring of population</b></p>	<p><b>Monitoring breeding populations:</b></p> <ul style="list-style-type: none"> <li>• Monitoring of breeding success by DEC, BirdLife Australia and Murdoch University (Kris Warren) of breeding sites has continued across five sites (including Coobabbi, Raffin's property, Campbells and Kokanup)</li> <li>• Screening of chicks in nests for viral infections such as Chlamydia or beak and feather disease (a significant threatening process). Results to date indicate a 4.7% infection rate. The implications of this infection rate are being investigated.</li> <li>• As part of BirdLife's Carnaby's Black-cockatoo Recovery project, nesting surveys were carried out at 45 locations (36 sites outside of the south-eastern Wheatbelt). Six new breeding sites were identified as well as three new potential breeding sites.</li> <li>• Sometimes Carnaby's return to the same sites to breed but not always, so they may need many breeding sites. At Koobabbi, there were 30 breeding pairs in 2009 but only seven pairs left in 2012, seven birds were found dead in Oct 2012. Further tests are still underway to determine cause of death.</li> <li>• The WA Museum has been carrying on with monitoring of breeding birds at Kataby and Bindoon for seven years now, no young birds have returned (with bands).</li> </ul> <p><b>Monitoring movements:</b></p> <ul style="list-style-type: none"> <li>• Birds Australia trials of radio transmitters on captured Carnaby's Cockatoos were successful (Anna LeSouef, Perth Zoo). The harnesses and radio-transmitters worked well: no birds lost weight (data for 9 to 15 birds) and time to failure was (average) 62 days for tail mounts (up to 287 days), average 174 days for harnesses (up to 527 days). Snagging seems minimal, but snagging in the wild will be much harder to predict. Tail mounts are safest, placed on birds after moulting. Satellite transmitters are too large for tail mounting. Feathers will cover solar panels if mounted on harnesses.</li> <li>• Christine Groom (PhD UWA) is working with Murdoch Uni (Kris Warren) towards a large-scale movement study for Carnaby's Cockatoos using 17g solar powered, satellite transmitters.</li> <li>• As part of this PhD thesis, nine tail-marked birds released, 40% of fixes are within 300m, total of 3,500 fixes. Birds show some roost site fidelity but foraging site fidelity is stronger than that for roost sites. Two birds collected on the scarp (Mundaring) moved to Avon Valley. Birds regularly move up to 12km from Yanchep roost into pines to feed. Results show that these rehabilitated birds are able to return to the wild, all birds surviving and re-integrating back to flocks. Tracking devices resulted in a new</li> </ul>

roost discovered in Rolystone Park. The long-term intention of Perth Zoo is to track all three species of black cockatoo.

- DEC and BirdLife Australia are continuing to band Carnaby's and have encouraged people to report and possibly photograph banded birds.

#### **Monitoring populations:**

- The BirdLife Australia State NRM project 'Conserving Black-Cockatoos on the Swan Coastal Plain (SCP, Tamra Kabat) also includes the running of the 2012 Great Cockey Count (GCC).
- The Great Cockey Count, run in partnership with DEC, was held in April 2012, which was the third of the formal Cockey Counts (2010, 11 and 12, see previous section for more details). These roost surveys are ongoing and in 2012 were extended outside the DEC Swan Region. Monthly follow-up roost surveys have been carried out to better understand seasonal variation in the number of roosting birds. A report has been produced with the results from the survey (Kabat et al., 2012. 2012 Great Cockey Count: Identification of roost sites for Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) and population count for the DEC Swan Region, BirdLife Australia, Floreat, Western Australia.
- The 2012 Great Cockey Count included 141 confirmed roosts across the southwest, 206 sites surveyed by 252 volunteers, 48 sites surveyed outside the DEC Swan Region (new roosts), 39 new sites confirmed as roosts across the southwest, 19 of these within Swan Region, and 31% of sites surveyed found to be occupied on the night of the GCC (64 sites 206 sites).
- Numbers of roosting birds were similar to the 2011 count in the DEC Swan Region (around 4,000 birds counted). This is still down on the 2010 count of 6,600 birds. The number of birds per roost was also similar to 2011 (114 birds), there being a slight increase in larger roosts since 2011 (just a trend). Monthly follow-up surveys were also held.
- The push towards monitoring roosts across the whole range of the species will continue.
- Recording the proportion of triplets (groups of three birds) flying into the roosts, gives an indication of breeding success. The proportion of triplets has remained constant across the three Cockey Counts.
- Funding has been secured for a 2013 Great Cockey Count. The next Great Cockey Count was on April 7th 2013 and will continue to promote roost counts outside of the DEC Swan Region.

#### **Population structure:**

- Murdoch University (Kris Warren) and Perth Zoo (Anna Le Souef) have analysed age structure of the Carnaby's Cockatoo population. Analysis based on based pentosidine analysis of 53 birds of known age, and tested on 258 samples over 18 months (Jan 2011 to Aug 2012). The curve has been found to have an accuracy of  $\pm 2$  years (very accurate).
- Murdoch is developing the capacity to develop the testing themselves (rather than sending to USA). All birds that come through the Zoo are now tested.
- Ratio of male to female was 50:50, same as for nestlings. 27% of the sampled birds were immature (<4 years old) and 73% were adult (>4 years old). Plenty of juvenile recruitment (72% birds <15 years old). This age pyramid is 'bottom-heavy' and suggests both high juvenile and high adult mortality.

<p><b>Community involvement</b></p>	<p><b>DEC Website:</b></p> <ul style="list-style-type: none"> <li>• An information and resources web page for Carnaby's Cockatoos has been maintained and updated: <a href="http://www.dec.wa.gov.au/carnabys">www.dec.wa.gov.au/carnabys</a></li> <li>• A significant amount of the Recovery Team's community involvement is delivered through the Birds Australia (WA) Carnaby's Cockatoo Recovery Project, which has a number of initiatives predicated on participation by private landowners in conservation of Carnaby's cockatoo on their own property, and some of the works involve volunteers travelling to Carnaby's cockatoo areas to carrying out surveys.</li> <li>• Carnaby's cockatoo is a charismatic visitor to the Perth metropolitan area and promotes significant public interest. Around 700 volunteers (in total) having assisted with the 2010, 2011 and 2012 Great Cocky Count roost surveys.</li> <li>• The recovery team members deal with many queries about the Carnaby's cockatoo and Nature Protection Branch staff and wildlife carers also deal with injured birds. Also, the presence of Carnaby's cockatoo in areas proposed for development is of increasing interest to the community.</li> </ul> <p><b>Food for Carnaby's:</b></p> <ul style="list-style-type: none"> <li>• The BirdLife Australia State NRM project 'Conserving Black-Cockatoos on the Swan Coastal Plain (SCP, Tamra Kabat) included the creation of a Cockatoo forage and roost plant nursery label. (This label was launched in April 2013).</li> <li>• Birdlife newsletter Cocky Notes was produced and distributed to approximately 1700 recipients</li> </ul>
<p><b>Captive-breeding program</b></p>	<ul style="list-style-type: none"> <li>• There was no captive breeding coordinated by DEC or the recovery team for the recovery of the species during 2012.</li> <li>• The program of management and rehabilitation of injured and 'derelict' birds was continued by staff from DEC, Perth Zoo, and licensed aviculturists. With approximately 40 released a year, the rest going into care or dying.</li> </ul>
<p><b>Management of other threats</b></p>	<p><b>Department of Main Roads:</b></p> <ul style="list-style-type: none"> <li>• The number of road killed birds appears to be increasing. Over 100 birds a year (Kris Warren Murdoch) are brought into care after car strikes.</li> <li>• Negotiations with Main Roads WA continue for the placement of signs at key locations where Carnaby's cockatoo continue to be killed (e.g. Chester Pass Rd in Stirling Ranges).</li> <li>• Main Roads has also been approached by the recovery team regarding the clearing of roadside vegetation including feeding and breeding habitat for Carnaby's cockatoo. They are now aware of the issue and ready to work with DEC districts and Local Government.</li> </ul> <p><b>Orchardists:</b></p> <ul style="list-style-type: none"> <li>• The recovery team is updating DEC information notes on the management of black cockatoos in plantations to include further guidance for nut plantations which can be impacted by Carnaby's cockatoo. Working with DAFWA and WALGA to develop notes, distribute them to key bodies.</li> <li>• A potential area of possible future conflict is with almond growers and other nut crop orchardists. Discussions have begun between growers and Local Government about ways to reduce</li> </ul>

	<p>this conflict and see a pest management strategy developed.</p> <ul style="list-style-type: none"> <li>• Ideally new plantations should require a fauna mitigation strategy before planning or environmental approvals are granted.</li> </ul> <p><b>Statutory land use planning:</b></p> <ul style="list-style-type: none"> <li>• Black cockatoos are a very significant factor in the joint State and Commonwealth project to prepare a Strategic Assessment under the EPBC Act of development in the Perth and Peel regions. The strategic assessment is aimed at protecting Carnaby's cockatoo in the Perth and Peel regions and provides an opportunity to achieve whole of landscape and strategic outcomes for the species.</li> <li>• The maps of potential feeding, roosting and breeding habitat are currently being used by land use planners to mitigate the impacts of development on Carnaby's.</li> </ul> <p><b>Bird deaths:</b></p> <ul style="list-style-type: none"> <li>• Several unexplained groups of Carnaby's cockatoo deaths were reported, which may be poisoning incidents. Unclear whether poisoning birds affected by organophosphates with birds still being analysed at Perth Zoo. Eight birds brought in alive and treated, four died, 14 brought in dead. 18 tested for organophosphites, all negative. Testing for carbonates (which causes paralysis) underway.</li> </ul>
<p><b>Recovery plans</b> e.g. recovery plans/ IRPs drafted, approved, reviewed or updated</p>	<p><b>Rewrite of the recovery plan:</b></p> <ul style="list-style-type: none"> <li>• In 2012 a new recovery plan for Carnaby's cockatoo was completed and endorsed as Western Australian Wildlife Management Program No. 52. This plan has also been forwarded to the Commonwealth SEWPAC for endorsement as a recovery plan under the EPBC Act. It is thought that this endorsement will occur during 2013.</li> </ul>