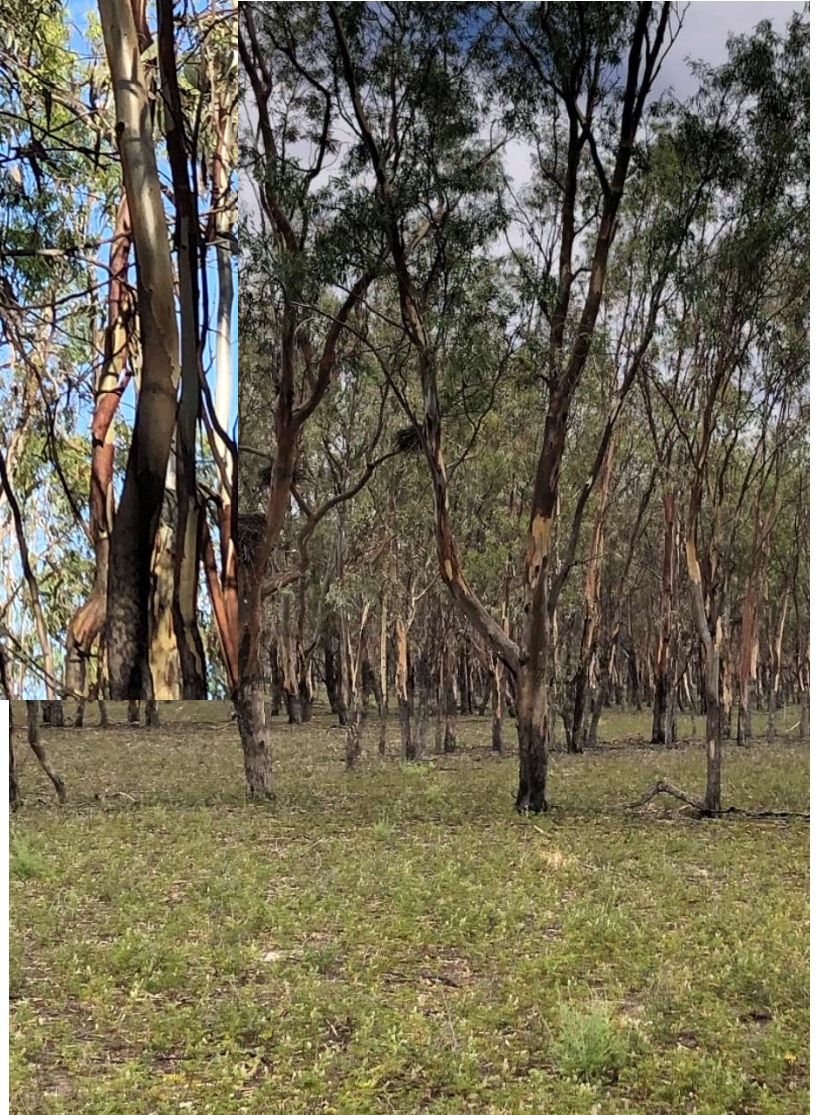




Mallee Catchment Management Authority

Assessing nest sites of colonial nesting waterbirds
Hattah Kulkyne National Park. Project 3046-3128

April 2021

Assessing nest sites of colonial nesting waterbirds - Hattah Kulkyne National Park. Project 3046-3128. March 2021

Client report for the Mallee Catchment Management Authority.

Cnr Eleventh St and Koorlong Ave. Mildura. Victoria 3500. 03 5051 4377.

Cover photos: colonial waterbird nests at Lakes Yelwell (left) and Lake Konardin (right).



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Executive summary

This report describes the targeted survey of colonial nesting waterbird nests at 19 lakes across the Hattah-Kulkyne National Park in late 2020 and early 2021. The surveys were commissioned by the Mallee CMA, following the delivery of environmental water to the Hattah Lakes in recent years, and observations of nest building and breeding of cormorant species in some of the lakes. At the time of inundation, access to many of the lakes was cut off, and only a partial record of the nesting sites at Hattah was documented, with the extent of nesting through the broader lake system unknown. All but one of the lakes (Lake Kramen) are currently dry, and although cormorants are no longer nesting at these sites, nests from previous seasons remain visible. This has provided the opportunity to thoroughly search the lake system for evidence of past nesting sites and to provide an indication of nesting density at those sites. In addition, the inundated Lake Kramen was assessed for current nesting activity, as well as evidence of previous nesting. By mapping nest site locations and densities, future watering events may be planned to provide the appropriate hydrological cues needed to improve breeding outcomes for cormorants and other species of colonial nesting waterbirds.

The development of water resources for water extraction has degraded wetlands across the world, and in Australia this has been particularly true across the Murray-Darling Basin. Intensive management has changed natural flow regimes, affecting aquatic organisms, including colonially breeding waterbirds and their prey, that rely on periodic wetland inundation, reducing the frequency of breeding opportunities and impacting reproductive success. To overcome some of the impacts of water resource development, there has been an increasing focus on the management of environmental flows for ecosystems and specific groups of organisms. Colonial nesting waterbirds are an important target group for the management of environmental flows, providing a measure of the success or failure of environmental flow management. The success of breeding events in wetlands may be used as a measure of overall wetland health, as successful breeding by these species indicates the presence of a wide range of aquatic organisms upon which the birds feed.

Wetting and drying cycles of the Hattah Lakes system in northern Victoria are now largely dependent on environmental flows. The lack of connectivity between the lakes and the Murray River, and the complete drying of the lakes in the past decade has had detrimental effects on the Hattah Lakes ecosystem and its ability to act as a refuge during prolonged drought. The completion of the Hattah Lakes The Living Murray project in 2013 has allowed the implementation of broad scale environmental watering to mitigate the effects of the reduced frequency of natural flooding, by inundating the Hattah Lakes Icon Site.

The 2020/21 targeted surveys of colonial nesting waterbird nests recorded a total of 1,973 nests, with 1,917 classified as communal nesting waterbird nests, 51 as nests of other waterbird species and 5 White-bellied Sea-eagle nests. These large numbers of nests clearly show the importance of the Hattah Lakes system as an area for waterbird breeding, and a refuge for waterbirds during dry times, with very little water present in other wetland systems of the Murray-Darling Basing during this period. Lakes varied greatly in abundances of nests, ranging from no nests at Lake Nip Nip and one at Lakes Mournpall and Tullamook, to 205 at Lake Konardin, 209 at Lake Yelwell, 317 at Lake Hattah and 739 at Lake Cantala.

Mapping of nest locations using heat maps provided a clear visual representation of the distribution of nests and colonies across the study area, with a generally broad spread of nesting activity across the Hattah Lakes area, with clear areas of intensive nesting activity. Dense colonies were typically found within or close to the inlet/outlet areas of the lakes, along narrow peninsulas which project into the lake areas, and overflow areas adjacent to the main lake waterbodies. The basis of the distribution of the nesting colonies can only be speculated

on, but may relate to those areas containing more suitable nesting habitat in the form of preferentially sized, oriented and shaped trees, or more likely, occurred in areas of higher prey concentrations, reducing travel distance for breeding adult birds.

Surveys of the wet Lake Kramen recorded high diversity and abundances of waterbirds, likely driven in part by the scarcity of other waterbodies in the area at this time. Five waterbird species were recorded breeding during the surveys, and five waterbird species listed as threatened in Victoria and/or Nationally were also recorded. These numbers and diversity suggest that Lake Kramen is providing an important refuge for these species, during a generally dry period with very few wetlands across the region containing water at present.

Following the comprehensive survey of old colonial nesting waterbird nests, future surveys may use this information to target areas with previous records, large colonies and high densities. Monitoring of actively breeding waterbird colonies could be completed from kayak/canoe and has the potential to provide data on not only the numbers of nests, but the species and their breeding success. Water-based surveys are likely to be more time consuming than dry surveys as accessing the lakes. Surveys of breeding activity would provide greater certainty to the species that are breeding within the Hattah Lakes, and allow records of other waterbird breeding activity, including ducks and grebes and potentially cryptic species such as Crakes, Rails and Bitterns.

It is clear that a large number of nests from a range of colonial nesting waterbird species are present within the Hattah Lakes system, and that environmental watering is providing a significant and important habitat for colonial waterbird nesting. These nests undoubtedly represent a number of events from a range of years, and some are likely to have been used multiple times during the recent wet periods. While particular species and absolute numbers of successful nests cannot be accurately estimated, these are clearly large and important from a local, state, and likely Murray-Darling basin wide scale for a number of waterbird species.

Future monitoring, if completed during breeding, may provide greater certainty to the species that are breeding within the Hattah Lakes, the success rates of these nests, and inform what drives the timing and locations of nesting colonies.

Abbreviations

CMA	Catchment Management Authority
DoAWE	Commonwealth Department of Agriculture, Water and the Environment
DELWP	Victorian Department Environment, Land, Water and Planning (formerly DEPI, DSE and NRE)
EPBC	Commonwealth <i>Environment Protection and Biodiversity Conservation</i> Act 1999
FFG	Victorian <i>Flora and Fauna Guarantee</i> Act 1988
GHD	GHD Pty Ltd
GPS	Global Positioning System
HKNP	Hattah-Kulkyne National Park
MDBA	Murray Darling Basin Authority
SDL	Sustainable Diversion Limits
TLM	The Living Murray
VBA	Victorian Biodiversity Atlas

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Appendix C – Incidental results

1. Introduction

1.1 Project Background and Objectives

This report describes the targeted survey of colonial nesting waterbird nests at 19 lakes across the Hattah-Kulkyne National Park (HKNP) in late 2020 and early 2021. The surveys were commissioned by the Mallee CMA, following the delivery of environmental water to the Hattah Lakes in recent years, and observations of nest building and breeding of cormorant species in some of the lakes. At the time of inundation, access to many of the lakes was cut off, and only a partial record of the nesting sites at Hattah was documented, with the extent of nesting through the broader lake system unknown. All but one of the lakes (Lake Kramen) are currently dry, and although cormorants are no longer nesting at these sites, nests from previous seasons remain visible. This has provided the opportunity to thoroughly search the lake system for evidence of past nesting sites and to provide an indication of nesting density at those sites. In addition, the inundated Lake Kramen was assessed for current nesting activity, as well as evidence of previous nesting. By mapping nest site locations and densities, future watering events may be planned to provide the appropriate hydrological cues needed to improve breeding outcomes for cormorants and other species of colonial nesting waterbirds.

The key objectives of this study were:

- Assess the distribution and density of colonial nesting waterbird nests across the Hattah Lakes Icon Site;
- Identify the species breeding at Lake Kramen;
- Identify the breeding success of these species at Lake Kramen.

This was achieved by mapping the position and density of colonial nesting waterbird nests at 19 lakes at the Hattah Lakes Icon Site and attempting to identify the species breeding at Lake Kramen. This technical report outlines the results of these surveys and provides spatial representations and GPS coordinates for each nest recorded. It is hoped that this project will lay the foundations for future work targeting waterbirds at the Hattah Lakes Icon Site and assess Lake Kramen's value as a refuge site for waterbirds.

All data will be entered into the Victorian Biodiversity Atlas (VBA).

1.1.1 Study Area

The HKNP lakes (Hattah Lakes) are part of a Ramsar listed wetland located in northern Victoria within the Murray-Darling Basin. The area contains a series of floodplain lakes representing wetlands classified as permanent freshwater lakes and seasonal intermittent freshwater lakes, subject to flooding from the Murray River with flows entering predominantly via the Chalka Creek. This series of interconnected lakes is the most extensive lake system along the Murray River. Twelve of the wetlands are listed as Wetlands of International Importance under the International Convention on Wetlands (Ramsar Convention). To be listed as a Ramsar site, a wetland must meet one or more internationally accepted criteria in relation to its zoology, botany, ecology, hydrology or limnology and importance to waterfowl. The Hattah Lakes site met four criteria as outlined on the Ramsar wetlands website (Ramsar 2021). The Ramsar site is also part of the Hattah Lakes Icon Site under The Living Murray program.

The lake system supports a number of vegetation groups, the most dominant of which is Lake Bed Herbland, as well as Grassy and Swampy Woodland. Species such as River Red Gum (*Eucalyptus camaldulensis*), Black Box (*Eucalyptus largiflorens*) and River Coobah (*Acacia stenophylla*) provide sheltering and nesting habitat for a range of fauna species, particularly

bats, parrots, possums, snakes and waterbirds. The lake beds support submerged and aquatic plant communities when flooded and terrestrial species during dry phases.

The Hattah lakes are also an important cultural heritage site, having been a focus for traditional Aboriginal society for thousands of years, as evidenced by over 1000 registered Aboriginal archaeological sites within the Hattah-Kulkyne National Park.

1.2 Colonial nesting waterbirds

Colonial nesting is common among many species of Australian waterbirds, in particular species of cormorants, herons, egrets, spoonbills, ibises, pelicans Black Swans and wading birds (Beruldsen, 2003, Brandis 2010, Marchant and Higgins 1990). Breeding colonies can range from several loosely associated nests, to many thousands of densely crowded nests. These colonial nesting waterbirds are dependent on river flows for the critical breeding stage of their lifecycle, and breed in response to large flows on relatively few wetlands in Australia (Brandis 2010, Kingsford and Johnson 1998).

The development of water resources through water extraction and impoundment has degraded wetlands across the world, and in Australia this has been particularly true across the Murray-Darling Basin. Intensive management has changed natural flow regimes, affecting aquatic organisms, including colonially breeding waterbirds and their prey, that rely on periodic wetland inundation, reducing the frequency of breeding opportunities and impacting reproductive success (Brandis 2010). To overcome some of the impacts of water resource development, there has been an increasing focus on the management of environmental flows for ecosystems and specific groups of organisms. Colonial nesting waterbirds are an important target group for the management of environmental flows, providing a measure of the success or failure of environmental flow management. The success of breeding events in wetlands may be used as a measure of overall wetland health, as successful breeding by these species indicates the presence of a wide range of aquatic organisms including fish, frogs, crustaceans, molluscs and other aquatic macroinvertebrates, upon which the birds feed.

Wetting and drying cycles of the Hattah Lakes system are now largely dependent on environmental flows, with just one natural, unregulated flooding event in the last 20 years (2016), and the last major flood before that in 1993 (Mallee CMA 2010). The lack of connectivity between the lakes and the Murray River, and the complete drying of the lakes in the past decade has had detrimental effects on the Hattah Lakes ecosystem and its ability to act as a refuge during prolonged drought (MDBA 2012). The ecological productivity of the system has declined and the habitat value for fauna has been degraded (MDBA 2012). The completion of the Hattah Lakes The Living Murray (TLM) project in 2013 has allowed the implementation of broad scale environmental watering to mitigate the effects of the reduced frequency of natural flooding, by inundating the Hattah Lakes Icon Site. Environmental watering of some lakes was implemented between 2005 and 2010, with broad scale filling of the system completed between 2013 and 2015, and again between 2016 and 2018. These surveys targeted old, unoccupied nests resulting from breeding events triggered by these environmental watering episodes between 2013 and 2018.

This report is subject to, and must be read in conjunction with, the limitations set out in section 2.1 and the assumptions and qualifications contained throughout the Report.

2. Methods

2.1 Assumptions and Limitations

A number of important limitations were made for the surveys of colonial nesting waterbird nests at HKNP in 2020-21. As counts were made of predominantly old, inactive nests of variable condition and age, it was not possible to be sure of the species of birds that these nests belong to, the success of the breeding events, or the age of the nests. Nesting by these colonial waterbirds has occurred at the 19 lakes over a number of years, likely between 2015 and 2020, with some nests possibly pre-dating this, and some nests at the presently inundated Lake Kramen more recently. As nests age, they degrade as they fall apart following wind and rain and likely the removal of sticks for use in subsequent nests. The numbers of nests counted may be treated as a minimum, as some nests will have been missed during surveys due to obstruction of view, or collapse and loss over time, some nests are likely to have been used multiple times by successive pairs (Beruldsen 2003), and some nests are likely to occur in areas of the Chalka Creek or broader floodplain that were not surveyed.

General features of the nests allow some categorisation of the likely species or groups of species nests belong too, as explained below in section 2.3. The success or failure of nests cannot be estimated, with the possibility that some nests had failed to yield any fledglings, or that nests may have been used more than once for a number of successful broods.

Surveys were focussed on the 17 dry lakes and water-filled Lake Kramen, and the additional area of Lake Woterap (Table 1) which was crossed to access Lake Bitterang and incidentally found to contain nests and therefore surveyed further. Areas along the Chalka Creek and broader floodplain were not surveyed and represent a significantly larger area, that is likely to have some areas of waterbird nests, and potentially additional colonial nesting waterbird nests.

2.2 Field Survey

Field surveys were primarily completed by GHD Ecologist Dan Eyles, with assistance and guidance by Richard Loyn of Eco Insights. Surveys were completed between September 2020 and March 2021. The survey was conducted under DELWP Flora and Fauna Guarantee Act (1988) Research Permit number 10009910, Victorian National Parks Research Permit Ref #0840001, and Animal Ethics Scientific Procedures Licence SPFL20067. A total of 19 TLM lakes were assessed across HKNP. These included 18 dry lakes, and Lake Kramen which is wet, as listed in Table 1 below.

Surveys of the 18 dry lakes for evidence of nesting or nest building was completed on foot, with the ecologist walking the perimeter of each lake, along with any islands, isthmuses and areas of dense saplings or regeneration, to inspect trees in areas where nests are anticipated. Trees containing nests were recorded with a GPS at their base, the tree diameter at 1.3m (DBH) taken, tree height estimated, nest height estimated, and nests counted. Searches were conducted of the nests and areas around and below for other signs, including nest material, size, shape, location and height within tree, and potentially dead chicks etc which may allow identification of the bird species, and estimation of the age of the nest, and year of the breeding event. Observations of both old and active nests were made at Lake Kramen from a kayak using the same methods, along with other evidence or signs of waterbird nests such as duck, swan or grebe nests, or feathers from duck nests. It should be noted that nest heights are given above the level of dry ground for the dry lakes, and that at the time of nesting these areas may have been two to four metres deep in water. In total over 112 km of transects were walked in the survey of the 18 dry and single wet lakes, and areas around these and the associated inlet / outlet creeks.

Table 1 Summary of survey sites

Wetland Name	Size (ha)	Perimeter (km)		
Arawak	40	4.2		
Bitterang	73	13.4		
Brockie	28	5.8		
Boich	10	1.9		
Bulla	40	5.2		
Cantala	101	15.2		
Hattah	61	4.7		
Konardin	121	6		
Kramen *	161	4.7		
Little Hattah	7.3	5.5		
Lockie	141	8.6		
Marramook	7	4.2		
Mournpall	243	7		
Nip Nip	3	1.2		
Roonki	38	5		
Tullamook	14	5.6		
Woterap +	50	5.2		
Yelwell	81	6.5		
Yerang	65	2.5		
TOTAL SURVEY EFFORT	1284.3	112.4		

*Note: Lake Kramen was surveyed wet and included active nests.

+Lake Woterap is not a part of the Hattah Lakes RAMSAR site and not part of the original scope but surveyed as many old nests were observed while surveying neighbouring Lake Bitterang.

2.3 Nest categorisation

Many of the waterbird species which have been previously recorded across the Hattah Lakes are known to typically breed in colonies, ranging from a loose aggregation of several nests, to dense colonies of thousands of birds. Territories immediately around nests are typically defended (Marchant and Higgins 1990), often resulting in groups of nests 'pecking distance' from each other. This can also be informative as to the size of the birds and potentially the length of the necks, of the species which have occupied them.

As surveys of most nests were completed following breeding activity, in some cases a number of years following breeding, certainty of the species of waterbirds to have constructed and used these nests was not possible. General features of the nests does however allow some categorisation of the most likely species or groups of species nests belong too. Based on the size of the nest, size and type of materials used, general location of the nest within the tree (i.e. height) and proximity to other nests (indicating colonial or solitary), some grouping of nests were able to be made. The categories decided on were large cormorants, small cormorants (both colonial nesting waterbirds), other non-communal nesting waterbirds, and non waterbirds which were not counted or assessed further (typically raptors, corvids, and honeyeaters etc). The features of these nest categories are summarised below.

2.3.1 Large Cormorants

The Great Cormorant (*Phalacrocorax carbo*) and Pied Cormorant (*Phalacrocorax varius*) typically breed in colonies of ten to many thousands, often with other species of cormorants, herons, spoonbills and ibises (Beruldsen 2003, Marchant and Higgins 1990). These species create quite distinctive nests, typically larger (45cm diameter and up to 90cm deep) than those of the other two common cormorant species typically found in this area, and constructed of larger diameter sticks (Beruldsen 2003, Marchant and Higgins 1990). During the targeted searches for colonial waterbird nests at HKNP, some nests were observed to be larger, and constructed of on average longer, larger diameter sticks, and in trees of greater diameter. These nests were assigned to the category of 'Large Cormorants'. Further deduction to the species level was not possible, and both species are well known from the area, and only surveys of nesting activity would give greater certainty to this.

2.3.2 Small Cormorants

The Little Pied Cormorant (*Microcarbo melanoleucos*) and Little Black Cormorant (*Phalacrocorax sulcirostris*) typically breed in colonies of 4-300 nests, often with other species of cormorants, herons, spoonbills and ibises (Beruldsen 2003, Marchant and Higgins 1990). These species create quite distinctive nests, typically smaller (30-40cm diameter and 30-60cm deep) than those of the two larger cormorant species typically found in this area and constructed of smaller diameter sticks (Beruldsen 2003, Marchant and Higgins 1990). During the targeted searches for colonial waterbird nests at HKNP, some nests were observed to be smaller, and constructed of on average shorter, smaller diameter sticks, in trees of smaller diameter (as little as 3cm DBH), and often in very tight colonies with many nests per tree (up to 18 in one tree). These nests were assigned to the category of 'Small Cormorants'. Further deduction to the species level was not possible, and both species are well known from the area, and only surveys of nesting activity would give greater certainty to this.

2.3.3 Other non-communal nesting waterbirds

Other species of waterbird known to nest in the HKNP lakes included the Australasian Darter (*Anhinga novaehollandiae*), White-faced Heron (*Egretta novaehollandiae*), White-necked Heron (*Ardea pacifica*), Eastern Great Egret (*Ardea alba modesta*), Little Egret (*Egretta garzetta*) and Plumed Egret (*Ardea intermedia plumifera*). Australasian Darter typically nest solitarily, as do Little Egret, and White-faced Heron. Plumed and Eastern Great Egrets and White-necked Heron sometimes nest in loose colonies with cormorants, other herons, egrets, ibises and spoonbills (Beruldsen 2003, Marchant and Higgins 1990). Most of these species also typically build relatively thin and frail nests, higher in trees, 7-25m above water level (Beruldsen 2003). During surveys, more isolated or solitary nests, and those in higher reaches of trees were assigned the category of 'Other non-communal nesting waterbirds', as most of these species are not typically communal nesters, and incidental observations of their communal breeding had not been made during previous surveys of the lakes while wet (R Loyn, pers comm).

2.3.4 Incidental records

Any noteworthy species observed during field work were recorded as incidental records. Noteworthy species included those listed under the FFG or EPBC Act, or considered as regionally significant due to location or time of year. These records have been added to the general list of species observed during the surveys. These observations are summarised in section 3.4 and Appendix C.

3. Results

3.1 Overview of survey results

A total of 1,973 nests were recorded, with 1,917 communal nesting waterbird nests in 919 separate trees, 51 other waterbird species nests in 49 trees and five White-bellied Sea-eagle nests in five separate trees. Nests recorded at all lakes except for Lake Nip Nip.

Of the communal nesting waterbird nests, 1,500 were classed as Small Cormorant nests, located in 732 separate trees, and 417 Large Cormorant nests were observed in 260 trees. 688 trees contained one nest, 77 contained two, 44 three, 41 contained four, 66 contained five, 13 contained six, five contained seven, nine contained eight, 25 contained 10, three contained 12, one contained 16 and one contained 18. Results are summarised below in Table 2 and Table 3, and shown visually in Figure 1.

Table 2 Nest tree data – by lake

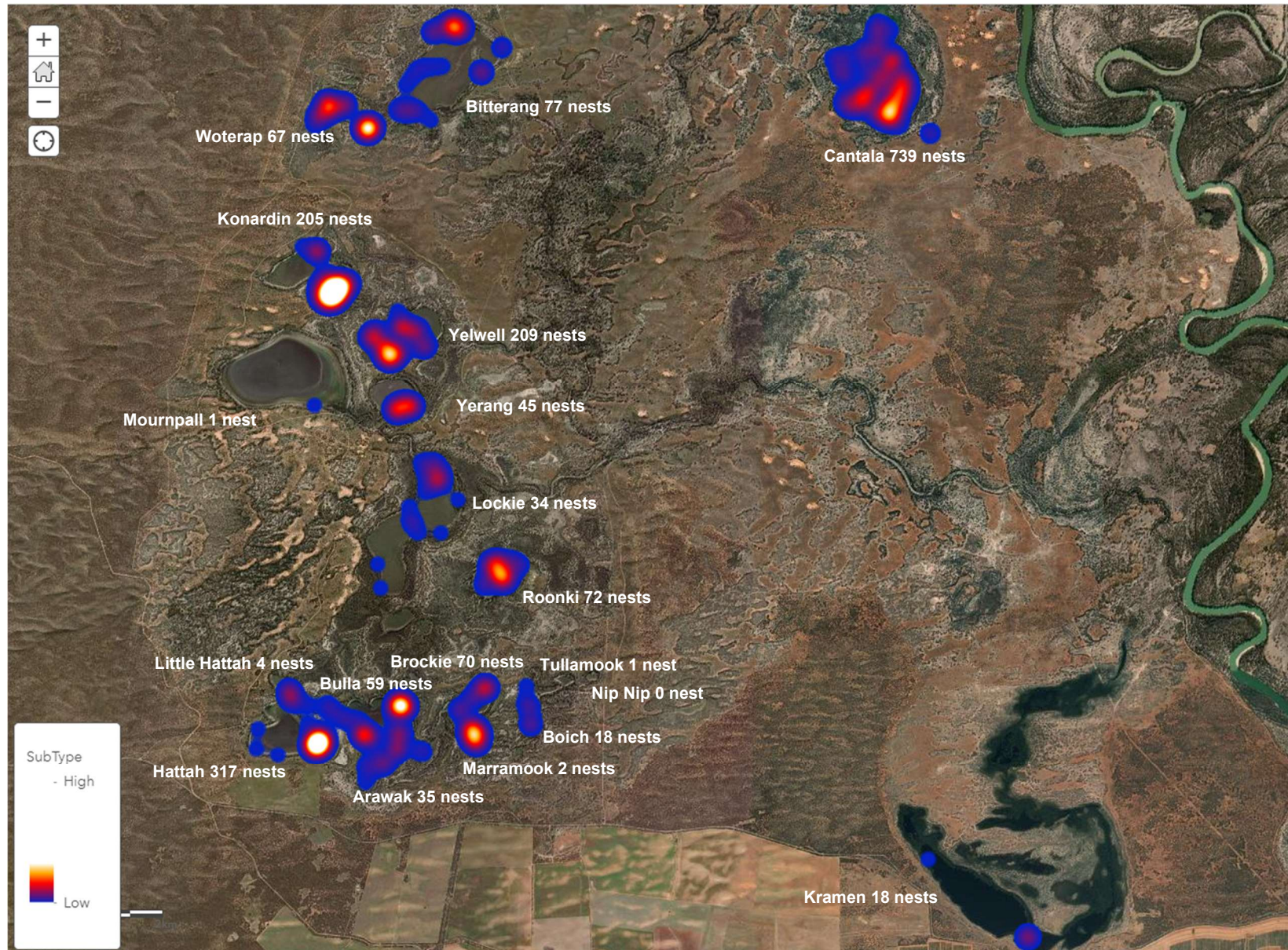
Lake	Total nests	Colonial waterbird nests	Small Cormorant nests	Large Cormorant nests	Tree species RRG/BB/Coobah	Alive/ Dead	Tree DBH mean/sd	Tree Height mean/sd	Nest Height mean/sd	Nests per tree mean/sd
Arawak	35	34	5	29	35 / 0 / 0	15 / 20	26.53 / 15.79	9.13 / 2.86	4.83 / 1.08	1.09 / 0.38
Bitterang	77	66	39	27	67 / 10 / 0	66 / 11	38.27 / 34.06	10.73 / 3.28	5.08 / 2.81	1.22 / 0.70
Boich	18	15	15	0	18 / 0 / 0	18 / 0	48.57 / 19.65	13.57 / 2.13	6.33 / 2.19	3.00 / 2.08
Brockie	70	70	49	21	70 / 0 / 0	19 / 51	26.30 / 9.38	9.80 / 2.12	5.31 / 1.10	1.52 / 0.74
Bulla	59	58	2	56	51 / 0 / 8	52 / 1	31.03 / 48.97	8.18 / 2.83	3.86 / 2.83	1.51 / 1.22
Cantala	739	739	423	316	621 / 0 / 118	548 / 191	20.85 / 17.92	8.52 / 1.23	3.86 / 0.81	1.74 / 1.55
Hattah	317	315	311	4	314 / 0 / 3	297 / 20	11.62 / 8.22	8.81 / 1.69	4.85 / 1.12	5.03 / 4.39
Konardin	205	188	176	12	202 / 0 / 3	204 / 1	33.50 / 25.27	9.93 / 2.31	6.00 / 1.86	1.72 / 1.28
Kramen *	18	16	16	0	18 / 0 / 0	18 / 0	37.33 / 17.37	13.00 / 0.82	3.14 / 1.81	3.00 / 1.53
Little Hattah	4	4	4	0	4 / 0 / 0	4 / 0	13.75 / 2.38	10.00 / 0.71	7.75 / 0.43	1.00 / 0.00
Lockie	34	29	17	12	13 / 0 / 21	28 / 6	53.04 / 45.40	8.74 / 3.39	4.74 / 1.90	1.48 / 0.88
Marramook	2	1	1	0	2 / 0 / 0	2 / 0	64.00 / 0.00	11.00 / 0.00	4.00 / 0.00	1.00 / 0.00
Mournpall	1	1	1	0	1 / 0 / 1	1 / 0	13.00 / 0.00	7.00 / 0.00	5.00 / 0.00	1.00 / 0.00
Nip Nip	0	0	0	0	0 / 0 / 0	0 / 0	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00
Roonki	72	70	57	13	20 / 0 / 52	22 / 50	31.89 / 8.62	8.67 / 2.21	4.30 / 1.11	1.95 / 1.37

Lake	Total nests	Colonial waterbird nests	Small Cormorant nests	Large Cormorant nests	Tree species RRG/BB/ Coobah	Alive/ Dead	Tree DBH mean/sd	Tree Height mean/sd	Nest Height mean/sd	Nests per tree mean/sd
Tullamook	1	1	1	0	1 / 0 / 0	1 / 0	22.00 / 0.00	9.00 / 0.00	3.00 / 0.00	1.00 / 0.00
Woterap +	67	66	64	2	67 / 0 / 0	65 / 2	47.71 / 41.02	10.65 / 2.44	5.58 / 1.19	2.68 / 3.56
Yelwell	209	205	202	3	81 / 0 / 128	205 / 4	47.75 / 56.99	9.66 / 2.89	5.74 / 2.22	3.43 / 2.85
Yerang	45	39	39	0	31 / 0 / 14	40 / 5	29.41 / 34.22	8.96 / 2.53	5.42 / 1.95	2.14 / 2.66
TOTALS	1,973	1917	1422	495	1,646 / 10 / 317	1,605 / 368	24.34 / 26.52	8.99 / 2.06	4.70 / 1.66	2.03 / 2.15

Table 3 Nest tree data – by waterbird group

	Tree species RRG/BB/ Coobah	Alive/ Dead	Tree DBH mean/sd	Tree Height mean/sd	Nest Height mean/sd	Nests per tree mean/sd
Colonial Waterbird nests	1,554 / 10 / 353	1,552 / 365	23.10 / 24.75	8.85 / 1.88	4.58 / 1.43	2.09 / 2.20
Small Cormorant nests	1,070 / 9 / 343	1,275 / 147	20.40 / 24.66	8.59 / 1.93	4.64 / 1.52	2.05 / 2.30
Large Cormorant nests	484 / 1 / 10	236 / 259	30.58 / 23.44	9.57 / 1.54	4.38 / 1.03	1.60 / 1.31
All Nests	1554 / 10 / 353	1,511 / 406	24.34 / 26.52	8.99 / 2.06	4.70 / 1.66	2.03 / 2.15

Figure 1 Heat map of waterbird nests detected during surveys



3.2 Description of site survey results

The number of nests can be seen to vary greatly between lakes, from very few detected at Lakes Nip Nip (0), Mournpall (1), Tullamook (1), Marramook (2), Little Hattah (4), to very large numbers at some others, particularly Cantala (739), Hattah (317), Yelwell (209) and Konardin (205). Almost three times as many small cormorant nests were detected as large cormorant nests. The predominant tree species were River Red Gum (1,554) with a smaller number of River Coobah (353) and very few Black Box (10). Approximately 81% of nests were in living trees. Overall, the mean tree diameter at 1.3m above the ground (DBH) was 24.34cm, but highly variable (standard deviation (s.d.) of 26.52cm) and tree heights averaged 8.99m (s.d. 1.66m), while nests were on average 4.70m above the ground (s.d. 1.66m).

Both large and small cormorants can be seen to show a strong preference for River Red Gum trees as nest sites, and mean tree heights (9.57m and 8.59m respectively) and mean nest heights (4.38m and 4.64m respectively) were seen to be similar for both groups. Differences between large and small cormorant nest sites may be noted in several of the assessed variables. More than half of large cormorants' nests were in dead trees, while less than 8% of small cormorant nests were in dead trees. The mean DBH of large cormorant nest trees (30.58cm) was much greater than that of small cormorants (20.40cm), and small cormorants appear more communal in tree use with an average of 2.05 nests per tree, and large cormorants on average 1.60 nests per tree.

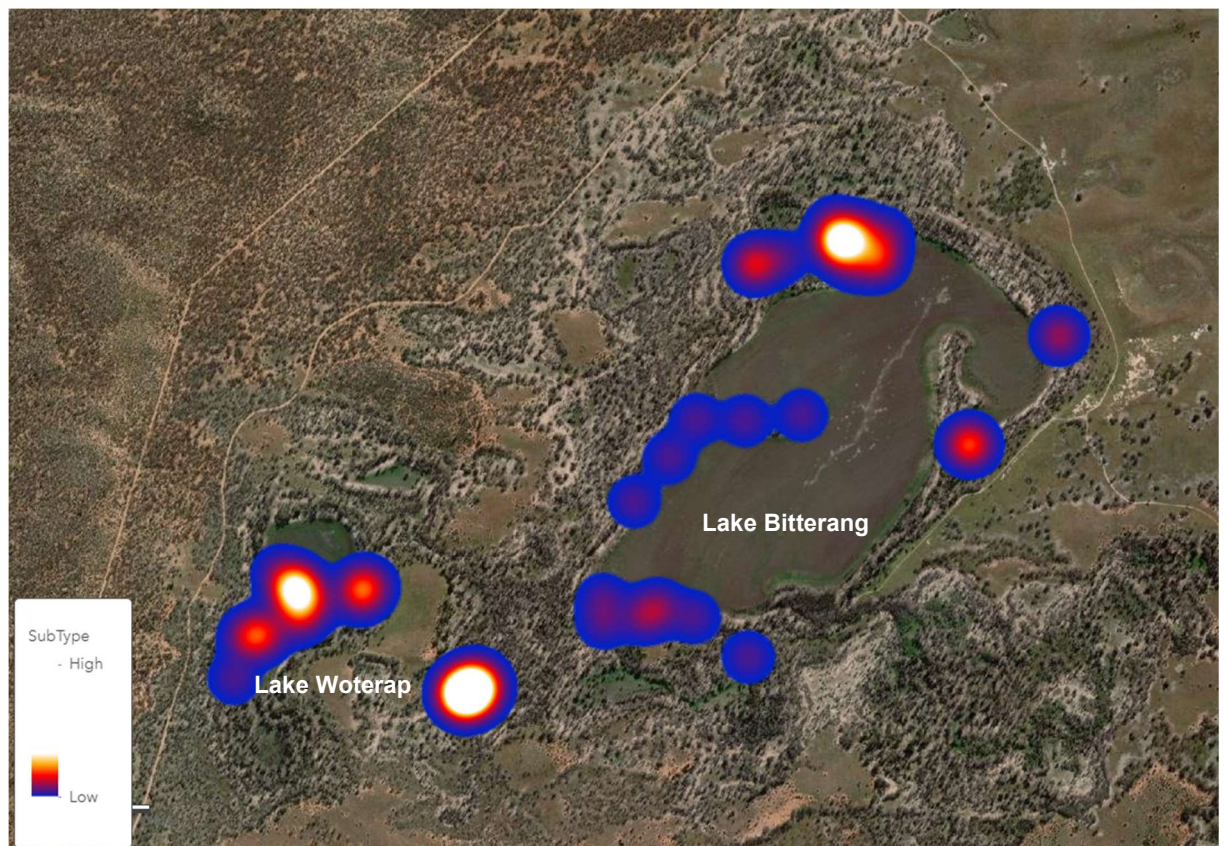
3.3 Spatial distributions of nest sites

The following heat maps show the spatial distributions of the nests sites, with descriptions of these areas provided.

3.3.1 Lakes Bitterang and Woterap

Nests at Lakes Bitterang (77 nests) and Woterap (67) can be seen in Figure 2 to be quite widespread across the perimeter of Lake Bitterang, with concentrations of nests in areas of River Red Gum regeneration on the northern end of Bitterang, south-central Woterap and a large area of dense River Red Gum and River Coobah saplings between these two lakes.

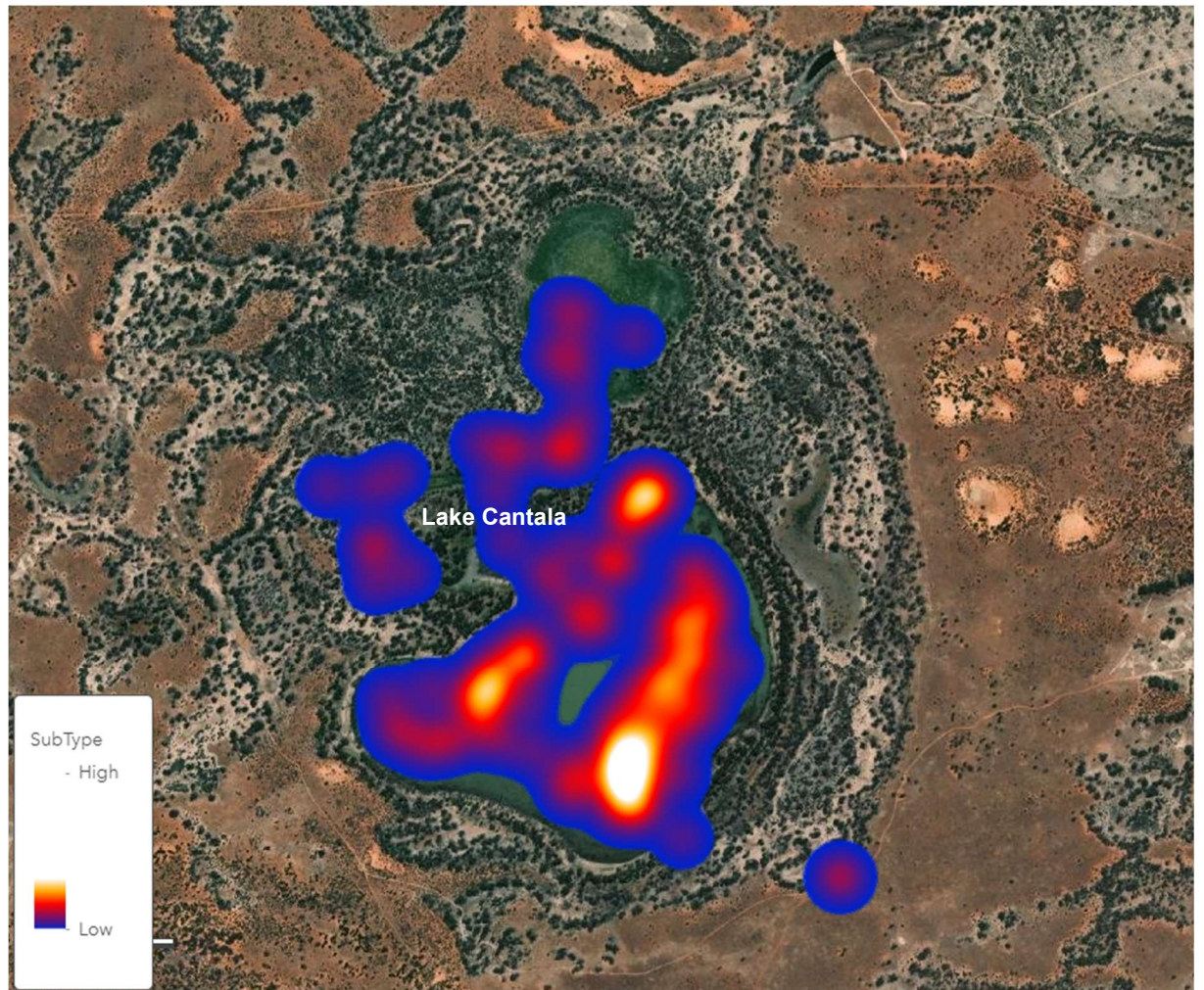
Figure 2 Spatial distribution of nests at Lakes Bitterang and Woterap



3.3.2 Lake Cantala

Lake Cantala had the greatest number of nests (739), which can be seen in Figure 3 to be widespread across the lake, with higher concentrations in the southern areas, most associated with medium sized trees growing across the lakebed. A number of nests in larger River Red Gums were also observed in the north-central areas of the lake.

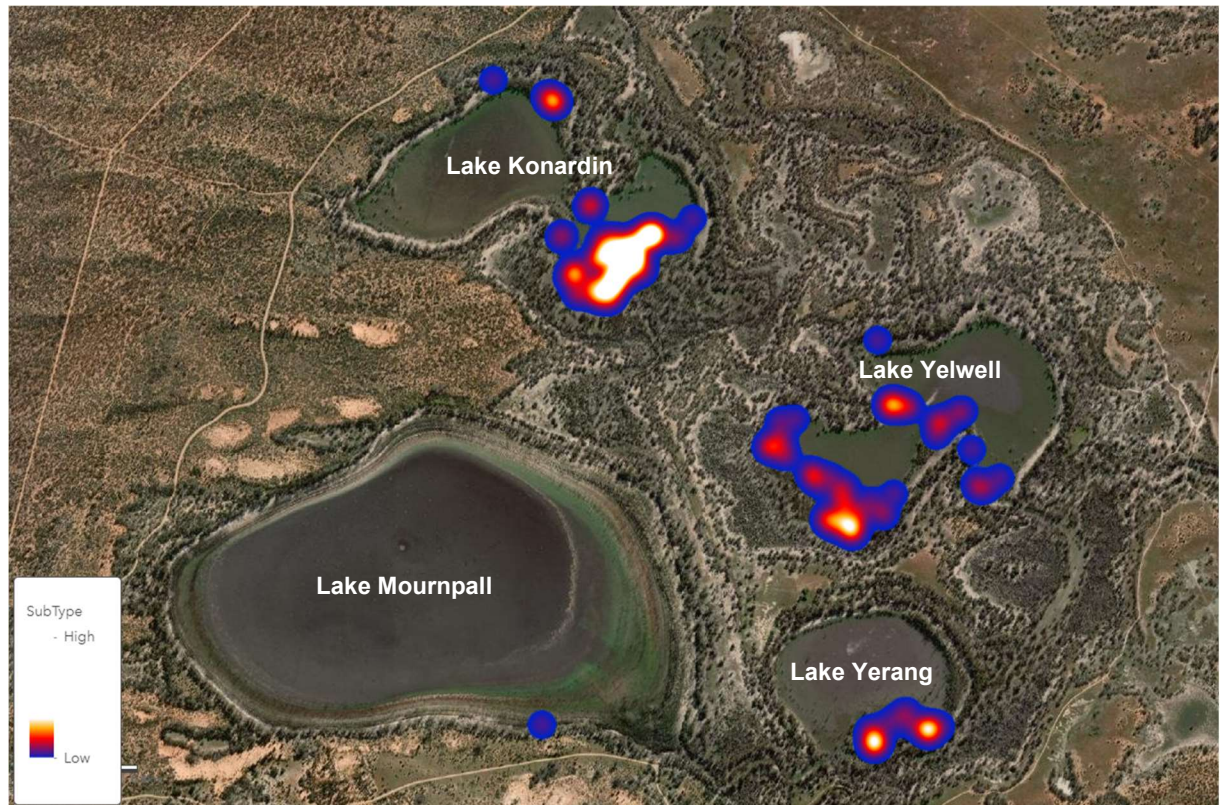
Figure 3 Spatial distribution of nests at Lake Cantala



3.3.3 Lakes Mournpall, Konardin, Yellwell and Yerang

Colonial waterbird nests at these central lakes (Figure 4) were concentrated in a very large group in tree saplings in the southeast of Konardin (205 nests), with smaller concentrations in southern and central Yellwell (209) and Yerang (45). Despite its size, Lake Mournpall had just one nest observed.

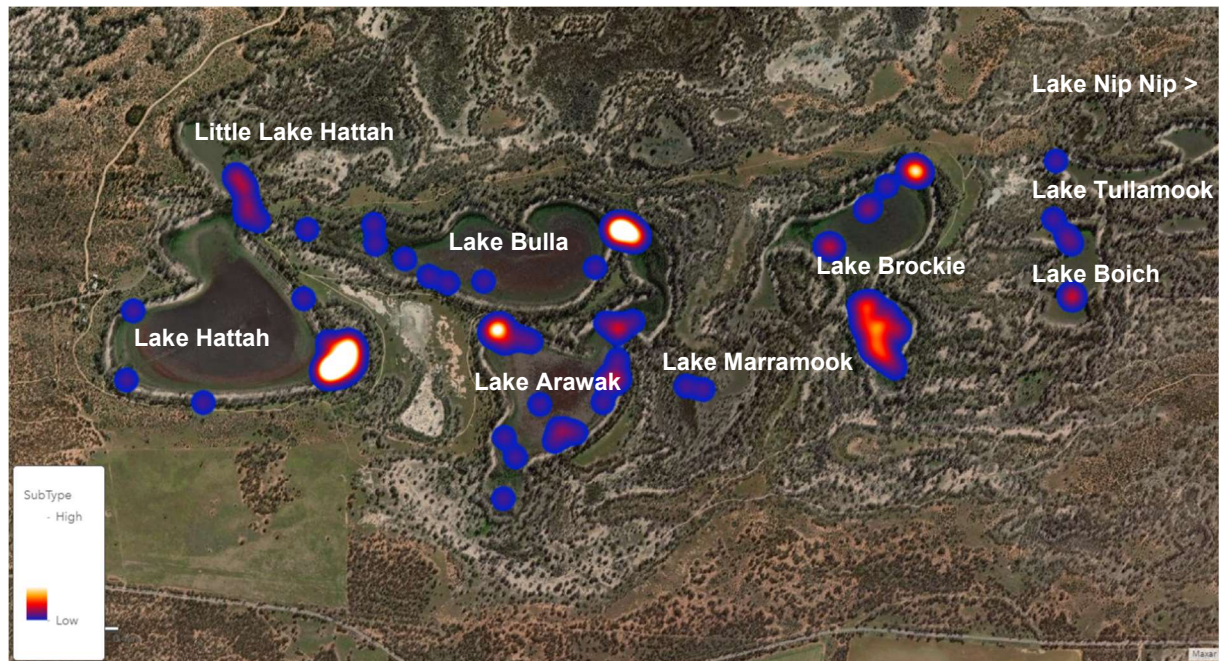
Figure 4 Spatial distribution of nests at Lakes Mournpall, Konardin, Yellwell and Yerang



3.3.4 Lakes Hattah, Little Hattah, Bulla, Arawak, Marramook, Brockie, Tullamook, Boich and Nip Nip

Colonial waterbird nests across the lakes in the south of the area can be seen in Figure 5 to be quite widespread, with concentrations of nests in areas of River Red Gum regeneration on the eastern end of Lake Hattah (317 nests) and Bulla (59), southern Brockie (70) and northern Arawak (35), with smaller colonies spread across the other lakes.

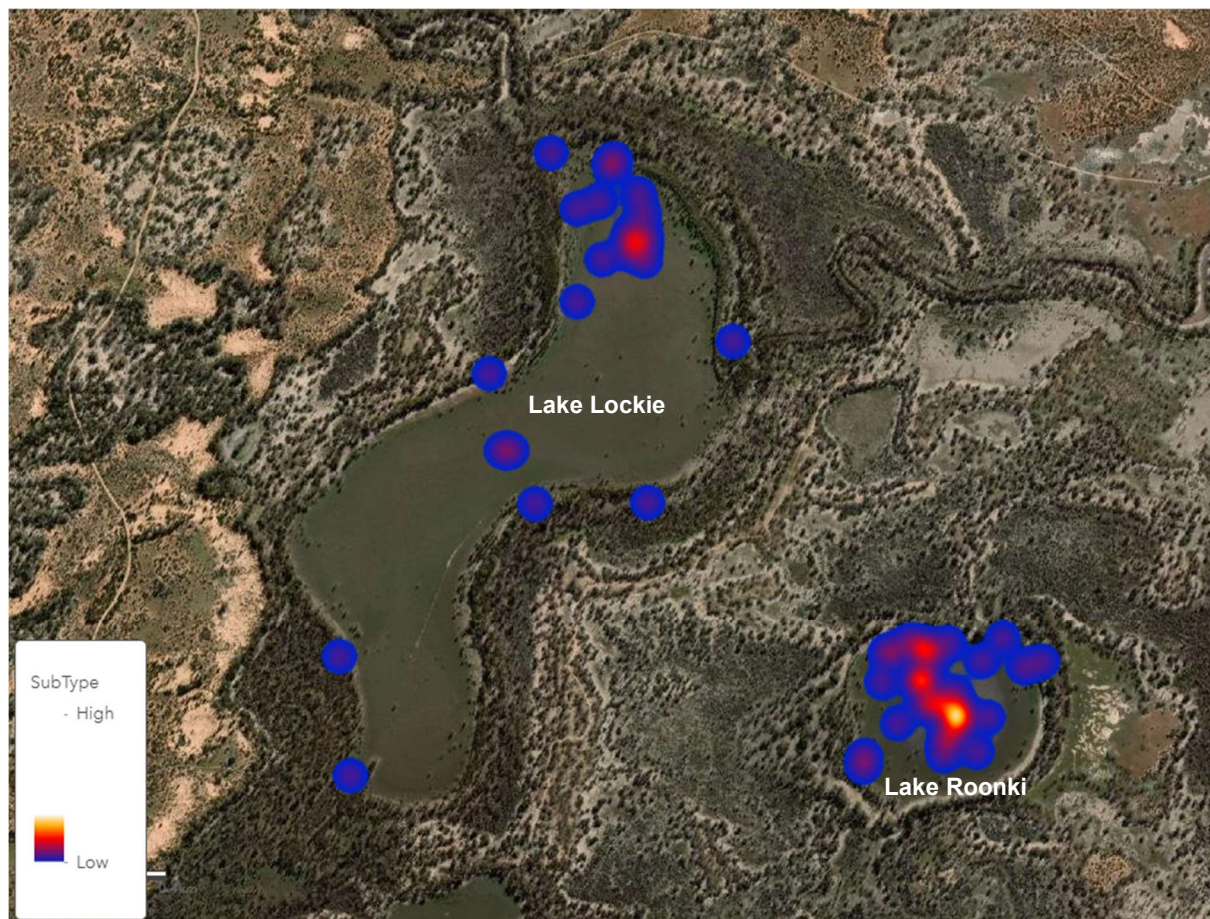
Figure 5 Spatial distribution of nests at Lakes Hattah, Little Hattah, Bulla, Arawak, Marramook, Brockie, Tullamook, Boich and Nip Nip



3.3.5 Lakes Lockie and Roonki

Despite its large size, Lake Lockie contained relatively few colonial waterbird nests (34) scattered around the perimeter and north, whilst Lake Roonki contained at least 72 nests, mainly in its centre in medium sized River Red Gum regrowth.

Figure 6 Spatial distribution of nests at Lakes Lockie and Roonki



3.3.6 Lake Kramen

Lake Kramen was the only lake to be surveyed while containing water, following environmental watering in 2020. Whilst a number of visits observed large numbers of waterbirds across the lake at various times (summarised in Appendix C) only 18 waterbird nests were observed, 16 belonging to small cormorant species, and one to each of an Australasian Darter and White-faced Heron. The colonial cormorant nests were located in dense River Red Gums at a narrowing of the lake in the southeast, and on the north western end of the lake.

Figure 7 Spatial distribution of nests at Lake Kramen



3.4 Lake Kramen waterbird survey results

Lake Kramen was surveyed in 2020 on September 23, November 18, 22, and in 2021 on February 2. A total of 54 bird species and two mammal species were observed at Lake Kramen across the four surveys, including six threatened species, and six species were observed breeding. Results of the surveys are summarised below in Table 4.

Threatened species recorded at Lake Kramen included 18 Blue-billed Duck (*Oxyura australis*) listed as Endangered in Victoria and FFG Act listed, 112 Hardhead (*Aythya australis*) listed as Vulnerable in Victoria, 4 Musk Duck (*Biziura lobata*) listed as Vulnerable in Victoria, 5 Glossy Ibis (*Plegadis falcinellus*) listed as Near Threatened in Victoria, 38 Regent Parrot (*Polytelis anthopeplus*) listed under the EPBC Act as Vulnerable, and in Victoria as Vulnerable and FFG Act listed, and two White-bellied Sea-Eagle (*Haliaeetus leucogaster*) listed as Vulnerable in Victoria and FFG Act listed.

Breeding was recorded for six species at Lake Kramen, with six fledgeling Australian Shelduck (*Tadorna tadornoides*), one small chick and one fledged chick Australian Wood Duck (*Chenonetta jubata*), six small and four larger Grey Teal (*Anas gracilis*), seven Black Swan (*Cygnus atratus*) cygnets, one active Whistling Kite (*Haliastur sphenurus*) nest and one active White-faced Heron (*Egretta novae-hollandiae*) nest.

Table 4 Results of Lake Kramen surveys

Common Name	Scientific Name	Count	Notes
23/09/2020 – 15 species			
Australian Wood Duck	<i>Chenonetta jubata</i>	12	
Grey Teal	<i>Anas gracilis</i>	60	
Black-tailed Nativehen	<i>Tribonyx ventralis</i>	12	
Masked Lapwing	<i>Vanellus miles</i>	8	
White-faced Heron	<i>Egretta novaehollandiae</i>	1	
Black Swan	<i>Cygnus atratus</i>	6	2 cygnets obs
Australian Pelican	<i>Pelecanus conspicillatus</i>	2	
Hoary-headed Grebe	<i>Poliiocephalus poliocephalus</i>	6	
Australasian Darter	<i>Anhinga novaehollandiae</i>	1	
Little Corella	<i>Cacatua sanguinea</i>	4	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	2	
Noisy Miner	<i>Manorina melanocephala</i>	8	
Australian Magpie	<i>Gymnorhina tibicen</i>	2	
Magpie-lark	<i>Grallina cyanoleuca</i>	2	
Australian Raven	<i>Corvus coronoides</i>	2	

18/11/2020 – 15 species			
Australian Wood Duck	<i>Chenonetta jubata</i>	8	
Grey Teal	<i>Anas gracilis</i>	50	
Hardhead	<i>Aythya australis</i>	1	
Black-tailed Nativehen	<i>Tribonyx ventralis</i>	15	
Pied Stilt	<i>Himantopus leucocephalus</i>	2	
Masked Lapwing	<i>Vanellus miles</i>	8	
Black-fronted Dotterel	<i>Elseyornis melanops</i>	3	
White-faced Heron	<i>Egretta novaehollandiae</i>	1	
Glossy Ibis	<i>Plegadis falcinellus</i>	5	Near Threatened in Victoria
Straw-necked Ibis	<i>Threskiornis spinicollis</i>	25	
Little Corella	<i>Cacatua sanguinea</i>	8	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	4	
Noisy Miner	<i>Manorina melanocephala</i>	8	
Australian Magpie	<i>Gymnorhina tibicen</i>	2	
Magpie-lark	<i>Grallina cyanoleuca</i>	4	
22/11/2020 – 46 bird species, 2 mammal species			
Emu	<i>Dromaius novaehollandiae</i>	2	
Musk Duck	<i>Biziura lobata</i>	4	Vulnerable in Victoria
Black Swan	<i>Cygnus atratus</i>	12	5 cygnets.
Australian Shelduck	<i>Tadorna tadornoides</i>	8	6 fledgelings
Australian Wood Duck	<i>Chenonetta jubata</i>	60	1 small chick
Pink-eared Duck	<i>Malacorhynchus membranaceus</i>	4	
Grey Teal	<i>Anas gracilis</i>	400	6 small chicks, 4 larger chicks
Chestnut Teal	<i>Anas castanea</i>	2	
Pacific Black Duck	<i>Anas superciliosa</i>	18	
Hardhead	<i>Aythya australis</i>	97	Vulnerable in Victoria
Blue-billed Duck	<i>Oxyura australis</i>	12	Endangered in Victoria, FFG Act listed
Australasian Grebe	<i>Tachybaptus novaehollandiae</i>	2	

Hoary-headed Grebe	<i>Poliocephalus poliocephalus</i>	170	
Great Crested Grebe	<i>Podiceps cristatus</i>	5	
Australasian Darter	<i>Anhinga novaehollandiae</i>	2	
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>	35	16 old nests
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	110	
Australian Pelican	<i>Pelecanus conspicillatus</i>	2	
White-faced Heron	<i>Egretta novaehollandiae</i>	4	one on nest
Australian White Ibis	<i>Threskiornis molucca</i>	6	
Straw-necked ibis	<i>Threskiornis spinicollis</i>	45	
Yellow-billed Spoonbill	<i>Platalea flavipes</i>	1	
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	2	Vulnerable in Victoria, FFG Act listed
Whistling Kite	<i>Haliastur sphenurus</i>	7	one on nest
Peregrine Falcon	<i>Falco peregrinus</i>	1	
Sacred Kingfisher	<i>Todiramphus sanctus</i>	1	
Crested Pigeon	<i>Ocyphaps lophotes</i>	2	
Black-tailed Native-hen	<i>Gallinula ventralis</i>	157	
Eurasian Coot	<i>Fulica atra</i>	119	
Black-winged Stilt	<i>Himantopus himantopus</i>	6	
Black-fronted Dotterel	<i>Elseyaornis melanops</i>	1	
Masked Lapwing	<i>Vanellus miles</i>	51	
Whiskered Tern	<i>Chlidonias hybridus</i>	3	
Galah	<i>Eolophus roseicapilla</i>	4	
Little Corella	<i>Cacatua sanguinea</i>	300	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	1	
Regent Parrot	<i>Polytelis anthopeplus</i>	30	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
Noisy Miner	<i>Manorina melanocephala</i>	30	
White-plumed Honeyeater	<i>Ptilotula penicillata</i>	6	
Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	2	
Little Friarbird	<i>Philemon citreogularis</i>	1	

Grey Butcherbird	<i>Cracticus torquatus</i>	1	
Magpie-lark	<i>Grallina cyanoleuca</i>	4	
Australian Raven	<i>Corvus coronoides</i>	55	
Welcome Swallow	<i>Hirundo neoxena</i>	10	
Fairy Martin	<i>Hirundo ariel</i>	2	
Red Kangaroo	<i>Macropus rufus</i>	4	
Western Grey Kangaroo	<i>Macropus fuliginosus</i>	1	
02/02/2021 – 31 species			
Black Swan	<i>Cygnus atratus</i>	25	
Australian Shelduck	<i>Tadorna tadornoides</i>	1	
Australian Wood Duck	<i>Chenonetta jubata</i>	15	
Australasian Shoveler	<i>Spatula rhynchotis</i>	25	
Pacific Black Duck	<i>Anas superciliosa</i>	8	
Grey Teal	<i>Anas gracilis</i>	50	
Chestnut Teal	<i>Anas castanea</i>	4	
Pink-eared Duck	<i>Malacorhynchus membranaceus</i>	30	
Hardhead	<i>Aythya australis</i>	15	Vulnerable in Victoria
Blue-billed Duck	<i>Oxyura australis</i>	6	Endangered in Victoria, FFG Act listed
Musk Duck	<i>Biziura lobata</i>	1	Vulnerable in Victoria
Hoary-headed Grebe	<i>Poliiocephalus poliocephalus</i>	10	
Great Crested Grebe	<i>Podiceps cristatus</i>	2	
Eurasian Coot	<i>Fulica atra</i>	10	
Pied Stilt	<i>Himantopus leucocephalus</i>	6	
Masked Lapwing	<i>Vanellus miles</i>	2	
Black-fronted Dotterel	<i>Elsemyornis melanops</i>	2	
Australasian Darter	<i>Anhinga novaehollandiae</i>	2	
Little Pied Cormorant	<i>Microcarbo melanoleucos</i>	6	
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	2	
Pied Cormorant	<i>Phalacrocorax varius</i>	2	

Australian Pelican	<i>Pelecanus conspicillatus</i>	2	
Yellow-billed Spoonbill	<i>Platalea flavipes</i>	2	
Little Corella	<i>Cacatua sanguinea</i>	30	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	6	
Regent Parrot	<i>Polytelis anthopeplus</i>	8	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
Noisy Miner	<i>Manorina melanocephala</i>	8	
Spiny-cheeked Honeyeater	<i>Acanthagenys rufogularis</i>	1	
Weebill	<i>Smicrornis brevirostris</i>	6	
Magpie-lark	<i>Grallina cyanoleuca</i>	4	
Australian Raven	<i>Corvus coronoides</i>	3	

3.5 Incidental observations

Incidental records of species observed during surveys were taken, and are summarised in Appendix C, and available through the eBird Australia website by searching for the checklists: www.ebird.org/australia. Lists are summarised below in Table 5. Observations of noteworthy species include those which are listed as threatened under state or federal legislation, or which are considered uncommon or significant from a regional perspective.

The nationally (EPBC Act) and state (FFG Act) listed Regent Parrot (*Polytelis anthopeplus*) is well known from HKNP and the surrounding area, and this species was regularly heard and seen during the surveys, across the study area, and was recorded at 15 of the 19 Lakes.

Five inactive White-bellied Sea-eagle (*Haliaeetus leucogaster*) nests were recorded; one at each of Lake Bitterang, Marramook, and Yelwell and two at Lake Roonki. A pair of Major Mitchell's Cockatoos (*Lophochroa leadbeateri*) were observed at Lake Bitterang.

Evidence of soil disturbance by feral pigs (*Sus scrofa*) was widespread across most lakebeds. Red, Western Grey and some Eastern Grey Kangaroos (*Macropus rufus*, *fuliginosus* and *giganteus*) were observed across lake beds, and a number of Black-tailed Wallabies (*Wallabia bicolor*) were also observed. A number of dead Murray River Turtle (*Emydura macquarii*) and Broad-shelled Turtle (*Chelodina expansa*) were observed on and around the lake beds, and appeared to have fallen prey to Red Fox (*Vulpes vulpes*) or feral pigs.

Records were taken using eBird and will be submitted to the VBA state-wide database.

Table 5 Incidental Observations taken during surveys

Wetland	Date	Number of species	eBird checklist number
Arawak	19/1/2021	16	S79512404
Bitterang	23/11/2021	23	S76660013
Brockie	2/2/2021	22	S80288414
Boich	2/2/2021	17	S80293482
Bulla	19/1/2021	10	S79520657
Cantala	25/2/2021	22	S82295662
	1/3/2021	27	S82548697
Hattah	22/2/2021	16	S82119352
Konardin	5/1/2021	13	S79041835
Kramen *	18/11/2021	15	S76369836
	22/11/2021	49	S76660017
	2/2/2021	31	S82126923
Little Hattah	22/2/2021	17	S82126757
Lockie	18/1/2021	21	S79463364
Marramook	2/2/2021	22	S80288414
Mournpall	5/1/2021	23	S78684945
Nip Nip	2/2/2021	17	S80293482
Roonki	18/1/2021	6	S79522782
Tullamook	2/2/2021	17	S80293482
Woterap +	24/11/2021	26	S76660001
Yelwell	18/1/2021	14	S79463371
Yerang	5/1/2021	10	S78697308

4. Discussion

4.1 Communal waterbird nest numbers

The 2020/21 targeted surveys of colonial nesting waterbird nests recorded a total of 1,973 nests, with 1,917 classified as communal nesting waterbird nests, 51 as nests of other waterbird species and 5 White-bellied Sea-eagle nests. These large numbers of nests clearly show the importance of the Hattah Lakes system as an area for waterbird breeding, and a refuge for waterbirds during dry times, with very little water present in other wetland systems of the Murray-Darling Basing during this period. Lakes varied greatly in abundances of nests, ranging from no nests at Lake Nip Nip and one at Lakes Mournpall and Tullamook, to 205 at Lake Konardin, 209 at Lake Yelwell, 317 at Lake Hattah and 739 at Lake Cantala. 1,422 nests were categorised as 'Small Cormorant' nests, most likely from Little Pied and Little Black Cormorants, and 495 categorised as 'Large Cormorant' nests, most likely from Great and Pied Cormorants. Whilst certainty of nest species were not possible, there was no doubt that the nests did belong to communal nesting waterbirds, and that these nesting events had occurred following environmental watering in recent years. Nests of raptors, Magpies, Corvid species and honeyeaters were all common, and easily differentiated from waterbird nests.

These counts of nests may be considered an estimate of the minimum number of nests in these areas surveyed, as it is almost certain that additional nests have degraded and fallen down due to the effects over time of wind, rain, repurposing by other birds constructing new nests, become too damaged to be noticed, were not observed / missed. Additionally, it is most likely that additional nesting colonies exist in areas not surveyed, such as other areas of floodplain, and along the Chalka Creek. It should be noted that many of the nests were recorded in the inlet/outlet creeks that connect the lakes, and areas of surrounding broader floodplain that are technically outside of the areas mapped as the Ramsar lakes, indicating the importance of these broader floodplain areas.

4.2 Spatial distribution of nests

Mapping of nest locations using heat maps provided a clear visual representation of the distribution of nests and colonies across the study area, with a generally broad spread of nesting activity across the Hattah Lakes area, with clear areas of intensive nesting activity. Dense colonies were typically found within or close to the inlet/outlet areas of the lakes, along narrow peninsulas which project into the lake areas, and overflow areas adjacent to the main lake waterbodies. The nests across the Lake Cantala lakebed were the main divergence to this, with many nests relatively spread out in the medium-to-large trees which have regenerated across the lake. The basis of the distribution of the nesting colonies can only be speculated on, but may relate to those areas containing more suitable nesting habitat in the form of preferentially sized, oriented and shaped trees, or more likely, occurred in areas of higher prey concentrations, reducing travel distance for breeding adult birds. Areas in and around the inlet/outlet creeks of the lakes may be more productive due to flows of water through those areas, potentially concentrating prey items. Most colonial waterbirds including cormorants are however strong fliers and have the ability to travel large distances between feeding grounds and nesting colonies (Marchant and Higgins 1990). Further surveys of nesting locations may provide further information on long term site preferences for nesting birds, and if completed during wet cycles, may provide an understanding on where birds are feeding during the breeding event.

Of note during surveys was the frequency of nests within dense clumps of River Red Gum regeneration, often with very thin stems, which is typical of many of the lakes. A total of 460 nests were recorded in trees with a DBH of 10cm or less, with 288 nests in trees with a DBH of 5cm or less. These dense stands of regeneration may be suitable as they provide protection to

the nests from wind and sun, or cover from predators, or may simply provide an easy opportunity for large numbers of nests to be built very close to each other. Nesting communal waterbirds in freshwater wetlands have a strong preference for nesting in trees standing in water, and this almost certainly contributes to the locations and tree preferences observed during this study. Large areas of River Red Gum regeneration exist within and around the perimeter of the lake beds of most of the lakes, whilst the largest old trees typically surround the lakes in higher locations. Most of the larger diameter trees that were recorded to contain nests occurred in lower lying areas of the lakes, such as on peninsulas. Very few of the largest trees are fully inundated during environmental watering events, and even when they do, are often not standing in water for long before water levels begin to recede. For this reason, it is possible, and even likely, that different, and possibly larger height and DBH trees would be used for nesting by these species during natural flood events if the water levels are higher than those possible during environmental watering.

Whilst heights of nests were assessed, these were above the dry ground level, and would be significantly different when lakes are full and vary over time as the lakes dry out, with the potential to vary by 4 or 5 meters. Some nests that were assessed as being 4 or 5 metres high may therefore have been at or close to water level during the breeding event. Nest heights in previous studies have shown significant variation in these species (Marchant and Higgins 1990).

4.3 Lake Kramen

Four surveys of the wet Lake Kramen recorded high diversity and abundances of waterbirds, likely driven in part by the scarcity of other waterbodies in the area at this time. Five waterbird species were recorded breeding during the surveys; Black Swan, Australian Shelduck, Australian Wood Duck, Grey Teal, White-faced Heron. Five waterbird species listed as threatened in Victoria and/or Nationally were also recorded at lake Kramen; Blue-billed Duck, Hardhead, Musk Duck, Glossy Ibis and White-bellied Sea-Eagle. These numbers and diversity suggest that Lake Kramen is providing an important refuge for these species, during a generally dry period with very few wetlands across the region containing water at present.

The large numbers of different species and high abundances of waterbirds recorded, with relatively little breeding activity, may relate to the lack of widespread, landscape scale flooding that can drive and stimulate breeding events, or may relate to the isolated nature of this one medium sized lake, and it's predominantly higher elevation Black Box vegetation community, which may not provide sufficient feeding opportunities to drive species to breed.

4.4 Future monitoring

Following the comprehensive survey of old colonial nesting waterbird nests, future surveys may use this information to target areas with previous records, large colonies and high densities. While focal areas of colonial nesting are likely to change over time, some areas are likely to be reused, with species often building nests on top of existing nests (Beruldsen 2003). Previous colonies are likely to be located in areas of suitable nesting habitat or close to high quality feeding habitat. Targeting known colony sites may save some of the time associated with completing reconnaissance of lakes searching for colonies. Further monitoring of unactive nests is likely to find difficulty differentiating between nests that were counted in this survey, and newer nests, and with a lack of information on exactly which species have constructed these nests, future monitoring should seek to target these areas when active breeding is occurring.

Monitoring of actively breeding waterbird colonies could be completed from kayak/canoe and has the potential to provide data on not only the numbers of nests, but the species and their breeding success. Water-based surveys are likely to be more time consuming than dry surveys as accessing the lakes, and movement by boat can be slow, and careful consideration must be

given to timing of breeding and the need for numerous reconnaissance trips, some potentially land based, to ascertain when breeding activity is occurring. Waterbird nesting colonies also typically have a protracted onset of breeding activity (Marchant and Higgins 1990), meaning that not all birds begin or finish breeding simultaneously, adding a challenge to accurately counting active nests in a season without multiple surveys of each area. Nonetheless, surveys of breeding activity would provide greater certainty to the species that are breeding within the Hattah Lakes, and allow records of other waterbird breeding activity, including ducks and grebes and potentially cryptic species such as Crakes, Rails and Bitterns.

4.5 Conclusions

Australian waterbird populations depend on suitable feeding and nesting habitats coupled with suitable rain and flood events to trigger breeding events. Wetlands within the Murray-Darling Basin provide many critical waterbird habitats, however the quality and availability of these sites are greatly influenced by water and vegetation management decisions. Protecting and maintaining suitable feeding and nesting habitats between, and during flood events is essential to maximise waterbird recruitment, maintain populations, and conserve biodiversity. This requires careful management of water regimes at a range of scales across the basin. The large number of nests recorded in these surveys only serve to emphasise the importance of the Hattah Lakes areas as a breeding ground for these species and a refuge at a time when much of the Murray-Darling basin is dry and suitable wetlands few and far between.

The use of valuable 'environmental water' within the Murray-Darling Basin has historically often been focused on supporting successful completion of waterbird breeding events. However managers and policy-makers are also becoming increasingly conscious of the need to manage feeding areas for both adult and juvenile waterbirds. Appropriately managing environmental water placement and timing is critical to allow the recruitment of juveniles into waterbird populations and ultimately species survival.

While some knowledge exists on the water flows needed to trigger waterbird nesting, basic knowledge of how water flows interact with other factors such as food abundance to influence waterbird breeding success and recruitment is lacking. Knowledge of the foraging and dispersal movements of important species during and between breeding events is also lacking, such as where do birds go, and why? Working towards filling these knowledge gaps is key to improving the efficiency of environmental water management. Applying water to the right places at the right times will help to ensure the success of future breeding events and waterbird recruitment within the Hattah Lakes, and across the Murray-Darling Basin.

It is clear that a large number of nests from a range of colonial nesting waterbird species are present within the Hattah Lakes system, and that environmental watering is providing a significant and important habitat for colonial waterbird nesting. These nests undoubtedly represent a number of events from a range of years, and some are likely to have been used multiple times during the recent wet periods. While particular species and absolute numbers of successful nests cannot be accurately estimated, these are clearly large and important from a local, state, and likely Murray-Darling basin wide scale for a number of waterbird species.

Future monitoring, if completed during breeding, may provide greater certainty to the species that are breeding within the Hattah Lakes, the success rates of these nests, and inform what drives the timing and locations of nesting colonies.

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Appendices

Appendix A – Locations of survey sites



Appendix B – Results of surveys

Appendix B – Results of Surveys

object id	Lake	Species	Easting	Northing	Nests per tree	Tree sp.	Alive?	Tree DBH	Tree height	Nest 1 Height	Nest 2 Height	Nest 3 Height	Nest 4 Height	Notes
1	Lake Bitterang	Small Cormorant	626405	6163268	3	RRG	Alive	13	7	4	4	5		
2	Lake Bitterang	Small Cormorant	626401	6163266	1	RRG	Alive	19	11	6				
3	Lake Bitterang	Small Cormorant	626397	6163263	2	RRG	Alive	16	10	4	5			
4	Lake Bitterang	Small Cormorant	626391	6163270	1	RRG	Alive	37	11	4				
5	Lake Bitterang	Other - Heron	625415	6162670	1	RRG	Alive	24	11	6				
6	Lake Bitterang	Other - Heron	625297	6162711	1	RRG	Alive	47	17	11				
7	Lake Bitterang	Other - Heron	625266	6162694	1	RRG	Alive	38	17	13				
8	Lake Bitterang	Other - Heron	625225	6162673	1	RRG	Alive	53	15	13				
9	Lake Bitterang	Large Cormorant	625091	6162657	1	RRG	Alive	116	9	2				
10	Lake Bitterang	Large Cormorant	625604	6162529	1	BB	Alive	4	2	1				
11	Lake Bitterang	Other - Heron	626721	6163640	1	RRG	Alive	86	15	12				
12	Lake Bitterang	Other - Heron	626726	6163650	1	RRG	Alive	124	16	13				
13	Lake Bitterang	Large Cormorant	625929	6164055	1	RRG	Alive	28	9	4				
14	Lake Bitterang	White-bellied Sea-eagle nest	625746	6163938	1	RRG	Dead							Incidental
15	Lake Bitterang	Major Mitchell's Cockatoo	625645	6163912										2 observed
16	Lake Bitterang	Large Cormorant	625986	6163907	1	RRG	Alive	46	12	7				
17	Lake Bitterang	Large Cormorant	626059	6163910	4	RRG	Alive	83	10	1	5	5	7	
18	Lake Bitterang	Large Cormorant	626093	6163916	1	RRG	Dead	95	14	5				
19	Lake Bitterang	Large Cormorant	626087	6163942	1	RRG	Dead	47	12	6				
20	Lake Bitterang	Large Cormorant	626069	6163961	1	RRG	Alive	102	10	6				
21	Lake Bitterang	Large Cormorant	626115	6164011	1	RRG	Dead	29	13	6				
22	Lake Bitterang	Large Cormorant	626030	6164030	1	RRG	Alive	29	10	5				
23	Lake Bitterang	Large Cormorant	625990	6164001	2	RRG	Alive	48	12	5	8			
24	Lake Bitterang	Large Cormorant	625989	6163986	1	RRG	Dead	41	12	7				
25	Lake Bitterang	Large Cormorant	625978	6163990	1	RRG	Alive	45	11	5				
26	Lake Bitterang	Large Cormorant	625973	6163997	1	RRG	Alive	49	14	6				
27	Lake Bitterang	Large Cormorant	625966	6163997	1	RRG	Alive	30	14	5				
28	Lake Bitterang	Large Cormorant	625958	6163995	1	RRG	Dead	32	11	5				
29	Lake Bitterang	Large Cormorant	625951	6163993	1	RRG	Alive	29	10	5				
30	Lake Bitterang	Large Cormorant	625952	6163990	1	RRG	Dead	44	15	5				

31	Lake Bitterang	Large Cormorant	625928	6164004	1	RRG	Dead	34	10	4				
32	Lake Bitterang	Large Cormorant	625940	6163981	1	RRG	Alive	49	13	5				
33	Lake Bitterang	Large Cormorant	625936	6163972	1	RRG	Alive	42	14	6				
34	Lake Bitterang	Other - Heron	625431	6163367	1	RRG	Alive	74	17	12				
35	Lake Bitterang	Other - Heron	625605	6163361	1	RRG	Alive	90	17	15				
36	Lake Bitterang	Other - Heron	625806	6163380	1	RRG	Alive	42	12	5				
37	Lake Woterap	Small Cormorant	624270	6162797	2	RRG	Alive	28	11	4	5			
38	Lake Woterap	Small Cormorant	624239	6162805	1	RRG	Alive	16	9	4				
39	Lake Woterap	Small Cormorant	624228	6162789	1	RRG	Alive	9	7	4				
40	Lake Woterap	Small Cormorant	624236	6162776	1	RRG	Alive	10	7	5				
41	Lake Woterap	Small Cormorant	624229	6162757	1	RRG	Alive	15	9	4				
42	Lake Bitterang	Small Cormorant	624635	6162466	1	BB	Alive	28	10	7				
43	Lake Bitterang	Small Cormorant	624642	6162451	1	RRG	Alive	19	11	3				
44	Lake Bitterang	Small Cormorant	624660	6162451	1	RRG	Alive	7	7	3				
45	Lake Bitterang	Small Cormorant	624658	6162424	1	RRG	Alive	12	7	4				
46	Lake Bitterang	Small Cormorant	624642	6162422	1	RRG	Alive	24	11	4				
47	Lake Bitterang	Small Cormorant	624640	6162431	1	RRG	Alive	5	6	4				
48	Lake Bitterang	Small Cormorant	624620	6162416	1	RRG	Alive	18	11	3				
49	Lake Bitterang	Small Cormorant	624620	6162419	1	RRG	Dead	18	3	2				
50	Lake Bitterang	Small Cormorant	624617	6162415	1	RRG	Dead	18	3	2				
51	Lake Bitterang	Small Cormorant	624617	6162416	1	RRG	Alive	5	7	4				
52	Lake Bitterang	Small Cormorant	624616	6162416	1	RRG	Alive	8	7	3				
53	Lake Bitterang	Small Cormorant	624605	6162432	1	RRG	Alive	27	11	4				
54	Lake Bitterang	Small Cormorant	624603	6162428	1	RRG	Alive	21	11	3				
55	Lake Bitterang	Small Cormorant	624602	6162421	1	RRG	Alive	12	10	4				
56	Lake Bitterang	Small Cormorant	624597	6162423	1	RRG	Alive	22	11	2				
57	Lake Bitterang	Small Cormorant	624591	6162418	1	RRG	Alive	18	10	4				
58	Lake Bitterang	Small Cormorant	624590	6162415	1	RRG	Alive	8	6	4				
59	Lake Bitterang	Small Cormorant	624592	6162411	1	RRG	Alive	19	10	4				
60	Lake Bitterang	Small Cormorant	624595	6162408	1	RRG	Alive	13	10	5				
61	Lake Bitterang	Small Cormorant	624597	6162413	1	RRG	Alive	7	8	5				
62	Lake Bitterang	Small Cormorant	624587	6162408	2	RRG	Alive	19	11	4	4			
63	Lake Bitterang	Small Cormorant	624586	6162406	1	RRG	Alive	13	11	4				
64	Lake Bitterang	Small Cormorant	624585	6162409	4	BB	Alive	18	8	2	3	3	3	
64	Lake Bitterang	Small Cormorant	624585	6162409	4	BB	Alive	18	8	3	3	4	4	
65	Lake Bitterang	Small Cormorant	624577	6162414	1	RRG	Alive	12	9	3				
66	Lake Bitterang	Large Cormorant	625092	6162739	1	RRG	Alive	83	10	4				
67	Lake Bitterang	Other - Darter	625205	6163080	1	RRG	Alive	189	15	5				
68	Lake Bitterang	Large Cormorant	625336	6163238	1	RRG	Dead	27	10	5				

69	Lake Woterap	Small Cormorant	624077	6162741	3	RRG	Alive	68	16	5	5	6		
70	Lake Woterap	Small Cormorant	624017	6162691	2	RRG	Alive	25	8	5	5			
71	Lake Woterap	Small Cormorant	624010	6162694	1	RRG	Alive	52	15	5				
72	Lake Woterap	Small Cormorant	624013	6162728	18	RRG	Alive	135	13	5	6	7	7	
72	Lake Woterap	Small Cormorant	624013	6162728		RRG	Alive	135	13	5	6	7	7	
72	Lake Woterap	Small Cormorant	624013	6162728		RRG	Alive	135	13	5	6	7	7	
72	Lake Woterap	Small Cormorant	624013	6162728		RRG	Alive	135	13	6	6	7		
72	Lake Woterap	Small Cormorant	624013	6162728		RRG	Alive	135	13	6	7	7		
73	Lake Woterap	Small Cormorant	624034	6162763	8	RRG	Alive	37	11	5	5	5	6	
73	Lake Woterap	Small Cormorant	624034	6162763		RRG	Alive	37	11	6	6	6	6	
74	Lake Woterap	Small Cormorant	624000	6162772	1	RRG	Alive	19	8	4				
75	Lake Woterap	Small Cormorant	624002	6162777	3	RRG	Alive	17	8	5	5	5		
76	Lake Woterap	Small Cormorant	624007	6162796	3	RRG	Alive	17	9	5	6	6		
77	Lake Woterap	Small Cormorant	624000	6162795	2	RRG	Alive	20	9	6	6			
78	Lake Woterap	Small Cormorant	623997	6162803	1	RRG	Alive	25	9	6				
79	Lake Woterap	Small Cormorant	623997	6162803	1	RRG	Alive	24	9	5				
80	Lake Woterap	Small Cormorant	624019	6162801	4	RRG	Alive	24	9	6	7	8	8	
81	Lake Woterap	Small Cormorant	623979	6162776	1	RRG	Alive	27	9	4				
82	Lake Woterap	Small Cormorant	623894	6162634	1	RRG	Alive	29	10	3				
83	Lake Woterap	Small Cormorant	623875	6162629	1	RRG	Alive	22	10	3				
84	Lake Woterap	Large Cormorant	623867	6162639	1	RRG	Alive	29	12	4				
85	Lake Woterap	Large Cormorant	623825	6162617	1	RRG	Alive	33	12	5				
86	Lake Woterap	Small Cormorant	623834	6162622	2	RRG	Dead	47	14	5	6			
87	Lake Woterap	Small Cormorant	623778	6162479	6	RRG	Alive	55	9	5	5	5	5	
87	Lake Woterap	Small Cormorant	623778	6162479		RRG	Alive	55	9	5	5			
88	Lake Woterap	Other - Heron	623942	6162851	1	RRG	Alive	64	15	10				
89	Lake Kramen	Small Cormorant	634755	6149661	5	RRG	Alive	25	12	3				
90	Lake Kramen	Other - Heron	634759	6149657	1	RRG	Alive	25	12	9				
91	Lake Kramen	Other - Darter	633214	6150895	1	RRG	Alive	75	14	5				
92	Lake Kramen	Small Cormorant	634751	6149668	4	RRG	Alive	29	13	2	2	3	3	
93	Lake Kramen	Small Cormorant	634754	6149675	3	RRG	Alive	33	13	2	2	3		
94	Lake Kramen	Small Cormorant	634762	6149669	4	RRG	Alive	37	14	2	2	3	3	
95	Lake Mournpall	Small Cormorant	623710	6158091	1	Coobah	Alive	13	7	5				
96	Lake Konardin	Other - Heron	623557	6160585	1	RRG	Alive	97	17	15				
97	Lake Konardin	Small Cormorant	623795	6160496	1	RRG	Alive	5	7	5				
98	Lake Konardin	Small Cormorant	623793	6160496	1	RRG	Alive	7	6	5				
99	Lake Konardin	Small Cormorant	623793	6160500	1	RRG	Alive	8	8	6				
100	Lake Konardin	Small Cormorant	623787	6160506	1	RRG	Alive	4	6	5				
101	Lake Konardin	Small Cormorant	623780	6160510	1	RRG	Alive	4	5	3				

102	Lake Konardin	Small Cormorant	623759	6160527	1	RRG	Alive	14	13	7				
103	Lake Konardin	Small Cormorant	623935	6160103	3	Coobah	Alive	13	9	4	5	5		
104	Lake Konardin	Small Cormorant	623922	6160096	1	RRG	Alive	15	9	3				
105	Lake Konardin	Small Cormorant	623922	6160089	1	RRG	Alive	5	8	3				
106	Lake Konardin	Small Cormorant	624322	6160039	5	RRG	Alive	109	15	6	6	6	7	
106	Lake Konardin	Small Cormorant	624322	6160039		RRG	Alive	109	15	8				
107	Lake Konardin	Other - Heron	624272	6159971	1	RRG	Alive	31	15	11				
108	Lake Konardin	Other - Heron	624238	6159966	1	RRG	Alive	96	18	12				
109	Lake Konardin	Small Cormorant	624176	6159982	2	RRG	Alive	18	13	8	10			
110	Lake Konardin	Small Cormorant	624172	6159986	1	RRG	Alive	21	9	3				
111	Lake Konardin	Small Cormorant	624169	6159985	1	RRG	Alive	12	8	4				
112	Lake Konardin	Small Cormorant	624171	6159984	1	RRG	Alive	13	6	4				
113	Lake Konardin	Small Cormorant	624167	6159984	2	RRG	Alive	24	7	4	4			
114	Lake Konardin	Small Cormorant	624165	6159984	1	RRG	Alive	22	5	4				
115	Lake Konardin	Small Cormorant	624173	6159986	1	RRG	Alive	12	7	5				
116	Lake Konardin	Small Cormorant	624170	6159983	1	RRG	Alive	8	6	4				
117	Lake Konardin	Small Cormorant	624149	6159992	1	RRG	Alive	38	11	6				
118	Lake Konardin	Small Cormorant	624148	6159981	1	RRG	Alive	14	8	4				
119	Lake Konardin	Small Cormorant	624140	6159972	1	RRG	Alive	12	6	5				
120	Lake Konardin	Small Cormorant	624136	6159977	1	RRG	Alive	17	8	6				
121	Lake Konardin	Other - Heron	624150	6159966	1	RRG	Alive	31	12	9				
122	Lake Konardin	Other - Heron	624159	6159956	1	RRG	Alive	26	12	9				
123	Lake Konardin	Small Cormorant	624124	6159951	1	RRG	Alive	13	9	7				
124	Lake Konardin	Small Cormorant	624105	6159956	1	RRG	Alive	14	9	6				
125	Lake Konardin	Small Cormorant	624098	6159960	2	RRG	Alive	18	11	6	7			
126	Lake Konardin	Small Cormorant	624083	6159948	1	RRG	Dead	9	5	4				
127	Lake Konardin	Small Cormorant	624080	6159944	1	RRG	Alive	17	10	6				
128	Lake Konardin	Small Cormorant	624069	6159936	1	RRG	Alive	39	14	7				
129	Lake Konardin	Other - Heron	624043	6159936	1	RRG	Alive	30	11	9				
130	Lake Konardin	Small Cormorant	624026	6159937	3	RRG	Alive	45	13	4	5	5		
131	Lake Konardin	Large Cormorant	624019	6159944	2	RRG	Alive	36	11	5	5			
132	Lake Konardin	Large Cormorant	624017	6159952	1	RRG	Alive	37	11	6				
133	Lake Konardin	Large Cormorant	624017	6159975	1	RRG	Alive	42	13	6				
134	Lake Konardin	Large Cormorant	623969	6159962	1	RRG	Alive	44	11	6				
135	Lake Konardin	Large Cormorant	623980	6159942	2	RRG	Alive	41	14	3	7			
136	Lake Konardin	Large Cormorant	623988	6159933	3	RRG	Alive	38	12	4	5	6		
137	Lake Konardin	Large Cormorant	623941	6159879	1	RRG	Alive	31	12	4				
138	Lake Konardin	Small Cormorant	623939	6159880	4	RRG	Alive	30	11	5	5	5		
139	Lake Konardin	Small Cormorant	623973	6159901	5	RRG	Alive	39	11	5	5	6	8	

139	Lake Konardin	Small Cormorant	623973	6159901		RRG	Alive	39	11	9				
140	Lake Konardin	Other - Heron	623967	6159899	1	RRG	Alive	43	13	10				
141	Lake Konardin	Small Cormorant	623985	6159902	2	RRG	Alive	28	11	6	7			
142	Lake Konardin	Small Cormorant	623985	6159901	1	RRG	Alive	48	10	8				
143	Lake Konardin	Other - Heron	623991	6159896	1	RRG	Alive	32	11	8				
144	Lake Konardin	Small Cormorant	623994	6159902	1	RRG	Alive	23	10	6				
145	Lake Konardin	Other - Heron	624017	6159903	2	RRG	Alive	45	10	7	8			
146	Lake Konardin	Small Cormorant	624031	6159906	1	RRG	Alive	37	10	6				
147	Lake Konardin	Other - Heron	624039	6159901	1	RRG	Alive	31	11	8				
148	Lake Konardin	Other - Heron	624042	6159896	1	RRG	Alive	35	12	10				
149	Lake Konardin	Other - Heron	624052	6159887	1	RRG	Alive	24	12	10				
150	Lake Konardin	Small Cormorant	624057	6159895	1	RRG	Alive	47	12	8				
151	Lake Konardin	Small Cormorant	624074	6159891	1	RRG	Alive	32	11	3				
152	Lake Konardin	Small Cormorant	624073	6159888	1	RRG	Alive	21	10	4				
153	Lake Konardin	Small Cormorant	624073	6159877	1	RRG	Alive	18	8	4				
154	Lake Konardin	Small Cormorant	624069	6159859	2	RRG	Alive	41	8	6	6			
155	Lake Konardin	Small Cormorant	624073	6159857	1	RRG	Alive	26	9	7				
156	Lake Konardin	Small Cormorant	624081	6159869	3	RRG	Alive	28	10	7	7	7		
157	Lake Konardin	Small Cormorant	624075	6159874	1	RRG	Alive	14	7	4				
158	Lake Konardin	Small Cormorant	624078	6159887	1	RRG	Alive	22	8	4				
159	Lake Konardin	Small Cormorant	624076	6159888	1	RRG	Alive	17	8	4				
160	Lake Konardin	Small Cormorant	624072	6159895	1	RRG	Alive	33	11	7				
161	Lake Konardin	Small Cormorant	624071	6159899	1	RRG	Alive	29	9	4				
162	Lake Konardin	Small Cormorant	624077	6159902	3	RRG	Alive	26	10	5	6	7		
163	Lake Konardin	Small Cormorant	624076	6159907	1	RRG	Alive	22	10	7				
164	Lake Konardin	Small Cormorant	624073	6159910	4	RRG	Alive	20	9	5	5	6	7	
165	Lake Konardin	Small Cormorant	624071	6159914	2	RRG	Alive	28	10	7	8			
166	Lake Konardin	Small Cormorant	624071	6159919	1	RRG	Alive	37	10	6				
167	Lake Konardin	Small Cormorant	624086	6159924	2	RRG	Alive	26	9	6	7			
168	Lake Konardin	Small Cormorant	624088	6159924	2	RRG	Alive	34	10	7	8			
169	Lake Konardin	Small Cormorant	624108	6159898	1	RRG	Alive	22	10	7				
170	Lake Konardin	Small Cormorant	624104	6159891	2	RRG	Alive	24	9	6	8			
171	Lake Konardin	Small Cormorant	624103	6159886	3	RRG	Alive	37	10	5	5	8		
172	Lake Konardin	Small Cormorant	624108	6159885	1	RRG	Alive	37	11	7				
173	Lake Konardin	Small Cormorant	624130	6159844	4	RRG	Alive	102	12	4	5	7	8	
174	Lake Konardin	Small Cormorant	624115	6159842	2	RRG	Alive	132	12	7	10			
175	Lake Konardin	Small Cormorant	624064	6159836	7	RRG	Alive	141	12	6	6	6	7	
175	Lake Konardin	Small Cormorant	624064	6159836		RRG	Alive	141	12	7	8	10		
176	Lake Konardin	Small Cormorant	624067	6159815	3	RRG	Alive	98	12	6	7	8		

177	Lake Konardin	Small Cormorant	624036	6159819	1	RRG	Alive	35	9	6				
178	Lake Konardin	Small Cormorant	624028	6159827	1	RRG	Alive	30	9	7				
179	Lake Konardin	Small Cormorant	624030	6159830	1	RRG	Alive	29	8	6				
180	Lake Konardin	Small Cormorant	624027	6159834	2	RRG	Alive	42	9	6	8			
181	Lake Konardin	Small Cormorant	624026	6159844	2	RRG	Alive	35	9	6	8			
182	Lake Konardin	Small Cormorant	624021	6159831	2	RRG	Alive	28	9	6	8			
183	Lake Konardin	Small Cormorant	624018	6159823	2	RRG	Alive	30	9	6	8			
184	Lake Konardin	Small Cormorant	624018	6159816	4	RRG	Alive	20	9	5	5	5	6	
185	Lake Konardin	Small Cormorant	624020	6159806	1	RRG	Alive	32	9	8				
186	Lake Konardin	Small Cormorant	624014	6159800	2	RRG	Alive	31	10	7	8			
187	Lake Konardin	Other - Heron	624016	6159799	1	RRG	Alive	31	11	9				
188	Lake Konardin	Small Cormorant	624013	6159789	2	RRG	Alive	28	11	7	9			
189	Lake Konardin	Small Cormorant	624012	6159786	1	RRG	Alive	17	8	4				
190	Lake Konardin	Small Cormorant	624007	6159789	5	RRG	Alive	29	12	4	4	5	5	
190	Lake Konardin	Small Cormorant	624007	6159789		RRG	Alive	29	12	6				
191	Lake Konardin	Small Cormorant	624001	6159784	1	RRG	Alive	11	6	4				
192	Lake Konardin	Other - Heron	623998	6159780	1	RRG	Alive	18	11	8				
193	Lake Konardin	Small Cormorant	623993	6159771	4	RRG	Alive	34	10	4	4	6	7	
194	Lake Konardin	Small Cormorant	623994	6159763	2	RRG	Alive	29	8	5	6			
195	Lake Konardin	Small Cormorant	623998	6159745	5	RRG	Alive	39	8	5	5	5	5	
195	Lake Konardin	Small Cormorant	623998	6159745		RRG	Alive	39	8	6				
196	Lake Konardin	Small Cormorant	623999	6159740	1	RRG	Alive	26	8	4				
197	Lake Konardin	Small Cormorant	623990	6159735	1	RRG	Alive	17	9	6				
198	Lake Konardin	Small Cormorant	623953	6159747	1	RRG	Alive	12	6	4				
199	Lake Konardin	Small Cormorant	623950	6159749	1	RRG	Alive	18	9	5				
200	Lake Konardin	Small Cormorant	623948	6159751	2	RRG	Alive	31	10	5	5			
201	Lake Konardin	Other - Heron	623944	6159758	1	RRG	Alive	30	11	9				
202	Lake Konardin	Small Cormorant	623955	6159789	4	RRG	Alive	45	10	5	5	8	8	
203	Lake Konardin	Small Cormorant	623944	6159795	1	RRG	Alive	54	10	3				
204	Lake Konardin	Small Cormorant	623933	6159789	8	RRG	Alive	41	9	4	4	4	5	
204	Lake Konardin	Small Cormorant	623933	6159789		RRG	Alive	41	9	5	5	5	6	
205	Lake Konardin	Small Cormorant	623877	6159759	1	RRG	Alive	25	11	3				
206	Lake Konardin	Small Cormorant	623871	6159758	1	RRG	Alive	23	11	4				
207	Lake Konardin	Small Cormorant	623837	6159816	2	RRG	Alive	33	9	3	4			
208	Lake Konardin	Small Cormorant	623862	6159823	1	RRG	Alive	39	10	4				
209	Lake Konardin	Small Cormorant	623876	6159824	2	RRG	Alive	20	7	4	5			
210	Lake Konardin	Other - Heron	623866	6159835	1	RRG	Alive	32	10	8				
211	Lake Konardin	Small Cormorant	623863	6159843	2	RRG	Alive	34	9	5	5			
212	Lake Konardin	Small Cormorant	623861	6159852	2	RRG	Alive	28	8	5	6			

213	Lake Konardin	Small Cormorant	623807	6159972	1	RRG	Alive	43	12	3				
214	Lake Konardin	Large Cormorant	623819	6159984	1	RRG	Alive	31	11	5				
215	Lake Yerang	Small Cormorant	625260	6158066	10	Coobah	Alive	17	8	4	4	5	5	
215	Lake Yerang	Small Cormorant	625260	6158066		Coobah	Alive	17	8	5	5	5	6	
215	Lake Yerang	Small Cormorant	625260	6158066		Coobah	Alive	17	8	6	7			
216	Lake Yerang	Small Cormorant	625221	6158039	4	Coobah	Alive	10	7	4	4	5	5	
217	Lake Yerang	Small Cormorant	625215	6158052	1	RRG	Alive	21	7	4				
218	Lake Yerang	Small Cormorant	625213	6158056	1	RRG	Alive	12	6	3				
219	Lake Yerang	Small Cormorant	625211	6158057	1	RRG	Alive	11	8	4				
220	Lake Yerang	Small Cormorant	625210	6158058	1	RRG	Alive	24	10	4				
221	Lake Yerang	Small Cormorant	625208	6158060	1	RRG	Alive	9	8	5				
222	Lake Yerang	Small Cormorant	625206	6158053	2	RRG	Alive	12	8	3	4			
223	Lake Yerang	Other - Heron	625148	6158074	1	RRG	Alive	141	16	13				
224	Lake Yerang	Small Cormorant	625133	6158122	3	RRG	Dead	37	12	5	7	7		
225	Lake Yerang	Other - Heron	625105	6158104	1	RRG	Dead	88	13	9				
226	Lake Yerang	Other - Heron	625055	6158076	1	RRG	Alive	119	13	10				
227	Lake Yerang	Other - Heron	624986	6158056	1	RRG	Alive	74	13	11				
228	Lake Yerang	Other - Heron	625006	6158036	1	RRG	Alive	41	12	10				
229	Lake Yerang	Other - Heron	625006	6158026	1	RRG	Alive	29	10	9				
230	Lake Yerang	Small Cormorant	625006	6158005	1	RRG	Dead	15	5	3				
231	Lake Yerang	Small Cormorant	625004	6158003	1	RRG	Alive	11	8	4				
232	Lake Yerang	Small Cormorant	625005	6158002	1	RRG	Alive	10	8	4				
233	Lake Yerang	Small Cormorant	625002	6158001	1	RRG	Alive	9	6	4				
234	Lake Yerang	Small Cormorant	625002	6158001	1	RRG	Alive	10	8	5				
235	Lake Yerang	Small Cormorant	624995	6158002	10	RRG	Alive	12	8	5	5	5	5	
235	Lake Yerang	Small Cormorant	624995	6158002		RRG	Alive	12	8	5	5	5	5	
235	Lake Yerang	Small Cormorant	624995	6158002		RRG	Alive	12	8	5	5	5	5	
235	Lake Yerang	Small Cormorant	624995	6158002		RRG	Alive	12	8	5	5	5	5	
235	Lake Yerang	Small Cormorant	624995	6158002		RRG	Alive	12	8	5	5	5	5	
236	Lake Yelwell	Other - Darter	625035	6159561	1	RRG	Alive	116	11	5				
237	Lake Yelwell	Small Cormorant	625089	6159324	2	RRG	Alive	172	15	10	11			
238	Lake Yelwell	Small Cormorant	625081	6159314	1	RRG	Alive	85	13	11				
239	Lake Yelwell	Small Cormorant	625078	6159307	2	RRG	Alive	158	14	10	11			
240	Lake Yelwell	Small Cormorant	625085	6159303	2	RRG	Alive	172	16	13	13			
241	Lake Yelwell	Small Cormorant	625104	6159303	2	RRG	Alive	139	16	13	14			
242	Lake Yelwell	White-bellied Sea-eagle nest	625115	6159313	1	RRG	Alive							Incidental
243	Lake Yelwell	Small Cormorant	625153	6159304	1	RRG	Alive	21	8	4				
244	Lake Yelwell	Small Cormorant	625149	6159298	1	RRG	Alive	18	8	5				

245	Lake Yelwell	Small Cormorant	624714	6159258	3	Coobah	Alive	18	9	4	4	4		
246	Lake Yelwell	Small Cormorant	624653	6159253	2	Coobah	Alive	10	7	4	5			
247	Lake Yelwell	Small Cormorant	624657	6159200	7	Coobah	Alive	14	8	4	4	4	4	
247	Lake Yelwell	Small Cormorant	624657	6159200		Coobah	Alive	14	8	4	5	5		
248	Lake Yelwell	Small Cormorant	624650	6159172	6	Coobah	Alive	15	10	4	4	4	5	
248	Lake Yelwell	Small Cormorant	624650	6159172		Coobah	Alive	15	10	6	6			
249	Lake Yelwell	Small Cormorant	624614	6159162	10	Coobah	Alive	13	9	4	4	4	4	
249	Lake Yelwell	Small Cormorant	624614	6159162		Coobah	Alive	13	9	5	5	5	5	
249	Lake Yelwell	Small Cormorant	624614	6159162		Coobah	Alive	13	9	5	6			
250	Lake Yelwell	Small Cormorant	624611	6159153	1	RRG	Alive	16	9	5				
251	Lake Yelwell	Small Cormorant	624605	6159148	4	Coobah	Alive	11	8	4	4	5	5	
252	Lake Yelwell	Small Cormorant	624658	6159134	6	RRG	Alive	171	13	4	4	4	5	
252	Lake Yelwell	Small Cormorant	624658	6159134	6	RRG	Alive	171	13	5	5			
253	Lake Yelwell	Small Cormorant	624676	6159118	2	Coobah	Alive	7	7	3	3			
254	Lake Yelwell	Small Cormorant	624772	6159058	16	RRG	Alive	119	14	4	4	5	8	
254	Lake Yelwell	Small Cormorant	624772	6159058		RRG	Alive	119	14	8	8	8	9	
254	Lake Yelwell	Small Cormorant	624772	6159058		RRG	Alive	119	14	9	9	9	9	
254	Lake Yelwell	Small Cormorant	624772	6159058		RRG	Alive	119	14	10	10	10	10	
255	Lake Yelwell	Small Cormorant	624784	6159041	8	RRG	Alive	174	14	8	8	9	9	
255	Lake Yelwell	Small Cormorant	624784	6159041		RRG	Alive	174	14	9	9	10	10	
256	Lake Yelwell	Small Cormorant	624778	6159039	6	RRG	Alive	152	14	6	7	9	9	
256	Lake Yelwell	Small Cormorant	624778	6159039		RRG	Alive	152	14	10	10			
257	Lake Yelwell	Small Cormorant	624803	6159007	6	RRG	Alive	184	14	6	7	7	9	
257	Lake Yelwell	Small Cormorant	624803	6159007		RRG	Alive	184	14	9	10			
258	Lake Yelwell	Small Cormorant	624843	6159035	1	RRG	Alive	32	11	5				
259	Lake Yelwell	Small Cormorant	624876	6158987	1	RRG	Alive	19	9	4				
260	Lake Yelwell	Small Cormorant	624906	6158995	1	RRG	Alive	22	8	4				
261	Lake Yelwell	Small Cormorant	624879	6158961	4	Coobah	Alive	21	8	4	4	4	5	
262	Lake Yelwell	Large Cormorant	624908	6158936	1	RRG	Alive	36	11	4				
263	Lake Yelwell	Large Cormorant	624901	6158923	1	RRG	Alive	39	10	4				
264	Lake Yelwell	Small Cormorant	624886	6158893	1	Coobah	Alive	17	6	4				
265	Lake Yelwell	Small Cormorant	624877	6158864	1	Coobah	Alive	13	6	3				
266	Lake Yelwell	Small Cormorant	624877	6158866	5	Coobah	Alive	16	6	4	5	5	5	
266	Lake Yelwell	Small Cormorant	624877	6158866		Coobah	Alive	16	6	5				
267	Lake Yelwell	Small Cormorant	624856	6158845	8	Coobah	Alive	19	9	4	4	5	5	
267	Lake Yelwell	Small Cormorant	624856	6158845		Coobah	Alive	19	9	5	5	6	6	
268	Lake Yelwell	Small Cormorant	624831	6158862	4	Coobah	Alive	14	8	4	5	5	5	
269	Lake Yelwell	Small Cormorant	624834	6158875	1	Coobah	Alive	16	8	5				
270	Lake Yelwell	Small Cormorant	624830	6158878	4	Coobah	Alive	20	8	5	5	5	6	

271	Lake Yelwell	Small Cormorant	624909	6158853	2	Coobah	Alive	13	8	5	5			
272	Lake Yelwell	Small Cormorant	624912	6158852	6	Coobah	Alive	14	9	4	4	5	5	
272	Lake Yelwell	Small Cormorant	624912	6158852		Coobah	Alive	14	9	6	6			
273	Lake Yelwell	Small Cormorant	624924	6158854	3	Coobah	Alive	10	7	5	5	6		
274	Lake Yelwell	Small Cormorant	624936	6158846	1	Coobah	Alive	10	7	5				
275	Lake Yelwell	Small Cormorant	624936	6158830	4	Coobah	Alive	13	7	4	4	5	5	
276	Lake Yelwell	Small Cormorant	624932	6158812	3	Coobah	Alive	11	7	5	5	6		
277	Lake Yelwell	Small Cormorant	624918	6158823	2	RRG	Alive	12	7	4	5			
278	Lake Yelwell	Small Cormorant	624916	6158833	1	Coobah	Alive	6	4	4				
279	Lake Yelwell	Small Cormorant	624944	6158904	5	Coobah	Alive	28	8	5	5	5	6	
279	Lake Yelwell	Small Cormorant	624944	6158904		Coobah	Alive	28	8	6				
280	Lake Yelwell	Small Cormorant	624968	6158889	1	Coobah	Dead	11	5	4				
281	Lake Yelwell	Large Cormorant	624999	6158941	1	RRG	Alive	26	10	4				
282	Lake Yelwell	Small Cormorant	625040	6158903	2	Coobah	Alive	23	8	4	4			
283	Lake Yelwell	Small Cormorant	625054	6158882	6	Coobah	Alive	14	7	3	4	4	4	
283	Lake Yelwell	Small Cormorant	625054	6158882		Coobah	Alive	14	7	5	5			
284	Lake Yelwell	Small Cormorant	625092	6158965	7	Coobah	Alive	29	8	4	4	4	4	
284	Lake Yelwell	Small Cormorant	625092	6158965		Coobah	Alive	29	8	5	5	5		
285	Lake Yelwell	Small Cormorant	625261	6159192	1	RRG	Alive	11	11	5				
286	Lake Yelwell	Small Cormorant	625258	6159233	2	RRG	Alive	12	12	5	6			
287	Lake Yelwell	Small Cormorant	625272	6159249	2	RRG	Alive	10	10	5	5			
288	Lake Yelwell	Other - Heron	625292	6159238	1	RRG	Alive	13	13	9				
289	Lake Yelwell	Small Cormorant	625339	6159275	3	Coobah	Dead	28	7	4	5	5		
290	Lake Yelwell	Small Cormorant	625368	6159282	4	RRG	Alive	11	11	6	6	7	8	
291	Lake Yelwell	Other - Heron	625398	6159134	1	RRG	Alive	15	15	11				
292	Lake Yelwell	Small Cormorant	625409	6159006	6	Coobah	Alive	17	7	3	3	4	4	
292	Lake Yelwell	Small Cormorant	625409	6159006		Coobah	Alive	17	7	4	5			
293	Lake Yelwell	Small Cormorant	625422	6158980	7	Coobah	Alive	34	10	5	5	5	6	
293	Lake Yelwell	Small Cormorant	625422	6158980		Coobah	Alive	34	10	6	7	7		
294	Lake Yelwell	Small Cormorant	625453	6158984	3	Coobah	Alive	22	9	5	5	6		
295	Lake Yelwell	Small Cormorant	625505	6159023	6	Coobah	Alive	23	7	4	4	5	5	
295	Lake Yelwell	Small Cormorant	625505	6159023		Coobah	Alive	23	7	5	5			
296	Lake Lockie	Other - Heron	625372	6157191	1	RRG	Alive	27	8	8				
297	Lake Lockie	Small Cormorant	625450	6157015	2	Coobah	Alive	28	7	4	4			
298	Lake Lockie	Large Cormorant	625522	6157037	1	RRG	Alive	34	5	5				
299	Lake Lockie	Large Cormorant	625647	6157059	1	RRG	Alive	43	6	6				
300	Lake Lockie	Large Cormorant	625662	6156995	1	RRG	Alive	46	6	6				
301	Lake Lockie	Large Cormorant	625666	6156923	1	RRG	Alive	31	5	5				
302	Lake Lockie	Small Cormorant	625618	6156936	3	Coobah	Alive	21	6	3	3	3		

303	Lake Lockie	Small Cormorant	625618	6156877	3	Coobah	Alive	28	7	4	5	5		
304	Lake Lockie	Large Cormorant	625622	6156907	3	Coobah	Dead	22	7	5	5	6		
305	Lake Lockie	Large Cormorant	625647	6156903	1	Coobah	Dead	24	7	5				
306	Lake Lockie	Large Cormorant	625665	6156847	1	Coobah	Alive	24	7	4				
307	Lake Lockie	Large Cormorant	625529	6156855	1	RRG	Alive	40	9	4				
308	Lake Lockie	Large Cormorant	625448	6156723	1	RRG	Alive	43	12	4				
309	Lake Lockie	Other - Darter	625165	6156499	1	RRG	Alive	133	15	8				
310	Lake Lockie	Small Cormorant	625230	6156256	1	Coobah	Dead	24	6	4				
311	Lake Lockie	Small Cormorant	625202	6156255	1	Coobah	Dead	21	5	3				
312	Lake Lockie	Other - Heron	624677	6155611	1	RRG	Alive	48	15	12				
313	Lake Lockie	Large Cormorant	624708	6155232	1	RRG	Alive	114	14	3				
314	Lake Lockie	Other - Darter	625302	6156088	1	RRG	Alive	192	15	5				
315	Lake Lockie	Other - Heron	625661	6156086	1	RRG	Alive	134	13	8				
316	Lake Lockie	Small Cormorant	625939	6156589	1	RRG	Alive	89	10	4				
317	Lake Lockie	Small Cormorant	625572	6157172	4	Coobah	Alive	25	8	3	3	3	4	
318	Lake Lockie	Small Cormorant	625558	6157147	2	Coobah	Alive	29	8	3	4			
319	Lake Roonki	Large Cormorant	626698	6155281	1	RRG	Alive	53	12	5				
320	Lake Roonki	Large Cormorant	626733	6155391	1	RRG	Dead	38	10	4				
321	Lake Roonki	White-bellied Sea-eagle nest	626910	6155564	1	RRG	Alive							Incidental
322	Lake Roonki	Large Cormorant	626850	6155543	1	RRG	Alive	47	11	6				
323	Lake Roonki	White-bellied Sea-eagle nest	626782	6155639	1	RRG	Alive							Incidental
324	Lake Roonki	Large Cormorant	626716	6155566	1	RRG	Alive	39	13	6				
325	Lake Roonki	Small Cormorant	626609	6155626	1	RRG	Alive	28	9	5				
326	Lake Roonki	Large Cormorant	626563	6155587	1	RRG	Alive	36	10	5				
327	Lake Roonki	Large Cormorant	626534	6155616	1	RRG	Alive	34	12	7				
328	Lake Roonki	Small Cormorant	626536	6155605	1	RRG	Alive	28	8	2				
329	Lake Roonki	Small Cormorant	626523	6155603	1	RRG	Alive	29	7	2				
330	Lake Roonki	Large Cormorant	626488	6155635	1	RRG	Alive	33	9	4				
331	Lake Roonki	Small Cormorant	626410	6155598	1	RRG	Alive	35	9	4				
332	Lake Roonki	Small Cormorant	626440	6155600	1	RRG	Alive	39	9	6				
333	Lake Roonki	Small Cormorant	626529	6155520	4	Coobah	Dead	27	7	4	5	5	5	
334	Lake Roonki	Small Cormorant	626528	6155505	3	Coobah	Dead	22	6	5	5	5		
335	Lake Roonki	Small Cormorant	626518	6155508	1	RRG	Alive	57	13	5				
336	Lake Roonki	Small Cormorant	626513	6155511	1	Coobah	Dead	25	6	4				
337	Lake Roonki	Small Cormorant	626398	6155504	1	RRG	Alive	32	10	3				
338	Lake Roonki	Small Cormorant	626444	6155374	1	RRG	Alive	36	10	2				
339	Lake Roonki	Large Cormorant	626337	6155273	1	RRG	Alive	37	10	4				

340	Lake Roonki	Large Cormorant	626335	6155237	1	RRG	Alive	34	11	4				
341	Lake Roonki	Small Cormorant	626533	6155432	6	Coobah	Dead	28	7	3	3	4	4	
341	Lake Roonki	Small Cormorant	626533	6155432		Coobah	Dead	28	7	4	4			
342	Lake Roonki	Small Cormorant	626553	6155436	2	Coobah	Dead	24	7	3	4			
343	Lake Roonki	Small Cormorant	626575	6155443	1	Coobah	Dead	20	6	2				
344	Lake Roonki	Small Cormorant	626627	6155470	1	Coobah	Dead	18	5	2				
345	Lake Roonki	Large Cormorant	626587	6155428	4	Coobah	Dead	27	7	3	4	4	4	
346	Lake Roonki	Small Cormorant	626634	6155398	4	Coobah	Dead	26	7	3	4	4	5	
347	Lake Roonki	Small Cormorant	626596	6155326	2	Coobah	Dead	26	7	4	4			
348	Lake Roonki	Small Cormorant	626623	6155406	4	Coobah	Dead	25	7	2	4	4	5	
349	Lake Roonki	Small Cormorant	626633	6155398	4	Coobah	Dead	29	8	4	4	5	6	
350	Lake Roonki	Small Cormorant	626639	6155390	3	Coobah	Alive	29	8	5	5	6		
351	Lake Roonki	Small Cormorant	626642	6155376	3	Coobah	Dead	23	7	3	3	4		
352	Lake Roonki	Small Cormorant	626628	6155370	4	Coobah	Dead	31	8	5	5	5	6	
353	Lake Roonki	Small Cormorant	626613	6155326	4	Coobah	Dead	29	8	5	5	5	6	
354	Lake Roonki	Small Cormorant	626635	6155422	2	Coobah	Dead	28	7	5	5			
355	Lake Roonki	Small Cormorant	626589	6155270	1	RRG	Alive	48	14	5				
356	Lake Arawak	Other - Darter	624443	6152477	1	RRG	Dead	37	14	7				
357	Lake Arawak	Large Cormorant	624433	6152198	1	RRG	Alive	36	11	3				
358	Lake Arawak	Small Cormorant	624492	6152386	1	RRG	Alive	25	12	5				
359	Lake Arawak	Small Cormorant	624668	6152452	1	RRG	Dead	32	11	7				
360	Lake Arawak	Large Cormorant	624603	6152621	1	RRG	Dead	34	11	6				
361	Lake Arawak	Large Cormorant	624689	6152507	1	RRG	Dead	42	10	5				
362	Lake Arawak	Large Cormorant	624716	6152501	1	RRG	Dead	45	11	5				
363	Lake Arawak	Small Cormorant	624767	6152491	1	RRG	Dead	36	11	5				
364	Lake Arawak	Small Cormorant	624892	6152628	1	RRG	Dead	46	14	5				
365	Lake Arawak	Small Cormorant	624903	6152728	1	RRG	Dead	41	13	6				
366	Lake Arawak	Small Cormorant	624938	6152714	1	RRG	Dead	35	11	5				
367	Lake Arawak	Small Cormorant	624967	6152729	1	RRG	Alive	28	10	4				
368	Lake Arawak	Small Cormorant	624949	6152755	1	RRG	Dead	31	8	3				
369	Lake Arawak	Small Cormorant	624962	6152817	1	RRG	Dead	48	11	5				
370	Lake Arawak	Small Cormorant	624958	6152950	1	RRG	Dead	9	5	4				
371	Lake Arawak	Small Cormorant	624968	6152960	1	RRG	Alive	20	9	4				
372	Lake Arawak	Small Cormorant	624974	6152965	1	RRG	Alive	11	7	4				
373	Lake Arawak	Small Cormorant	625035	6152991	2	RRG	Alive	31	7	4	4			
375	Lake Arawak	Small Cormorant	624908	6152988	3	RRG	Dead	46	10	5	5	6		
376	Lake Arawak	Large Cormorant	624570	6152905	1	RRG	Dead	36	11	7				
377	Lake Arawak	Small Cormorant	624517	6152926	1	RRG	Dead	31	12	7				
378	Lake Arawak	Small Cormorant	624463	6152921	1	RRG	Dead	47	10	6				

379	Lake Arawak	Small Cormorant	624449	6152901	1	RRG	Dead	49	10	5				
380	Lake Arawak	Small Cormorant	624439	6152973	1	RRG	Dead	5	5	5				
381	Lake Arawak	Small Cormorant	624431	6152968	1	RRG	Alive	4	4	4				
382	Lake Arawak	Small Cormorant	624421	6152965	1	RRG	Alive	7	4	4				
383	Lake Arawak	Small Cormorant	624416	6152964	1	RRG	Alive	8	9	4				
384	Lake Arawak	Small Cormorant	624415	6152967	1	RRG	Alive	5	5	4				
385	Lake Arawak	Small Cormorant	624412	6152963	1	RRG	Alive	5	5	4				
386	Lake Arawak	Small Cormorant	624405	6152958	1	RRG	Alive	5	6	4				
387	Lake Arawak	Small Cormorant	624406	6152958	1	RRG	Alive	6	6	4				
388	Lake Arawak	Small Cormorant	624391	6152943	1	RRG	Alive	8	9	4				
389	Lake Bulla	Large Cormorant	624356	6153180	2	RRG	Dead	38	12	5	6			
390	Lake Bulla	Small Cormorant	624865	6153239	2	RRG	Dead	29	11	6	6			
391	Lake Bulla	Small Cormorant	624968	6153389	3	Coobah	Alive	15	9	4	5	5		
392	Lake Bulla	Small Cormorant	624967	6153388	3	Coobah	Alive	19	9	5	5	6		
393	Lake Bulla	Small Cormorant	624965	6153405	1	RRG	Alive	7	4	4				
394	Lake Bulla	Small Cormorant	624969	6153410	1	RRG	Alive	5	3	3				
395	Lake Bulla	Small Cormorant	624969	6153409	1	RRG	Alive	5	6	4				
396	Lake Bulla	Small Cormorant	624969	6153409	1	RRG	Alive	5	5	3				
397	Lake Bulla	Small Cormorant	624962	6153418	1	RRG	Alive	5	6	3				
398	Lake Bulla	Small Cormorant	624968	6153411	2	RRG	Alive	7	6	4	4			
399	Lake Bulla	Small Cormorant	624969	6153419	1	RRG	Alive	7	6	4	4	4	4	
399	Lake Bulla	Small Cormorant	624969	6153419	1	RRG	Alive	7	6	4	4	4	4	
399	Lake Bulla	Small Cormorant	624969	6153419	1	RRG	Alive	7	6	4	4	4	4	
399	Lake Bulla	Small Cormorant	624969	6153419	1	RRG	Alive	7	6	4	4	4	4	
399	Lake Bulla	Small Cormorant	624969	6153419	1	RRG	Alive	7	6	4	4	4	4	
400	Lake Bulla	Small Cormorant	624984	6153409	1	RRG	Dead	7	4	3				
401	Lake Bulla	Small Cormorant	624987	6153405	1	RRG	Alive	7	4	3				
402	Lake Bulla	Small Cormorant	624987	6153402	1	RRG	Dead	4	4	3				
403	Lake Bulla	Small Cormorant	624989	6153405	1	RRG	Alive	5	6	4				
404	Lake Bulla	Small Cormorant	624995	6153399	8	RRG	Alive	57	12	2	2	2	3	
404	Lake Bulla	Small Cormorant	624995	6153399		RRG	Alive	57	12	3	3	3	4	
405	Lake Bulla	Small Cormorant	625000	6153388	3	RRG	Alive	157	12	3	4	4		
406	Lake Bulla	Small Cormorant	625025	6153409	1	RRG	Alive	37	10	4				
407	Lake Bulla	Small Cormorant	625033	6153380	1	RRG	Alive	10	7	4				
408	Lake Bulla	Small Cormorant	625040	6153382	1	RRG	Alive	18	11	3				
409	Lake Bulla	Small Cormorant	625042	6153379	1	RRG	Alive	13	11	4				
410	Lake Bulla	Small Cormorant	625045	6153379	1	RRG	Alive	11	9	3				
411	Lake Bulla	Small Cormorant	625047	6153373	1	RRG	Alive	8	9	3				
412	Lake Bulla	Small Cormorant	625042	6153362	1	RRG	Alive	5	5	3				

413	Lake Bulla	Small Cormorant	625052	6153380	1	RRG	Alive	18	10	3				
414	Lake Bulla	Small Cormorant	625004	6153408	2	RRG	Alive	126	12	3	4			
415	Lake Bulla	Small Cormorant	625006	6153411	2	RRG	Alive	17	9	4	4			
416	Lake Bulla	Small Cormorant	625002	6153411	1	RRG	Alive	21	8	3				
417	Lake Bulla	Small Cormorant	624995	6153407	1	RRG	Alive	23	8	4				
418	Lake Bulla	Small Cormorant	623861	6153444	2	RRG	Alive	86	11	2	2			
419	Lake Hattah	Small Cormorant	623338	6153468	1	RRG	Alive	4	6	3				
420	Lake Bulla	Small Cormorant	623560	6153427	2	Coobah	Alive	22	7	2	2			
421	Lake Bulla	Small Cormorant	623867	6153357	1	RRG	Alive	43	11	7				
422	Lake Bulla	Small Cormorant	624001	6153286	1	RRG	Dead	38	10	6				
423	Lake Bulla	Small Cormorant	624109	6153209	1	RRG	Alive	262	13	3				
424	Lake Bulla	Other - Heron	624197	6153177	1	RRG	Alive	19	11	9				
425	Lake Brockie	Large Cormorant	626099	6153477	1	RRG	Dead	28	7	5				
426	Lake Brockie	Large Cormorant	626116	6153495	2	RRG	Dead	32	12	5	6			
427	Lake Brockie	Small Cormorant	626193	6153588	1	RRG	Dead	27	11	5				
428	Lake Brockie	Small Cormorant	626309	6153663	2	RRG	Alive	13	4	3	3			
429	Lake Brockie	Small Cormorant	626301	6153656	2	RRG	Alive	18	6	4	5			
430	Lake Brockie	Small Cormorant	626321	6153658	2	RRG	Alive	8	10	4	5			
431	Lake Brockie	Small Cormorant	626323	6153661	1	RRG	Alive	7	7	5				
432	Lake Brockie	Small Cormorant	626335	6153653	1	RRG	Alive	3	5	3				
433	Lake Brockie	Small Cormorant	626333	6153644	1	RRG	Alive	4	7	5				
434	Lake Brockie	Small Cormorant	626344	6153643	1	RRG	Alive	8	7	5				
435	Lake Brockie	Small Cormorant	626339	6153645	1	RRG	Alive	8	7	6				
436	Lake Brockie	Small Cormorant	626065	6153050	1	RRG	Alive	23	12	6				
437	Lake Brockie	Small Cormorant	626083	6153051	1	RRG	Alive	34	13	6				
438	Lake Brockie	Small Cormorant	626113	6153043	1	RRG	Dead	29	10	3				
439	Lake Brockie	Small Cormorant	626091	6153026	1	RRG	Dead	32	13	5				
440	Lake Brockie	Small Cormorant	626107	6153001	3	RRG	Dead	28	11	5	6	7		
441	Lake Brockie	Small Cormorant	626156	6152949	2	RRG	Dead	34	12	6	7			
442	Lake Brockie	Small Cormorant	626146	6152961	3	RRG	Dead	31	11	6	6	7		
443	Lake Brockie	Large Cormorant	626165	6152969	1	RRG	Dead	28	6	4				
444	Lake Brockie	Small Cormorant	626175	6152897	3	RRG	Dead	35	11	4	6	6		
445	Lake Brockie	Small Cormorant	626165	6152870	2	RRG	Dead	34	11	6	6			
446	Lake Brockie	Small Cormorant	626123	6153060	1	RRG	Alive	20	10	6				
447	Lake Brockie	Small Cormorant	626190	6153016	2	RRG	Dead	36	12	4	5			
448	Lake Brockie	Large Cormorant	626200	6152963	1	RRG	Alive	34	12	7				
449	Lake Brockie	Small Cormorant	626238	6152942	3	RRG	Dead	34	12	4	5	7		
450	Lake Brockie	Small Cormorant	626232	6152923	2	RRG	Dead	35	9	4	6			
451	Lake Brockie	Large Cormorant	626193	6152799	1	RRG	Dead	37	12	6				

452	Lake Brockie	Large Cormorant	626177	6152816	1	RRG	Dead	33	11	6				
453	Lake Brockie	Large Cormorant	626163	6152825	1	RRG	Alive	31	12	6				
454	Lake Brockie	Large Cormorant	626160	6152836	1	RRG	Alive	30	11	6				
455	Lake Brockie	Small Cormorant	626221	6152764	1	RRG	Alive	21	11	6				
456	Lake Brockie	Large Cormorant	626125	6152844	1	RRG	Dead	28	11	6				
457	Lake Brockie	Large Cormorant	626118	6152865	1	RRG	Dead	28	11	3				
458	Lake Brockie	Large Cormorant	626125	6152878	1	RRG	Dead	33	10	3				
459	Lake Brockie	Large Cormorant	626134	6152902	3	RRG	Dead	32	9	5	6	6		
459	Lake Brockie	Small Cormorant	626134	6152902	3	RRG	Dead	32	9	5	6	6		
459	Lake Brockie	Small Cormorant	626134	6152902	3	RRG	Dead	32	9	5	6	6		
460	Lake Brockie	Large Cormorant	626133	6152931	1	RRG	Dead	31	10	4				
461	Lake Brockie	Large Cormorant	626129	6152945	1	RRG	Dead	36	11	6				
462	Lake Brockie	Small Cormorant	626096	6152932	1	RRG	Alive	31	10	6				
463	Lake Brockie	Small Cormorant	626083	6152969	1	RRG	Dead	29	9	4				
464	Lake Brockie	Small Cormorant	626079	6152979	1	RRG	Dead	17	8	5				
465	Lake Brockie	Large Cormorant	625944	6153308	2	RRG	Dead	30	10	6	7			
465	Lake Brockie	Small Cormorant	625944	6153308	2	RRG	Dead	30	10	6	7			
466	Lake Brockie	Large Cormorant	625933	6153324	1	RRG	Dead	27	9	4				
467	Lake Brockie	Large Cormorant	625910	6153318	1	RRG	Dead	19	10	5				
468	Lake Marramook	White-bellied Sea-eagle nest	625268	6152695	1	RRG	Alive							Incidental
469	Lake Marramook	Small Cormorant	625347	6152679	1	RRG	Alive	64	11	4				
470	Lake Tullamook	Small Cormorant	626964	6153688	1	RRG	Alive	22	9	3				
471	Lake Boich	Other - Heron	627035	6153070	2	RRG	Alive	42	15	7	9			
472	Lake Boich	Small Cormorant	627027	6153071	7	RRG	Alive	74	15	5	5	6	6	
472	Lake Boich	Small Cormorant	627027	6153071		RRG	Alive	74	15	6	6	7		
473	Lake Boich	Small Cormorant	627028	6153092	3	RRG	Alive	36	12	3	4	7		
474	Lake Boich	Small Cormorant	627032	6153314	4	RRG	Alive	48	14	5	5	6	9	
475	Lake Boich	Small Cormorant	627007	6153351	1	RRG	Alive	14	9	5				
476	Lake Boich	Other - Heron	626947	6153426	1	RRG	Alive	52	15	13				
477	Lake Hattah	Other - Darter	622764	6153069	1	RRG	Alive	13	7	5				
478	Lake Hattah	Swamp Wallaby	622728	6152758										Incidental
479	Lake Hattah	Other - Heron	623078	6152652	1	RRG	Alive	117	15	12				
480	Lake Hattah	Small Cormorant	623642	6152764	1	RRG	Alive	17	7	5				
481	Lake Hattah	Small Cormorant	623645	6152778	2	RRG	Dead	13	8	4	5			
482	Lake Hattah	Small Cormorant	623641	6152779	1	RRG	Dead	21	11	4	5			
483	Lake Hattah	Large Cormorant	623636	6152776	1	RRG	Dead	28	12	5				
484	Lake Hattah	Small Cormorant	623651	6152782	1	RRG	Dead	16	10	5				

485	Lake Hattah	Small Cormorant	623654	6152784	1	RRG	Dead	28	11	5				
486	Lake Hattah	Small Cormorant	623649	6152789	1	RRG	Dead	26	13	6				
487	Lake Hattah	Small Cormorant	623638	6152787	1	RRG	Dead	38	13	7				
488	Lake Hattah	Small Cormorant	623656	6152790	2	RRG	Dead	12	9	4	5			
489	Lake Hattah	Small Cormorant	623653	6152799	1	RRG	Alive	29	13	6				
490	Lake Hattah	Small Cormorant	623645	6152805	1	RRG	Dead	25	10	7				
491	Lake Hattah	Small Cormorant	623653	6152803	3	RRG	Dead	23	11	5	6	6		
492	Lake Hattah	Small Cormorant	623656	6152806	1	RRG	Dead	18	10	4				
493	Lake Hattah	Small Cormorant	623659	6152811	1	RRG	Dead	22	10	7				
494	Lake Hattah	Small Cormorant	623660	6152812	1	RRG	Dead	14	8	6				
495	Lake Hattah	Small Cormorant	623661	6152807	1	RRG	Alive	20	10	4				
496	Lake Hattah	Large Cormorant	623670	6152811	1	RRG	Dead	33	12	7				
497	Lake Hattah	Small Cormorant	623676	6152820	1	RRG	Alive	10	8	4				
498	Lake Hattah	Small Cormorant	623680	6152820	1	RRG	Alive	8	9	5				
499	Lake Hattah	Small Cormorant	623683	6152819	1	RRG	Alive	24	12	7				
500	Lake Hattah	Small Cormorant	623683	6152817	1	RRG	Alive	11	7	5				
501	Lake Hattah	Small Cormorant	623683	6152813	1	RRG	Alive	5	6	4				
502	Lake Hattah	Small Cormorant	623674	6152805	1	RRG	Dead	5	6	4				
503	Lake Hattah	Small Cormorant	623681	6152802	1	RRG	Alive	22	12	8				
504	Lake Hattah	Small Cormorant	623689	6152802	8	RRG	Alive	5	8	4				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	8	9	4				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	9	10	4				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	11	10	5				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	16	11	5				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	18	11	6				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	20	11	7				
504	Lake Hattah	Small Cormorant	623689	6152802		RRG	Alive	21	12	7				
505	Lake Hattah	Small Cormorant	623680	6152782	12	RRG	Alive	5	8	4				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	8	9	4				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	9	9	4				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	11	10	4				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	13	10	5				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	15	10	5				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	16	11	5				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	16	11	5				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	18	11	6				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	19	12	6				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	20	12	7				
505	Lake Hattah	Small Cormorant	623680	6152782		RRG	Alive	21	12	7				

506	Lake Hattah	Small Cormorant	623701	6152800	12	RRG	Alive	5	8	4				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	8	8	4				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	9	9	4				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	11	9	4				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	13	9	5				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	15	10	5				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	16	10	5				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	16	10	5				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	18	11	6				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	19	11	6				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	20	12	7				
506	Lake Hattah	Small Cormorant	623701	6152800		RRG	Alive	21	12	7				
507	Lake Hattah	Small Cormorant	623717	6152822	12	RRG	Alive	5	8	4				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	8	8	4				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	9	9	4				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	11	9	5				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	11	9	5				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	13	10	5				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	13	10	5				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	15	10	5				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	15	11	6				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	16	11	6				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	16	12	7				
507	Lake Hattah	Small Cormorant	623717	6152822		RRG	Alive	18	12	7				
508	Lake Hattah	Small Cormorant	623721	6152833	10	RRG	Alive	5	8	4				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	8	8	4				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	9	9	4				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	11	9	4				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	11	9	5				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	13	10	5				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	13	10	5				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	15	10	5				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	15	11	6				
508	Lake Hattah	Small Cormorant	623721	6152833		RRG	Alive	16	12	7				
509	Lake Hattah	Small Cormorant	623729	6152843	10	RRG	Alive	5	8	4				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	8	8	4				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	9	9	4				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	11	9	4				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	11	9	5				

509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	13	10	5				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	13	10	5				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	15	10	5				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	15	11	6				
509	Lake Hattah	Small Cormorant	623729	6152843		RRG	Alive	16	12	7				
510	Lake Hattah	Small Cormorant	623752	6152846	10	RRG	Alive	5	8	4				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	8	8	4				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	9	9	4				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	11	9	4				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	11	9	5				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	13	10	5				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	13	10	5				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	15	10	5				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	15	11	6				
510	Lake Hattah	Small Cormorant	623752	6152846		RRG	Alive	16	12	7				
511	Lake Hattah	Small Cormorant	623752	6152836	4	RRG	Alive	41	12	5	5	6	7	
512	Lake Hattah	Small Cormorant	623755	6152820	10	RRG	Alive	5	8	4				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	6	8	4				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	8	8	4				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	8	9	4				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	9	9	5				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	11	9	5				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	11	9	5				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	13	10	5				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	15	10	6				
512	Lake Hattah	Small Cormorant	623755	6152820		RRG	Alive	16	12	7				
513	Lake Hattah	Small Cormorant	623743	6152827	10	RRG	Alive	5	8	4				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	6	8	4				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	8	8	4				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	8	9	4				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	9	9	5				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	11	9	5				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	11	9	5				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	13	10	5				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	15	10	6				
513	Lake Hattah	Small Cormorant	623743	6152827		RRG	Alive	16	12	7				
514	Lake Hattah	Small Cormorant	623745	6152803	10	RRG	Alive	5	7	4				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	6	8	4				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	6	8	4				

514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	8	8	4				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	8	9	5				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	9	9	5				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	11	9	5				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	11	9	5				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	13	10	6				
514	Lake Hattah	Small Cormorant	623745	6152803		RRG	Alive	15	10	7				
515	Lake Hattah	Large Cormorant	623736	6152799	1	RRG	Alive	21	9	4				
516	Lake Hattah	Small Cormorant	623718	6152784	10	RRG	Alive	5	7	4				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	6	8	4				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	6	8	4				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	8	8	4				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	8	9	5				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	9	9	5				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	11	9	5				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	11	9	5				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	13	10	6				
516	Lake Hattah	Small Cormorant	623718	6152784		RRG	Alive	15	10	7				
517	Lake Hattah	Small Cormorant	623698	6152769	10	RRG	Alive	5	7	4				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	6	8	4				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	6	8	4				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	8	8	4				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	8	9	5				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	9	9	5				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	11	9	5				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	11	9	5				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	13	10	6				
517	Lake Hattah	Small Cormorant	623698	6152769		RRG	Alive	15	10	7				
518	Lake Hattah	Small Cormorant	623750	6152853	10	RRG	Alive	5	5	4				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	6	6	4				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	6	7	4				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	7	8	4				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	8	8	5				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	8	8	5				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	9	9	5				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	11	9	5				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	13	9	6				
518	Lake Hattah	Small Cormorant	623750	6152853		RRG	Alive	15	10	7				
519	Lake Hattah	Small Cormorant	623750	6152864	10	RRG	Alive	5	5	4				

519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	6	6	4				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	6	7	4				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	7	8	4				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	8	8	5				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	8	8	5				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	9	9	5				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	11	9	5				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	13	9	6				
519	Lake Hattah	Small Cormorant	623750	6152864		RRG	Alive	15	10	7				
520	Lake Hattah	Small Cormorant	623755	6152876	10	RRG	Alive	5	5	4				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	6	6	4				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	6	7	4				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	7	8	4				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	8	8	5				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	8	8	5				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	9	9	5				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	11	9	5				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	13	9	6				
520	Lake Hattah	Small Cormorant	623755	6152876		RRG	Alive	15	10	7				
521	Lake Hattah	Small Cormorant	623747	6152877	10	RRG	Alive	5	5	4				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	6	6	4				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	6	7	4				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	7	8	4				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	8	8	5				
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521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	9	9	5				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	11	9	5				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	13	9	6				
521	Lake Hattah	Small Cormorant	623747	6152877		RRG	Alive	15	10	7				
522	Lake Hattah	Small Cormorant	623744	6152887	10	RRG	Alive	5	5	4				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	6	6	4				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	6	7	4				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	7	8	4				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	8	8	5				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	8	8	5				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	9	9	5				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	11	9	5				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	13	9	6				
522	Lake Hattah	Small Cormorant	623744	6152887		RRG	Alive	15	10	7				

523	Lake Hattah	Small Cormorant	623742	6152899	10	RRG	Alive	5	5	4				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	6	6	4				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	6	7	4				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	7	8	4				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	8	8	5				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	8	8	5				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	9	9	5				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	11	9	5				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	13	9	6				
523	Lake Hattah	Small Cormorant	623742	6152899		RRG	Alive	15	10	7				
524	Lake Hattah	Small Cormorant	623747	6152907	3	Coobah	Alive	11	7	4	4	5		
525	Lake Hattah	Small Cormorant	623741	6152908	4	Coobah	Alive	11	9	3	3	4	5	
526	Lake Hattah	Small Cormorant	623738	6152894	10	RRG	Alive	5	5	3				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	6	6	3				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	6	7	4				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	7	8	4				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	8	8	4				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	8	8	4				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	9	9	5				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	11	9	5				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	13	9	5				
526	Lake Hattah	Small Cormorant	623738	6152894		RRG	Alive	15	10	6				
527	Lake Hattah	Small Cormorant	623735	6152882	10	RRG	Alive	5	5	3				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	6	6	3				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	6	7	4				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	7	8	4				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	8	8	4				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	8	8	4				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	9	9	5				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	11	9	5				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	13	9	5				
527	Lake Hattah	Small Cormorant	623735	6152882		RRG	Alive	15	10	6				
528	Lake Hattah	Small Cormorant	623724	6152889	10	RRG	Alive	5	5	3				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	6	6	3				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	6	7	4				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	7	8	4				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	8	8	4				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	8	8	4				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	9	9	5				

528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	11	9	5				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	13	9	5				
528	Lake Hattah	Small Cormorant	623724	6152889		RRG	Alive	15	10	6				
529	Lake Hattah	Small Cormorant	623703	6152888	10	RRG	Alive	5	5	3				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	6	6	3				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	6	7	4				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	7	8	4				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	8	8	4				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	8	8	4				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	9	9	5				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	11	9	5				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	13	9	5				
529	Lake Hattah	Small Cormorant	623703	6152888		RRG	Alive	15	10	6				
530	Lake Hattah	Small Cormorant	623713	6152869	10	RRG	Alive	5	5	3				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	6	6	3				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	6	7	4				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	7	8	4				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	8	8	4				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	8	8	4				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	9	9	5				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	11	9	5				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	13	9	5				
530	Lake Hattah	Small Cormorant	623713	6152869		RRG	Alive	15	10	6				
531	Lake Hattah	Small Cormorant	623698	6152846	10	RRG	Alive	5	5	3				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	6	6	3				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	6	7	4				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	7	8	4				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	8	8	4				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	8	8	4				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	9	9	5				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	11	9	5				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	13	9	5				
531	Lake Hattah	Small Cormorant	623698	6152846		RRG	Alive	15	10	6				
532	Lake Hattah	Small Cormorant	623691	6152864	10	RRG	Alive	5	6	3				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	6	7	3				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	7	8	4				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	8	8	4				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	9	9	4				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	11	9	5				

532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	13	9	5				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	15	10	5				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	18	10	6				
532	Lake Hattah	Small Cormorant	623691	6152864		RRG	Alive	22	11	6				
533	Lake Hattah	Small Cormorant	623689	6152880	10	RRG	Alive	5	6	3				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	6	7	3				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	7	8	4				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	8	8	4				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	9	9	4				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	11	9	5				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	13	9	5				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	15	10	5				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	18	10	6				
533	Lake Hattah	Small Cormorant	623689	6152880		RRG	Alive	22	11	6				
534	Lake Hattah	Small Cormorant	623667	6152891	5	RRG	Alive	11	7	3				
534	Lake Hattah	Small Cormorant	623667	6152891		RRG	Alive	13	8	4				
534	Lake Hattah	Small Cormorant	623667	6152891		RRG	Alive	15	8	4				
534	Lake Hattah	Small Cormorant	623667	6152891		RRG	Alive	18	9	5				
534	Lake Hattah	Small Cormorant	623667	6152891		RRG	Alive	22	10	6				
535	Lake Hattah	Small Cormorant	623647	6152917	1	RRG	Dead	12	7	5				
536	Lake Hattah	Large Cormorant	623539	6153113	1	Coobah	Alive	12	9	4				
537	Lake Hattah	Small Cormorant	623282	6153492	1	RRG	Alive	24	8	6				
538	Lake Hattah	Small Cormorant	623299	6153527	1	RRG	Alive	11	9	7				
539	Lake Hattah	Small Cormorant	623286	6153559	1	RRG	Alive	8	8	6				
540	Little Lake Hattah	Small Cormorant	623241	6153671	1	RRG	Alive	17	11	8				
541	Little Lake Hattah	Small Cormorant	623242	6153669	1	RRG	Alive	12	10	8				
542	Little Lake Hattah	Small Cormorant	623273	6153621	1	RRG	Alive	11	9	7				
543	Little Lake Hattah	Small Cormorant	623276	6153621	1	RRG	Alive	15	10	8				
545	Lake Cantala	Small Cormorant	632815	6162453	1	RRG	Dead	18	8	3				
546	Lake Cantala	Small Cormorant	632809	6162444	1	RRG	Dead	33	11	4				
547	Lake Cantala	Small Cormorant	632794	6162426	1	RRG	Dead	29	11	6				
548	Lake Cantala	Large Cormorant	632742	6162424	1	RRG	Dead	23	8	3				
549	Lake Cantala	Large Cormorant	632751	6162477	1	RRG	Dead	16	8	6				
550	Lake Cantala	Large Cormorant	632753	6162497	1	RRG	Dead	32	11	3				
551	Lake Cantala	Large Cormorant	632777	6162492	1	RRG	Dead	25	10	4				

552	Lake Cantala	Small Cormorant	632758	6162523	1	RRG	Alive	35	10	3				
553	Lake Cantala	Small Cormorant	632746	6162547	1	RRG	Dead	18	7	3				
554	Lake Cantala	Large Cormorant	632756	6162554	1	RRG	Alive	18	7	3				
555	Lake Cantala	Large Cormorant	632770	6162568	1	RRG	Dead	15	10	5				
556	Lake Cantala	Small Cormorant	632775	6162564	2	RRG	Dead	31	11	4	5			
557	Lake Cantala	Small Cormorant	632799	6162532	4	RRG	Alive	14	6	3				
557	Lake Cantala	Small Cormorant	632799	6162532		RRG	Alive	18	7	3				
557	Lake Cantala	Small Cormorant	632799	6162532		RRG	Alive	23	9	3				
557	Lake Cantala	Small Cormorant	632799	6162532		RRG	Alive	25	10	4				
558	Lake Cantala	Large Cormorant	632806	6162538	2	RRG	Dead	29	11	4	5			
559	Lake Cantala	Large Cormorant	632855	6162536	4	RRG	Alive	14	6	3				
559	Lake Cantala	Large Cormorant	632855	6162536		RRG	Alive	18	7	3				
559	Lake Cantala	Large Cormorant	632855	6162536		RRG	Alive	23	9	3				
559	Lake Cantala	Large Cormorant	632855	6162536		RRG	Alive	25	10	4				
560	Lake Cantala	Large Cormorant	632792	6162591	4	RRG	Alive	18	7	3				
560	Lake Cantala	Large Cormorant	632792	6162591		RRG	Alive	22	9	4				
560	Lake Cantala	Large Cormorant	632792	6162591		RRG	Alive	23	9	4				
560	Lake Cantala	Large Cormorant	632792	6162591		RRG	Alive	25	10	4				
561	Lake Cantala	Large Cormorant	632798	6162605	4	RRG	Dead	18	7	3				
561	Lake Cantala	Large Cormorant	632798	6162605		RRG	Dead	19	9	4				
561	Lake Cantala	Large Cormorant	632798	6162605		RRG	Dead	23	9	4				
562	Lake Cantala	Large Cormorant	632768	6162613	4	RRG	Dead	18	7	3				
562	Lake Cantala	Large Cormorant	632768	6162613		RRG	Dead	19	9	4				
562	Lake Cantala	Large Cormorant	632768	6162613		RRG	Dead	25	10	4				
563	Lake Cantala	Large Cormorant	632729	6162625	4	RRG	Dead	18	7	3				
563	Lake Cantala	Large Cormorant	632729	6162625		RRG	Dead	19	9	4				
563	Lake Cantala	Large Cormorant	632729	6162625		RRG	Dead	23	9	4				
563	Lake Cantala	Large Cormorant	632729	6162625		RRG	Dead	25	10	4				
564	Lake Cantala	Large Cormorant	632772	6162653	5	RRG	Dead	23	9	4				
564	Lake Cantala	Large Cormorant	632772	6162653		RRG	Dead	18	7	3				
564	Lake Cantala	Large Cormorant	632772	6162653		RRG	Dead	19	9	4				
564	Lake Cantala	Large Cormorant	632772	6162653		RRG	Dead	23	9	4				
564	Lake Cantala	Large Cormorant	632772	6162653		RRG	Dead	25	10	4				
565	Lake Cantala	Large Cormorant	632742	6162701	5	RRG	Alive	25	10	4				
565	Lake Cantala	Large Cormorant	632742	6162701		RRG	Alive	18	7	3				
565	Lake Cantala	Large Cormorant	632742	6162701		RRG	Alive	19	9	4				
565	Lake Cantala	Large Cormorant	632742	6162701		RRG	Alive	23	9	4				
565	Lake Cantala	Large Cormorant	632742	6162701		RRG	Alive	29	10	5				
566	Lake Cantala	Large Cormorant	632808	6162729	5	RRG	Alive	25	10	4				

566	Lake Cantala	Large Cormorant	632808	6162729		RRG	Alive	18	7	3				
566	Lake Cantala	Large Cormorant	632808	6162729		RRG	Alive	19	9	4				
566	Lake Cantala	Large Cormorant	632808	6162729		RRG	Alive	23	9	4				
566	Lake Cantala	Large Cormorant	632808	6162729		RRG	Alive	29	10	5				
567	Lake Cantala	Large Cormorant	632831	6162647	5	RRG	Alive	25	10	4				
567	Lake Cantala	Large Cormorant	632831	6162647		RRG	Alive	18	7	3				
567	Lake Cantala	Large Cormorant	632831	6162647		RRG	Alive	19	9	4				
567	Lake Cantala	Large Cormorant	632831	6162647		RRG	Alive	23	9	4				
567	Lake Cantala	Large Cormorant	632831	6162647		RRG	Alive	29	10	5				
568	Lake Cantala	Large Cormorant	632847	6162616	5	RRG	Dead	25	10	4				
568	Lake Cantala	Large Cormorant	632847	6162616		RRG	Dead	18	7	3				
568	Lake Cantala	Large Cormorant	632847	6162616		RRG	Dead	19	9	4				
568	Lake Cantala	Large Cormorant	632847	6162616		RRG	Dead	23	9	4				
568	Lake Cantala	Large Cormorant	632847	6162616		RRG	Dead	29	10	5				
569	Lake Cantala	Large Cormorant	632937	6162532	5	RRG	Dead	25	10	4				
569	Lake Cantala	Large Cormorant	632937	6162532		RRG	Dead	18	7	3				
569	Lake Cantala	Large Cormorant	632937	6162532		RRG	Dead	19	9	4				
569	Lake Cantala	Large Cormorant	632937	6162532		RRG	Dead	23	9	4				
569	Lake Cantala	Large Cormorant	632937	6162532		RRG	Dead	29	10	5				
570	Lake Cantala	Large Cormorant	632856	6162645	5	RRG	Alive	18	9	3				
570	Lake Cantala	Large Cormorant	632856	6162645		RRG	Alive	19	9	4				
570	Lake Cantala	Large Cormorant	632856	6162645		RRG	Alive	23	10	4				
570	Lake Cantala	Large Cormorant	632856	6162645		RRG	Alive	25	10	5				
570	Lake Cantala	Large Cormorant	632856	6162645		RRG	Alive	29	11	5				
571	Lake Cantala	Large Cormorant	632928	6162656	5	RRG	Alive	18	9	3				
571	Lake Cantala	Large Cormorant	632928	6162656		RRG	Alive	19	9	4				
571	Lake Cantala	Large Cormorant	632928	6162656		RRG	Alive	23	10	4				
571	Lake Cantala	Large Cormorant	632928	6162656		RRG	Alive	25	10	5				
571	Lake Cantala	Large Cormorant	632928	6162656		RRG	Alive	29	11	5				
572	Lake Cantala	Large Cormorant	632862	6162723	5	RRG	Alive	18	9	3				
572	Lake Cantala	Large Cormorant	632862	6162723		RRG	Alive	19	9	4				
572	Lake Cantala	Large Cormorant	632862	6162723		RRG	Alive	23	10	4				
572	Lake Cantala	Large Cormorant	632862	6162723		RRG	Alive	25	10	5				
572	Lake Cantala	Large Cormorant	632862	6162723		RRG	Alive	29	11	5				
573	Lake Cantala	Large Cormorant	632947	6162709	5	RRG	Alive	18	9	3				
573	Lake Cantala	Large Cormorant	632947	6162709		RRG	Alive	19	9	4				
573	Lake Cantala	Large Cormorant	632947	6162709		RRG	Alive	23	10	4				
573	Lake Cantala	Large Cormorant	632947	6162709		RRG	Alive	25	10	5				
573	Lake Cantala	Large Cormorant	632947	6162709		RRG	Alive	29	11	5				

574	Lake Cantala	Small Cormorant	633001	6162716	5	RRG	Dead	18	7	3				
574	Lake Cantala	Small Cormorant	633001	6162716		RRG	Dead	19	9	4				
574	Lake Cantala	Small Cormorant	633001	6162716		RRG	Dead	23	9	4				
574	Lake Cantala	Small Cormorant	633001	6162716		RRG	Dead	25	10	4				
574	Lake Cantala	Small Cormorant	633001	6162716		RRG	Dead	29	10	5				
575	Lake Cantala	Large Cormorant	632807	6162780	5	RRG	Alive	18	7	3				
575	Lake Cantala	Large Cormorant	632807	6162780		RRG	Alive	19	9	4				
575	Lake Cantala	Large Cormorant	632807	6162780		RRG	Alive	23	9	4				
575	Lake Cantala	Large Cormorant	632807	6162780		RRG	Alive	25	10	4				
575	Lake Cantala	Large Cormorant	632807	6162780		RRG	Alive	29	10	5				
576	Lake Cantala	Large Cormorant	632885	6162779	5	RRG	Alive	18	7	3				
576	Lake Cantala	Large Cormorant	632885	6162779		RRG	Alive	19	9	4				
576	Lake Cantala	Large Cormorant	632885	6162779		RRG	Alive	23	9	4				
576	Lake Cantala	Large Cormorant	632885	6162779		RRG	Alive	25	10	4				
576	Lake Cantala	Large Cormorant	632885	6162779		RRG	Alive	29	10	5				
577	Lake Cantala	Large Cormorant	632911	6162798	5	RRG	Dead	18	7	3				
577	Lake Cantala	Large Cormorant	632911	6162798		RRG	Dead	19	9	4				
577	Lake Cantala	Large Cormorant	632911	6162798		RRG	Dead	23	9	4				
577	Lake Cantala	Large Cormorant	632911	6162798		RRG	Dead	25	10	4				
577	Lake Cantala	Large Cormorant	632911	6162798		RRG	Dead	29	10	5				
578	Lake Cantala	Large Cormorant	632869	6162825	5	RRG	Alive	18	9	3				
578	Lake Cantala	Large Cormorant	632869	6162825		RRG	Alive	19	9	4				
578	Lake Cantala	Large Cormorant	632869	6162825		RRG	Alive	23	10	4				
578	Lake Cantala	Large Cormorant	632869	6162825		RRG	Alive	25	10	5				
578	Lake Cantala	Large Cormorant	632869	6162825		RRG	Alive	29	11	5				
579	Lake Cantala	Large Cormorant	632943	6162766	5	RRG	Dead	18	9	3				
579	Lake Cantala	Large Cormorant	632943	6162766		RRG	Dead	19	9	4				
579	Lake Cantala	Large Cormorant	632943	6162766		RRG	Dead	23	10	4				
579	Lake Cantala	Large Cormorant	632943	6162766		RRG	Dead	25	10	5				
579	Lake Cantala	Large Cormorant	632943	6162766		RRG	Dead	29	11	5				
580	Lake Cantala	Large Cormorant	632899	6162838	5	RRG	Alive	18	9	3				
580	Lake Cantala	Large Cormorant	632899	6162838		RRG	Alive	19	9	4				
580	Lake Cantala	Large Cormorant	632899	6162838		RRG	Alive	23	10	4				
580	Lake Cantala	Large Cormorant	632899	6162838		RRG	Alive	25	10	5				
580	Lake Cantala	Large Cormorant	632899	6162838		RRG	Alive	29	11	5				
581	Lake Cantala	Large Cormorant	633023	6162778	5	RRG	Alive	18	9	3				
581	Lake Cantala	Large Cormorant	633023	6162778		RRG	Alive	19	9	4				
581	Lake Cantala	Large Cormorant	633023	6162778		RRG	Alive	23	10	4				
581	Lake Cantala	Large Cormorant	633023	6162778		RRG	Alive	25	10	5				

581	Lake Cantala	Large Cormorant	633023	6162778		RRG	Alive	29	11	5				
582	Lake Cantala	Large Cormorant	632967	6162863	5	RRG	Dead	18	7	3				
582	Lake Cantala	Large Cormorant	632967	6162863		RRG	Dead	19	9	4				
582	Lake Cantala	Large Cormorant	632967	6162863		RRG	Dead	23	9	4				
582	Lake Cantala	Large Cormorant	632967	6162863		RRG	Dead	25	10	4				
582	Lake Cantala	Large Cormorant	632967	6162863		RRG	Dead	29	10	5				
583	Lake Cantala	Large Cormorant	632967	6162864	5	RRG	Dead	18	7	3				
583	Lake Cantala	Large Cormorant	632967	6162864		RRG	Dead	19	9	4				
583	Lake Cantala	Large Cormorant	632967	6162864		RRG	Dead	23	9	4				
583	Lake Cantala	Large Cormorant	632967	6162864		RRG	Dead	25	10	4				
583	Lake Cantala	Large Cormorant	632967	6162864		RRG	Dead	29	10	5				
584	Lake Cantala	Large Cormorant	632970	6162898	5	RRG	Alive	18	7	3				
584	Lake Cantala	Large Cormorant	632970	6162898		RRG	Alive	19	9	4				
584	Lake Cantala	Large Cormorant	632970	6162898		RRG	Alive	23	9	4				
584	Lake Cantala	Large Cormorant	632970	6162898		RRG	Alive	25	10	4				
584	Lake Cantala	Large Cormorant	632970	6162898		RRG	Alive	29	10	5				
585	Lake Cantala	Small Cormorant	633102	6162859	5	RRG	Alive	18	7	3				
585	Lake Cantala	Small Cormorant	633102	6162859		RRG	Alive	19	9	4				
585	Lake Cantala	Small Cormorant	633102	6162859		RRG	Alive	23	9	4				
585	Lake Cantala	Small Cormorant	633102	6162859		RRG	Alive	25	10	4				
585	Lake Cantala	Small Cormorant	633102	6162859		RRG	Alive	29	10	5				
586	Lake Cantala	Large Cormorant	633014	6162906	5	RRG	Alive	18	9	3				
586	Lake Cantala	Large Cormorant	633014	6162906		RRG	Alive	19	9	4				
586	Lake Cantala	Large Cormorant	633014	6162906		RRG	Alive	23	10	4				
586	Lake Cantala	Large Cormorant	633014	6162906		RRG	Alive	25	10	5				
586	Lake Cantala	Large Cormorant	633014	6162906		RRG	Alive	29	11	5				
587	Lake Cantala	Large Cormorant	632899	6162929	5	RRG	Alive	18	9	3				
587	Lake Cantala	Large Cormorant	632899	6162929		RRG	Alive	19	9	4				
587	Lake Cantala	Large Cormorant	632899	6162929		RRG	Alive	23	10	4				
587	Lake Cantala	Large Cormorant	632899	6162929		RRG	Alive	25	10	5				
587	Lake Cantala	Large Cormorant	632899	6162929		RRG	Alive	29	11	5				
588	Lake Cantala	Large Cormorant	632972	6162972	5	RRG	Alive	18	9	3				
588	Lake Cantala	Large Cormorant	632972	6162972		RRG	Alive	19	9	4				
588	Lake Cantala	Large Cormorant	632972	6162972		RRG	Alive	23	10	4				
588	Lake Cantala	Large Cormorant	632972	6162972		RRG	Alive	25	10	5				
588	Lake Cantala	Large Cormorant	632972	6162972		RRG	Alive	29	11	5				
589	Lake Cantala	Small Cormorant	632975	6162982	5	RRG	Alive	18	7	3				
589	Lake Cantala	Small Cormorant	632975	6162982		RRG	Alive	19	9	4				
589	Lake Cantala	Small Cormorant	632975	6162982		RRG	Alive	23	9	4				

589	Lake Cantala	Small Cormorant	632975	6162982		RRG	Alive	25	10	4				
589	Lake Cantala	Small Cormorant	632975	6162982		RRG	Alive	29	10	5				
590	Lake Cantala	Large Cormorant	632915	6162989	5	RRG	Alive	18	7	3				
590	Lake Cantala	Large Cormorant	632915	6162989		RRG	Alive	19	9	4				
590	Lake Cantala	Large Cormorant	632915	6162989		RRG	Alive	23	9	4				
590	Lake Cantala	Large Cormorant	632915	6162989		RRG	Alive	25	10	4				
590	Lake Cantala	Large Cormorant	632915	6162989		RRG	Alive	29	11	5				
591	Lake Cantala	Large Cormorant	633038	6162995	5	RRG	Dead	18	7	3				
591	Lake Cantala	Large Cormorant	633038	6162995		RRG	Dead	19	9	4				
591	Lake Cantala	Large Cormorant	633038	6162995		RRG	Dead	23	9	4				
591	Lake Cantala	Large Cormorant	633038	6162995		RRG	Dead	25	10	4				
591	Lake Cantala	Large Cormorant	633038	6162995		RRG	Dead	29	10	5				
592	Lake Cantala	Large Cormorant	633042	6163034	5	RRG	Dead	18	7	3				
592	Lake Cantala	Large Cormorant	633042	6163034		RRG	Dead	19	9	4				
592	Lake Cantala	Large Cormorant	633042	6163034		RRG	Dead	23	9	4				
592	Lake Cantala	Large Cormorant	633042	6163034		RRG	Dead	25	10	4				
592	Lake Cantala	Large Cormorant	633042	6163034		RRG	Dead	29	10	5				
593	Lake Cantala	Large Cormorant	632951	6163025	5	RRG	Alive	18	7	3				
593	Lake Cantala	Large Cormorant	632951	6163025		RRG	Alive	19	9	4				
593	Lake Cantala	Large Cormorant	632951	6163025		RRG	Alive	23	9	4				
593	Lake Cantala	Large Cormorant	632951	6163025		RRG	Alive	25	10	4				
593	Lake Cantala	Large Cormorant	632951	6163025		RRG	Alive	29	10	5				
594	Lake Cantala	Small Cormorant	633028	6163081	5	RRG	Dead	18	7	3				
594	Lake Cantala	Small Cormorant	633028	6163081		RRG	Dead	19	8	4				
594	Lake Cantala	Small Cormorant	633028	6163081		RRG	Dead	20	9	4				
594	Lake Cantala	Small Cormorant	633028	6163081		RRG	Dead	23	9	5				
594	Lake Cantala	Small Cormorant	633028	6163081		RRG	Dead	25	10	5				
595	Lake Cantala	Small Cormorant	632980	6163118	5	RRG	Alive	18	7	3				
595	Lake Cantala	Small Cormorant	632980	6163118		RRG	Alive	19	8	4				
595	Lake Cantala	Small Cormorant	632980	6163118		RRG	Alive	20	9	4				
595	Lake Cantala	Small Cormorant	632980	6163118		RRG	Alive	23	9	5				
595	Lake Cantala	Small Cormorant	632980	6163118		RRG	Alive	25	10	5				
596	Lake Cantala	Small Cormorant	632989	6163154	5	RRG	Alive	18	7	3				
596	Lake Cantala	Small Cormorant	632989	6163154		RRG	Alive	19	8	4				
596	Lake Cantala	Small Cormorant	632989	6163154		RRG	Alive	20	9	4				
596	Lake Cantala	Small Cormorant	632989	6163154		RRG	Alive	23	9	5				
596	Lake Cantala	Small Cormorant	632989	6163154		RRG	Alive	25	10	5				
597	Lake Cantala	Small Cormorant	632889	6163372	5	RRG	Alive	6	7	3				
597	Lake Cantala	Small Cormorant	632889	6163372		RRG	Alive	8	8	4				

597	Lake Cantala	Small Cormorant	632889	6163372		RRG	Alive	8	8	4				
597	Lake Cantala	Small Cormorant	632889	6163372		RRG	Alive	8	9	4				
597	Lake Cantala	Small Cormorant	632889	6163372		RRG	Alive	9	9	5				
598	Lake Cantala	Small Cormorant	632860	6163398	5	RRG	Alive	6	7	3				
598	Lake Cantala	Small Cormorant	632860	6163398		RRG	Alive	8	8	4				
598	Lake Cantala	Small Cormorant	632860	6163398		RRG	Alive	8	8	4				
598	Lake Cantala	Small Cormorant	632860	6163398		RRG	Alive	8	9	4				
598	Lake Cantala	Small Cormorant	632860	6163398		RRG	Alive	9	9	5				
599	Lake Cantala	Small Cormorant	632859	6163373	5	RRG	Alive	8	7	3				
599	Lake Cantala	Small Cormorant	632859	6163373		RRG	Alive	9	8	4				
599	Lake Cantala	Small Cormorant	632859	6163373		RRG	Alive	11	9	4				
599	Lake Cantala	Small Cormorant	632859	6163373		RRG	Alive	14	9	4				
599	Lake Cantala	Small Cormorant	632859	6163373		RRG	Alive	18	10	5				
600	Lake Cantala	Small Cormorant	632798	6163293	5	RRG	Alive	8	7	3				
600	Lake Cantala	Small Cormorant	632798	6163293		RRG	Alive	9	8	4				
600	Lake Cantala	Small Cormorant	632798	6163293		RRG	Alive	11	9	4				
600	Lake Cantala	Small Cormorant	632798	6163293		RRG	Alive	14	9	4				
600	Lake Cantala	Small Cormorant	632798	6163293		RRG	Alive	18	10	5				
601	Lake Cantala	Small Cormorant	632832	6163376	5	RRG	Alive	8	7	3				
601	Lake Cantala	Small Cormorant	632832	6163376		RRG	Alive	9	8	4				
601	Lake Cantala	Small Cormorant	632832	6163376		RRG	Alive	11	9	4				
601	Lake Cantala	Small Cormorant	632832	6163376		RRG	Alive	14	9	4				
601	Lake Cantala	Small Cormorant	632832	6163376		RRG	Alive	18	10	5				
602	Lake Cantala	Small Cormorant	632840	6163392	5	RRG	Alive	8	7	3				
602	Lake Cantala	Small Cormorant	632840	6163392	5	RRG	Alive	8	7	3				
602	Lake Cantala	Small Cormorant	632840	6163392		RRG	Alive	9	8	4				
602	Lake Cantala	Small Cormorant	632840	6163392		RRG	Alive	11	9	4				
602	Lake Cantala	Small Cormorant	632840	6163392		RRG	Alive	14	9	4				
602	Lake Cantala	Small Cormorant	632840	6163392		RRG	Alive	18	10	5				
603	Lake Cantala	Small Cormorant	632835	6163349	5	RRG	Alive	6	7	3				
603	Lake Cantala	Small Cormorant	632835	6163349		RRG	Alive	9	8	4				
603	Lake Cantala	Small Cormorant	632835	6163349		RRG	Alive	11	9	4				
603	Lake Cantala	Small Cormorant	632835	6163349		RRG	Alive	14	9	4				
603	Lake Cantala	Small Cormorant	632835	6163349		RRG	Alive	18	10	5				
604	Lake Cantala	Small Cormorant	632807	6163334	5	RRG	Alive	8	7	3				
604	Lake Cantala	Small Cormorant	632807	6163334		RRG	Alive	8	8	4				
604	Lake Cantala	Small Cormorant	632807	6163334		RRG	Alive	8	8	4				
604	Lake Cantala	Small Cormorant	632807	6163334		RRG	Alive	8	9	4				
604	Lake Cantala	Small Cormorant	632807	6163334		RRG	Alive	9	9	5				

605	Lake Cantala	Small Cormorant	632774	6163311	1	RRG	Alive	18	10	5				
605	Lake Cantala	Small Cormorant	632774	6163311		RRG	Alive	8	7	3				
605	Lake Cantala	Small Cormorant	632774	6163311		RRG	Alive	9	8	4				
605	Lake Cantala	Small Cormorant	632774	6163311		RRG	Alive	11	9	4				
605	Lake Cantala	Small Cormorant	632774	6163311		RRG	Alive	14	9	4				
606	Lake Cantala	Large Cormorant	632734	6163184	2	RRG	Alive	19	11	3	5			
607	Lake Cantala	Large Cormorant	632769	6163167	4	RRG	Alive	11	8	3				
607	Lake Cantala	Large Cormorant	632769	6163167		RRG	Alive	14	9	4				
607	Lake Cantala	Large Cormorant	632769	6163167		RRG	Alive	17	9	4				
607	Lake Cantala	Large Cormorant	632769	6163167		RRG	Alive	18	10	5				
608	Lake Cantala	Large Cormorant	632737	6163174	1	RRG	Dead	12	8	4				
609	Lake Cantala	Large Cormorant	632685	6163053	3	RRG	Dead	23	9	3	4	5		
610	Lake Cantala	Large Cormorant	632703	6162996	4	RRG	Dead	18	8	3				
610	Lake Cantala	Large Cormorant	632703	6162996		RRG	Dead	19	8	3				
610	Lake Cantala	Large Cormorant	632703	6162996		RRG	Dead	22	9	4				
610	Lake Cantala	Large Cormorant	632703	6162996		RRG	Dead	23	9	5				
611	Lake Cantala	Large Cormorant	632624	6163032	4	RRG	Dead	18	8	3				
611	Lake Cantala	Large Cormorant	632624	6163032		RRG	Dead	19	8	3				
611	Lake Cantala	Large Cormorant	632624	6163032		RRG	Dead	22	9	4				
611	Lake Cantala	Large Cormorant	632624	6163032		RRG	Dead	23	9	5				
612	Lake Cantala	Large Cormorant	632619	6163218	1	RRG	Alive	47	12	6				
613	Lake Cantala	Large Cormorant	632567	6163112	4	RRG	Dead	18	8	3				
613	Lake Cantala	Large Cormorant	632567	6163112		RRG	Dead	19	8	3				
613	Lake Cantala	Large Cormorant	632567	6163112		RRG	Dead	22	9	4				
613	Lake Cantala	Large Cormorant	632567	6163112		RRG	Dead	23	9	5				
614	Lake Cantala	Large Cormorant	632428	6163237	1	RRG	Dead	34	12	4				
615	Lake Cantala	Large Cormorant	632537	6163157	1	RRG	Dead	21	9	3				
616	Lake Cantala	Large Cormorant	632656	6162977	4	RRG	Dead	18	8	3				
616	Lake Cantala	Large Cormorant	632656	6162977		RRG	Dead	19	8	3				
616	Lake Cantala	Large Cormorant	632656	6162977		RRG	Dead	22	9	4				
616	Lake Cantala	Large Cormorant	632656	6162977		RRG	Dead	23	9	5				
617	Lake Cantala	Large Cormorant	632488	6162949	1	RRG	Alive	15	9	3				
618	Lake Cantala	Large Cormorant	632503	6162879	3	RRG	Dead	12	8	3				
618	Lake Cantala	Large Cormorant	632503	6162879		RRG	Dead	15	9	4				
618	Lake Cantala	Large Cormorant	632503	6162879		RRG	Dead	17	9	4				
619	Lake Cantala	Large Cormorant	632477	6162910	1	RRG	Dead	20	9	5				
620	Lake Cantala	Large Cormorant	632470	6162886	2	RRG	Dead	23	10	3	5			
621	Lake Cantala	Large Cormorant	632441	6162877	2	RRG	Dead	28	10	4	5			
622	Lake Cantala	Large Cormorant	632477	6162758	3	RRG	Dead	18	9	3				

622	Lake Cantala	Large Cormorant	632477	6162758		RRG	Dead	21	9	4				
622	Lake Cantala	Large Cormorant	632477	6162758		RRG	Dead	23	10	5				
623	Lake Cantala	Large Cormorant	632386	6162880	1	RRG	Dead	16	9	3				
624	Lake Cantala	Large Cormorant	632386	6162817	5	RRG	Dead	18	8	3				
624	Lake Cantala	Large Cormorant	632386	6162817		RRG	Dead	21	9	4				
624	Lake Cantala	Large Cormorant	632386	6162817		RRG	Dead	23	9	5				
624	Lake Cantala	Large Cormorant	632386	6162817		RRG	Dead	27	10	5				
624	Lake Cantala	Large Cormorant	632386	6162817		RRG	Dead	29	10	6				
625	Lake Cantala	Large Cormorant	632377	6162808	5	RRG	Alive	18	8	3				
625	Lake Cantala	Large Cormorant	632377	6162808		RRG	Alive	21	9	4				
625	Lake Cantala	Large Cormorant	632377	6162808		RRG	Alive	23	9	5				
625	Lake Cantala	Large Cormorant	632377	6162808		RRG	Alive	27	10	5				
625	Lake Cantala	Large Cormorant	632377	6162808		RRG	Alive	29	10	6				
626	Lake Cantala	Large Cormorant	632363	6162789	5	RRG	Dead	18	8	3				
626	Lake Cantala	Large Cormorant	632363	6162789		RRG	Dead	21	9	4				
626	Lake Cantala	Large Cormorant	632363	6162789		RRG	Dead	23	9	5				
626	Lake Cantala	Large Cormorant	632363	6162789		RRG	Dead	27	10	5				
626	Lake Cantala	Large Cormorant	632363	6162789		RRG	Dead	29	10	6				
627	Lake Cantala	Large Cormorant	632357	6162821	5	RRG	Dead	18	8	3				
627	Lake Cantala	Large Cormorant	632357	6162821		RRG	Dead	21	9	4				
627	Lake Cantala	Large Cormorant	632357	6162821		RRG	Dead	23	9	5				
627	Lake Cantala	Large Cormorant	632357	6162821		RRG	Dead	27	10	5				
627	Lake Cantala	Large Cormorant	632357	6162821		RRG	Dead	29	10	6				
628	Lake Cantala	Large Cormorant	632363	6162739	5	RRG	Dead	18	8	3				
628	Lake Cantala	Large Cormorant	632363	6162739		RRG	Dead	19	9	4				
628	Lake Cantala	Large Cormorant	632363	6162739		RRG	Dead	21	9	5				
628	Lake Cantala	Large Cormorant	632363	6162739		RRG	Dead	23	10	5				
628	Lake Cantala	Large Cormorant	632363	6162739		RRG	Dead	27	10	6				
629	Lake Cantala	Large Cormorant	632333	6162726	5	RRG	Dead	18	8	3				
629	Lake Cantala	Large Cormorant	632333	6162726		RRG	Dead	19	9	4				
629	Lake Cantala	Large Cormorant	632333	6162726		RRG	Dead	21	9	5				
629	Lake Cantala	Large Cormorant	632333	6162726		RRG	Dead	23	10	5				
629	Lake Cantala	Large Cormorant	632333	6162726		RRG	Dead	27	10	6				
630	Lake Cantala	Large Cormorant	632331	6162777	5	RRG	Alive	18	8	3				
630	Lake Cantala	Large Cormorant	632331	6162777		RRG	Alive	19	9	4				
630	Lake Cantala	Large Cormorant	632331	6162777		RRG	Alive	21	9	5				
630	Lake Cantala	Large Cormorant	632331	6162777		RRG	Alive	23	10	5				
630	Lake Cantala	Large Cormorant	632331	6162777		RRG	Alive	27	10	6				
631	Lake Cantala	Large Cormorant	632293	6162773	5	RRG	Dead	18	8	3				

631	Lake Cantala	Large Cormorant	632293	6162773		RRG	Dead	19	9	4				
631	Lake Cantala	Large Cormorant	632293	6162773		RRG	Dead	21	9	5				
631	Lake Cantala	Large Cormorant	632293	6162773		RRG	Dead	23	10	5				
631	Lake Cantala	Large Cormorant	632293	6162773		RRG	Dead	27	10	6				
632	Lake Cantala	Large Cormorant	632187	6162802	1	RRG	Dead	21	9	5				
633	Lake Cantala	Large Cormorant	632061	6162774	1	RRG	Dead	21	9	5				
634	Lake Cantala	Large Cormorant	632074	6162686	1	RRG	Dead	24	9	5				
635	Lake Cantala	Large Cormorant	632115	6162674	1	RRG	Dead	24	9	5				
636	Lake Cantala	Large Cormorant	632166	6162627	1	RRG	Alive	24	9	5				
637	Lake Cantala	Large Cormorant	632221	6162651	1	RRG	Dead	18	9	5				
638	Lake Cantala	Large Cormorant	632252	6162641	1	RRG	Dead	24	9	4				
639	Lake Cantala	Large Cormorant	632344	6162674	5	RRG	Dead	18	8	3				
639	Lake Cantala	Large Cormorant	632344	6162674		RRG	Dead	19	9	4				
639	Lake Cantala	Large Cormorant	632344	6162674		RRG	Dead	21	9	5				
639	Lake Cantala	Large Cormorant	632344	6162674		RRG	Dead	23	10	5				
639	Lake Cantala	Large Cormorant	632344	6162674		RRG	Dead	27	10	6				
640	Lake Cantala	Large Cormorant	632403	6162641	5	RRG	Dead	18	8	4				
640	Lake Cantala	Large Cormorant	632403	6162641		RRG	Dead	19	9	4				
640	Lake Cantala	Large Cormorant	632403	6162641		RRG	Dead	21	9	5				
640	Lake Cantala	Large Cormorant	632403	6162641		RRG	Dead	21	10	5				
640	Lake Cantala	Large Cormorant	632403	6162641		RRG	Dead	23	10	6				
641	Lake Cantala	Large Cormorant	632500	6162608	5	RRG	Dead	18	8	4				
641	Lake Cantala	Large Cormorant	632500	6162608		RRG	Dead	19	9	4				
641	Lake Cantala	Large Cormorant	632500	6162608		RRG	Dead	21	9	5				
641	Lake Cantala	Large Cormorant	632500	6162608		RRG	Dead	21	10	5				
641	Lake Cantala	Large Cormorant	632500	6162608		RRG	Dead	23	10	6				
642	Lake Cantala	Large Cormorant	632587	6162523	5	RRG	Dead	18	8	4				
642	Lake Cantala	Large Cormorant	632587	6162523		RRG	Dead	19	9	4				
642	Lake Cantala	Large Cormorant	632587	6162523		RRG	Dead	21	9	5				
642	Lake Cantala	Large Cormorant	632587	6162523		RRG	Dead	21	10	5				
642	Lake Cantala	Large Cormorant	632587	6162523		RRG	Dead	23	10	6				
643	Lake Cantala	Large Cormorant	632633	6162573	5	RRG	Dead	18	8	4				
643	Lake Cantala	Large Cormorant	632633	6162573		RRG	Dead	19	9	4				
643	Lake Cantala	Large Cormorant	632633	6162573		RRG	Dead	21	9	5				
643	Lake Cantala	Large Cormorant	632633	6162573		RRG	Dead	21	10	5				
643	Lake Cantala	Large Cormorant	632633	6162573		RRG	Dead	23	10	6				
644	Lake Cantala	Large Cormorant	632602	6162483	5	RRG	Dead	18	8	4				
644	Lake Cantala	Large Cormorant	632602	6162483		RRG	Dead	19	9	4				
644	Lake Cantala	Large Cormorant	632602	6162483		RRG	Dead	21	9	5				

644	Lake Cantala	Large Cormorant	632602	6162483		RRG	Dead	21	10	5				
644	Lake Cantala	Large Cormorant	632602	6162483		RRG	Dead	23	10	6				
645	Lake Cantala	Large Cormorant	632652	6162513	5	RRG	Dead	18	8	4				
645	Lake Cantala	Large Cormorant	632652	6162513		RRG	Dead	19	9	4				
645	Lake Cantala	Large Cormorant	632652	6162513		RRG	Dead	21	9	5				
645	Lake Cantala	Large Cormorant	632652	6162513		RRG	Dead	21	10	5				
645	Lake Cantala	Large Cormorant	632652	6162513		RRG	Dead	23	10	6				
646	Lake Cantala	Large Cormorant	632942	6162341	5	RRG	Dead	18	8	4				
646	Lake Cantala	Large Cormorant	632942	6162341		RRG	Dead	19	9	4				
646	Lake Cantala	Large Cormorant	632942	6162341		RRG	Dead	21	9	5				
646	Lake Cantala	Large Cormorant	632942	6162341		RRG	Dead	21	10	5				
646	Lake Cantala	Large Cormorant	632942	6162341		RRG	Dead	23	10	6				
648	Lake Cantala	Large Cormorant	632818	6163846	1	RRG	Alive	89	11	3				
649	Lake Cantala	Large Cormorant	632570	6163791	1	RRG	Alive	76	11	4				
650	Lake Cantala	Large Cormorant	632657	6163913	1	RRG	Alive	72	10	4				
651	Lake Cantala	Small Cormorant	632646	6163605	3	Coobah	Alive	10	8	3	3	4		
652	Lake Cantala	Small Cormorant	632395	6163392	3	RRG	Alive	22	12	6	6	7		
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	11	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	12	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	12	8	3				

653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	16	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	19	8	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	13	9	3				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	18	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	19	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				

653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	11	9	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	13	9	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	16	9	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	18	9	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	21	9	4				
653	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	9	5				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	9	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	11	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	7	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	15	8	3				

654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	16	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	19	8	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	13	9	3				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	11	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	20	7	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	8	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	12	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	18	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	19	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	RRG	Alive	21	8	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	11	9	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	13	9	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	16	9	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	18	9	4				
654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	21	9	4				

654	Lake Cantala	Small Cormorant	632443	6163512	1	Coobah	Alive	9	9	5				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	9	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	7	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	12	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	15	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	18	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	18	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	18	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	18	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	18	8	3				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				
655	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	11	7	4				

656	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	21	8	4				
656	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	21	8	4				
656	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	21	8	4				
656	Lake Cantala	Small Cormorant	632615	6163517	1	RRG	Alive	21	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	10	7	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	10	7	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	11	7	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	11	7	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	13	7	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	12	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	14	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	14	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	16	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	19	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	19	8	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	14	9	3				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	11	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	11	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	12	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	12	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	18	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	18	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	19	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	19	8	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	14	9	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	14	9	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	16	9	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	18	9	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	18	9	4				
657	Lake Cantala	Small Cormorant	632576	6163507	1	Coobah	Alive	12	9	5				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	73	9	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	75	9	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	78	9	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	81	10	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	83	10	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	87	10	3				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	92	10	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	95	11	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	98	11	4				

658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	104	11	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	113	11	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	132	11	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	151	12	4				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	158	12	5				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	160	12	5				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	164	13	5				
658	Lake Cantala	Large Cormorant	632630	6163814	1	RRG	Alive	170	13	5				
659	Lake Cantala	Large Cormorant	632603	6163932	1	RRG	Alive	73	9	3				
660	Lake Cantala	Large Cormorant	632638	6163735	1	RRG	Alive	75	9	3				
661	Lake Cantala	Small Cormorant	632353	6163534	1	RRG	Alive	78	9	3				
662	Lake Cantala	Large Cormorant	632104	6163447	1	RRG	Dead	110	13	5				
663	Lake Cantala	Small Cormorant	632024	6163408	3	Coobah	Alive	24	7	2	3	3		
664	Lake Cantala	Large Cormorant	631885	6163413	1	RRG	Alive	72	13	3				
665	Lake Cantala	Small Cormorant	632014	6163228	2	Coobah	Alive	19	9	4	5			
666	Lake Cantala	Small Cormorant	632040	6163238	6	Coobah	Alive	18	6	2	2	2	2	
666	Lake Cantala	Small Cormorant	632040	6163238		Coobah	Alive	18	6	3	3			
667	Lake Cantala	Small Cormorant	632029	6163118	2	Coobah	Alive	16	7	3	4			
668	Lake Cantala	Small Cormorant	632134	6163150	6	Coobah	Alive	37	9	3	4			
668	Lake Cantala	Small Cormorant	632134	6163150	8	Coobah	Alive	8	6	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150	8	Coobah	Alive	19	8	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150	8	Coobah	Alive	24	8	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150		Coobah	Alive	8	6	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150		Coobah	Alive	19	8	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150		Coobah	Alive	24	8	3	4	4	5	
668	Lake Cantala	Small Cormorant	632134	6163150		Coobah	Alive	37	9	3	4	4	5	

Appendix C – Incidental results

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ID	Site	Common Name	Sci Name	Number	eBird list	Notes
1	23 Nov 2020 9:26 AM. Lake Bitterang	Apostlebird	<i>Struthidea cinerea</i>	4	S76660013	
2	23 Nov 2020 9:26 AM. Lake Bitterang	Australian Magpie	<i>Gymnorhina tibicen</i>	2	S76660013	
3	23 Nov 2020 9:26 AM. Lake Bitterang	Australian Raven	<i>Corvus coronoides</i>	1	S76660013	
4	23 Nov 2020 9:26 AM. Lake Bitterang	Australian Ringneck	<i>Barnardius zonarius</i>	5	S76660013	
5	23 Nov 2020 9:26 AM. Lake Bitterang	Black-faced Cuckooshrike	<i>Coracina novaehollandiae</i>	1	S76660013	
6	23 Nov 2020 9:26 AM. Lake Bitterang	Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	2	S76660013	
7	23 Nov 2020 9:26 AM. Lake Bitterang	Crested Pigeon	<i>Ocyphaps lophotes</i>	4	S76660013	
8	23 Nov 2020 9:26 AM. Lake Bitterang	Crimson Rosella	<i>Platycercus elegans</i>	2	S76660013	
9	23 Nov 2020 9:26 AM. Lake Bitterang	Galah	<i>Eolophus roseicapilla</i>	2	S76660013	
10	23 Nov 2020 9:26 AM. Lake Bitterang	Grey Butcherbird	<i>Cracticus torquatus</i>	1	S76660013	
11	23 Nov 2020 9:26 AM. Lake Bitterang	Magpie-lark	<i>Grallina cyanoleuca</i>	2	S76660013	
12	23 Nov 2020 9:26 AM. Lake Bitterang	Major Mitchell's Cockatoo	<i>Lophochroa leadbeateri</i>	2	S76660013	
13	23 Nov 2020 9:26 AM. Lake Bitterang	Noisy Miner	<i>Manorina melanocephala</i>	4	S76660013	
14	23 Nov 2020 9:26 AM. Lake Bitterang	Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	S76660013	
15	23 Nov 2020 9:26 AM. Lake Bitterang	Red-rumped Parrot	<i>Psephotus haematonotus</i>	12	S76660013	
16	23 Nov 2020 9:26 AM. Lake Bitterang	Regent Parrot	<i>Polytelis anthopeplus</i>	6	S76660013	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
17	23 Nov 2020 9:26 AM. Lake Bitterang	Striated Pardalote	<i>Pardalotus striatus</i>	8	S76660013	
18	23 Nov 2020 9:26 AM. Lake Bitterang	Tree Martin	<i>Petrochelidon nigricans</i>	8	S76660013	
19	23 Nov 2020 9:26 AM. Lake Bitterang	Welcome Swallow	<i>Hirundo neoxena</i>	2	S76660013	
20	23 Nov 2020 9:26 AM. Lake Bitterang	Whistling Kite	<i>Haliastur spheonurus</i>	2	S76660013	
21	23 Nov 2020 9:26 AM. Lake Bitterang	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	2	S76660013	
22	23 Nov 2020 9:26 AM. Lake Bitterang	White-winged Chough	<i>Corcorax melanorhamphos</i>	6	S76660013	
23	23 Nov 2020 9:26 AM. Lake Bitterang	Willie Wagtail	<i>Rhipidura leucophrys</i>	2	S76660013	
24	24 Nov 2020 10:52 AM Lake Woterap	Apostlebird	<i>Struthidea cinerea</i>	25	S76660001	
25	24 Nov 2020 10:52 AM Lake Woterap	Australian Magpie	<i>Gymnorhina tibicen</i>	4	S76660001	
26	24 Nov 2020 10:52 AM Lake Woterap	Australian Raven	<i>Corvus coronoides</i>	2	S76660001	
27	24 Nov 2020 10:52 AM Lake Woterap	Australian Ringneck	<i>Barnardius zonarius</i>	6	S76660001	
28	24 Nov 2020 10:52 AM Lake Woterap	Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	4	S76660001	
29	24 Nov 2020 10:52 AM Lake Woterap	Brown Songlark	<i>Cincloramphus cruralis</i>	1	S76660001	
30	24 Nov 2020 10:52 AM Lake Woterap	Brown Treecreeper	<i>Climacteris picumnus</i>	2	S76660001	
31	24 Nov 2020 10:52 AM Lake Woterap	Crested Pigeon	<i>Ocyphaps lophotes</i>	4	S76660001	
32	24 Nov 2020 10:52 AM Lake Woterap	Crimson Rosella	<i>Platycercus elegans</i>	4	S76660001	
33	24 Nov 2020 10:52 AM Lake Woterap	Grey Butcherbird	<i>Cracticus torquatus</i>	3	S76660001	

34	24 Nov 2020 10:52 AM Lake Woterap	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	1	S76660001	
35	24 Nov 2020 10:52 AM Lake Woterap	Magpie-lark	<i>Grallina cyanoaleuca</i>	4	S76660001	
36	24 Nov 2020 10:52 AM Lake Woterap	Noisy Miner	<i>Manorina melanocephala</i>	30	S76660001	
37	24 Nov 2020 10:52 AM Lake Woterap	Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	S76660001	
38	24 Nov 2020 10:52 AM Lake Woterap	Rainbow Bee-eater	<i>Merops ornatus</i>	2	S76660001	
39	24 Nov 2020 10:52 AM Lake Woterap	Red-rumped Parrot	<i>Psephotus haematonotus</i>	8	S76660001	
40	24 Nov 2020 10:52 AM Lake Woterap	Rufous Whistler	<i>Pachycephala rufiventris</i>	1	S76660001	
41	24 Nov 2020 10:52 AM Lake Woterap	Sacred Kingfisher	<i>Todiramphus sanctus</i>	2	S76660001	
42	24 Nov 2020 10:52 AM Lake Woterap	Striated Pardalote	<i>Pardalotus striatus</i>	12	S76660001	
43	24 Nov 2020 10:52 AM Lake Woterap	Striped Honeyeater	<i>Plectorhyncha lanceolata</i>	1	S76660001	
44	24 Nov 2020 10:52 AM Lake Woterap	Tree Martin	<i>Petrochelidon nigricans</i>	2	S76660001	
45	24 Nov 2020 10:52 AM Lake Woterap	Weebill	<i>Smicrornis brevirostris</i>	20	S76660001	
46	24 Nov 2020 10:52 AM Lake Woterap	White-eared Honeyeater	<i>Nesoptilotis leucotis</i>	1	S76660001	
47	24 Nov 2020 10:52 AM Lake Woterap	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	4	S76660001	
48	24 Nov 2020 10:52 AM Lake Woterap	White-winged Chough	<i>Corcorax melanorhamphos</i>	18	S76660001	
49	24 Nov 2020 10:52 AM Lake Woterap	Willie Wagtail	<i>Rhipidura leucophrys</i>	4	S76660001	
50	5 Jan 2021 8:27 AM Lake Mournpall	Australian Magpie	<i>Gymnorhina tibicen</i>	8	S78684945	
51	5 Jan 2021 8:27 AM Lake Mournpall	Australian Raven	<i>Corvus coronoides</i>	3	S78684945	
52	5 Jan 2021 8:27 AM Lake Mournpall	Australian Ringneck	<i>Barnardius zonarius</i>	6	S78684945	
53	5 Jan 2021 8:27 AM Lake Mournpall	Black-faced Cuckooshrike	<i>Coracina novaehollandiae</i>	1	S78684945	
54	5 Jan 2021 8:27 AM Lake Mournpall	Crested Pigeon	<i>Ocyphaps lophotes</i>	6	S78684945	
55	5 Jan 2021 8:27 AM Lake Mournpall	Crimson Rosella	<i>Platycercus elegans</i>	4	S78684945	
56	5 Jan 2021 8:27 AM Lake Mournpall	Emu	<i>Dromaius novaehollandiae</i>	4	S78684945	
57	5 Jan 2021 8:27 AM Lake Mournpall	Galah	<i>Eolophus roseicapilla</i>	10	S78684945	
58	5 Jan 2021 8:27 AM Lake Mournpall	Grey Butcherbird	<i>Cracticus torquatus</i>	4	S78684945	
59	5 Jan 2021 8:27 AM Lake Mournpall	Grey Shrike-thrush	<i>Colluricincla harmonica</i>	3	S78684945	
60	5 Jan 2021 8:27 AM Lake Mournpall	Little Corella	<i>Cacatua sanguinea</i>	30	S78684945	
61	5 Jan 2021 8:27 AM Lake Mournpall	Magpie-lark	<i>Grallina cyanoaleuca</i>	4	S78684945	
62	5 Jan 2021 8:27 AM Lake Mournpall	Noisy Miner	<i>Manorina melanocephala</i>	15	S78684945	
63	5 Jan 2021 8:27 AM Lake Mournpall	Pied Butcherbird	<i>Cracticus nigrogularis</i>	4	S78684945	
64	5 Jan 2021 8:27 AM Lake Mournpall	Regent Parrot	<i>Polytelis anthopeplus</i>	8	S78684945	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
65	5 Jan 2021 8:27 AM Lake Mournpall	Restless Flycatcher	<i>Myiagra inquieta</i>	2	S78684945	
66	5 Jan 2021 8:27 AM Lake Mournpall	Rufous Whistler	<i>Pachycephala rufiventris</i>	1	S78684945	
67	5 Jan 2021 8:27 AM Lake Mournpall	Striated Pardalote	<i>Pardalotus striatus</i>	5	S78684945	
68	5 Jan 2021 8:27 AM Lake Mournpall	Striped Honeyeater	<i>Plectorhyncha lanceolata</i>	2	S78684945	
69	5 Jan 2021 8:27 AM Lake Mournpall	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	10	S78684945	
70	5 Jan 2021 8:27 AM Lake Mournpall	Whistling Kite	<i>Haliastur sphenurus</i>	2	S78684945	

71	5 Jan 2021 8:27 AM Lake Mournpall	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	8	S78684945	
72	5 Jan 2021 8:27 AM Lake Mournpall	Willie Wagtail	<i>Rhipidura leucophrys</i>	2	S78684945	
73	5 Jan 2021 11:13 AM Lake Konardin	Apostlebird	<i>Struthidea cinerea</i>	6	S79041835	
74	5 Jan 2021 11:13 AM Lake Konardin	Australian Magpie	<i>Gymnorhina tibicen</i>	4	S79041835	
75	5 Jan 2021 11:13 AM Lake Konardin	Australian Raven	<i>Corvus coronoides</i>	3	S79041835	
76	5 Jan 2021 11:13 AM Lake Konardin	Crimson Rosella	<i>Platycercus elegans</i>	2	S79041835	
77	5 Jan 2021 11:13 AM Lake Konardin	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	1	S79041835	
78	5 Jan 2021 11:13 AM Lake Konardin	Mistletoebird	<i>Dicaeum hirundinaceum</i>	1	S79041835	
79	5 Jan 2021 11:13 AM Lake Konardin	Restless Flycatcher	<i>Myiagra inquieta</i>	1	S79041835	
80	5 Jan 2021 11:13 AM Lake Konardin	Rufous Whistler	<i>Pachycephala rufiventris</i>	1	S79041835	
81	5 Jan 2021 11:13 AM Lake Konardin	Striated Pardalote	<i>Pardalotus striatus</i>	4	S79041835	
82	5 Jan 2021 11:13 AM Lake Konardin	Weebill	<i>Smicrornis brevirostris</i>	2	S79041835	
83	5 Jan 2021 11:13 AM Lake Konardin	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	4	S79041835	
84	5 Jan 2021 11:13 AM Lake Konardin	White-winged Chough	<i>Corcorax melanorhamphos</i>	8	S79041835	
85	5 Jan 2021 11:13 AM Lake Konardin	Willie Wagtail	<i>Rhipidura leucophrys</i>	1	S79041835	
86	5 Jan 2021 3:08 PM Lake Yerang	Australian Magpie	<i>Gymnorhina tibicen</i>	5	S78697308	
87	5 Jan 2021 3:08 PM Lake Yerang	Australian Raven	<i>Corvus coronoides</i>	2	S78697308	
88	5 Jan 2021 3:08 PM Lake Yerang	Crimson Rosella	<i>Platycercus elegans</i>	4	S78697308	
89	5 Jan 2021 3:08 PM Lake Yerang	Emu	<i>Dromaius novaehollandiae</i>	2	S78697308	
90	5 Jan 2021 3:08 PM Lake Yerang	Galah	<i>Eolophus roseicapilla</i>	10	S78697308	
91	5 Jan 2021 3:08 PM Lake Yerang	Noisy Miner	<i>Manorina melanocephala</i>	6	S78697308	
92	5 Jan 2021 3:08 PM Lake Yerang	Regent Parrot	<i>Polytelis anthopeplus</i>	6	S78697308	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
93	5 Jan 2021 3:08 PM Lake Yerang	Sacred Kingfisher	<i>Todiramphus sanctus</i>	1	S78697308	
94	5 Jan 2021 3:08 PM Lake Yerang	Whistling Kite	<i>Haliastur spheonurus</i>	1	S78697308	
95	5 Jan 2021 3:08 PM Lake Yerang	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	6	S78697308	
96	18 Jan 2021 7:12 AM Lake Yelwell	Australian Magpie	<i>Gymnorhina tibicen</i>	4	S79463371	
97	18 Jan 2021 7:12 AM Lake Yelwell	Australian Raven	<i>Corvus coronoides</i>	2	S79463371	
98	18 Jan 2021 7:12 AM Lake Yelwell	Australian Ringneck	<i>Barnardius zonarius</i>	4	S79463371	
99	18 Jan 2021 7:12 AM Lake Yelwell	Galah	<i>Eolophus roseicapilla</i>	15	S79463371	
100	18 Jan 2021 7:12 AM Lake Yelwell	Grey Butcherbird	<i>Cracticus torquatus</i>	2	S79463371	
101	18 Jan 2021 7:12 AM Lake Yelwell	Magpie-lark	<i>Grallina cyanoleuca</i>	6	S79463371	
102	18 Jan 2021 7:12 AM Lake Yelwell	Noisy Miner	<i>Manorina melanocephala</i>	10	S79463371	
103	18 Jan 2021 7:12 AM Lake Yelwell	Pied Butcherbird	<i>Cracticus nigrogularis</i>	4	S79463371	
104	18 Jan 2021 7:12 AM Lake Yelwell	Regent Parrot	<i>Polytelis anthopeplus</i>	12	S79463371	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed

105	18 Jan 2021 7:12 AM Lake Yelwell	Striated Pardalote	<i>Pardalotus striatus</i>	4	S79463371	
106	18 Jan 2021 7:12 AM Lake Yelwell	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	4	S79463371	
107	18 Jan 2021 7:12 AM Lake Yelwell	Weebill	<i>Smicrornis brevirostris</i>	4	S79463371	
108	18 Jan 2021 7:12 AM Lake Yelwell	White-browed Babbler	<i>Pomatostomus superciliosus</i>	6	S79463371	
109	18 Jan 2021 7:12 AM Lake Yelwell	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	4	S79463371	
110	18 Jan 2021 10:42 AM Lake Lochie	Australian Magpie	<i>Gymnorhina tibicen</i>	6	S79463364	
111	18 Jan 2021 10:42 AM Lake Lochie	Australian Ringneck	<i>Barnardius zonarius</i>	6	S79463364	
112	18 Jan 2021 10:42 AM Lake Lochie	Brown Treecreeper	<i>Climacteris picumnus</i>	2	S79463364	
113	18 Jan 2021 10:42 AM Lake Lochie	Crimson Rosella	<i>Platycercus elegans</i>	2	S79463364	
114	18 Jan 2021 10:42 AM Lake Lochie	Emu	<i>Dromaius novaehollandiae</i>	2	S79463364	
115	18 Jan 2021 10:42 AM Lake Lochie	Galah	<i>Eolophus roseicapilla</i>	6	S79463364	
116	18 Jan 2021 10:42 AM Lake Lochie	Grey Shrikethrush	<i>Colluricincla harmonica</i>	2	S79463364	
117	18 Jan 2021 10:42 AM Lake Lochie	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	2	S79463364	
118	18 Jan 2021 10:42 AM Lake Lochie	Mistletoebird	<i>Dicaeum hirundinaceum</i>	1	S79463364	
119	18 Jan 2021 10:42 AM Lake Lochie	Nankeen Kestrel	<i>Falco cenchroides</i>	1	S79463364	
120	18 Jan 2021 10:42 AM Lake Lochie	Noisy Miner	<i>Manorina melanocephala</i>	20	S79463364	
121	18 Jan 2021 10:42 AM Lake Lochie	Pied Butcherbird	<i>Cracticus nigrogularis</i>	4	S79463364	
122	18 Jan 2021 10:42 AM Lake Lochie	Purple-backed Fairywren	<i>Malurus assimilis</i>	4	S79463364	
123	18 Jan 2021 10:42 AM Lake Lochie	Rainbow Bee-eater	<i>Merops ornatus</i>	4	S79463364	
124	18 Jan 2021 10:42 AM Lake Lochie	Regent Parrot	<i>Polytelis anthopeplus</i>	15	S79463364	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
125	18 Jan 2021 10:42 AM Lake Lochie	Striated Pardalote	<i>Pardalotus striatus</i>	6	S79463364	
126	18 Jan 2021 10:42 AM Lake Lochie	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	4	S79463364	
127	18 Jan 2021 10:42 AM Lake Lochie	Tree Martin	<i>Petrochelidon nigricans</i>	10	S79463364	
128	18 Jan 2021 10:42 AM Lake Lochie	Whistling Kite	<i>Haliastur spheurnus</i>	2	S79463364	
129	18 Jan 2021 10:42 AM Lake Lochie	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	8	S79463364	
130	18 Jan 2021 10:42 AM Lake Lochie	Willie Wagtail	<i>Rhipidura leucophrys</i>	3	S79463364	
131	18 Jan 2021 2:07 PM Lake Roonki	Emu	<i>Dromaius novaehollandiae</i>	2	S79522782	
132	18 Jan 2021 2:07 PM Lake Roonki	Greater Bluebonnet	<i>Northiella haematogaster</i>	2	S79522782	
133	18 Jan 2021 2:07 PM Lake Roonki	Noisy Miner	<i>Manorina melanocephala</i>	8	S79522782	
134	18 Jan 2021 2:07 PM Lake Roonki	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	4	S79522782	
135	18 Jan 2021 2:07 PM Lake Roonki	Weebill	<i>Smicrornis brevirostris</i>	4	S79522782	
136	18 Jan 2021 2:07 PM Lake Roonki	Chestnut-crowned Babbler	<i>Pomatostomus ruficeps</i>	8	S79522782	
137	19 Jan 2021 7:06 AM Lake Arawak	Apostlebird	<i>Struthidea cinerea</i>	7	S79512404	
138	19 Jan 2021 7:06 AM Lake Arawak	Australian Magpie	<i>Gymnorhina tibicen</i>	6	S79512404	

139	19 Jan 2021 7:06 AM Lake Arawak	Australian Raven	<i>Corvus coronoides</i>	1	S79512404	
140	19 Jan 2021 7:06 AM Lake Arawak	Australian Ringneck	<i>Barnardius zonarius</i>	8	S79512404	
141	19 Jan 2021 7:06 AM Lake Arawak	Galah	<i>Eolophus roseicapilla</i>	20	S79512404	
142	19 Jan 2021 7:06 AM Lake Arawak	Grey Butcherbird	<i>Cracticus torquatus</i>	3	S79512404	
143	19 Jan 2021 7:06 AM Lake Arawak	Magpie-lark	<i>Grallina cyanoleuca</i>	4	S79512404	
144	19 Jan 2021 7:06 AM Lake Arawak	Noisy Miner	<i>Manorina melanocephala</i>	20	S79512404	
145	19 Jan 2021 7:06 AM Lake Arawak	Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	S79512404	
146	19 Jan 2021 7:06 AM Lake Arawak	Regent Parrot	<i>Polytelis anthopeplus</i>	8	S79512404	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
147	19 Jan 2021 7:06 AM Lake Arawak	Striated Pardalote	<i>Pardalotus striatus</i>	3	S79512404	
148	19 Jan 2021 7:06 AM Lake Arawak	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	10	S79512404	
149	19 Jan 2021 7:06 AM Lake Arawak	Weebill	<i>Smicrornis brevirostris</i>	2	S79512404	
150	19 Jan 2021 7:06 AM Lake Arawak	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	8	S79512404	
151	19 Jan 2021 7:06 AM Lake Arawak	White-winged Chough	<i>Corcorax melanorhamphos</i>	17	S79512404	
152	19 Jan 2021 7:06 AM Lake Arawak	Willie Wagtail	<i>Rhipidura leucophrys</i>	1	S79512404	
153	19 Jan 2021 9:09 AM Lake Bulla	Australian Magpie	<i>Gymnorhina tibicen</i>	5	S79520657	
154	19 Jan 2021 9:09 AM Lake Bulla	Australian Raven	<i>Corvus coronoides</i>	3	S79520657	
155	19 Jan 2021 9:09 AM Lake Bulla	Crimson Rosella	<i>Platycercus elegans</i>	2	S79520657	
156	19 Jan 2021 9:09 AM Lake Bulla	Galah	<i>Eolophus roseicapilla</i>	6	S79520657	
157	19 Jan 2021 9:09 AM Lake Bulla	Grey Butcherbird	<i>Cracticus torquatus</i>	2	S79520657	
158	19 Jan 2021 9:09 AM Lake Bulla	Magpie-lark	<i>Grallina cyanoleuca</i>	4	S79520657	
159	19 Jan 2021 9:09 AM Lake Bulla	Noisy Miner	<i>Manorina melanocephala</i>	20	S79520657	
160	19 Jan 2021 9:09 AM Lake Bulla	Striated Pardalote	<i>Pardalotus striatus</i>	4	S79520657	
161	19 Jan 2021 9:09 AM Lake Bulla	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	6	S79520657	
162	19 Jan 2021 9:09 AM Lake Bulla	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	6	S79520657	
163	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Apostlebird	<i>Struthidea cinerea</i>	8	S80288414	
164	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Australian Magpie	<i>Gymnorhina tibicen</i>	4	S80288414	
165	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Australian Raven	<i>Corvus coronoides</i>	4	S80288414	
166	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Australian Ringneck	<i>Barnardius zonarius</i>	4	S80288414	
167	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	1	S80288414	
168	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Crested Pigeon	<i>Ocyphaps lophotes</i>	4	S80288414	

169	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Crimson Rosella	<i>Platycercus elegans</i>	6	S80288414	
170	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Emu	<i>Dromaius novaehollandiae</i>	2	S80288414	
171	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Galah	<i>Eolophus roseicapilla</i>	25	S80288414	
172	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Great Cormorant	<i>Phalacrocorax carbo</i>	1	S80288414	
173	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Greater Bluebonnet	<i>Northiella haematogaster</i>	2	S80288414	
174	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Grey Butcherbird	<i>Cracticus torquatus</i>	2	S80288414	
175	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Grey Shrikethrush	<i>Colluricincla harmonica</i>	1	S80288414	
176	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	2	S80288414	
177	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Magpie-lark	<i>Grallina cyanoleuca</i>	2	S80288414	
178	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Noisy Miner	<i>Manorina melanocephala</i>	6	S80288414	
179	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Pied Butcherbird	<i>Cracticus nigrogularis</i>	4	S80288414	
180	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Red-rumped Parrot	<i>Psephotus haematonotus</i>	4	S80288414	
181	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Regent Parrot	<i>Polytelis anthopeplus</i>	20	S80288414	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
182	2 Feb 2021 7:01 AM Lake Brockie & Marramook	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	15	S80288414	
183	2 Feb 2021 7:01 AM Lake Brockie & Marramook	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	4	S80288414	
184	2 Feb 2021 7:01 AM Lake Brockie & Marramook	White-winged Chough	<i>Corcorax melanorhamphos</i>	12	S80288414	
185	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Wedge-tailed Eagle	<i>Aquila audax</i>	1	S80293482	
186	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Australian Magpie	<i>Gymnorhina tibicen</i>	2	S80293482	
187	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Australian Raven	<i>Corvus coronoides</i>	4	S80293482	
188	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Australian Ringneck	<i>Barnardius zonarius</i>	4	S80293482	

189	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Crimson Rosella	<i>Platycercus elegans</i>	6	S80293482	
190	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Galah	<i>Eolophus roseicapilla</i>	15	S80293482	
191	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Grey Butcherbird	<i>Cracticus torquatus</i>	3	S80293482	
192	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Grey Shrikethrush	<i>Colluricincla harmonica</i>	2	S80293482	
193	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	2	S80293482	
194	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Noisy Miner	<i>Manorina melanocephala</i>	25	S80293482	
195	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Regent Parrot	<i>Polytelis anthopeplus</i>	12	S80293482	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
196	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Rufous Whistler	<i>Pachycephala rufiventris</i>	1	S80293482	
197	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Striated Pardalote	<i>Pardalotus striatus</i>	10	S80293482	
198	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Weebill	<i>Smicrornis brevirostris</i>	5	S80293482	
199	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	8	S80293482	
200	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	White-winged Chough	<i>Corcorax melanorhamphos</i>	13	S80293482	
201	2 Feb 2021 12:07 PM Lake Nip Nip & Boich & Tullamook	Willie Wagtail	<i>Rhipidura leucophrys</i>	4	S80293482	
202	22 Feb 2021 7:57 AM Lake Hattah	Australian Magpie	<i>Gymnorhina tibicen</i>	8	S82119352	
203	22 Feb 2021 7:57 AM Lake Hattah	Australian Raven	<i>Corvus coronoides</i>	3	S82119352	
204	22 Feb 2021 7:57 AM Lake Hattah	Australian Ringneck	<i>Barnardius zonarius</i>	2	S82119352	
205	22 Feb 2021 7:57 AM Lake Hattah	Crimson Rosella	<i>Platycercus elegans</i>	8	S82119352	
206	22 Feb 2021 7:57 AM Lake Hattah	Galah	<i>Eolophus roseicapilla</i>	12	S82119352	
207	22 Feb 2021 7:57 AM Lake Hattah	Grey Butcherbird	<i>Cracticus torquatus</i>	2	S82119352	
208	22 Feb 2021 7:57 AM Lake Hattah	Grey Currawong	<i>Strepera versicolor</i>	4	S82119352	
209	22 Feb 2021 7:57 AM Lake Hattah	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	3	S82119352	
210	22 Feb 2021 7:57 AM Lake Hattah	Magpie-lark	<i>Grallina cyanoleuca</i>	3	S82119352	
211	22 Feb 2021 7:57 AM Lake Hattah	Noisy Miner	<i>Manorina melanocephala</i>	25	S82119352	
212	22 Feb 2021 7:57 AM Lake Hattah	Pied Butcherbird	<i>Cracticus nigrogularis</i>	3	S82119352	
213	22 Feb 2021 7:57 AM Lake Hattah	Red-rumped Parrot	<i>Psephotus haematonotus</i>	4	S82119352	
214	22 Feb 2021 7:57 AM Lake Hattah	Regent Parrot	<i>Polytelis anthopeplus</i>	15	S82119352	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed

215	22 Feb 2021 7:57 AM Lake Hattah	Striated Pardalote	<i>Pardalotus striatus</i>	8	S82119352	
216	22 Feb 2021 7:57 AM Lake Hattah	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	15	S82119352	
217	22 Feb 2021 7:57 AM Lake Hattah	White-winged Chough	<i>Corcorax melanorhamphos</i>	12	S82119352	
218	22 Feb 2021 11:03 AM Little Lake Hattah	Australian Magpie	<i>Gymnorhina tibicen</i>	2	S82126757	
219	22 Feb 2021 11:03 AM Little Lake Hattah	Australian Raven	<i>Corvus coronoides</i>	4	S82126757	
220	22 Feb 2021 11:03 AM Little Lake Hattah	Australian Ringneck	<i>Barnardius zonarius</i>	2	S82126757	
221	22 Feb 2021 11:03 AM Little Lake Hattah	Brown Treecreeper	<i>Climacteris picumnus</i>	3	S82126757	
222	22 Feb 2021 11:03 AM Little Lake Hattah	Chestnut-crowned Babbler	<i>Pomatostomus ruficeps</i>	5	S82126757	
223	22 Feb 2021 11:03 AM Little Lake Hattah	Chestnut-rumped Thornbill	<i>Acanthiza uropygialis</i>	12	S82126757	
224	22 Feb 2021 11:03 AM Little Lake Hattah	Crimson Rosella	<i>Platycercus elegans</i>	6	S82126757	
225	22 Feb 2021 11:03 AM Little Lake Hattah	Galah	<i>Eolophus roseicapilla</i>	8	S82126757	
226	22 Feb 2021 11:03 AM Little Lake Hattah	Grey Shrikethrush	<i>Colluricincla harmonica</i>	2	S82126757	
227	22 Feb 2021 11:03 AM Little Lake Hattah	Noisy Miner	<i>Manorina melanocephala</i>	15	S82126757	
228	22 Feb 2021 11:03 AM Little Lake Hattah	Red-rumped Parrot	<i>Psephotus haematonotus</i>	8	S82126757	
229	22 Feb 2021 11:03 AM Little Lake Hattah	Regent Parrot	<i>Polytelis anthopeplus</i>	6	S82126757	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
230	22 Feb 2021 11:03 AM Little Lake Hattah	Rufous Whistler	<i>Pachycephala rufiventris</i>	1	S82126757	
231	22 Feb 2021 11:03 AM Little Lake Hattah	Splendid Fairywren	<i>Malurus splendens</i>	3	S82126757	
232	22 Feb 2021 11:03 AM Little Lake Hattah	Striated Pardalote	<i>Pardalotus striatus</i>	5	S82126757	
233	22 Feb 2021 11:03 AM Little Lake Hattah	Striped Honeyeater	<i>Plectorhyncha lanceolata</i>	2	S82126757	
234	22 Feb 2021 11:03 AM Little Lake Hattah	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	5	S82126757	
235	25 Feb 2021 10:02 AM Lake Cantala	Australian Magpie	<i>Gymnorhina tibicen</i>	4	S82295662	
236	25 Feb 2021 10:02 AM Lake Cantala	Australian Owlet-nightjar	<i>Aegotheles cristatus</i>	1	S82295662	
237	25 Feb 2021 10:02 AM Lake Cantala	Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	2	S82295662	
238	25 Feb 2021 10:02 AM Lake Cantala	Brown Treecreeper	<i>Climacteris picumnus</i>	4	S82295662	

239	25 Feb 2021 10:02 AM Lake Cantala	Crested Bellbird	<i>Oreoica gutturalis</i>	1	S82295662	
240	25 Feb 2021 10:02 AM Lake Cantala	Crested Pigeon	<i>Ocyphaps lophotes</i>	6	S82295662	
241	25 Feb 2021 10:02 AM Lake Cantala	Crimson Rosella	<i>Platycercus elegans</i>	10	S82295662	
242	25 Feb 2021 10:02 AM Lake Cantala	Greater Bluebonnet	<i>Northiella haematogaster</i>	2	S82295662	
243	25 Feb 2021 10:02 AM Lake Cantala	Grey Shrikethrush	<i>Colluricincla harmonica</i>	1	S82295662	
244	25 Feb 2021 10:02 AM Lake Cantala	Magpie-lark	<i>Grallina cyanoleuca</i>	2	S82295662	
245	25 Feb 2021 10:02 AM Lake Cantala	Noisy Miner	<i>Manorina melanocephala</i>	16	S82295662	
246	25 Feb 2021 10:02 AM Lake Cantala	Pied Butcherbird	<i>Cracticus nigrogularis</i>	1	S82295662	
247	25 Feb 2021 10:02 AM Lake Cantala	Rainbow Bee-eater	<i>Merops ornatus</i>	4	S82295662	
248	25 Feb 2021 10:02 AM Lake Cantala	Regent Parrot	<i>Polytelis anthopeplus</i>	8	S82295662	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
249	25 Feb 2021 10:02 AM Lake Cantala	Singing Honeyeater	<i>Gavicalis virescens</i>	1	S82295662	
250	25 Feb 2021 10:02 AM Lake Cantala	Striated Pardalote	<i>Pardalotus striatus</i>	3	S82295662	
251	25 Feb 2021 10:02 AM Lake Cantala	Striped Honeyeater	<i>Plectorhyncha lanceolata</i>	1	S82295662	
252	25 Feb 2021 10:02 AM Lake Cantala	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	6	S82295662	
253	25 Feb 2021 10:02 AM Lake Cantala	Tree Martin	<i>Petrochelidon nigricans</i>	4	S82295662	
254	25 Feb 2021 10:02 AM Lake Cantala	Wedge-tailed Eagle	<i>Aquila audax</i>	2	S82295662	
255	25 Feb 2021 10:02 AM Lake Cantala	Welcome Swallow	<i>Hirundo neoxena</i>	5	S82295662	
256	25 Feb 2021 10:02 AM Lake Cantala	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	8	S82295662	
257	1 Mar 2021 9:56 AM Lake Cantala	Australian Magpie	<i>Gymnorhina tibicen</i>	8	S82548697	
258	1 Mar 2021 9:56 AM Lake Cantala	Australian Raven	<i>Corvus coronoides</i>	2	S82548697	
259	1 Mar 2021 9:56 AM Lake Cantala	Australian Ringneck	<i>Barnardius zonarius</i>	4	S82548697	
260	1 Mar 2021 9:56 AM Lake Cantala	Black-faced Cuckooshrike	<i>Coracina novaehollandiae</i>	2	S82548697	
261	1 Mar 2021 9:56 AM Lake Cantala	Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	3	S82548697	
262	1 Mar 2021 9:56 AM Lake Cantala	Brown Treecreeper	<i>Climacteris picumnus</i>	4	S82548697	
263	1 Mar 2021 9:56 AM Lake Cantala	Crested Pigeon	<i>Ocyphaps lophotes</i>	6	S82548697	
264	1 Mar 2021 9:56 AM Lake Cantala	Crimson Rosella	<i>Platycercus elegans</i>	8	S82548697	
265	1 Mar 2021 9:56 AM Lake Cantala	Galah	<i>Eolophus roseicapilla</i>	6	S82548697	
266	1 Mar 2021 9:56 AM Lake Cantala	Greater Bluebonnet	<i>Northiella haematogaster</i>	4	S82548697	
267	1 Mar 2021 9:56 AM Lake Cantala	Grey Shrikethrush	<i>Colluricincla harmonica</i>	2	S82548697	
268	1 Mar 2021 9:56 AM Lake Cantala	Laughing Kookaburra	<i>Dacelo novaeguineae</i>	1	S82548697	
269	1 Mar 2021 9:56 AM Lake Cantala	Magpie-lark	<i>Grallina cyanoleuca</i>	4	S82548697	
270	1 Mar 2021 9:56 AM Lake Cantala	Noisy Miner	<i>Manorina melanocephala</i>	30	S82548697	
271	1 Mar 2021 9:56 AM Lake Cantala	Pied Butcherbird	<i>Cracticus nigrogularis</i>	5	S82548697	
272	1 Mar 2021 9:56 AM Lake Cantala	Purple-backed Fairywren	<i>Malurus assimilis</i>	10	S82548697	
273	1 Mar 2021 9:56 AM Lake Cantala	Rainbow Bee-eater	<i>Merops ornatus</i>	4	S82548697	
274	1 Mar 2021 9:56 AM Lake Cantala	Red-rumped Parrot	<i>Psephotus haematonotus</i>	12	S82548697	

275	1 Mar 2021 9:56 AM Lake Cantala	Regent Parrot	<i>Polytelis anthopeplus</i>	8	S82548697	EPBC Act Vulnerable, Vulnerable in Victoria, FFG Act listed
276	1 Mar 2021 9:56 AM Lake Cantala	Singing Honeyeater	<i>Gavicalis virescens</i>	1	S82548697	
277	1 Mar 2021 9:56 AM Lake Cantala	Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	4	S82548697	
278	1 Mar 2021 9:56 AM Lake Cantala	Tree Martin	<i>Petrochelidon nigricans</i>	6	S82548697	
279	1 Mar 2021 9:56 AM Lake Cantala	Wedge-tailed Eagle	<i>Aquila audax</i>	2	S82548697	
280	1 Mar 2021 9:56 AM Lake Cantala	Weebill	<i>Smicrornis brevirostris</i>	8	S82548697	
281	1 Mar 2021 9:56 AM Lake Cantala	White-plumed Honeyeater	<i>Ptilotula penicillata</i>	25	S82548697	
282	1 Mar 2021 9:56 AM Lake Cantala	White-winged Chough	<i>Corcorax melanorhamphos</i>	12	S82548697	
283	1 Mar 2021 9:56 AM Lake Cantala	Willie Wagtail	<i>Rhipidura leucophrys</i>	6	S82548697	

GHD

57 Orange Avenue
Mildura VIC 3500

T: 61 3 5018 5200 F: 61 3 5018 5201 E: mdamail@ghd.com

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Revision	Author	Reviewer		Approved for Issue		
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