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A PIECE OF COG'S HISTORY

ADDING OLD RECORDS TO THE COG DATABASE

CHRIS DAVEY AND LIA BATTISSON

In early 2010 Henry Nix, a long-term COG and committee member and a past President asked Chris Davey to take possession of an old satchel containing many bird observations from the early days of COG. Henry was moving away from Canberra and had discovered the satchel in the deep recesses of his garage. Henry could not remember how he came to obtain the satchel but it turned out to contain a book filled in by members at each COG meeting on the birds that had been observed recently and many cards containing information on the date, observer and location of individual species. The records stretched from 1963 to the early 1970s and none were in the COG database.

It was decided to transfer all of the observations to the database as *'Incidental'* records and Lia Battison volunteered for this daunting task. In Lia's own words 'I put my hand up, having recently retired and at a bit of a loose end, having just completed the first major task I had set myself upon leaving work'. Lia describes the process she went through as follows: The card file was arranged in RAOU code order and records had been entered by various people, as evidenced by different handwriting styles. The exercise book was "The Meeting Book". The Meeting Book was passed around at the monthly COG meetings and attendees wrote down their sightings of the previous month, or pinned their own sheets into the book. The sheets were not necessarily in chronological order, as a person might miss a meeting and bring their recollections/sheet to the next meeting. This Meeting Book[1] was the precursor to the 'COG phone line' and finally the 'chat line'.

It was assumed that the records on the cards had been transcribed out of the Meeting Book, given the notation on the first page of the book – "*June recorded on cards, July not recorded*", and the fact that all of the records in the meeting book had been ticked. It seemed logical that the first task was to enter the records off the cards into an Excel spread sheet which could then very readily be imported into the COG Access database. I devoted all of my 'spare time to the task and finished it in about 6 weeks. There were 2250 records, each with a Unique Record Number, RAOU Code, Date, Location, Species Name, Abundance, Observer Name and Comments fields.

I then thought that it was just a simple matter of checking through the Meeting Book, to ascertain if any of the records had been missed. Before I had gone very far it became clear that the records on the cards were only a small subset of the Meeting Book records. Checking the record in the excel spread sheet against the Meeting Book proved to be very time consuming and I decided that it would be more efficient to enter all of the records and then remove any duplicates. I made a commitment to complete this task, but not at the same frenzied pace that I had applied to the first stage. Life must go on in the meantime!

[1] The introduction by Steve Marchant to the first Annual Report of the Royal Australasian Ornithologist's Union A.C.T. Branch for 1964/65 (compiled by Steve Wilson) refers to the 'Observation Book' that was circulated at the monthly meetings (S. Marchant, 3rd December 1965). The book retrieved from Henry Nix's garage with records going back to 1963 is this original 'Observation Book'. *The Editor*

It was some months before I recommenced the work. Finally in August 2012 all of the records had been entered. There were 6667 in all, not including the out of area, Water Rat and Wombat records. After the duplicates had been removed, 5402 records remained. A further 66 which had some data element(s) such as Location or Date missing, were removed to the" rejected" basket, pending further investigation. A missing Observer Name was less problematic, as 'anonymous' could be used, and an' x' could reluctantly be used, if Abundance had not been provided.

Species names were challenging at times. Most people would be aware that Peewee is the common name for a Magpie-lark, the Hardhead used to be called the White-eyed Duck, the Australian Wood Duck was the Maned Goose and Australasian Shelduck was the Mountain Duck but some of the less familiar old species names required some extra deciphering. The Southern Whiteface was the Eastern Whiteface and the Eastern Yellow Robin was the Southern Yellow Robin! The Plumed Whistling Duck was called Plumed Tree-Duck, and the Australasian Shoveler was called Blue-winged Shoveler. The G.H.F Warbler was intriguing until it was notated as Golden-headed Fantail-Warbler and it then translated more readily into Golden-headed Cisticola. The RAOU code was invaluable to ensure that the translation into today's nomenclature was accurate, but the meeting book didn't have RAOU codes against species!

Subsequently, all the records entered to the EXCEL spread sheet have, where possible, been provided a geo-coordinate. For those species where this was not possible the geo-location has been given as the centre of a COG grid cell. All the records are regarded as unendorsed by the COG Rarities Panel. The Panel makes its deliberations based on a written report on the observation and description of the species. As many of the observations were made by individuals who are either deceased or no longer associated with COG and due to the elapsed time since observations were made, it was decided that endorsement of the unusual species was impractical.

It was an interesting exercise and goes some way to extending the period covered by the COG database.

At the same time Malcolm Fyfe translated all the sightings recorded in Canberra Bird Notes to electronic format. He has translated records from Vol. 1 (1966-1971) (168 records), Vol. 2 (1971-73) (218 records) and Vol. 3 (1974-77) (320 records).

To bring these records up to date with geo-coordinates, Paul Fennell has been working on both Lia's and Malcolm's records to pin-point locations as accurately as possible and ascribe a latitude and longitude value for each record. This has been very interesting because many of the locations have since been swallowed up by Canberra suburbs. Mark Clayton has been particularly helpful with record verification and in helping to identify many of the old location names.

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ARTICLES

PSITTACINE BEAK AND FEATHER VIRAL DISEASE IN PARROTS IN THE ACT[2]

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Abstract. *Psittacine Beak and Feather Disease (PBFD) is endemic in the populations of most Australian psittacine birds. It is most obvious in Sulphur-crested Cockatoos* (*Cacatua galerita). A range of clinical signs are specific to these cockatoos but other species of cockatoo, lorikeet and parrot have different external symptoms that are not always as obvious. The common psittacine species of the ACT were tested if it was suspected that they had PBFD. Sulphur-crested Cockatoos and Galahs* (Eolophus roseicapilla) *were the only species that exhibited beak deformities. Other parrots showed feather deformities and altered feather colours. The research was carried out at the RSPCA ACT Wildlife Clinic.*

1. Introduction

Psittacine Beak and Feather Disease (PBFD) is caused by the *Beak and Feather Disease Virus (BFDV),* a circovirus, which belongs to the smallest disease-causing virus family. The virus is 16 nm in diameter. It is resistant to most disinfectants, and is extremely hardy, surviving outside the host for many months even in a harsh environment.

PBFD can affect parrots of all ages. The BFDV multiplies in the liver and is excreted in the feather dust, faeces and crop contents. Inhalation and ingestion of the virus can occur at any feeding, watering and roosting places and can spread to the chicks via feeding. It is suggested that the mother can pass it to the egg. Ninety-two per cent of birds affected are under three years of age, but birds up to 20 years can become infected. The majority of birds die within six months of showing clinical signs. The virus accumulates in the feather follicles, and affects the growth of emerging feathers; and at the growth plate area of the beak, which then affects the beak integrity and shape.

Parrots are flock birds and breed in hollows. These two factors facilitate the spread of PBFD.

The word Psittacine is derived from *psittacinus* (Latin) meaning *psittacus* parrot, and from the Greek *psittakos*, meaning parrot. There are around 372 species in 86 genera that make up the order Psittaciformes with three families: Cacatuidae (cockatoos), Stringopidae (New Zealand parrots) and Psittacidae (true parrots) (Joseph et al. 2012). Their characteristics are:

- Cacatuidae - distinguished by a mobile crest, such as Sulphur-crested Cockatoo, Major Mitchell's Cockatoo, and Gang-gang Cocaktoo. These birds lack the highly reflective bright colours.

[2] Edited version of a paper presented at the Australian Wildlife Rehabilitation Conference, Townsville, 2012

- Stringopidae - include species such as the New Zealand Kea and Kaka, and the critically endangered Kakapo.
- Psittacidae - include all other parrots, such as rosellas and lorikeets. They are more highly coloured.

PBFD has only been recorded in parrots. Therefore the circovirus, in the wild, is limited to the parrot distribution areas of the tropics and the Southern Hemisphere, with most species found in Australia and South America (Fig. 1).

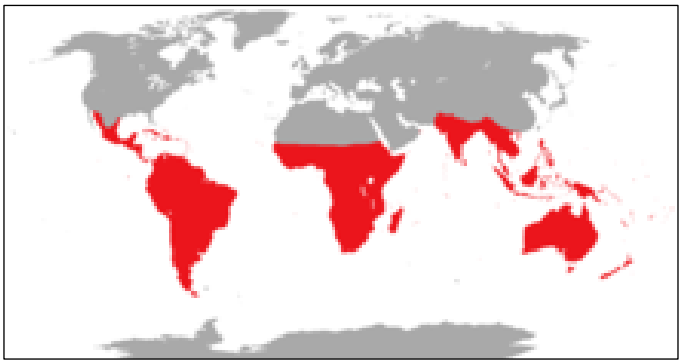

Figure 1. Distribution of parrots (all species) highlighted in red (Cooke and Bruce 2001).

This paper provides general factual information on PBFD and shows trends found in the ACT over a three-year period. It aims to provide relevant information for carers to equip them to make informed decisions to help prevent the spread of the disease.

My research attempted to show variation in common, visual clinical signs in Sulphur-crested Cockatoos where the disease is obvious by the time they are received into care and to define clinical signs in other parrots.

2. Symptoms of PBFD

2.1. Effects on parrot populations

PBFD was first documented in wild Red-rumped Parrots in 1888 in the Adelaide Hills. Investigation into PBFD was prompted in 1987 when the endangered Orange-bellied Parrot population was decreasing. It was then identified as a virus. Birds were taken from the wild to breed for release, but most of the birds in captivity tested positive for PBFD.

2.2. Clinical Signs

There are three types, or stages, of PBFD (see Table 1 for details).

Peracute (sudden) - The peracute stage occurs in hatchlings. They suffer septicaemia, pneumonia, enteritis, weight loss and death even before feathers start emerging.

Acute - At about four weeks of age chicks show symptoms of depression followed by sudden changes in the developing feathers, crop stasis, diarrhoea, anaemia and death.

Chronic – Birds that survive the acute phase go on to show signs of symmetrical feather deformities after the next moult and become progressively worse with each subsequent moult.

Table 1. Clinical signs observed in the current study.

Clinical Sign – seen in (species)	Description
Feather dust absent – Sulphur-crested Cockatoo, Galah	Swiping hand between feathers should result in your hand being covered with feather dust. PBFD reduces the amount of feather dust produced because the contour feathers are not normal
Shiny beak and feet – Sulphur-crested Cockatoo, Galah	Instead of beak and feet being covered in feather dust their true colour is revealed
Abnormal feather growth – Sulphur-crested Cockatoo	Emerging feathers are small, twisted and very abnormal
Abnormal feather growth – Galah and Rosella sp.	Feather cover looks ok but some feathers lack colour or have a different than normal colour
Grubby – Sulphur-crested Cockatoo	Feather dust cover keeps feathers looking nice and clean, lack of feather dust makes birds look very dirty
Crest loss – Sulphur-crested Cockatoo, Galah	Crest feathers missing
Blood in feather shafts – Sulphur-crested Cockatoo	Developing feathers normally close off blood supply when mature. Feathers affected by BFDV do not close off or are fractured, and dried blood can be seen in the calamus.
Beak deformed – Sulphur-crested Cockatoo, Galah	BPDV causes deformed beaks and unstable beak integrity
Tail feathers missing - all parrot sp.	Missing tail feathers
Symmetrical wing feather loss – all parrot sp.	After moult new feathers do not grow. Moult occurs symmetrically

The first clinical signs noticed in many parrots, in particular Sulphur-crested Cockatoos, are changes in new feather growth. On the rump the newly emerging, small contour feathers appear necrotic and misshapen. These feathers no longer have the ability to produce feather powder down. The birds end up having dark and shiny beaks and feet, and dirty-looking feathers.

In species with coloured feathers there is characteristic abnormal colouring of some feathers.

Although there are common symptoms individual birds tend to show these symptoms to varying and differing degrees.

2.3 Characteristic clinical signs:

Feathers: symmetrical feather abnormalities, retained feather sheaths, haemorrhage into the calamus, fractured shafts, and constrictions, stress lines and curled feathers;

Beaks can grow to extraordinary lengths and become necrotic. The beak is characterised by deformed shapes and is very brittle and "sponge-like", often breaking off.

Death usually occurs due to:

– Secondary infections, such as pneumonia, because of less feather insulation, or from a combination of candidiasis, aspergillosis, cryptosporidiosis, chlamydiosis and avian polyomavirus, an overburden of parasites;

– Starvation due to the inability to eat with a deformed beak;

– Necropsy will often show enlargement of the liver, smaller kidneys and atrophy of the thymus and bursa. There are accumulations of the virus within basophils (white blood cells) found around developing feather follicles.

2.4. Diagnosis

The three (of five) most commonly used tests in Australia are the haemagglutination assay (HA) which tests for virus particles in feather dander, the haemagglutination-inhibition (HI) antibody test, and the Polymerase chain reaction (PCR) which tests for viral DNA. A blood sample is required for HI and PCR tests.

3. Methods

From November 2006 to May 2009, any psittacine spp. brought to the RSPCA ACT Wildlife Clinic because they were sick or injured, was to be tested for PBFD if they were suspected of carrying it. However, because of time, financial and staffing restrictions only some of the birds were tested. Molecular Diagnostic Services Australia Pty. Ltd. (MDS) tested the blood samples.

Initially Sulphur-crested Cockatoos were tested until it was realised similar trends in other parrots indicated possible PBFD. The clinical signs for the latter were different and less defined.

A recording sheet was designed with a column for each clinical sign that was recognised. MDS supplied kits, each consisting of a small tube with a strip of 'blotting" paper. The sample required was a drop of blood 'blotted' to cover the last 3mm of the paper. This was then sealed in the tube and posted to MDS in Queanbeyan. There were no other special provisions and the sample did not need to be kept fresh or processed quickly.

Blood samples were taken from the brachial wing vein. The birds were subsequently euthanased. They were euthanased, without the benefit of a test result, because even if they were to prove negative the birds were underweight and usually had other problems, for example; broken bones (hit by cars) or suffering other diseases. RSPCA ACT lacks quarantine facilities and if all tested parrots were housed in the same facility, those that

were negative at the time of testing would have been positive for PBFD by the time the results were returned, and other parrots in care could be infected.

A thorough examination of the birds followed and clinical signs were noted on the form with the date and clinic number. All photos were taken by the author.

4. Results

The following data demonstrates strong trends in the Sulphur-crested cockatoo and Galah samples. Numbers of Eastern Rosellas and Crimson Rosellas and other parrots were insufficient to come to any viable conclusions.

4.1 Sulphur-crested Cockatoo

During the study period 490 Sulphur-crested Cockatoos were brought into the wildlife clinic, 187 (38%) of those had feather abnormalities and were undernourished and thin. Most other birds sustained injuries caused by vehicle strikes. Sulphur-crested Cockatoos came from all suburban areas in the ACT.

Of the 90 Sulphur-crested cockatoos studied, 10% were used as controls to establish normal parameters. The controls showed no clinical signs of PBFD. They had an average weight of 794g.

Fig. 2 shows birds that tested positive to PBFD had an average weight of 580g and the birds that tested negative had an average weight of 640g.

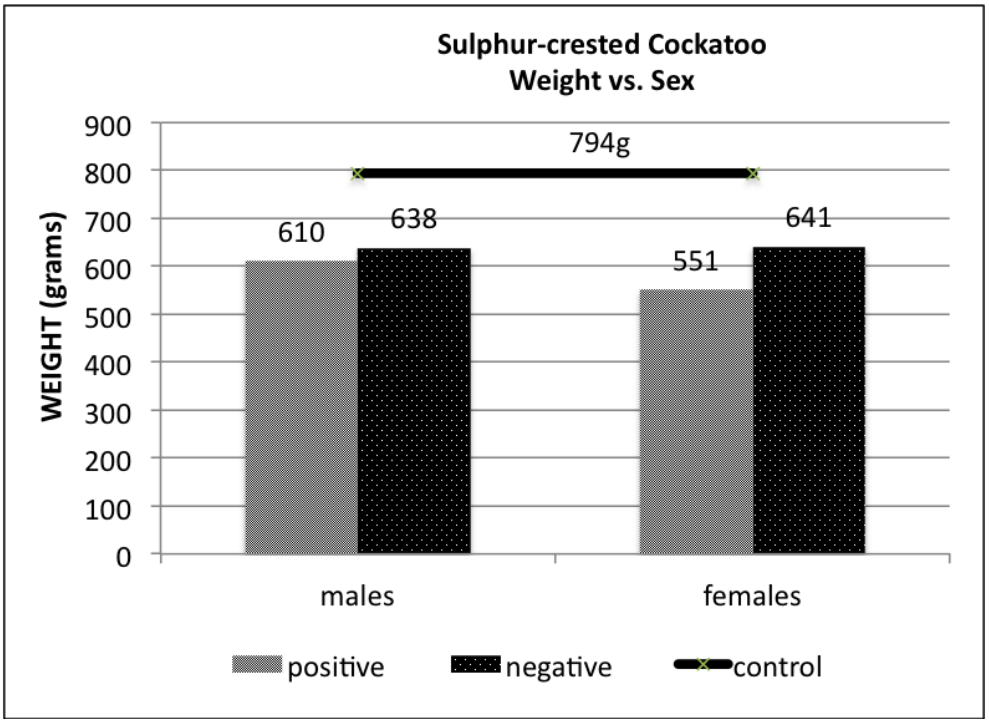

Figure 2. Weights of Sulphur-crested Cockatoos having tested as positive or negative for PBFD compared to the average weight of control birds.

The clinical signs of 78 cockatoos were compiled and Fig. 3 gives the percentage of birds that exhibited each symptom. Clearly the most common clinical signs were a lack of feather dust, shiny beak and feet and abnormal feather growth. Deformed beaks were only seen in 46.1% of birds (Fig. 5). In birds tested positive females had significantly less symmetrical feather loss (Figs. 3 and 4).

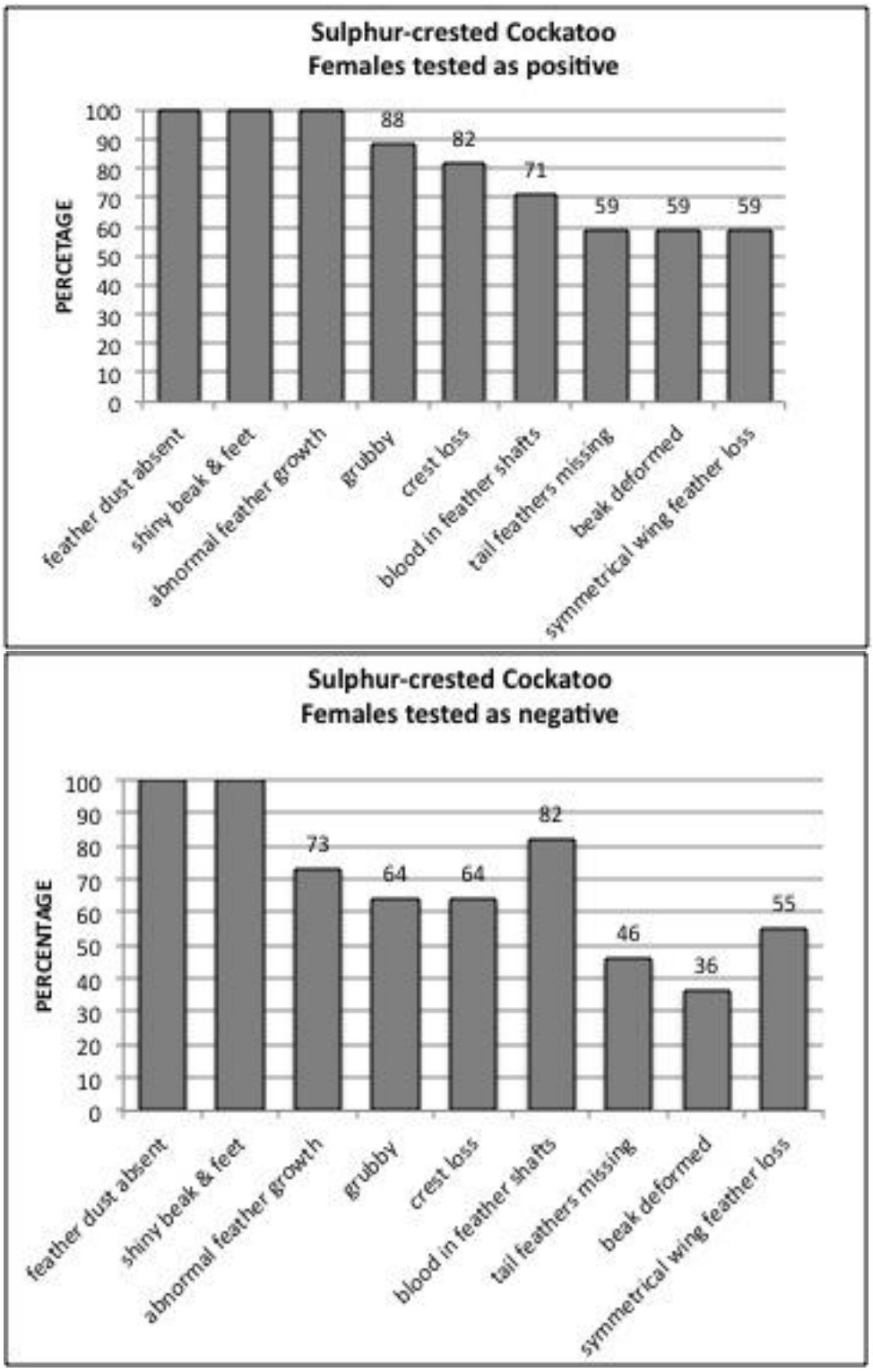

Figure 3. Percentages of clinical signs in female Sulphur-crested Cockatoos. Positive for PBFD (above), negative (below).

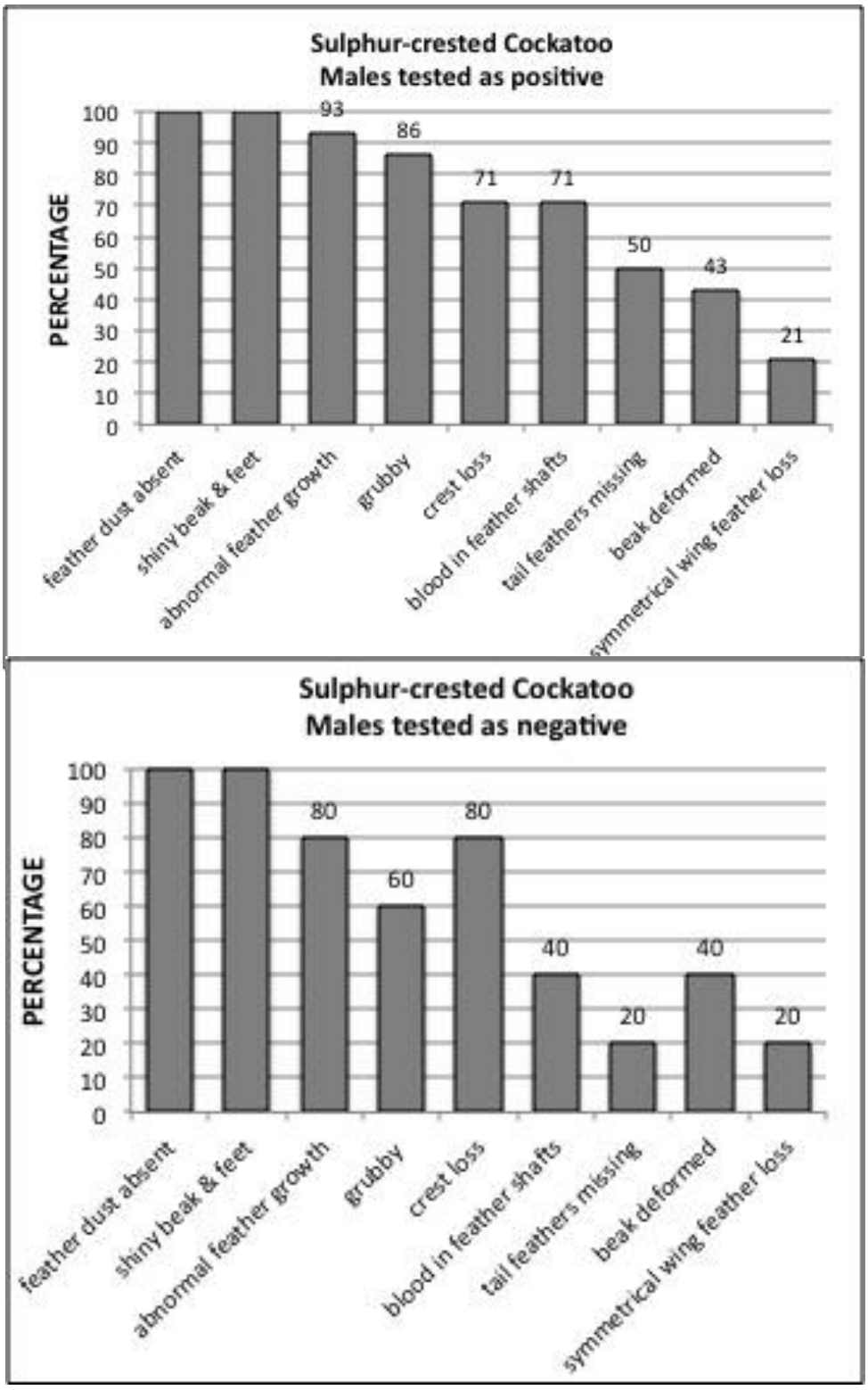

Figure 4. Percentages of clinical signs in male Sulphur-crested Cockatoos. Positive for PBFD (above), negative (below)

Figure 5. Sulphur-crested Cockatoos suffering from PBFD with brittle and deformed beaks.

4.2 Galah males tested as positive

Positive Galahs (Fig. 6) show different proportions of clinical signs than cockatoos although they still have a significant amount of feather dust loss (Figs. 7 and 8). Only females had lost some crest feathers. Not enough female Galahs tested negatively for meaningful interpretation.

Figure 6. Galah in an advanced stage of PBFD.

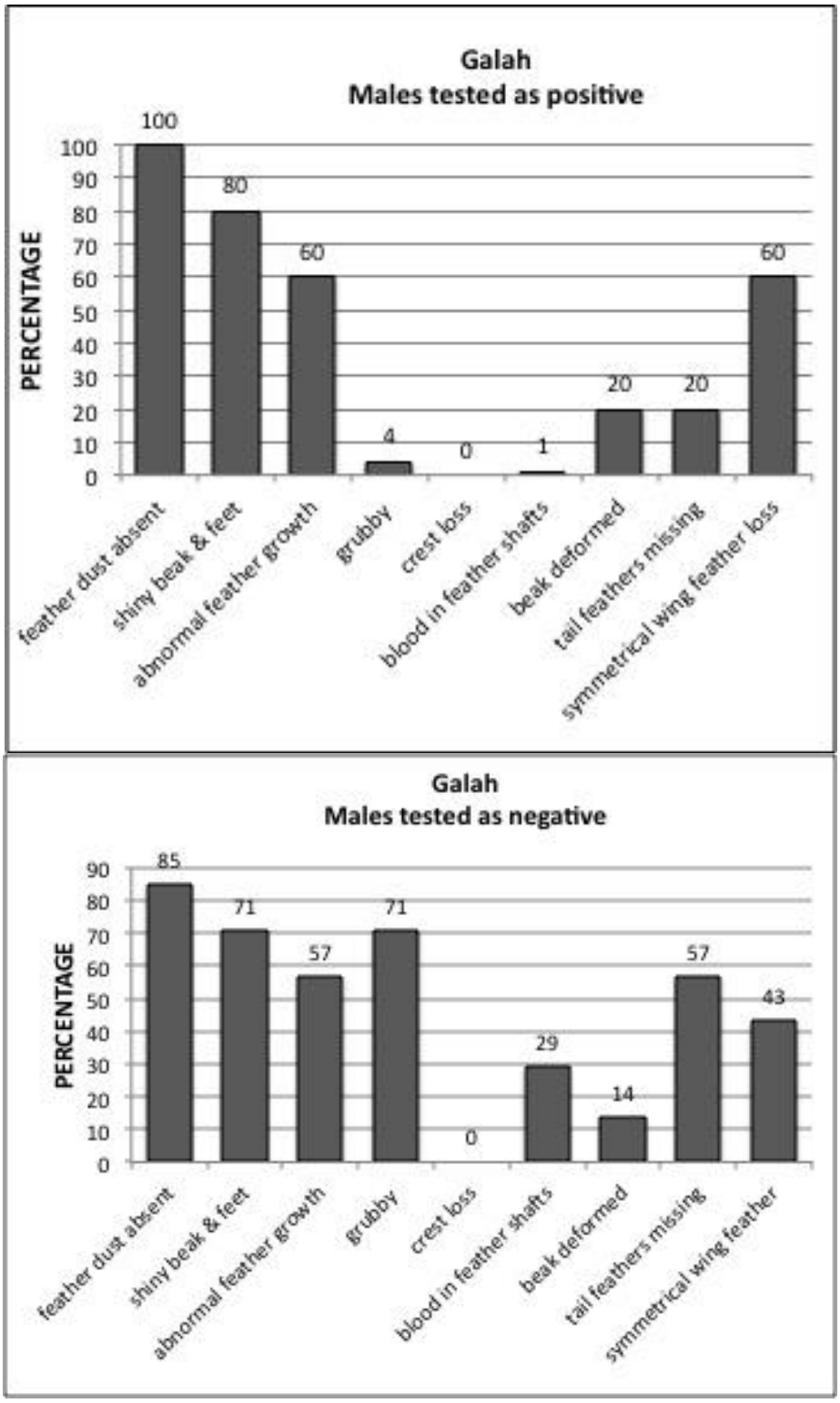

Figure 7. Percentages of clinical signs in male Galahs. Positive for PBFD (above), negative (below)

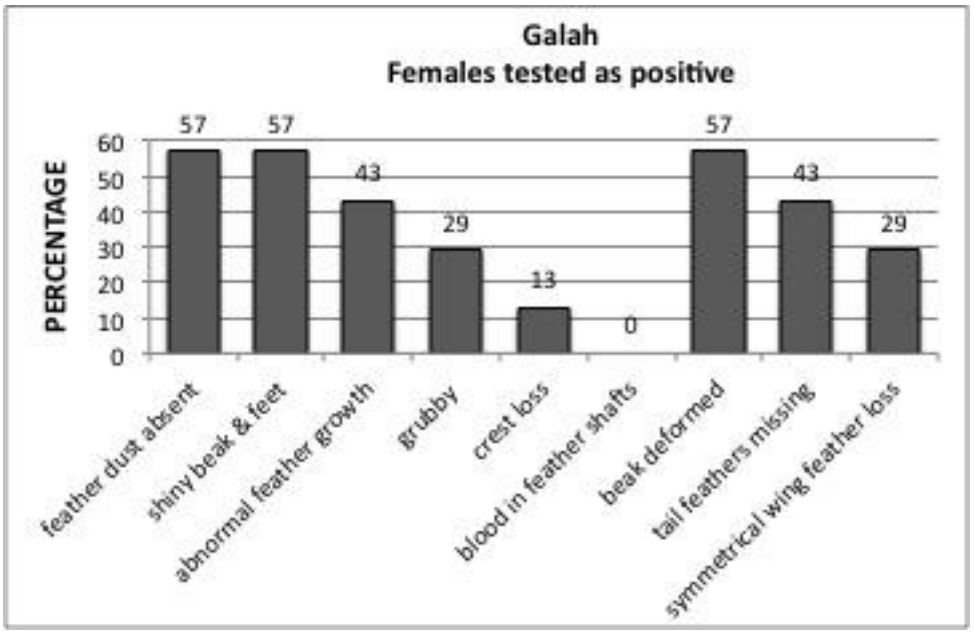

Figure 8. Percentages of clinical signs in female Galahs

4.3 Crimson and Eastern Rosella

There were not enough rosellas to give meaningful results except to say that their clinical signs were quite different to those of Sulphur-crested Cockatoos. Fig. 7 (Eastern Rosella) and Fig. 8 (Crimson Rosella) illustrates this. At least half the rosellas missing tail feathers had been attacked by cats or dogs.

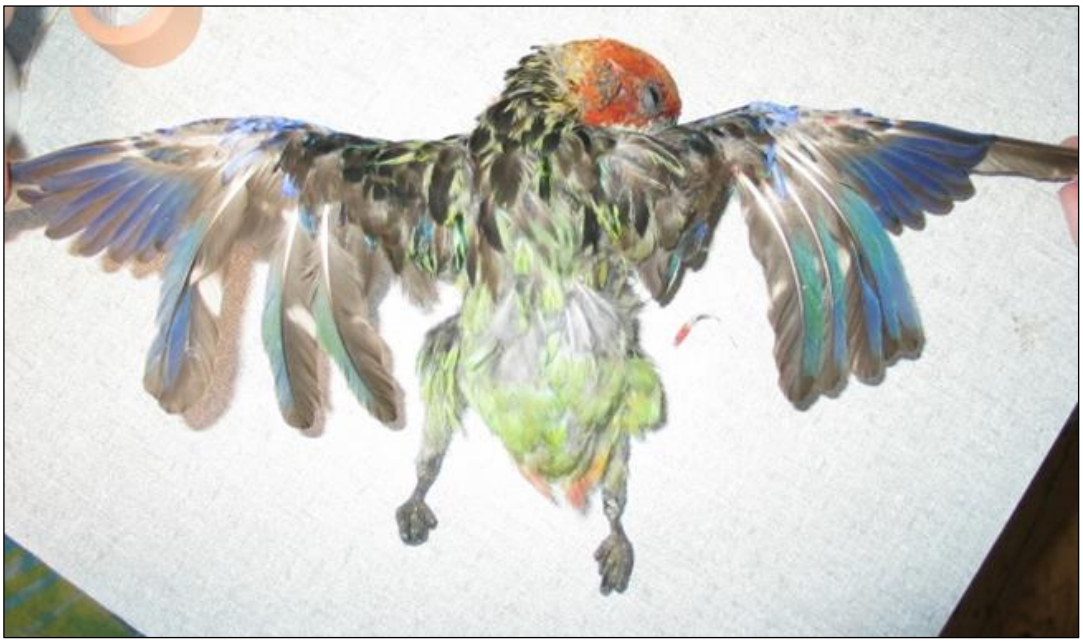

Figure 9. Eastern Rosella with advanced symptoms of PBFD.

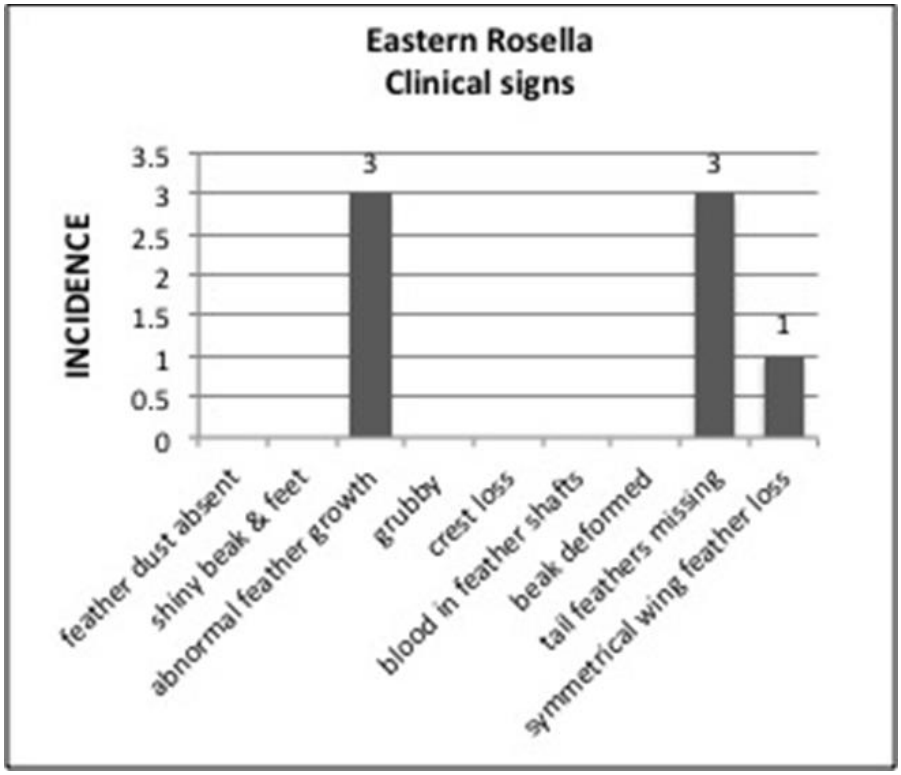

Figure 10. Eastern Rosella - Clinical signs of PBFD.

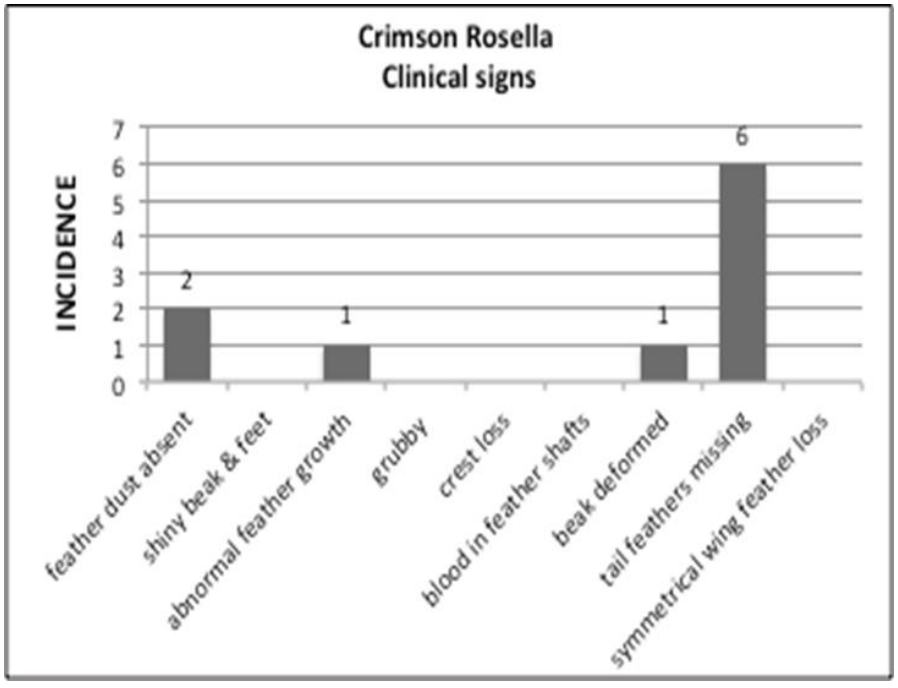

Figure 11. Crimson Rosella - Clinical signs of PBFD.

4.4 Other species

There was one Major Mitchell Cockatoo (not tested), three Little Corellas (one positive), two Australian King Parrots (one positive; Fig. 12), and one Gang-gang Cockatoo (Fig. 12) that arrived after the experiment had concluded but tested positive.

Figure 12. Australian King Parrot (left) and Gang-gang Cockatoo (right) with PBFD symptoms.

5. Discussion

Sulphur-crested Cockatoos that were received into care were generally underweight. Fig. 2 shows that the positive PBFD birds had only 73% of normal weight. The clinical signs shown in the highest proportions are the same as the visual signs in the wild. Male and female cockatoos which tested positive showed the same trends. Cockatoos tested as negative had the same signs of lack of feather dust and abnormal feather growth. This leads to the question of why this should be so? The birds were chosen for testing because they exhibited those characteristic signs but still tested negative. More investigation needs to be carried out.

The same applies to Galahs (Figs. 7 and 8). Galahs have less feather dust than Sulphur-crested Cockatoos and rosellas even less. The charts reflect this. But why do Galahs tested as negative experience a loss of feather dust?

Whereas Sulphur-crested Cockatoos show abnormally formed feathers, Galahs tend to have some of their feathers without grey colouring. Rosellas, on the other hand, show more feather discolouration, with their brighter colours of a different colour. Research into factors for feather colour development and the mechanism by which this is changed would be useful.

Sulphur-crested Cockatoos and Galahs, members of the cockatoo family, showed the most obvious clinical signs. However, Crimson and Eastern Rosellas, being true parrots, showed different clinical signs (Figs. 10 and 11).

Most parrot populations thrive despite the presence of PBFD. Large populations are not likely to be threatened but smaller populations could become extinct if the numbers are not self-sustaining. With a decline in numbers there is a loss of genetic diversity.

Most parrot species are widespread in Australia and their habitats overlap. This will facilitate spread of PBFD. Management of the disease is impossible in the wild.

We have seen the disastrous results of PBFD on the population of Orange-bellied Parrots, despite the efforts to breed them in captivity. Populations of endangered Australian parrot species could potentially be affected by PBFD. Carnaby's Black Cockatoo (WA), Kangaroo Island Glossy Black Cockatoo (SA), Golden-shouldered Parrot (Qld), Ground parrot (WA), Norfolk Island Green Parrot, Red-tailed Black cockatoo (Qld, NT, WA), and the Swift Parrot (SE Aust.) are all critically endangered.

Looking at this list it is obvious that birds around the country are at risk. With altered habitats and diminished natural food supply there are extra stresses on birds and some populations have declined.

Wildlife carers have a responsibility to remove birds that are affected by PBFD. These birds would naturally die and stop spreading the disease and the population is sustained. However, if rehabilitated parrots no longer showing clinical signs of the disease are released, they are still latently infected. The circovirus remains active in the liver.

For any research to be undertaken it is essential that the object of the research is defined at the outset and the statistics to demonstrate it are built into the methodology. The research undertaken here was ad hoc, sporadic and limited data collection from wildlife staff led to insufficient data for accurate analysis. Future research should be well planned.

Acknowledgements

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AUSTRALIAN LITTLE BITTERN BEHAVIOUR

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This description of the behaviour of an Australian Little Bittern (ALB) (*Ixobrychus dubius*) at Jerrabomberra Wetlands Nature Reserve, Australian Capital Territory (ACT), is based on 62 minutes of video footage taken on 18 Oct and 22 Nov 2012. Posture, movement, strikes at prey, size of prey and response to the approach of some other bird species are described.

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Figure 1. The female ALB seen at Kellys Swamp, taken on 22 Nov 2012

1. Background

The ALB is rarely seen. Most sightings are brief with little chance to gather information about the species. There are 39 records of ALB in the Canberra Ornithologists Group (COG) database for the period 1 Jul 1982 to 30 Jun 2012, all within the ACT and all between November and March. The records occur in 16 of the 31 years (Fig. 2).

Only four of these records are from Kellys Swamp at Jerrabomberra Wetlands. All but two of the rest are from Lake Burley Griffin. Breeding has also been confirmed within the ACT.

In 2012, a female ALB was sighted many times foraging in the open. This presented the opportunity to observe its behaviour for an extended period.

2. Reports of ALB since 30 June 2012 around Canberra

An ALB was reported at Kellys Swamp, Jerrabomberra Wetlands Nature Reserve, on 12 Oct 2012. One was reported on the COG chatline and Eremaea Birds on 10 further days up to 22 Nov 2012 (13-15, 17-19, 25 Oct and 20-22 Nov). There is then a gap to the last report on 26 Dec 2012 (Eremaea). It is highly likely that these reports are of the same bird although there are historic reports outside the ACT of up to 10 birds at a single location (Marchant and Higgins 1990) raising the possibility that more than one bird was involved.

A male was reported on 5 November at Jerrabomberra, NSW (about 9 km from Jerrabomberra Wetlands), but it was found injured soon after and died.

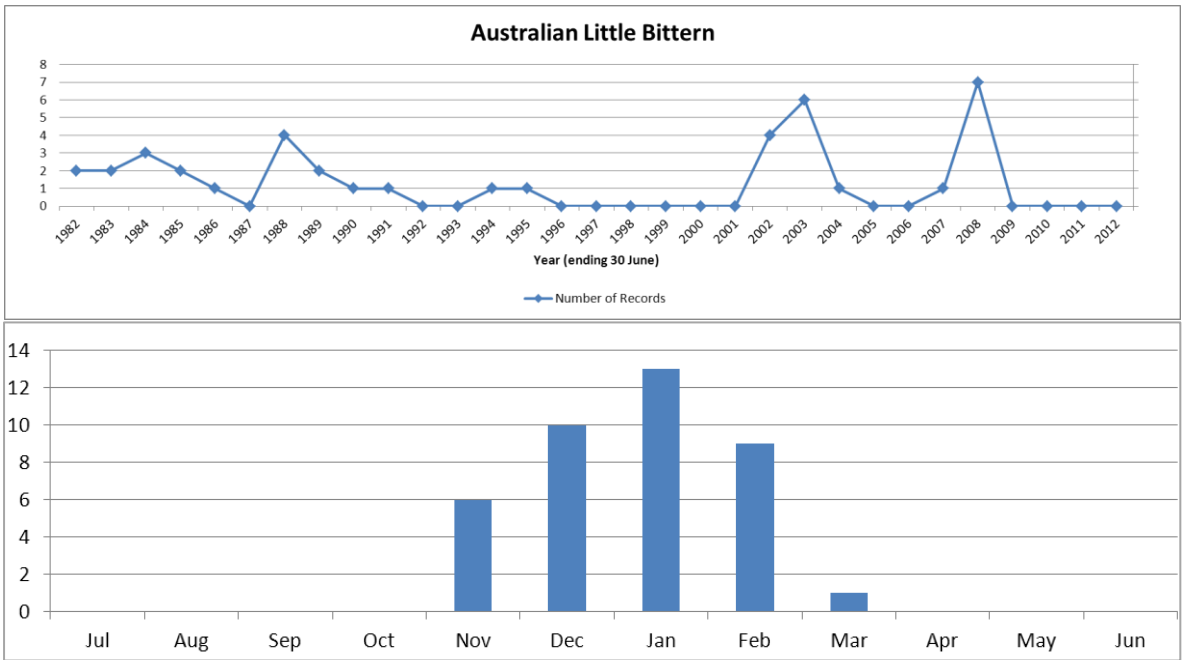

Figure 2. Number of reports of Australian Little Bittern in the COG database by year (top) and month (below).

3. Habitat at Kellys Swamp

In October and November 2012, Kellys Swamp in front of Bittern Hide had a patchwork of open water interspersed with Water Couch 'tussocks' (*Paspalum distichum*) adjacent to about 0.35 hectares of Bulrush (*Typha* spp). The water was generally shallow but is estimated to be up to about 30 cm deep. Many large European Carp had been in the area, presumably breeding. Fig. 3 and Fig.re 4**Error! Reference source not found.** illustrate the habitat.

Kellys Swamp extends beyond the area shown in the photographs but the ALB was, as far as I am aware, only seen in the area shown.

4. Methods

This analysis is based on 61 minutes 42 seconds of video taken by me from Bittern Hide on 18 Oct 2012 and 22 Nov 2012. A total of 30 videos were taken, 3 on 18 Oct and 27 on 22 Nov. The bird was also observed by me on 17 Oct 2012, in the same area as on 18 Oct, but only photographs were taken.

On 18 Oct, the ALB was observed from about 8:40am to 9:20am AEST with videos taken between 8:46 and 9:06. On 22 Nov, the ALB spent most of the time from 8:15am to 2:30pm AEST in clear sight. Other observers were present from early morning. I arrived about 9am and left soon after 2:30pm. Videos were taken between 9:08am and 11:15am and between 1:52pm and 2:19pm. Table 1 summarises the videos taken.

Figure 3. Kellys Swamp from the Bittern Hide, 28 Nov 2012.

Figure 4. The area under the tree on the left of Fig. 3, taken from Ardea Hide (off screen to the right) on 17 Oct 2012, showing the area used by the ALB on 17 and 18 Oct 2012.

Table 1. Summary of videos taken on 18 Oct 2012 and 22 Nov 2012.
The videos are grouped into sequences with less than 3 minutes between videos.

Date	Video number	Start Time (Eastern Std Time)	End Time	Time captured on video (min:sec)	Time captured as % of elapse	Time captured as % of total video time
18/10/2012						
	1	8:46:54	8:49:14	2:20	100	4
	2-3	8:58:12	9:05:46	5:31	73	9
	18/10 (1-3)	8:46:54	9:05:46	7:51	42	13
22/11/2012						
am	1-8	9:08:24	9:26:17	17:06	96	28
	9-10	10:35:03	10:38:20	3:01	92	5
	11-12	10:55:21	11:00:51	5:12	95	8
	13-17	11:06:04	11:14:59	7:35	85	12
	am (1-17)	9:08:24	11:14:59	32:54	26	53
pm	18-27	13:52:48	14:18:18	20:57	82	34
Total				61:42	36	

The videos were analysed frame by frame and the timing of events recorded. All timings were to the nearest second. It was not possible to observe the detail of all events from the entire length of the videos, usually because the bird was facing in the wrong direction (eg when it faced away from the camera) or the video did not show the event clearly. The bird was not visible for three periods. If a new bird appeared after each of these, there would be at most four different birds in the recordings. This report will assume only one bird was involved.

Posture, movement, interactions with other bird species and strikes at prey were analysed. An estimate of the size of the prey relative to the bill size (in 10% increments) was made and converted to a length using the average bill size for females of the species, 43.8mm (Marchant and Higgins). Except for large fish taken, the type of prey generally could not be determined with any degree of certainty from the video and photographs taken.

The terminology used to describe the foraging behaviour is taken from Hancock and Kuslan (1984). They describe heron foraging behaviour in terms of posture, body movements, wing movements, foot movements, aerial foraging and head and neck movements. For the ALB the following was observed:

- posture - crouched, upright, erect, peering over
- body movements -standing, walking slowly, walking quickly
- head and neck movements -neck swaying, bill thrust.

For this article, walking quickly (more than 60 steps per minute) is used when more than 1 step is recorded in a second. A step was counted at the end of it, when the bird is supported by vegetation or the ground. In some cases the step may be very slow, taking several seconds to complete, but it was only counted once the bird put weight back on to the leg. Fig. 1 shows the ALB walking slowly while crouched.

Neck swaying may include the body as well. Strike will be used in this article instead of the term bill thrust.

5. Behaviour

The videos mainly record foraging behaviour. Interaction with some other bird species while foraging was also recorded. Video 27 only recorded perching and preening so it was excluded from the time spent foraging.

5.1 Posture

Crouching posture was most often used. At times the movement between postures was very slow, taking several seconds, and sometimes it was not clear if the bird was crouched or upright. However, it is estimated that the bird was upright for 24% of the time and crouched for 76%. When only foraging time is considered (i.e. excluding video 27), these change to upright 19% and crouched 81% of the time.

Figure 5. ALB flying across water separating foraging areas (Photo from video).

An erect stance was observed three times but only two of these captured the full transformation into and out of the erect stance: once when a Black Swan approached and once when something went overhead. In both of these cases the erect stance was adopted for 8 seconds. The third case was at the start of the video and therefore may have been part of a longer period. It only lasted 1 second and the cause could not be determined. In total the erect stance was adopted for less than 0.5% of the time recorded on video.

5.2 Movement

Table 2 summarises the behaviour recorded in terms of movement. A large percentage (92%) of the foraging time was spent standing with an occasional movement of the head. Walking, when it did occur, was mostly slow. At times each step took several seconds to complete. This slow movement could probably be considered as creeping, rather than walking slowly, but this is not part of the Hancock and Kuslan classification of movement. The bird did fly several times to cross small areas of deeper water, to avoid other species and to escape to the *Typha*.

A rough estimate of the distance covered by the bird on the video taken on 22 Nov is 18 metres. This is equivalent to the bird covering about 21 metres per hour.

Fig. 6 shows the path taken by the bird on 22 November.

Table 2. Movement of ALB recorded on video.

Date	Video number	Standing (seconds)	Walking slowly (seconds)	Walking Quickly (seconds)	Perched (seconds)	Flying (a) (seconds)
18/10/2012						
	1	140	0	0	0	0
	2-3	313	13	5	0	1
	18/10 (1-3)	453	13	5	0	1
22/11/2012						
am	1-8	940	81	5	0	0
	9-10	167	14	0	0	0
	11-12	295	17	0	0	0
	13-17	397	51	7	0	2
	am (1-17)	1799	163	12	0	2
pm	18-27	972	76	7	202	2
am+pm	**1-27**	2771	239	19	202	4
Total		3224	252	24	202	5
as percentage of time captured		**87.1**	**6.8**	**0.6**	**5.5**	**0.1**

(a) Flying is not exclusive of other categories as steps may also have been taken in the same period.

Figure 6. The path taken by ALB on 22 November. The path taken in each video is shown as a line with an arrow at the end indicating the direction. The dashed line indicates flight into the *Typha* beds which was not captured on the video. The black dots on the path lines indicate flight. Circles indicate that the bird did not move during the video. The numbers reference the video. The four broad horizontal bars indicate a distance of approximately one metre.

5.3 Time of day

Foraging activity was observed across the day. The videos show active foraging between 8:45am and 2:18pm AEST. On 22 Nov, other people observed the bird foraging from 8:16am. I made no attempt to locate the bird at night.

5.4 Strikes at prey

A total of 27 strikes at prey were observed with 19 (70%) being successful. The type of prey taken was mostly not able to be determined with any confidence from the video but most looked like invertebrates or tadpoles. One small Carp was also taken.

Prey was generally consumed quickly with 82% swallowed within 3 seconds from the time of the strike. The time to swallow the prey was not related to its size but more to the time to extract it from the vegetation and whether or not it was dunked into water before eating. The largest prey item, a fish, took some effort to extract from the vegetation (about 6 seconds) but was consumed in 1.5 seconds once it was extracted. On three occasions the prey was dunked into the water with the time taken to consume the prey varying with the number of dunks – 3 seconds with one dunk, 5 seconds with two dunks and 8 seconds with three dunks.

5.5 Prey size and density

Of the 19 successful strikes, 12 (63%) of the prey items could be assessed for size relative to the beak length of the bird. The Carp, at 55mm, was the outlier in terms of size being three times longer than the next biggest prey item. Excluding the Carp, the average size of prey was estimated at 13mm and ranged from 9 to 18mm. Table 3 summarises the strikes and prey taken.

Table 3. Strikes at prey.

Date	Video number	Strikes	Success-full strikes (%)	Strikes per minute	Number of prey sized	Prey sized (%)	Less than 20mm (%)	Smallest prey size (mm)	Largest prey size (mm)
18/10/2012									
	1	0							
	2-3	2	50	0.36	1	100	100	13	13
	18/10 (1-3)	2	50	0.25	1	100	100	13	13
22/11/2012									
am	1-8	13	85	0.76	8	73	100	10	18
	9-10	3	33	0.99	1	100	100	9	9
	11-12	3	100	0.58	0	0			
	13-17	2	0	0.26					
	am (1-17)	21	71	0.64	9	60	100	9	18
pm	18-27	4	75	0.19	2	67	50	16	55
am+pm	**1-27**	25	72	0.46	11	61	91	9	55
Total		27	70	0.44	12	63	92	9	55

As well as the successful strikes on the video of 22 Nov, Geoffrey Dabb has advised that between 8:16am and 8:35am the bird ate 5 small prey (4 unidentified invertebrates and one water snail) and at 9:03am one small fish (Carp). This means that the bird consumed at

least 25 items of prey between 8:16am and 2:19pm on that day with most (23 out of 25) estimated to be less than 20mm long. The two fish taken were over 40mm long.

The success rate of foraging is linked to the density of prey. Prey density could not be measured directly. However, by measuring the area covered by the bird and multiplying by the successful strikes, the minimum prey density can be estimated. Using a box generously enclosing the path taken by the bird on 22 Nov to estimate the area covered (90sqm) and the successful strikes recorded on the video (18), the prey density is estimated to be at least 2000 per hectare. When the successful strikes observed by others earlier in the day from the same area are included (25 in total), the estimated prey density is over 2600 per hectare.

5.6 Strike dynamics

For most strikes, the head, neck and body were in alignment. However, strikes to the side were observed, with two estimated to be with the neck turned at 60 degrees to the body (see Fig..3). While the ALB often extended its neck before striking, peering over was only used three times. It did not cock or tilt its head. The bird was also prepared to stand in water deep enough to wet the feathers of its body (see Fig. 13).

The body and legs did not move much in the majority (85%) of the 20 strikes assessed. At the strike, the body usually showed a recoil action, moving backwards slightly (10% or less of the body length) and quickly returned to its original position. However, the body moved much further for three of the strikes. In these the body moved forward by 20%, 30% and 70% of the body length. The 20% body movement also included a step at the point of the strike and could be considered a lunge. The 30% body movement did not include any steps but was assisted by the legs extending by 20%. The 70% body movement could definitely be called a lunge as it included 2 steps, and the head, neck and most of the body going under water. The wings were held up out of the water. Fig. 7**Error! Reference source not found.** shows the bird partially submerged. The neck and most of the body were not visible when the bird was at its most submerged point.

By measuring the length of the head and neck in the video frame before the strike and then at the strike, it was possible to get an idea of how far the head and neck was extended for the strike. Of the 19 strikes measured, 90% showed an extension of the head and neck by 30-67% of the pre-strike length.

Figure 7. ALB lunging at prey.

The largest extension measured was 67% and the shortest 0% (*i.e.* no extension - no movement could be detected from before the prey was captured).

Table 4 summarises the head and neck extension at strike.

Table 4. Extension of the head and neck at strike – video taken on 22 November.

Extension of head and neck at strike (%)	Percentage of 19 measured strikes
0	5
10-19	5
20-29	-
30-39	16
40-49	21
50-59	37
60-69	16

The neck of the bird was arched in 67% of the 24 strikes where this could be assessed and straight in 33% (see Figure 8).

Figure 8. ALB striking at prey with straight and arched neck. (Photos from video).

At least one shake of the head was usually observed after a strike (68% of the strikes) even if nothing was caught. The maximum number of head shakes observed was two.

Table 5. Head shakes after a strike – video from 22 Nov.

Number of head shakes after strike	Strikes where prey caught (% of 18 strikes)	Strikes where no prey caught (% of 7 strikes)	Total strikes (% of 25 strikes)
0	33	29	32
1	39	57	44
2	28	14	24

5.7 Neck sway

Neck swaying was observed 66 times. The body also moved with the neck while the head was generally kept stationary. It was observed at many different times: between strikes, immediately before strikes, when holding prey and after swallowing it, after an unsuccessful strike and while adopting an erect posture when a Black Swan approached. It

was not observed before and after every strike and was not always associated with a strike (see Table 6).

Table 6. Neck sway around strikes at prey on 22 Nov 2012.

Neck sway	Strikes where prey captured (number)	Strikes where prey not captured (number)	Total number of strikes	Percentage of Grand Total
No neck sway	5	5	10	40
Sway after strike	13	1	14	56
Sway before and after strike	0	1	1	4
Total number of strikes	18	7	25	
Percentage of Grand Total	72	28		

The link below is to a video of some of the foraging behaviour.
http://ibc.lynxeds.com/video/little-bittern-ixobrychus-minutus/female-foraging

5.8 Response to the approach of other bird species

The following species were captured on the video either approaching the ALB or with the ALB approaching them:

- Australasian Grebe
- Dusky Moorhen
- Eurasian Coot
- Black Swan.

Neither the ALB nor the Australasian Grebe responded when the foraging grebe approached to within about 0.5m.

Figure 9. ALB near Dusky Moorhen.

Four encounters with Dusky Moorhen were recorded. Three were with a single moorhen and one with three moorhens.

In one encounter the single foraging moorhen passed about 0.5m away from the ALB with no discernible reaction from either bird. In the two other single moorhen encounters, the moorhen passed within 0.25m of the ALB. This prompted the ALB to open its beak widely

with its head in the direction of the moorhen. In the first case, the ALB did this after the moorhen had passed quickly behind it. In the other case the ALB was facing the moorhen and responded as it approached with the moorhen then passing quickly and the ALB closing its beak when the moorhen was about 0.5m away.

When three moorhens approached the interaction was more complex. The first foraging moorhen passed about 0.25m in front of the ALB with no response from either bird. Six seconds later the second foraging moorhen passed 0.25m behind the ALB with the first now about 0.5m away. There was no response from either bird. The third moorhen passed about 0.25 behind the ALB about 20 seconds later and the ALB started to walk quickly away from it. By this time the first moorhen was over 1m away and out of frame and the second moorhen about 0.75m away. Heading in the direction of the first moorhen, the ALB opened its beak wide and adopted an upright posture. When the first moorhen moved quickly away with wings open, the ALB turned towards the second moorhen which also started to move away quickly. The ALB then adopted a crouched posture. From the time the ALB started to move to the time it adopted the crouched posture was 3 seconds and all three moorhens were now about 0.5m from the ALB. The moorhens then started to move in a line about 0.5m behind the ALB and circled back towards it. When the first moorhen was about 0.25m from the ALB it stopped and placed its body parallel to the ALB but facing the other direction. After it looked at the ALB a couple of times, the ALB flew off.

Figure 10. ALB interacting with Dusky Moorhens. (Photo from video).

Five encounters with foraging Eurasian Coot were recorded. There was no response from either species even when a coot got as close as 0.1m (see Fig. 11).

Figures 11 and 12. ALB and Eurasian Coot foraging close together (left). ALB reacting to the approach of a Black Swan (right) (Photos from video).

When a foraging Black Swan passed about 2m from the ALB there was a slight posture change from crouched to upright. When the swan returned 7 seconds later the ALB started to adopt an erect posture when it was about 1.5m away and faced towards the swan with its head slightly to one side (Fig. 12). Neck sway was observed when the swan got to about 1m from the ALB. The ALB returned to an upright posture when the swan moved to about 1.5m away. The only response from the swan was to look in the direction of the ALB at one point.

The video of some of these interactions can be seen at http://ibc.lynxeds.com/video/little-bittern-ixobrychus-minutus/female-interacting-black-swan-several-dusky-moorhen.

The ALB was not harassed by other bird species while consuming its prey.

6. Discussion

The ALB is so rarely seen that there is little information available on its behaviour. The information that is available is mainly descriptive and based on a limited number of observations. There is little to compare to the quantitative data presented here.

There are varying views on when ALB is active. Some examples are:

- McKilligan (2005)- "usually forages alone at night or at dusk and dawn".
- Marchant and Higgins (1990) - "Active day and night, especially early morning and evening", "generally considered nocturnal but, when breeding, seen flying over reed beds".
- Birdlife Australia's web site on the Bittern Project page does not indicate when the bird is active.
- Serventy (1985) – "Diurnal or nocturnal (evidence conflicting)"

Foraging in the open is considered rare for the species:

- McKilligan - "usually forages … in dense waterside vegetation".

- Marchant and Higgins - "… rarely traverse open ground" and "Food may be taken by standing and waiting at edge of water or perched on emergent vegetation".
- Birdlife Australia's web site on the Bittern Project - "it rarely comes out onto mudflats or into the open, preferring to remain within or on the edge of wetland vegetation".

The observations at Kellys Swamp indicate that the ALB, or at least this bird, was regularly active during the day (on at least 10 days between 12 Oct. and 22 Nov.) and foraging in the open during this time. While it spent most of its time on vegetation or in shallow water, it was capable of foraging in water up to its belly.

Given the timing, October and November, one suggestion is that the activity may have been associated with breeding but no evidence of this was observed. The bird did not show the red facial flush reported in the species when breeding and foraged for long periods, taking many prey items, without returning to the reeds.

The long periods spent crouched and still while foraging were expected based on the literature, although I have not been able to find any other quantification in terms of the proportion of time in the different postures to compare to the results presented here. Mattingley's (1928) description of the bird usually keeping its head and neck erect is not supported by my observations.

Most of the descriptions of the bird foraging, describe the bird slowly extending its neck to its full length and then jabbing at the prey, as described by Mattingley (1928). The videos show that the neck is not fully extended prior to jabbing at prey. Usually the neck extends between 30-67% at the point of the strike. At times the neck was also arched at the point of the strike.

Neck sway is reported for many herons. Neck sway by the ALB was observed many times and in many situations. No particular purpose for neck sway could be determined from these observations.

The food recorded for this species is mostly aquatic invertebrates (Marchant and Higgins 1990) and also mosquito fish and tadpoles (Barker and Vestjens 1979). Although it was not possible to identify the small species taken using the videos, what could be seen does seem to be consistent with these descriptions. Carp, although only representing 5% of the 19 prey items taken on 22 November, would have comprised a high proportion of the food volume. When the observations made by Geoffrey Dabb are included in the data, fish represents 8% of the 25 prey items taken and a much higher percentage of the food volume (possibly 60%+). This may indicate that fish are more important part of the diet than the literature indicates.

This seems like a high volume of food for a bird weighing about 85 grams (Marchant and Higgins 1990) to consume over 6 hours, assuming it was the same bird being observed. The consumption of 19 prey items in just under 62 minutes, one every 3.25 minutes on average, is very high compared to the Australian Bittern, observed by Menkhorst (2012), of one per 21 minutes.

Figure 13. ALB foraging in deep water and striking to the side. (Photos from video)

The ALB did not seem to be disturbed too much by the presence of other bird species, with the possible exception of the Black Swan and Dusky Moorhen in a group. The ALB was able to feed relatively undisturbed for periods long enough to catch a considerable number of prey. Other bird species did not seem to be disturbed by the presence of the ALB.

The information presented here most likely represents the behaviour of one bird and therefore may not be representative of the species. More observations of Australian Little Bittern are required to determine if this behaviour is usual for the species. The bird's small size, its stillness and mostly crouched posture when foraging, and the camouflaged nature of its plumage make it easy to overlook, even when it is in the open.

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Male Australian Little Bittern (*Julian Robinson*)

DISTRIBUTION, ABUNDANCE AND BREEDING STATUS OF THE SUPERB PARROT (*POLYTELIS SWAINSONII*) DURING THE 2011-12 BREEDING SEASON, CENTRAL AND LOWER MOLONGLO VALLEY, ACT[3]

Prepared for the Canberra Ornithologists Group (COG)

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Summary. *Approximately 1650 ha of the central and lower Molonglo Valley were surveyed for Superb Parrots between 20th September 2011 and 11th January 2012. Breeding behaviour was observed within an area of approximately 650 ha in the central Molonglo Valley. Up to 40-50 Superb Parrots were recorded flying over or landing in the area with up to 35 showing signs of breeding behaviour. Birds appeared to be flying into and out of the breeding area along two distinct flight corridors from the suburbs of Belconnen. Superb Parrots were also observed using a third flight corridor, flying over the Kama Nature Reserve and south over the Molonglo River. Breeding behaviour was not observed in the Kama or Pinnacle Nature Reserves. A total of 102 species was recorded from the survey area and included five ACT threatened species; Superb Parrot, Little Eagle, Varied Sittella, White-winged Triller and Brown Treecreeper.*

[3] Edited version of a report under the same title prepared for the ACT Environment and Sustainable Development Directorate (ESDD), 20 April 2013

1. Background

Up until the summer of 2005-06 the Superb Parrot (*Polytelis swainsonii*) was known as a rare visitor in the ACT with breeding having been recorded in earlier days (Wilson, 1999). Wilson noted that the migratory Superb Parrot was seen occasionally within the borders of the ACT. Records were confined to the north-western suburbs with birds arriving with young during the breeding dispersal phase in late November-early December and departing from the local area by mid-February.

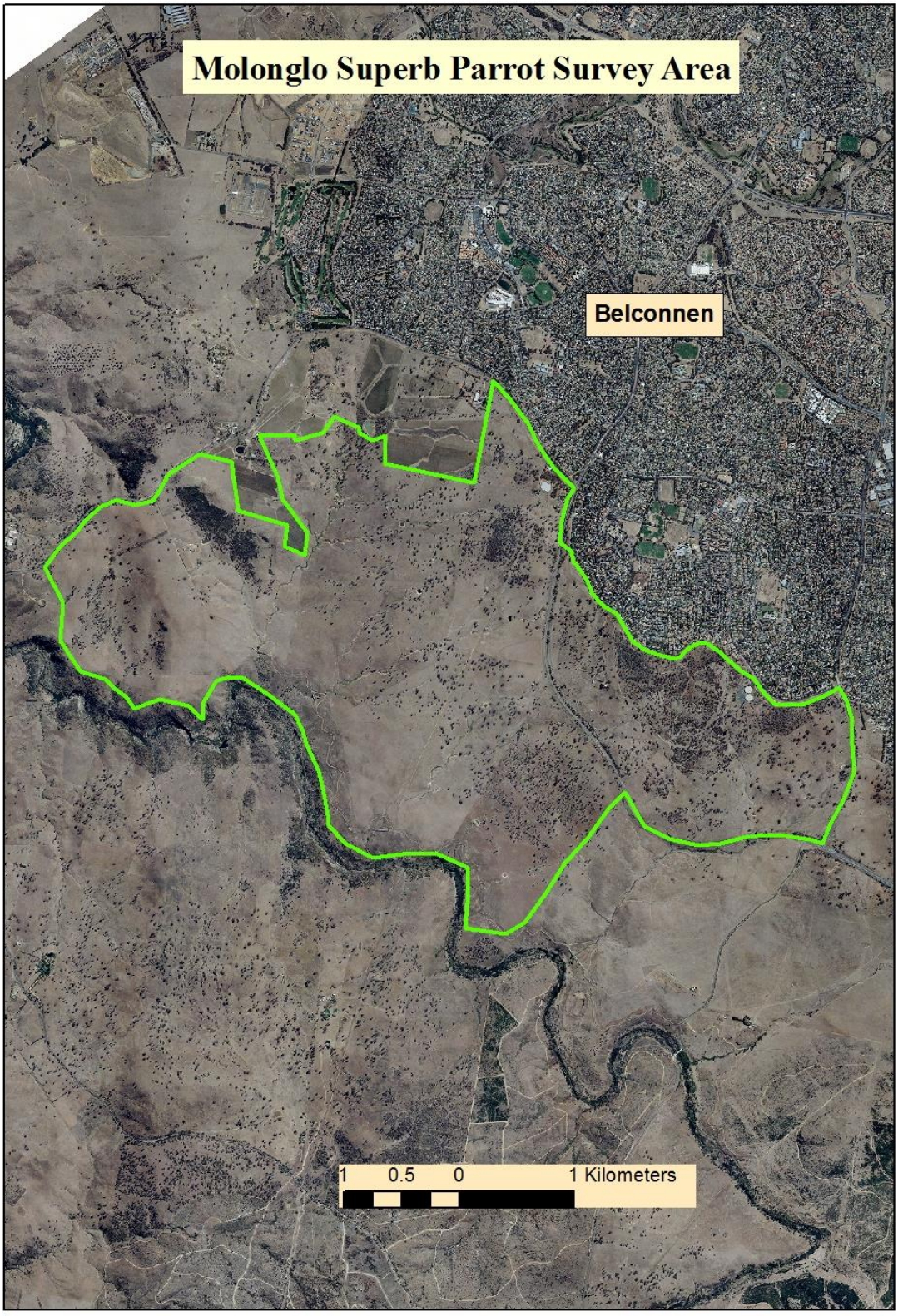
Breeding within the local region was recorded by Davey (1997) but there had been no recent breeding recorded within the ACT. Lashko (2006) reported on a large number of Superb Parrots including many dependent young in the Belconnen suburbs over the summer of 2005-06 with birds from early December remaining through to February. At this time there were no confirmed reports of breeding within the ACT and it was assumed that the breeding had occurred elsewhere. Since then birds have been reported arriving from early September and departing late March with breeding reported in the Gungahlin suburb of Harrison, the proposed suburb of Throsby and within the Mulligan's Flat and Goorooyarroo Nature Reserves (Davey 2010, 2011). It should be noted that the reports of breeding within the ACT coincide with the earlier arrival times.

With support from the ACT Government members of the Canberra Ornithologists Group (COG) surveyed land proposed for the suburbs of Kenny, Throsby, Moncrieff, Jacka and Kinlyside between early September and mid-December 2009. The results of the Superb Parrot survey and a survey on the tree hollow estate were provided by COG to the ACT Government in April 2010 (Davey, 2010).

In early November 2010, the ACT Government approached COG for an additional survey to determine the distribution and abundance of the Superb Parrot's breeding activity within the Goorooyarroo Nature Reserve-Throsby area, the proposed suburb of Moncrieff and a site under construction for the Harrison School Secondary Campus. In addition, it was agreed that COG would repeat the survey of the proposed suburb of Kenny. A report was presented to the ACT Government in May 2011 (Davey, 2011).

An examination of records from the COG database, in particular records from the COG Garden Bird Survey, indicated that the Superb Parrot was most frequently reported from the suburbs of Belconnen and in particular from the Aranda, Macquarie, Cook Weetangera, Page, Hawker and Scullin areas, that is the southern Belconnen suburbs. In addition, there had been the occasional sighting of birds in the Molonglo Valley, in particular central Molonglo.

In mid-September 2011, COG was contracted to conduct a survey within the central and lower Molonglo Valley. This report documents the distribution and abundance of the Superb Parrot's breeding activity within the survey area during the 2011-12 breeding season. The extent of the approximate 1650 ha survey site is shown in Map 1.



Map 1. Survey site, central and lower Molonglo Valley, 2011-12

2. Methods

The study was undertaken for the Environment and Sustainable Development Directorate (ESDD) and was in accordance with the following:

1. The survey will be undertaken in accordance with the Superb Parrot survey guidelines, see Appendix I
2. Survey of the Molonglo area will be once in late September-early October, once in late October-early November and once in December;
3. All eucalypt trees within the study areas with diameter greater than 30cm will be inspected and any Superb Parrot sightings and breeding activity recorded. Breeding activity can include any of the following:
    a. a reluctance by either sex to leave the vicinity of a tree with suitable hollow nearby;
    b. female or male observed entering or leaving a hollow;
    c. copulation;
    d. aggressive interactions between pairs with a potential nest hollow nearby;
    e. a male 'on station' indicated by the presence of a lone bird perched quietly in a tree occasionally making a soft call with a possible nest hollow in the same or nearby tree; and
    f. the feeding by adult birds of young with very short tails and limited capacity of flight with a possible breeding hollow in the same or nearby tree.
4. The location of any ACT threatened bird observed during the survey will be recorded and any breeding activity noted. These birds include the Brown Treecreeper, Hooded Robin, White-winged Triller, Varied Sittella, Painted Honeyeater and Regent Honeyeater.

Areas will be intensively surveyed on foot by members walking up and down, zigzagging across designated areas or where practical by driving amongst paddocks. In the report COG will document observed breeding behavioural characteristics and whether the species is observed outside of survey areas.

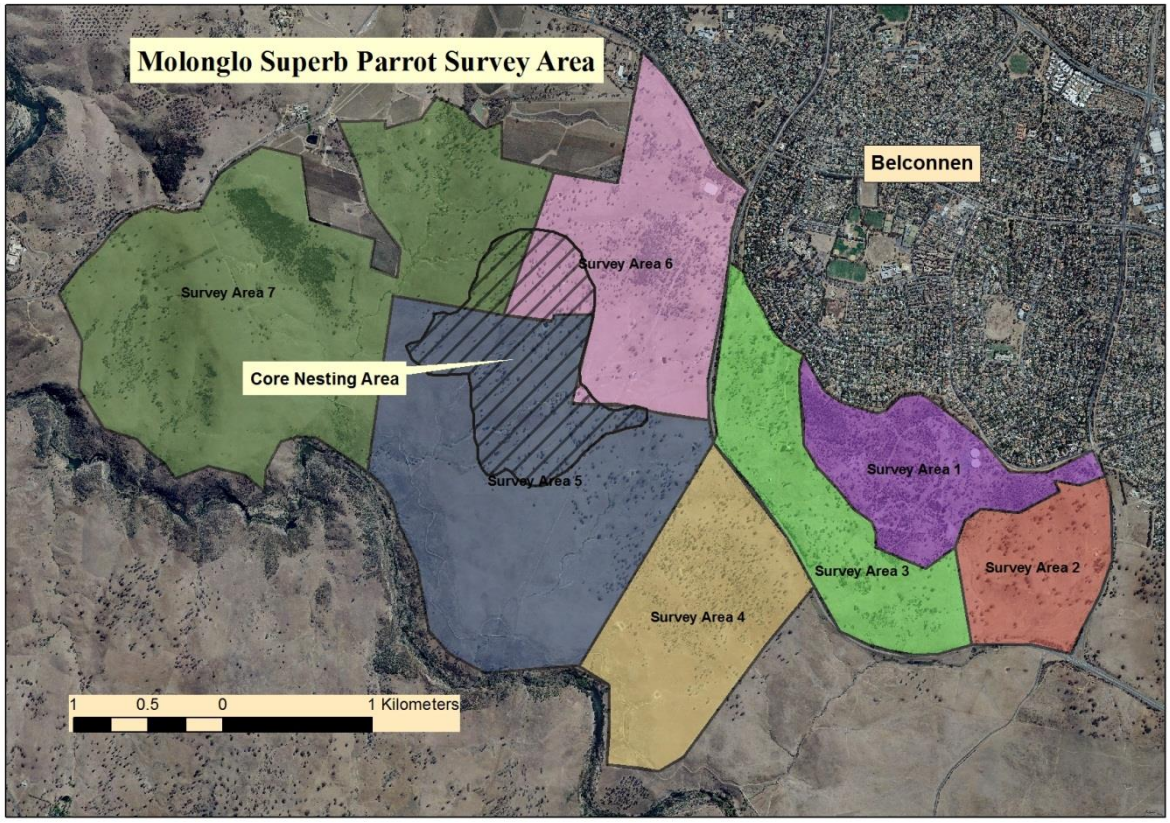
The survey site was divided into seven areas (see Map 2) with each area surveyed once during the periods late September-early October, late October-early November and late November-early December. Thus, each of the seven areas was surveyed on at least three occasions.

It is important to locate the areas of Superb Parrot activity by late September as this will indicate where birds intend to breed (Davey, 1997). By the end of the first survey period an area of activity had been located in central Molonglo. This 'core' area consisted of parts of area 5, 6, and 7 and was subject to five surveys during October 2011 to January 2012. Area 4 was also subject to additional surveys, on 19 Oct and 22 Nov 2011. For survey dates of each area see Table 1.

All areas were surveyed by one or two members of COG from just after sunrise up to 11:00 am. A total of 135 person/hours were spent in the field. The author of this report was present on all surveys apart from those conducted in Area 1.

In addition to any breeding information, the geo-location of any birds flying over or of birds flying into or out of trees was noted as was the flight direction.

All photographs were taken by the author.



Map 2. Survey areas, central and lower Molonglo Valley.

3. Results

Area 1 - Pinnacle Nature Reserve - is an area that is frequently visited by members of COG. In addition, specific bird surveys of areas of the Reserve are conducted by members of the Friends of the Pinnacle (FOTPIN). Rather than conduct specific Superb Parrot surveys in this area the results from the FOTPIN surveys are reported. In addition, members of COG or FOTPIN were asked to report any signs of possible Superb Parrot breeding activity. Although the activity and flight direction of any sighted Superb Parrot was noted no geo-locations were taken.

Area 4 - Kama Nature Reserve - is another area commonly visited by members of COG since it became a reserve. In addition to the three designated surveys the area was also surveyed on 19 Oct and again on 22 Nov.

Table 1. Survey dates for the 2011-2012 Superb Parrot breeding season within the central and lower Molonglo Valley. Survey periods were as follows: Period 1- late September-early October, Period 2- late October-early November and Period 3- late November-early December.

Survey period	1	2	3
Area 1	25-30 Sep	29-Oct	24-6 Dec
Area 2	10-Oct	26-Oct	5-Dec
Area 3	2-Oct	26-28 Oct	6-Dec
Area 4*	20-Sep	29-Oct	4-Dec
Area 5	24-Sep	3-Nov	1-Dec
Area 6	27-Sep	1-Nov	30-Nov
Area 7	28-Sep	2-Nov	29-Nov

Core: 14 Oct, 16 Nov, 14 Dec, 27 Dec, 10 Jan
* additional surveys 19 Oct, 22 Nov

3.1 Superb Parrot observations

Area 1, Pinnacle Nature Reserve. No Superb Parrots were observed during survey period 1. For survey period 2, 17 birds were recorded flying over the area in various sized groups all heading in a south-west or westerly direction, that is, towards the core area. For survey period 3, two birds were recorded again flying over in a south-west direction

Area 2. No Superb Parrots were observed during any of the survey periods.

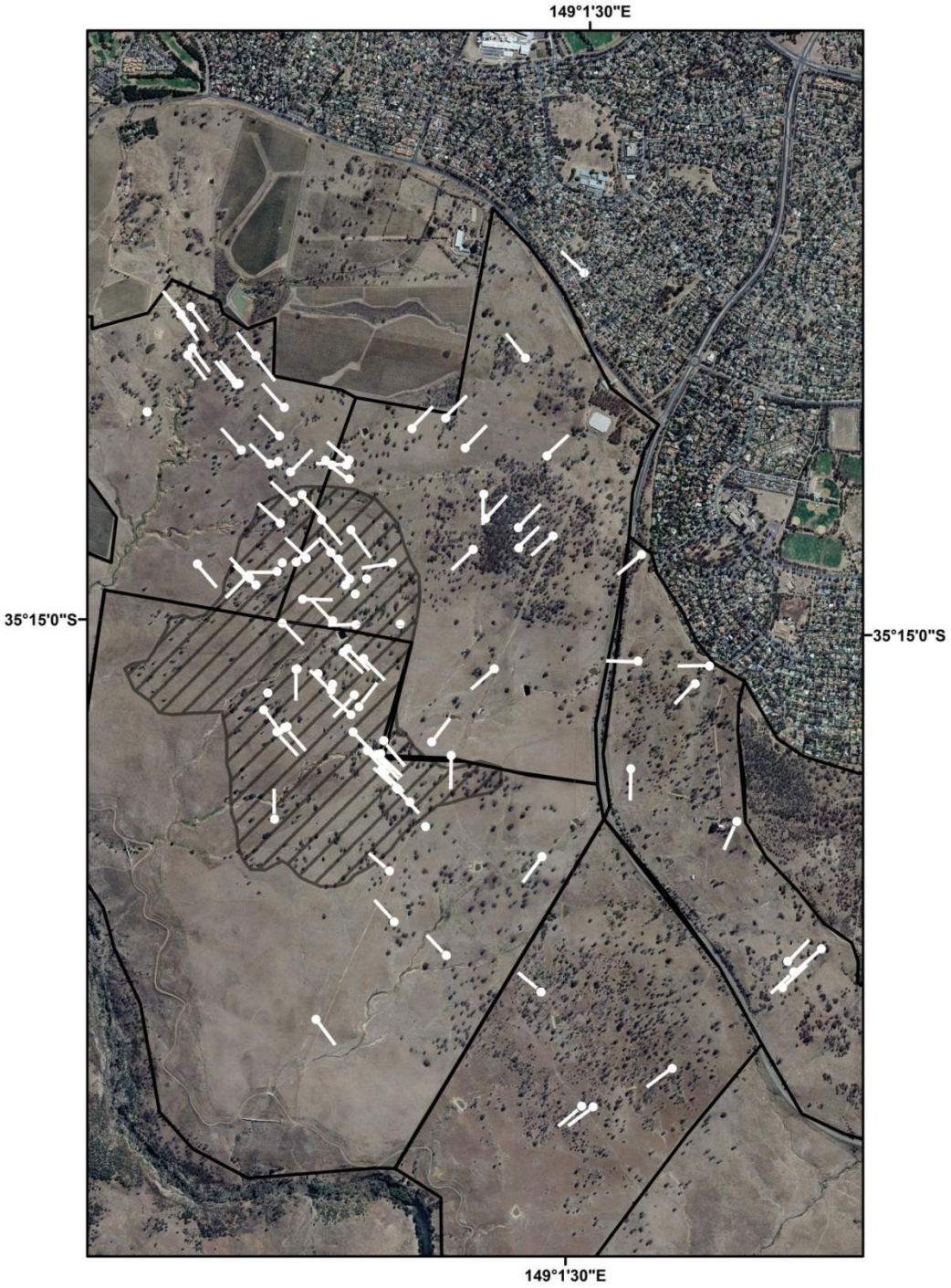
Area 3. During survey period 1 two groups of three birds were recorded heading towards the core area. During survey period 2, a total of 19 Superb Parrots in four groups were recorded flying back and forth in a generally north-east/south-west direction, across the Pinnacle Nature Reserve and over the Kama Nature Reserve. During survey period 3, a maximum of 17 birds in three groups were recorded flying over the area in a south and south-west direction again towards the core area, see Map 3 for details of these movements.

Area 4, Kama Nature Reserve. The area was visited on five occasions (Table 1). During survey period 1, there were no birds recorded in the area. On 19 Oct, a single bird was seen flying over in a south-west direction and over the Molonglo River. For survey period 2, on 29 Oct and on 22 Nov, no Superb Parrots were recorded in the area.

During survey period 3, a total of 13 birds in 6 groups were recorded. Four groups were seen flying in a north-west, south-east direction whilst two groups were recorded flying in a south -west direction and over the Molonglo River, see Map 3.

Areas 5, 6 and 7. Over a large part of the three areas, there were no Superb Parrots recorded but birds were recorded flying into or out from the core area situated near the junction of the three areas. During the three survey periods, areas 5, 6 and 7 were surveyed on different days (Table 1) and there is a high probability of multiple counting with birds flying in and out of the core area and flying from tree to tree within the various areas. On

14 Octo, 16 Nov, 14 Decr and 10 Jan, the core area only was visited therefore reducing but not eliminating the possibility of multiple counting.



Map 3. Location and direction of travel of Superb Parrots moving through the survey site in central and lower Molonglo Valley. Line indicates direction of travel from location point.

The locations and direction of birds flying over or arriving and departing were recorded, see Map 3. In addition, the location of birds exhibiting breeding behaviour was also noted

on each visit. The number of birds in total and the number showing some interest in the particular area, that is, not flying over or landing and departing without showing signs of breeding behaviour are shown in Table 2.

Table 2. Total number of Superb Parrots observed during various survey periods for areas 5, 6 and 7 and the core area. Figures in brackets are the number of Superb Parrots showing some signs of breeding activity in the particular area.

Survey period/Dates	Area 5	Area 6	Area 7	Core area
1	38 (25)	29 (5)	17 (10)	
14 Oct				37 (22)
2	28 (23)	35 (8)	10(3)	
16 Nov				54 (28)
3	42 (31)	20 (10)	20(8)	
14 Dec				46 (36)
27 Dec				9 (4)
10 Jan				21 (0)
11 Jan				0 (0)

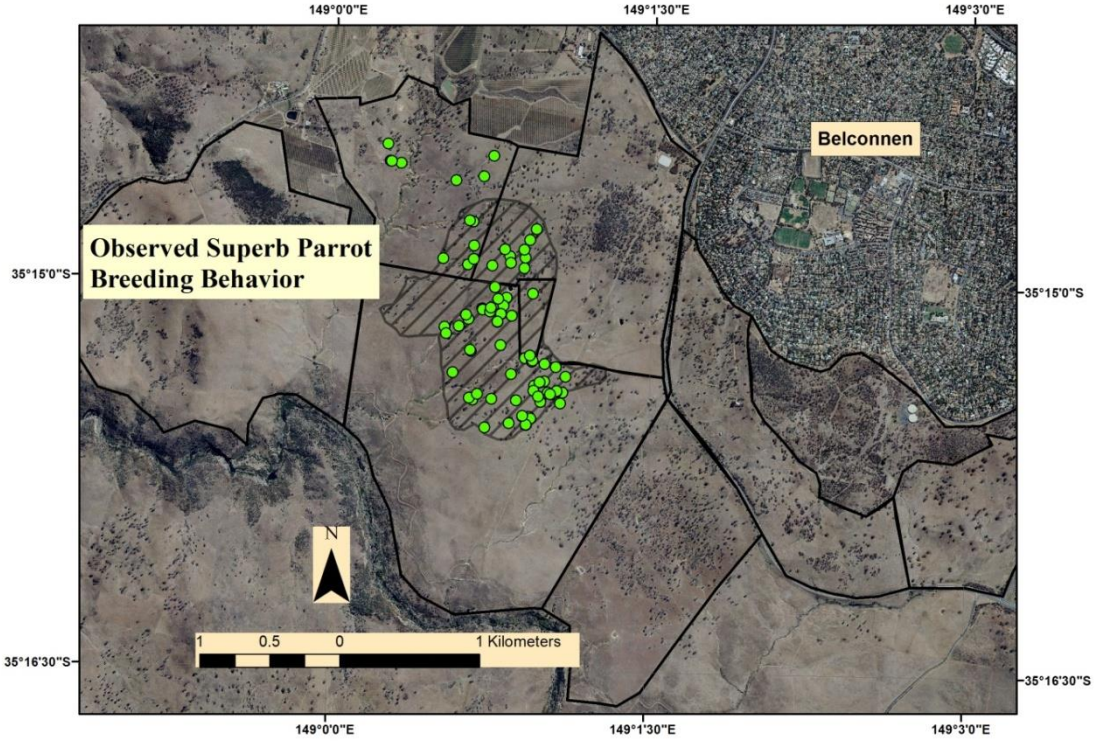
For survey period 1 there were about 40 Superb Parrots in the area. A similar number of birds were recorded from the core area on 14 Oct. During survey period 2 the maximum number of bird recorded was about 35 although this had increased to a maximum of about 50 birds on 16 Novr.

For the 14 October survey and survey period 2, which was between 1-3 Nov, the number of females decreased. The observed sex ratio was approximately 4 males to every 1 female. This would be expected as females whilst incubating, and for a period after hatching, remain in the nest hollow.

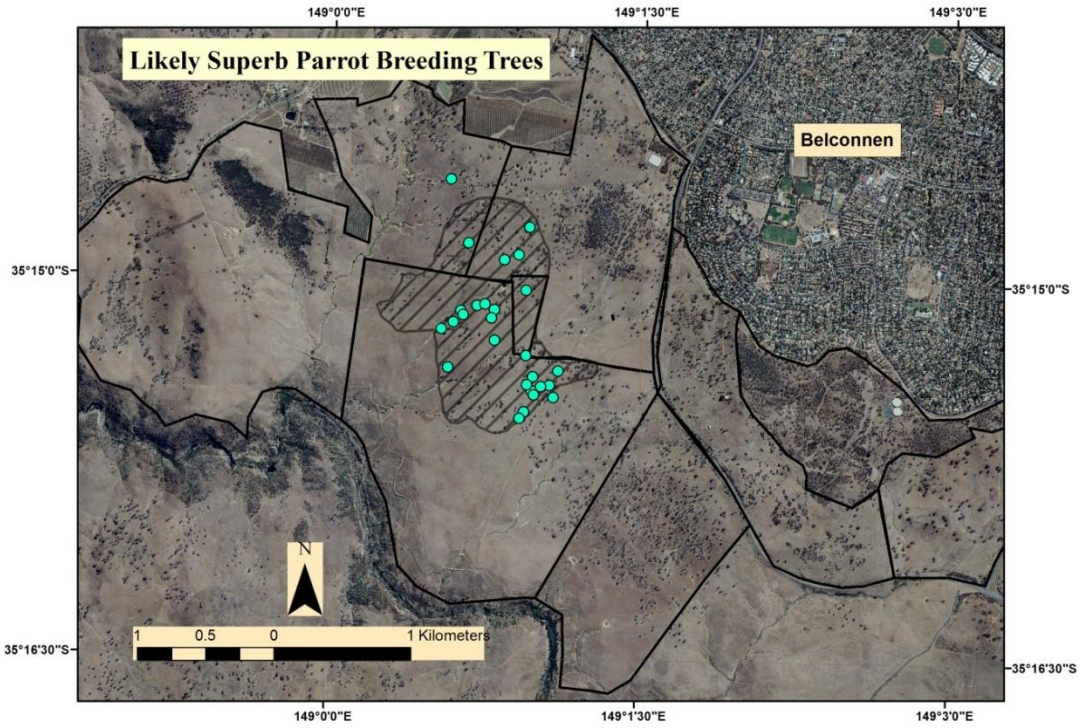
A similar number of around 40-50 birds were recorded in the area on survey period 3 and again on 14 Dec. By the end of the year (27 Dec) numbers of parrots in the area had declined with only 9 records of birds flying over and within the area and 21 birds observed flying over on 10 January. The next day no birds were seen in the area.
The location of birds that showed some form of breeding behaviour in the area i.e. birds inspecting hollows, single birds perched or on station in trees, males feeding females and females seen entering hollows are shown on Map 4.

For survey period 1 and again on 14 Oct, survey period 2 and 16 November about 25 individual parrots showed some form of breeding behaviour. For survey period 3 and on 14 Dec, this increased to about 30-35 individuals after which the number observed declined to four on 27 Dec and none were recorded after that, see Table 2.

There were 27 trees of specific interest either because a female was seen entering or leaving a hollow or because a male was seen on station (see Map 5.



Map 4. Location of Superb Parrots that displayed breeding behaviours in central and lower Molonglo Valley



Map 5. Location of possible breeding trees, central and lower Molonglo Valley.

On the various occasions when an area was surveyed the location of any relevant behaviour was recorded and the position noted as a waypoint on a GPS unit. Therefore, a particular location of interest could have more than one waypoint number with different dates. Many of the trees had multiple observations of some form of breeding behaviour and are therefore the most likely to contain breeding hollows. For the 27 trees of particular interest, date of observation, tree species, the diameter at breast height (DBH), the UTM coordinates (WGS 84) and the behaviour observed is shown in Table 3.

Table 3. Date of observation, location, species and diameter of trees at breast height (DBH-cm) and observed behaviour at 27 possible breeding trees in the central Molonglo Valley. For ease of reading alternate trees listed in the Table are shaded. Numbers in brackets denote photo numbers in Appendix III of the original report.

Date (2011)	Location		Easting	Northing	Tree species	DBH (cm)	Behaviour
14-Oct	55	H	683149	6096925	*E. blakelyi*	1100	Male on station (#3)
14-Oct	55	H	682808	6096730	*E. blakelyi*	730	Male on station (#17)
24-Sep	55	H	683362	6096400	*E. blakelyi ?*	1100	Male on station (#19)
14-Oct							Male on station
24-Sep	55	H	683552	6096595	*E. blakelyi*	940	Pair inspects hollow (#26)
14-Oct-							Male on station
1-Nov	55	H	683409	6097753	*E. blakelyi*	910	Male feeds female, female into hollow (#7)
1-Nov	55	H	683330	6097550	*E. blakelyi*	1070	Pair inspects hollow (#8)
1-Nov							Male on station
24-Sep	55	H	683330	6096354	*E. blakelyi*	1130	Pair inspects hollow (#18)
3-Nov							Female in/out hollow
3-Nov	55	H	682761	6097011	*E. blakelyi*	1120	Male on station (#16)
3-Nov	55	H	682850	6097061	*E. blakelyi*	1010	Female from hollow (#15)
3-Nov	55	H	683381	6097291	*E. blakelyi*	1020	Female from hollow (#10)
3-Nov	55	H	683022	6097179	*E. blakelyi*	970	Male on station (#12)
16-Nov							Male feeds female
14-Oct	55	H	683150	6097150	*E. blakelyi*	1010	Male on station (#5)
3-Nov							Male on station
16-Nov							Male on station
16-Nov	55	H	682963	6097638	*E. blakelyi*	850	Male on station (#6)
16-Nov	55	H	683417	6096556	*E. blakelyi*	1020	Female into hollow (#22)
29-Nov	55	H	682834	6098105	*E. blakelyi*	930	Female into hollow (#1)
1-Dec	55	H	683615	6096698	*E. blakelyi*	1180	Female into hollow (#27)
1-Dec	55	H	683487	6096585	*E. blakelyi*	1040	Male on station (#25)
3-Nov	55	H	683428	6096658	*E. blakelyi*	1090	Male on station (#24)
1-Dec							Male on station
1-Dec	55	H	683385	6096599	*E. blakelyi*	1000	Male on station (#23)
1-Dec	55	H	683577	6096506	*E. blakelyi*	980	Male on station (#20)
1-Dec							Pair defends area

Table 3 continued

Date (2011)	Location		Easting	Northing	Tree species	DBH (cm)	Behaviour
16-Nov	55	H	683435	6096524	*E. blakelyi*	1100	Pair together, female with bent tail (#21)
1-Dec							Male on station
14-Oct	55	H	683378	6096813	*E. blakelyi*	870	Pair sits quietly (#2)
1-Dec							Male on station
1-Dec	55	H	682903	6097143	*E. blakelyi*	1160	Male on station, begging calls (#13)
1-Dec	55	H	682921	6097113	*E. blakelyi*	990	Male feeds female (#14)
16-Nov	55	H	683127	6097089	*E. blakelyi*	1070	Female into hollow (#4)
1-Dec							Male on station
1-Dec	55	H	683080	6097191	*E, blakelyi*	1140	Pair sits quietly (#11)
14-Dec							Female from hollow
14-Dec	55	H	683225	6097513	*E. blakelyi*	1200	Female enters hollow (#9)

All of the most likely breeding sites were in Blakelys Red Gum (*Eucalyptus blakelyi*) with an average DBH of 1027 cms ranging from 730 to 1200 cms. The majority of observations were of males on station in trees with a nearby hollow. Surprisingly, the only observation of successful breeding was on a single occasion when begging was heard from a hollow on 1 December and of two pairs of Superb Parrots with 2 young on 10 January. However, a lack of successful breeding observations does not necessarily mean that other observed breeding attempts were not successful.

3.2 Other bird observations

Between late September and December 2011, there were 102 bird species recorded within the central and lower Molonglo Valley, see Appendix II. Although the various areas are difficult to compare due to differences in survey effort, size and differences in vegetation, the number of species recorded in each area varied between 34 and 72 species. All observations will be submitted to the COG bird sightings database.

Of particular note is that eight of the possible 12 diurnal raptors were recorded with a particular high number of sightings of the Black-shouldered Kite (*Elanus axillaris*), the Nankeen Kestrel (*Falco cenchroides*) and the Brown Falcon (*Falco berigora*). Olsen (1992) noted that the Molonglo Valley is a hot-spot for raptors housing breeding territories of nine species and providing food and shelter for at least another three. Also recorded were species on the ACT Flora and Fauna Committee's 'Watching Brief', the Diamond Firetail (*Stagonopleura guttata*) and the Dusky Woodswallow (*Artamus cyanopterus*).

Apart from the Superb Parrot there were four ACT threatened species observed, for details see Table 4.

The Little Eagle (*Hieraaetus morphnoides*) was first recorded on 27 Sep as it flew from a woodland patch. Subsequently a nest was located nearby. On 30 Nov, a chick was observed in the nest and was still present up to 27 Dec. This is the only known ACT breeding record for this species during the 2011-12 breeding season, (J. Olsen pers. comm.). For security reasons the location of the nest site is not provided.

Table 4. ACT threatened species recorded in the central and lower Molonglo Valley.

Species	Date (2011)	Location		Easting	Northing	Comments
Little Eagle	27-Sep-	55	H	683970	6098513	Adult leaves area
Little Eagle	1-Nov	55	H	683926	6098539	Adult, nest nearby
Little Eagle	30-Nov	55	H			Young in nest
Brown Treecreeper	24-Sep	55	H	683446	6096872	1 bird
Brown Treecreeper	24-Sep	55	H	683332	6097323	1 bird
Brown Treecreeper	24-Sep	55	H	683569	6096697	1 bird
Brown Treecreeper	24-Sep	55	H	682892	6097512	1 bird
Brown Treecreeper	28-Sep	55	H	683155	6097590	1 bird
Brown Treecreeper	28-Sep	55	H	680345	6097346	1 bird
Brown Treecreeper	28-Sep	55	H	682953	6097794	2 birds
Brown Treecreeper	14-Oct	55	H	683340	6097374	1 bird
Brown Treecreeper	14-Oct	55	H	683038	6097823	2 birds
Brown Treecreeper	14-Oct	55	H	683364	6096679	1 bird
Brown Treecreeper	14-Oct	55	H	683364	6096679	1 bird
Brown Treecreeper	19-Oct	55	H	684307	6095427	3 birds
Brown Treecreeper	19-Oct	55	H	683877	6095442	1 bird
Brown Treecreeper	29-Oct	55	H	684458	6095476	4 birds
Brown Treecreeper	2-Nov	55	H	682950	6097782	2 bird
Brown Treecreeper	16-Nov	55	H	682936	6097571	2 birds
Brown Treecreeper	22-Nov	55	H	684331	6095507	4 birds, nest site
Brown Treecreeper	29-Nov	55	H	682932	6097818	3 birds
Brown Treecreeper	1-Dec	55	H	684015	6096208	1 bird
Brown Treecreeper	1-Dec	55	H	683770	6095693	1 bird
Brown Treecreeper	1-Dec	55	H	683748	6095915	1 bird
Brown Treecreeper	1-Dec	55	H	683843	6096689	1 bird
Brown Treecreeper	4-Dec	55	H	684344	6095561	2 adult, 2 young
Brown Treecreeper	14-Dec	55	H	682927	6097810	3 adult 2 young
Brown Treecreeper	27-Dec	55	H	682870	6097680	3 birds
Varied Sittella	28-Sep-11	55	H	681586	6097633	1 bird
Varied Sittella	2-Oct-11	55	H	684647	6096769	2 birds
Varied Sittella	29-Oct-11	55	H	?	?	2 birds, area 1
Varied Sittella	1-Nov-11	55	H	683916	6097854	2 birds
Varied Sittella	4-Dec-11	55	H	684444	6095875	6 birds
Varied Sittella	6-Dec-11	55	H	685509	6095425	1 bird

Table 4 continued

Species	Date (2011)	Location		Easting	Northing	Comments
White-winged Triller	29-Sep	55	H	?	?	1 bird, area 1
White-winged Triller	28-Oct	55	H	684718	6096887	1 bird
White-winged Triller	29-Oct	55	H	684407	6095809	2 birds
White-winged Triller	16-Nov	55	H	683264	6096765	1 bird
White-winged Triller	22-Nov	55	H	684250	6095708	2 birds
White-winged Triller	29-Nov	55	H	680500	6097128	2 birds
White-winged Triller	30-Nov	55	H	683471	6097721	2 birds
White-winged Triller	30-Nov	55	H	683980	6097992	1 bird
White-winged Triller	1-Dec	55	H	684067	6096312	2 birds
White-winged Triller	4-Dec	55	H	684616	6095776	2 birds

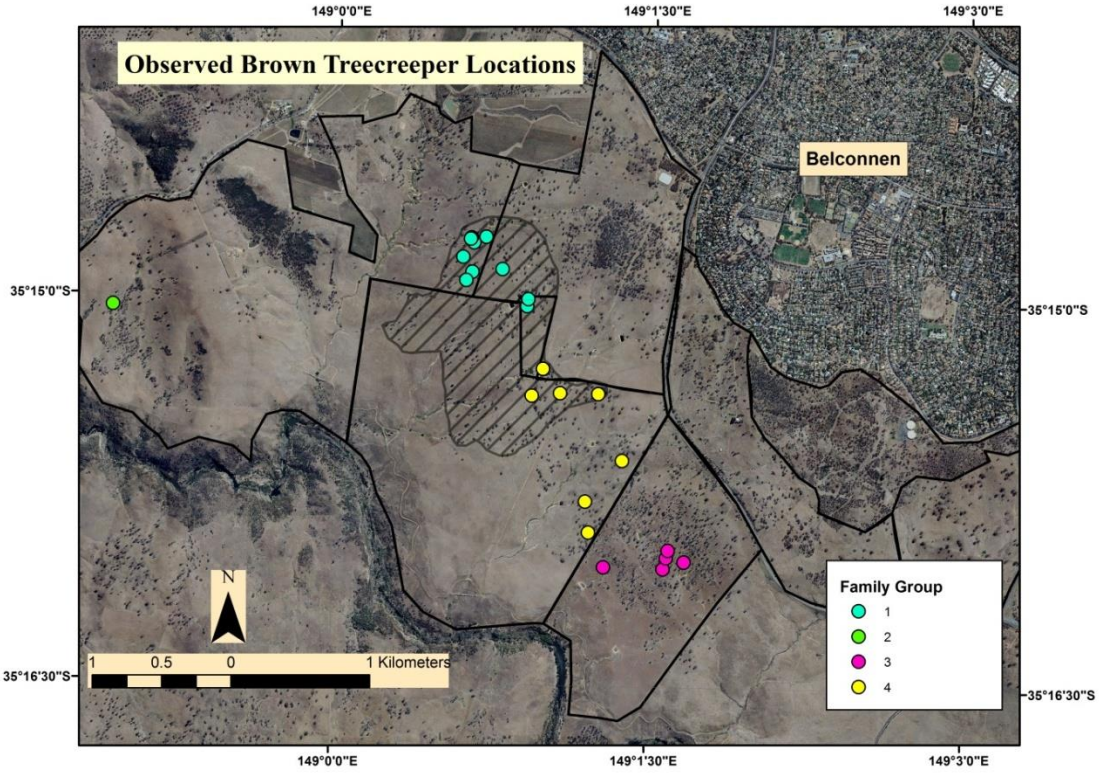
The Brown Treecreeper (*Climacteric picumnus*) has been known from the Kama Nature Reserve since spring 1989 (COG database records). Additional Brown Treecreepers were first recorded in the central Molonglo Valley in December 2008 and subsequent observations have confirmed the presence of up to four small breeding groups (C. Davey *pers. obs.*). At present there appears to be a breeding group in the Kama Nature Reserve, (2 adults, 2 young of 2010-11 and 2-3 young of 2011-12) and 2 groups in central Molonglo (a single bird and a group of 3 adults and 2 young of 2011-12). In addition, a single bird was recorded in lower Molonglo on 28 September (Area 7) but not recorded subsequently (see Map 6).

The Varied Sittella (*Daphoenositta chrysoptera*) and the White-winged Triller (Lalage sueurii) occur within the area with six records for the former and 10 records for the latter, see Table 4 and Map 7 and Map 8. Since 2005, breeding has been observed within the Kama Nature Reserve for the Varied Sittella (C. Davey pers. obs.) but despite being observed each year breeding of the White-winged Triller has not been confirmed to date.

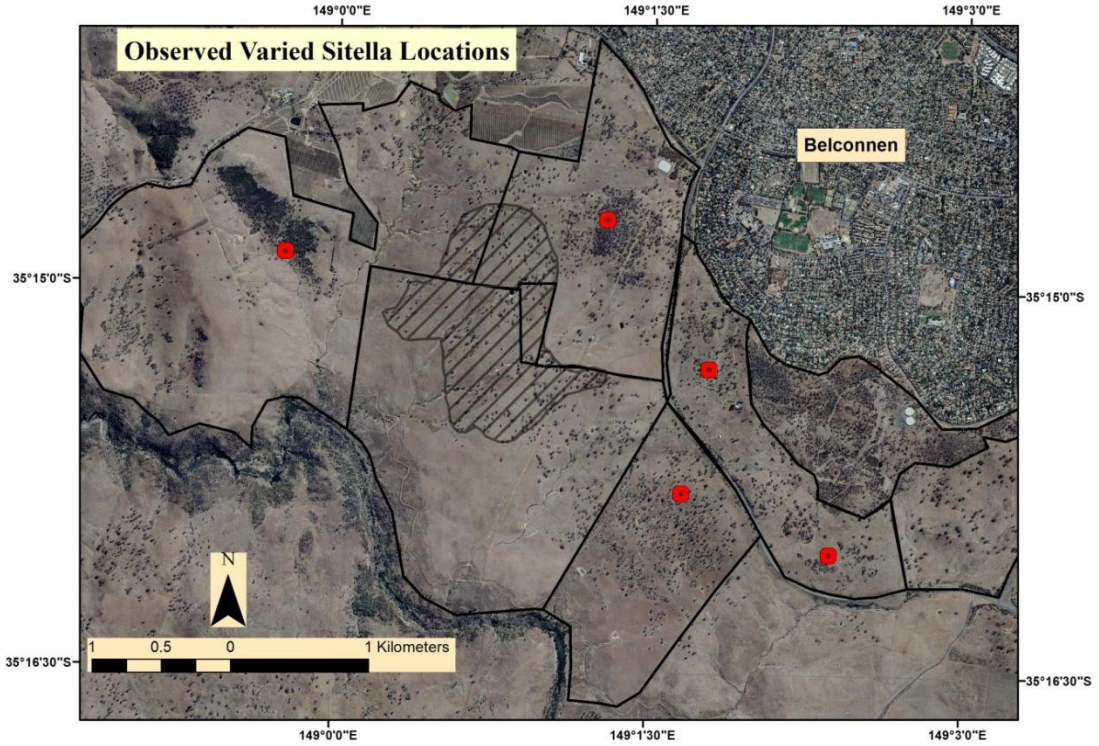
4. Discussion

The area surveyed for Superb Parrots during the 2011-12 breeding season covered approximately 1650 ha and stretched north of William Hovell Drive from Coulter Drive to the east to the western end of the Pinnacle Nature Reserve. The area included the Pinnacle Nature Reserve and leasehold land known as North Kama and Lower Pinnacle. South of William Hovell Drive the survey area stretched from the eastern boundary of the Kama Nature Reserve to Stockdill Drive to the west, the majority of which was leasehold land and included the properties of 'Lands End', 'Pine Ridge' and 'Wagtail Park'.

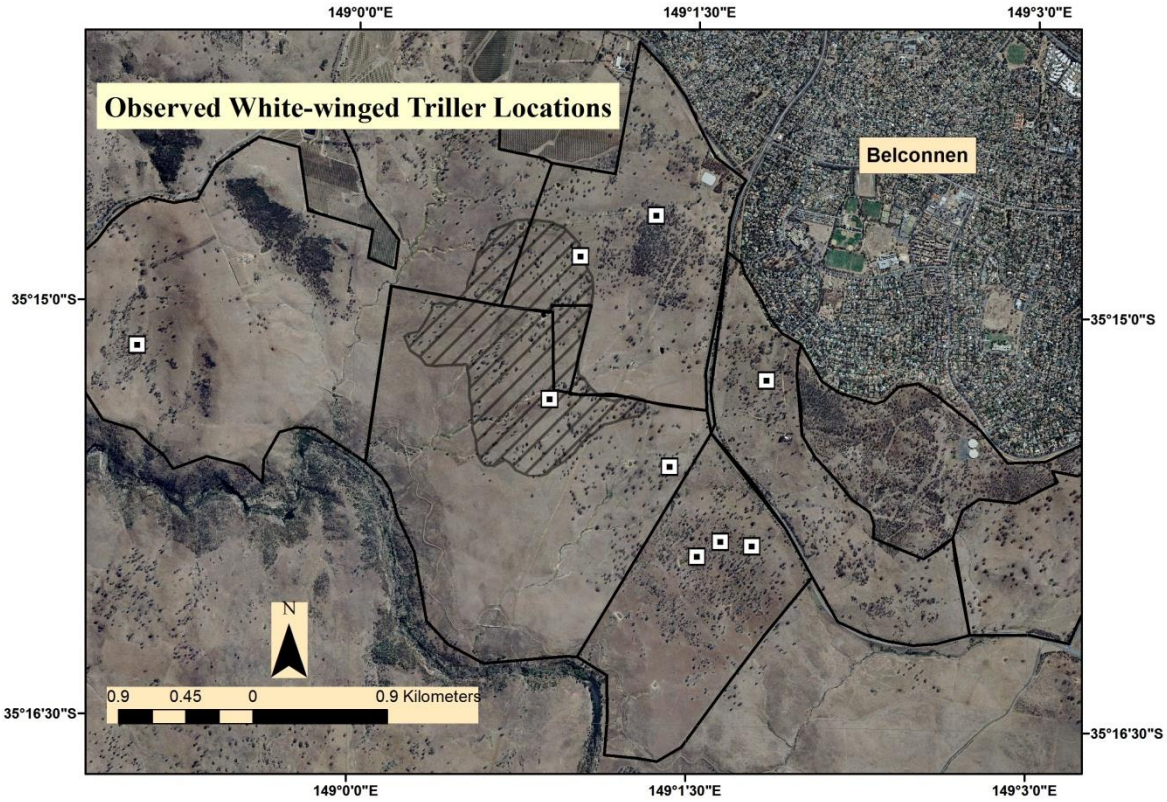
Breeding observations were limited to an area of approximately 650 ha situated in the centre of the area south of William Hovell Drive. Much of the breeding or core area is designated as White Box- Yellow Box- Blakely's Red Gum grassy woodland and derived native grasslands (Box Gum Woodlands) and is listed under the Environment Protection Biodiversity Conservation Act 1999 as an endangered ecological community. Other areas to the south of William Hovell Drive along the south-west boundary also contain White Box- Yellow Box- Blakely's Red Gum grassy woodland and derived native grasslands (Box Gum Woodlands) but the area is virtually clear of trees and no Superb Parrots were recorded in this area.



Map 6. Location of all Brown Treecreeper observation, central and lower Molonglo Valley.



Map 7. Location of all Varied Sittella observation, central and lower Molonglo Valley.



Map 8. Location of all White-winger Triller observation, central and lower Molonglo Valley.

In addition to the breeding or core area, the Superb Parrot was also observed in other areas but in all cases the birds were recorded only flying overhead. It appeared that the observations consisted of birds either flying to or from the core area or flying further south and over the Molonglo River, possibly to an area of woodland situated between the Molonglo River and the Uriarra Road to the south. Movement appeared to occur along three flight corridors. The first corridor stretched from somewhere around the Pine Ridge Homestead or possibly further north in a south-east direction to the core area. Where birds were coming from to the north is unknown but Superb Parrots are frequently recorded at the Belconnen Golf Course. Birds using the second flight corridor appeared to come from the central Belconnen area heading to the core area in a south-west direction returning to central Belconnen in the opposite direction. The third corridor appeared to start from the eastern Belconnen area across the Kama Nature Reserve and on to the south of the Molonglo River, see Map 3. In addition, Superb Parrots were also occasionally recorded from the core area and flying across the Molonglo River.

There was no indication of Superb Parrots feeding along the flight corridors suggesting quite distinct breeding and feeding areas. This appears to be similar to the Riverina population of Superb Parrots where breeding occurs in tree hollows along river margins with birds feeding some distance away on the more open grassy plains (Higgins, 1999).

There were no signs of breeding in either the Kama or the Pinnacle Nature Reserves. COG commenced regular observations of birds in the Kama Nature Reserve in what was then land grazed on an agistment basis in late 2005. In addition to the seasonal woodland bird

surveys, the area was regularly visited to monitor the Brown Treecreeper population (C. Davey pers. obs.). There were also regular visits to an area outside the Reserve on leasehold land bordering the western boundary of the Reserve to monitor a small group of resident Brown Treecreepers. The first Superb Parrot seen in the area was on 25 September 2006 when a pair was observed inspecting a tree hollow. A couple of pairs were subsequently seen in the area on 19 Oct and 21 Dec. Birds were increasingly recorded on the leasehold land during all subsequent seasons. There were no observations of birds inspecting hollows within the Kama Nature Reserve. It would, therefore, appear that the Superb Parrot started using the central Molonglo area from the 2006-07 breeding season onwards.

Typical view across the core nest area, central Molonglo.

Within the central and lower Molonglo Valley the core area is dominated virtually exclusively by Blakely's Red Gum with the very occasional Yellow Box (*E. melliodora*) but due to grazing pressure there is very little regeneration of these species. There is an abundance of tree hollows suitable for the Superb Parrot to nest in and all possible nest sites were in Blakely's Red Gum.

It was of interest to note the interactions between the Crimson Rosella (*Platycercus elegans*), the Eastern Rosella (*P. eximius*) and the Superb Parrot. Both rosella species are resident in the area and had set up territories and were defending preferred tree hollows before the return of the Superb Parrot. Interactions between the rosellas and the Superb Parrots were often intense with the rosellas invariably winning any aggressive interaction. It would therefore appear that the Superb Parrot is at a disadvantage and may be restricted to trees not within the defended territories of Crimson and Eastern Rosella pairs. Whether the territorial behaviour of the rosellas is limiting the number of Superb Parrots successfully breeding in the area is unknown, but any increase in rosella numbers which could result with nearby urban development and artificial feeding may well have an adverse impact on this and possibly the Throsby breeding populations in Gungahlin.

Despite the many behavioural observations indicating the breeding of the Superb Parrots in the core area it was surprising that there were no observations of young either begging or being fed. The only indications were of begging sounds from a hollow on 1 Dec and

indications of young with adults on 10 Jan. This was unexpected. There are two possible explanations for this. Firstly the breeding events were unsuccessful either due to no egg laying or the death of young in the nest hollow. This is unlikely from sequences of behavioural observations with an equal sex ratio being observed followed by a dominance of males then a subsequent return to an equal sex ratio indicating females were incubating and therefore not visible. In addition, reports from the COG 'Discussion-list' would indicate a successful breeding season with many young reported from urban parks and sports ovals.

Second, the core area was not a favoured feeding area and young and adults left possibly to feed in urban Belconnen as soon as the young emerged. It is surprising that there were no indications of emergent young during the 14 Dec visit to the area. The next visit was two weeks later and it is most likely that by then all breeding birds and their young had left the area. The first reported begging calls to be heard in the Belconnen area was from the Belconnen Golf Course on 10 Dec with many reports after that. Both the Blakely's Red Gum and the few Yellow Box had a profuse flowering event during this time and it is possible that preferred food was available elsewhere.

With observations of breeding by the Superb Parrot in the Throsby area of Gungahlin and within the central Molonglo Valley area and the possibility of breeding in an area south of the Molonglo River, it would appear that since 2006-07 the ACT has become an increasingly important breeding area for the Superb Parrot. It is also becoming clear, that for unknown reasons, the urban environment of Canberra is providing important food resources whilst the surrounding rural areas of woodland are providing nesting habitat, both of which are essential elements for the successful breeding of this threatened species.

Acknowledgements

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Personal Communications

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Appendix I

Survey Guidelines for Superb Parrot Conservation Planning and Research
August 2010

Purpose

These guidelines aim to promote a consistent and reliable method for determining the presence of Superb Parrots at sites in the ACT.

Aim

The aim is to determine whether or not the species is present at a site, which may also include determining whether breeding is occurring at the site.

Timing

Surveys should be undertaken during the period when Superb Parrots visit the ACT, which is in the spring/summer breeding season. Most birds will have arrived in the ACT by September and most will have departed by February, thus surveys should be undertaken between September and late December.

Method

Surveys should be undertaken by observers who are experienced in bird surveys (or who are experienced 'bird watchers') and who are familiar with the species. Surveys must be conducted in teams (2 individuals per team) or as single individuals. Single observers and at least 1 member of a team should be familiar with the species' call.
Surveys should be undertaken between 1 hour after sunrise and about mid-morning.

Accepted 15 May 2013

Appendix II. Frequency of observation (number of visits) for 102 bird species.

Species	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Number of visits	3	3	3	5	3	3	3	23
Stubble Quail		1				1		2
Brown Quail					2			2
Australian Wood Duck	2	3	3	4	3	2	3	20
Grey Teal		1	2	3	2	2	2	12
Pacific Black Duck	1		2	3	2	1	3	12
Hardhead						2	2	4
Australasian Grebe				1		1	2	4
Crested Pigeon	1	1	1	2	3	1	3	12
Tawny Frogmouth	2		1					3
Australian Owlet-nightjar	1							1
Little Pied Cormorant				1				1
White-necked Heron					1	1		2
White-faced Heron	1	1	3		3		2	10
Straw-necked Ibis	1					1	1	3
Black-shouldered Kite	1	1	2	5	3	3	2	17
Brown Goshawk	1		3	2	1		1	8
Collared Sparrowhawk		1	1			1		3
Little Eagle						3		3
Nankeen Kestrel	1		3	5	3	2	3	17
Brown Falcon		1	2	1	2	2	2	10
Australian Hobby	1		1		1			3
Peregrine Falcon					1			1
Masked Lapwing			1			1		2
Yellow-tailed Black-Cockatoo				1				1
Gang-gang Cockatoo	1					1		2
Galah	3	3	3	5	3	3	3	23
Little Corella			1				2	3
Sulphur-crested Cockatoo	3	3	3	5	3	3	3	23
Rainbow Lorikeet	1		3					4
Australian King-Parrot	1		1			1	1	4
Superb Parrot	**2**		3	2	3	3	3	16
Crimson Rosella	3	3	3	5	3	3	3	23
Eastern Rosella	3	3	3	5	3	3	3	23
Red-rumped Parrot	1	3	3	5	3	3	3	21
Horsfield's Bronze-Cuckoo	1		1	3	2	3	2	12
Pallid Cuckoo					1		1	2
Fan-tailed Cuckoo							2	2
Laughing Kookaburra	3	2	1	4	3	2	3	18
Sacred Kingfisher					1	3		4

Appendix II Table continued

Species	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Rainbow Bee-eater							1	1
Dollarbird	1			3		1		5
White-throated Treecreeper	3		1	3		3	3	13
Brown Treecreeper				4	2	2	3	11
Superb Fairy-wren	3	3	3	5	2	3	3	22
White-browed Scrubwren							2	2
Speckled Warbler	3		1	1			2	7
Weebill	3	2	2	5	2	3	2	19
Western Gerygone			1					1
White-throated Gerygone	2					3	1	6
Striated Thornbill	2					1	1	4
Yellow Thornbill	2							2
Yellow-rumped Thornbill	3	3	3	5	3	3	3	23
Buff-rumped Thornbill	3		3	4	2	3	3	18
Brown Thornbill	3						2	5
Southern Whiteface		2	3	3	2	3	3	16
Spotted Pardalote	2		2	3		2	1	10
Striated Pardalote	3	3	3	5	3	3	3	23
Yellow-face Honeyeater	2		2			2	1	7
White-plumed Honeyeater		1	2	5	1	3	2	14
Noisy Miner			1	5	3	1	3	13
Red Wattlebird	3		3	5		3	1	15
Brown-headed Honeyeater	2		3	3			1	9
White-naped Honeyeater			2					2
Noisy Friarbird	3	3	3	4	1	3	1	18
Varied Sittella	**1**		2	2		1	1	7
Black-faced Cuckoo-shrike	3	3	2	5	2	3	3	21
White-winged Triller	**1**		1	3	1	1	1	8
Golden Whistler	**1**			1				2
Rufous Whistler	**2**			1		2	3	8
Grey Shrike-thrush				1			2	3
Olive-backed Oriole	**3**				1	1	1	6
Dusky Woodswallow	**3**		1	1		3	2	10
Australian Magpie	**3**	3	3	5	3	3	3	23
Grey Butcherbird			1			1		2
Pied Currawong	**3**	1		2	1	3	3	13
Grey Fantail	**3**		3	5	1	3	3	18
Willie Wagtail	**2**	3	3	5	3	3	3	22
Australian Raven	**3**	2	3	4	2	3	2	19

Appendix II Table continued

Species	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Little Raven				1				1
Leaden Flycatcher	**3**		2	1		2		8
Restless Flycatcher						1		1
Magpie-lark	**1**	2	2	4	3	3	2	17
White-winged Chough	3					2		5
Scarlet Robin	**2**							2
Red-capped Robin				2		1		3
Eurasian Skylark				1	3		3	7
Golden-headed Cisticola							2	2
Australian Reed-Warbler							1	1
Rufous Songlark			1	2		2	2	7
Silvereye	1		3			2	2	8
Welcome Swallow	2	3	2	2		3	3	15
Tree Martin		1	3	5	3	3	3	18
Common Blackbird	1		1					2
Common Starling	2	3	3	5	3	3	3	22
Common Myna	1	3	2	1		3	3	13
Mistletoebird					1			1
Double-barred Finch			1				1	2
Red-browed Finch	3		2	4			2	11
Diamond Firetail		2		2	2	3	1	10
House Sparrow	1	3						4
Australasian Pipit		1				2	3	6
European Goldfinch	1		1			1	2	5
Total number species	**63**	**34**	**62**	**59**	**47**	**69**	**72**	**102**

THE CANBERRA BIRD BLITZ 2012

BARBARA ALLAN

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Abstract. *This paper describes the conduct of the Canberra Ornithologists Group's eighth 'bird blitz', held on 27-28 October 2012, outlines some findings and provides comparisons with the seven previous blitzes.*

1. Introduction

On the last weekend in October 2012 (Saturday 27 and Sunday 28), the Canberra Ornithologists Group (COG) held its eighth annual 'bird blitz'. In this exercise, we aim to record all species of wild bird present in the ACT over that weekend, to obtain a broad indication of their abundance, and to record breeding status. To achieve this, we set out to conduct a minimum of one 20-minute 2-hectare survey within each of the 165 grid cells covering the ACT (a 2.5-minute grid on lines of latitude and longitude, so each cell measures approximately 3.5 km by 4.5 km). A subsidiary aim of this exercise is to encourage more of our members to get out, survey and submit datasheets.

The data collected are entered in the COG Atlas database, and subsequently contributed to the BirdLife Australia Atlas database. They are available for scientific purposes and as an input to Canberra land use planning.

2. Conduct of the blitz

Participants register for their preferred locations or grid cells, on a first-in, best-dressed basis. In the allocation process, some site preference is given to members who survey given sites on a regular basis. More tardy volunteers are cajoled by the organiser into surveying the remaining sites. Less experienced birders may accompany more experienced birders who indicate a willingness to take them along. And as a modest inducement to participants, a variety of prizes are on offer, courtesy of our members.

Participants are allowed to choose their preferred methodology from the three BirdLife Australia Atlas options: a 20-minute/2-ha survey; within 500 m of a central point, for >20 mins; or within 5 km of a central point, for >20 mins. Incidental records are also welcomed.

3. Results and discussion

3.1 Operational issues

We enjoyed perhaps the best weather of any blitz to date, with mild conditions, pleasant sunshine and just a modest breeze – in short, perfect birding weather. Not all trails in Namadgi National Park were accessible, however, with the middle portion of the Naas Valley Fire Trail off-limits, as were the southern reaches of the Park.

3.2 Level of participation and coverage

At least 77 COG members and friends took part in the 2012 blitz (Fig. 1), plus a number of unnamed "extras" (a list of known participants is at Table 1). As noted before, this probably equates to about 100 participants if the 'number surveying' box on the datasheets is taken into consideration. Seven of the named individuals participated for the first time. And twenty-nine participants blitzed for part or all of both days.

Datasheets were received from ninety-two grid cells, a little fewer than average. This can be partly explained by the lack of access to certain areas in Namadgi National Park. Nevertheless the grid cells surveyed covered most habitat types, so I believe we have a representative sample of ACT avifauna for the weekend. Map 1 shows the grid cells covered, while the table below indicates the comparisons between blitz years.

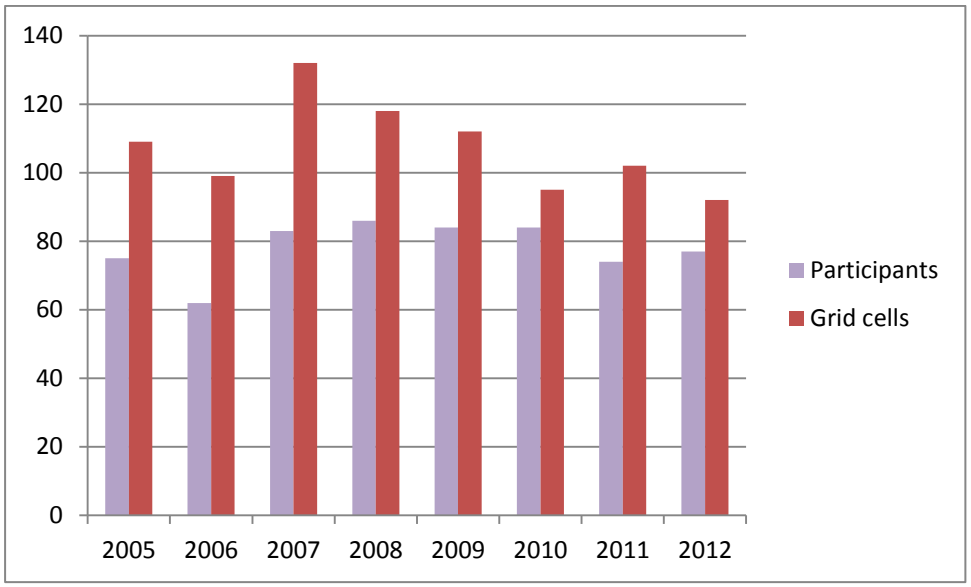


Figure 1. Blitz participant numbers and grid cells covered.

3.3 Datasheets submitted

In the 2012 blitz, a total of 271 eligible datasheets were received, 205 in hard copy and 66 electronically. Datasheet numbers have fluctuated over the eight years of the blitz from a high of 338 in 2008 to a low of 242 in 2006. The actual number each year appears to have more to do with the types of surveys undertaken, and the relative proportion of lengthy surveys. It is at times a difficult trade-off for our blitzers between covering many grid cells and hence generally adopting the '20-minute, two-hectare' survey, and covering fewer areas but doing so more intensively over a longer period with a 'within 500m' survey.

3.4 Type of survey

As usual, participants were given the option of choosing their survey type to best fit the grid cell or location they were surveying and to allow for personal preference and time or other constraints. In the 2012 blitz, the '20-minute, two-hectare' survey proved the most popular, with 46% of datasheets being for this type of survey. It is hard to explain this variation and I suspect it has little bearing on the outcomes, in terms of bird species recorded, though it may account for the reduced number of breeding species recorded in the 2012 blitz.

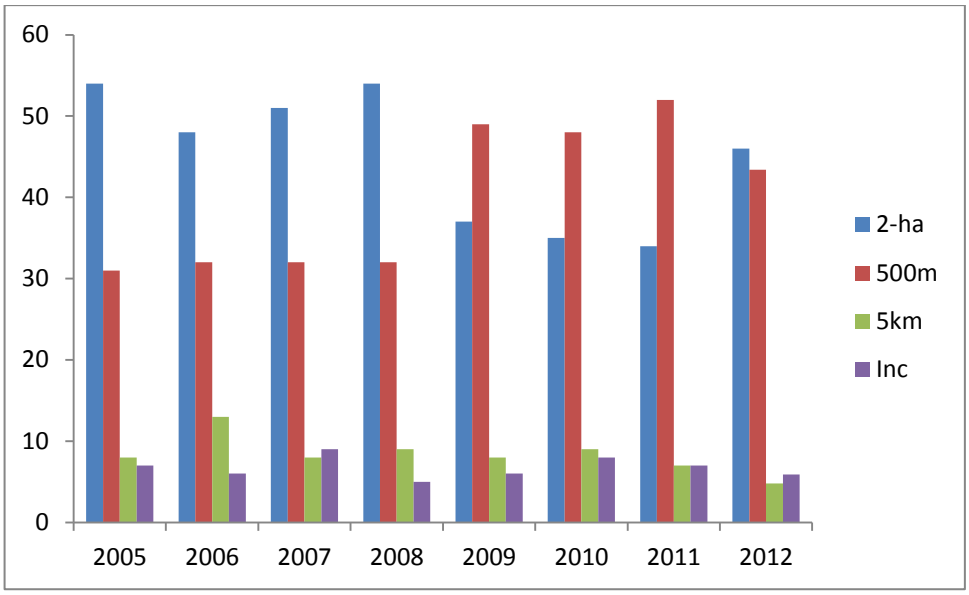


Figure 2. Survey type (percentages)

3.5 Species recorded

As Fig. 3 and Table 2 show, 166 bird species were recorded over the two blitz days in 2012. This is also the average for the number of species recorded in the seven previous blitzes, suggesting that in many respects 2012 was an 'average' year. When the eight blitz years are considered together, 203 species have been recorded, while131 species have been recorded every year. By way of comparison, the species total for all of the financial year 2011-12 and the whole of COG's area of concern, as recorded in the annual bird report, was 237 from 278 grid cells (COG 2013).

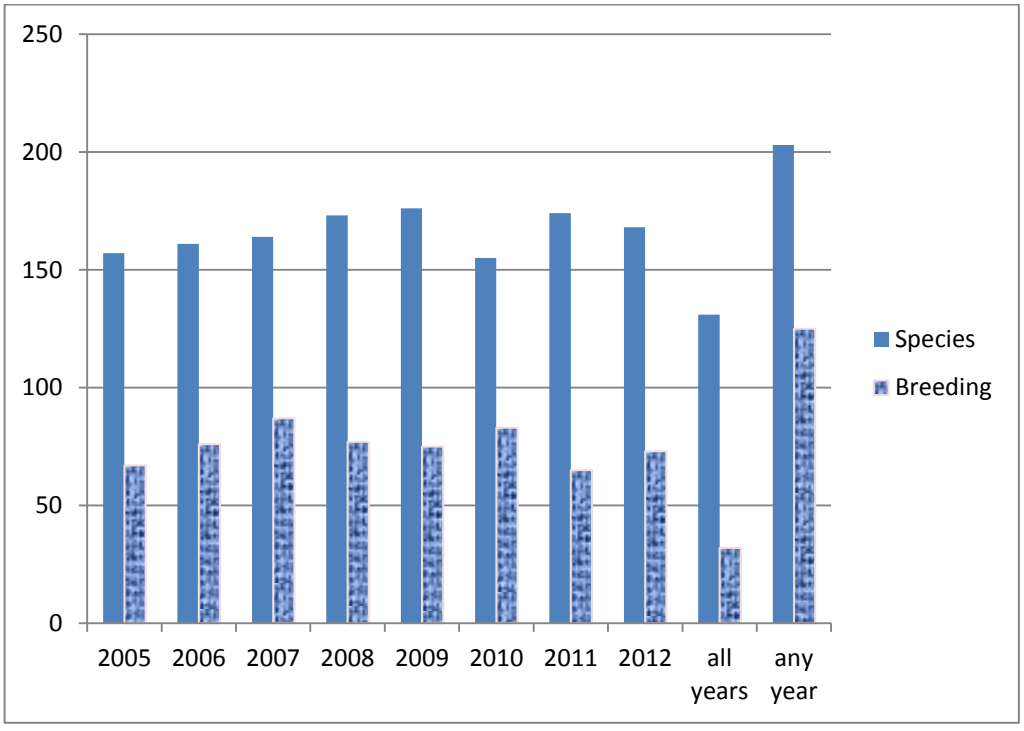


Figure 3. Number of species recorded, and recorded breeding

3.6 Highlights of the 2012 blitz

Australian Painted Snipe (*Geoffrey Dabb*)

We were once again thrilled to record an Australian Painted Snipe during the blitz, a single individual of the group then frequenting West Belconnen Pond. This is the only nationally vulnerable species we recorded. Another pleasant surprise was the first blitz recording of a Wonga Pigeon since 2008. Four species were recorded for the first time in the blitz: Spotless Crake, Lewin's Rail, Freckled Duck and Spotted Harrier.

3.6 Species most commonly recorded

For the first time in the blitz, the Australian Magpie (with 167 records) was supplanted as 'most common' species by the Grey Fantail (176). They were followed by Superb Fairy-wren (158), Crimson Rosella (153), Pied Currawong (139), Red Wattlebird (135) and Sulphur-crested Cockatoo(134).

Photos and collage: *Geoffrey Dabb*

3.8 Species not recorded in 2012

Inevitably, species known to be present in the ACT over the blitz weekend sometimes fail to be recorded. This is almost certainly the case with the population of Indian Peafowl which resides in Narrabundah. Quail are not always easy to detect even in locations in which they are suspected to reside and in 2012, no Stubble Quail was recorded in the blitz. Similarly 'resident' crakes and rails can be missed, as was the case in 2012 with the Buff-banded Rail, the Baillon's and Australian Spotted Crake. Other species with quite restricted distribution in the ACT, such as the Peaceful Dove, were not recorded in 2012 as no-one checked their known spot. Several of our occasional visitors did not visit over the blitz weekend, including the Great Crested Grebe and the Channel-billed Cuckoo. There were a few misses amongst our high-country species, including Rufous Fantail, Crescent Honeyeater, Red-browed Treecreeper and Powerful Owl. And for the first time, no Rose Robin was recorded.

3.9 Breeding

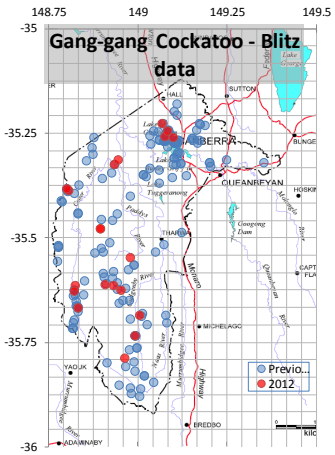
As Table 2 and Figure 3 show, in the 2012 blitz 73 species of bird were recorded as 'breeding' – that is a generous interpretation, including the widest parameters recorded such as 'display' and 'inspecting hollow'. The highest breeding we have recorded in the blitz was 87 species in 2007 and the lowest, 65 species in 2011. It may be that the higher number of twenty minute surveys reduced the likelihood of breeding being observed and recorded. Or it may simply be that the breeding season for some species began a little later in 2012. Australian Magpie, Common Starling, Australian Wood Duck, Crimson Rosella, Sulphur-crested Cockatoo, Red Wattlebird, Pied Currawong, Dusky Woodswallow and White-winged Chough were the species most frequently recorded breeding in the 2012 blitz.

3.10 ACT-listed vulnerable and endangered species

Photos and collage: *Geoffrey Dabb*

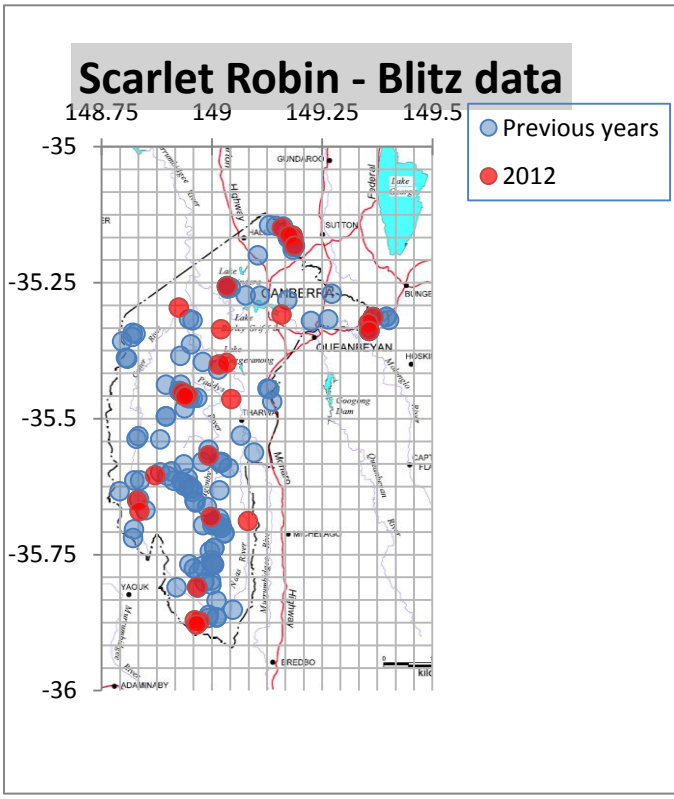
Of the bird species listed as vulnerable in the ACT, only the Glossy Black-Cockatoo was not recorded during the 2012 blitz and in fact has only been recorded in three previous blitzes, most recently in 2008. As usual, the most widely recorded of the 'vulnerables' was the White-winged Triller, particularly from urban or semi-urban nature reserves, and mostly in low numbers. There were 26 triller records, from 22 distinct grid cells, a sharp rise on the previous two years. It was even recorded as 'displaying' at Goorooyarroo NR. The triller reporting rate of 9.56, while down from a high of 13.04 in 2007, was well above its blitz average of 7.26. The Superb Parrot too appears to be holding its own adequately. There were 8 records of 1-7 birds from 6 grid cells, all in north Canberra. Its reporting rate of 2.94 was below the 2009 high of 3.68 but still above the blitz average of 2.41. The Brown Treecreeper and the Varied Sittella were also relatively well recorded in blitz 2012, with 8 records of 1-5 birds from 8 grid cells (Tharwa region, Hall, Kama NR and Glendale Crossing) for the former, at a reporting rate of 2.94; and 7 records of 1-6 birds from 7 grid cells at a reporting rate of 2.94 for the latter. Encouragingly the sittella was also recorded as nest building in Goorooyarroo NR. The picture for the Little Eagle is less promising, however, with only two records of a single bird, at Newline and Curtin. Its reporting rate of 0.74 was the lowest for any blitz, down from a high of 2.72 in 2010. And the Hooded Robin was only recorded once, a single male at Castle Hill.

3.1.1. A case study: the Gang-gang Cockatoo



There were 20 records of the ACT faunal emblem, the Gang-gang Cockatoo, in the 2012 blitz, distributed as shown above in red, while the blue spots indicate where the species was recorded in previous blitzes. Abundance ranged from one to four birds. Quite a few single males were recorded, hopefully suggesting that their mates were deep in hollows, breeding. The reporting rate for 2012 was 2.94, and has ranged over blitz years from a low of 0.79 in 2005 to 3.68 in 2009.

3.1.2. A case study: the Scarlet Robin



The Scarlet Robin was recorded 27 times in the 2012 blitz, in numbers ranging from one to three. As the map opposite shows, by the time of the blitz it is recorded more regularly at higher altitudes. Its reporting rate in 2012 was 9.93, the highest of all blitzes thus far, the blitz average being 7.26. Sadly, no breeding was recorded in the 2012 blitz despite the best efforts of observers who had recorded breeding just before and just after the final week of October. Robins can be very elusive when breeding!

4. Conclusions and lessons for the future

Blitz 2012, like its predecessors, has increased significantly the amount of data about Canberra's birds. Several of the grid cells surveyed would in all probability not have been covered but for the targeted effort of the blitz. The blitz data is made available to the managers of Canberra's national park and nature reserves. A lesson to be drawn from the blitz is that, when prompted, more of our members will get out, survey and submit datasheets and perhaps revisit favoured spots.

There is, inevitably, an element of 'luck of the day' in terms of the results but the long-term trends are already being highlighted. The blitz breeding observations are particularly useful in fleshing out a more detailed overall picture of bird breeding in Canberra. And given the tendency of our vulnerable species to be patchily distributed, the additional blitz information about where they are and in what numbers is highly valuable.

Acknowledgements

First and foremost, thanks must go to all COG members who participated in the 2012 blitz, and particularly to those who put in two full days of birding in remote sites. The assistance of staff at Namadgi National Park in providing advice, and access to areas behind locked gates, is greatly appreciated. Thanks also go to Paul Fennell and Steve Wallace for extracting and manipulating blitz data from the COG databases and to Geoffrey Dabb for his wonderful photographs. And sincere thanks go too to all those COG members who donated prizes.

Table 1. Known blitz participants 2012

Barbara Allan
Mark Allen
Richard Allen
Ian Anderson
Sue Beatty
Darryl Beaumont
Jamie Begg
Rosemary Blemings
Jenny Bounds
John Brannan
Tina Bromhead
Muriel Brookfield
Erin Brown
Martin Butterfield
Jean Casburn
Brian Chauncy
Kay Clayton
Mark Clayton
Roger Curnow
Chris Davey
Paul Fennell
Matthew Frawley
Malcolm Fyfe
John Goldie
Bill Graham
Jeannie Gray
Jane Green
Horst Hahne
Kay Hahne
Lindsay Hansch
Stuart Harris
Sandra Henderson
Jonathan Henshaw
Jack Holland
Judith Hopwood
Julienne Kamprad
Joanne Kinsella
Adam Kral
Shirley Kral
David Landon
Matt Larkin
Sue Lashko
Bruce Lindenmayer
Noel Luff
Rod Mackay
Alison Mackerras
Paul Mackerras
Sue Mathews
Duncan McCaskill
David McDonald
Noela McDonald
Julie McGinniss
Judy Middlebrook
Martyn Moffatt
Matt Mullaney
Terry Munro
Gail Neumann
Nick Nicholls
Harvey Perkins
Lucy Randall
Michael Robbins
Susan Robertson
Julian Robinson
David Rosalky
Keith Simpson
Alastair Smith
Tim Smith
Sunny Sutherland-Harris
Nicki Taws
Julian Teh
Alan Thomas
Philip Veerman
Ben Walcott
Ros Walcott
Steve Wallace
Kathy Walter
Louise Wangerek
Tony Willis
Kevin Windle

Table 2. Species recorded during the 2005 - 2012 blitzes
[X=present;*=breeding]

Common name	Scientific name	2005	2006	2007	2008	2009	2010	2011	2012
Emu	*Dromaius novaehollandiae*	X		X	X			X	X
Stubble Quail	*Coturnix pectoralis*		X			X		X	
Brown Quail	*Coturnix ypsilophora*		X	X	X	X		X	X
Indian Peafowl	*Pavo cristatus*	X			X		X		
Magpie Goose	*Anseranas semipalmata*				X	X			
Musk Duck	*Biziura lobata*	X	X*		X*	X*		X	X
Freckled Duck	*Stictonetta naevosa*								X
Black Swan	*Cygnus atratus*	X*	X*	X*	X*	X*	X*	X*	X*
Australian Wood Duck	*Chenonetta jubata*	X*	X*	X*	X*	X*	X*	X*	X*
Pink-eared Duck	*Malacorhynchus membranaceus*		X	X		X			X
Australasian Shoveler	*Anas rhynchotis*	X	X*	X	X*	X	X*	X*	X
Grey Teal	*Anas gracilis*	X*	X	X*	X*	X	X*	X	X*
Chestnut Teal	*Anas castanea*	X	X	X*	X	X	X	X	X
Pacific Black Duck	*Anas superciliosa*	X*	X*	X*	X*	X*	X*	X*	X*
Hardhead	*Aythya australis*	X	X	X*	X	X	X	X	X
Blue-billed Duck	*Oxyura australis*	X	X		X	X		X	
Australasian Grebe	*Tachybaptus novaehollandiae*	X*	X	X*	X*	X	X*	X*	X*
Hoary-headed Grebe	*Poliocephalus poliocephalus*	X	X	X	X	X	X	X	X
Great Crested Grebe	*Podiceps cristatus*	X							
Rock Dove	*Columba livia*	X	X	X	X	X	X	X	X
Spotted Dove	*Streptopelia chinensis*				X	X	X	X	X*
Common Bronzewing	*Phaps chalcoptera*	X	X	X	X*	X	X*	X	X
Brush Bronzewing	*Phaps elegans*					X			
Crested Pigeon	*Ocyphaps lophotes*	X*	X*	X*	X*	X*	X*	X*	X*
Peaceful Dove	*Geopelia striata*	X	X		X	X		X	
Wonga Pigeon	*Leucosarcia picata*	X			X				X
Tawny Frogmouth	*Podargus strigoides*	X*	X*	X*	X*	X*	X*	X*	X*
Australian Owlet-nightjar	*Aegotheles cristatus*				X			X	X
Australasian Darter	*Anhinga novaehollandiae*	X	X*	X*	X*	X*	X*	X*	X
Little Pied Cormorant	*Microcarbo melanoleucos*	X	X	X*	X*	X*	X*	X*	X
Great Cormorant	*Phalacrocorax carbo*	X	X	X	X	X	X	X	X
Little Black Cormorant	*Phalacrocorax sulcirostris*	X	X	X	X	X	X*	X	X
Pied Cormorant	*Phalacrocorax varius*			X	X	X		X	
Australian Pelican	*Pelecanus conspicillatus*	X	X		X	X	X	X	X
White-necked Heron	*Ardea pacifica*		X	X		X		X	X
Eastern Great Egret	*Ardea modesta*		X	X	X	X	X	X	X
Intermediate Egret	*Ardea intermedia*				X		X	X	X
Cattle Egret	*Ardea ibis*		X					X	X

Table 2 continued

Common name	*Scientific name*	2005	2006	2007	2008	2009	2010	2011	2012
White-faced Heron	*Egretta novaehollandiae*	X*	X*	X*	X	X	X*	X*	X
Little Egret	*Egretta garzetta*				X			X	
Nankeen Night Heron	*Nycticorax caledonicus*	X	X	X	X	X	X	X	X
Glossy Ibis	*Plegadis falcinellus*		X	X				X	
Australian White Ibis	*Threskiornis molucca*	X	X	X*	X*	X*	X*	X	X
Straw-necked Ibis	*Threskiornis spinicollis*		X	X	X	X		X	
Royal Spoonbill	*Platalea regia*		X	X	X	X	X		
Black-shouldered Kite	*Elanus axillaris*	X	X	X	X	X		X	X
White-bellied Sea-Eagle	*Haliaeetus leucogaster*			X	X			X	
Whistling Kite	*Haliastur sphenurus*	X	X	X*	X	X		X*	X
Brown Goshawk	*Accipiter fasciatus*	X*	X*	X*	X*	X*	X*	X	X
Collared Sparrowhawk	*Accipiter cirrhocephalus*	X	X	X*	X	X	X	X	X
Spotted Harrier	*Circus assimilis*								X
Swamp Harrier	*Circus approximans*	X	X	X	X		X	X	X
Wedge-tailed Eagle	*Aquila audax*	X	X	X	X	X*	X*	X	X*
Little Eagle	*Hieraaetus morphnoides*	X	X	X	X*	X*	X*	X	X
Nankeen Kestrel	*Falco cenchroides*	X*	X*	X*	X*	X	X	X*	X*
Brown Falcon	*Falco berigora*	X	X	X*	X	X	X	X	X*
Australian Hobby	*Falco longipennis*	X	X	X*	X*	X*	X*	X	X
Peregrine Falcon	*Falco peregrinus*	X	X	X	X	X	X*	X*	X
Purple Swamphen	*Porphyrio porphyrio*	X*	X*	X*	X*	X*	X*	X*	X*
Buff-banded Rail	*Gallirallus philippensis*		X		X	X			
Lewin's Rail	*Rallua pectoralis*								X
Baillon's Crake	*Porzana pusilla*				X	X		X	
Australian Spotted Crake	*Porzana fluminia*			X		X	X	X	
Spotless Crake	*Porzana tabuensis*								X
Black-tailed Native-hen	*Gallinula ventralis*					X		X	X
Dusky Moorhen	*Gallinula tenebrosa*	X*	X*	X*	X*	X*	X*	X*	X*
Eurasian Coot	*Fulica atra*	X*	X	X*	X*	X*	X*	X*	X
Black-winged Stilt	*Himantopus himantopus*			X		X			
Black-fronted Dotterel	*Elseyornis melanops*	X	X	X	X	X	X*	X	X*
Red-kneed Dotterel	*Erythrogonys cinctus*		X	X	X	X			
Banded Lapwing	*Vanellus tricolor*					X			
Masked Lapwing	*Vanellus miles*	X*	X*	X*	X*	X*	X*	X*	X*
Austrralian Painted Snipe	*Rostratula benghalensis*							X	X
Latham's Snipe	*Gallinago hardwickii*	X	X	X	X	X	X	X	X
Bar-tailed Godwit	*Limosa lapponica*			X					
Sharp-tailed Sandpiper	*Calidris acuminata*	X		X		X		X	
Painted Button-quail	*Turnix varius*	X			X	X	X	X	X

Table 2 continued

Common name	*Scientific name*	2005	2006	2007	2008	2009	2010	2011	2012
Whiskered Tern	*Chlidonias hybrida*				X	X			
Silver Gull	*Chroicocephalus novaehollandiae*	X*	X*	X*	X	X	X	X	X
Glossy Black-Cockatoo	*Calyptorhynchus lathami*	X	X		X				
Yellow-tailed Black-Cockatoo	*Calyptorhynchus funereus*	X	X	X	X*	X	X	X	X
Gang-gang Cockatoo	*Callocephalon fimbriatum*	X	X	X	X	X*	X	X*	X
Major Mitchell's Cockatoo	*Cacatua leadbeateri*			X					
Galah	*Eolophus roseicapillus*	X*	X*	X*	X*	X*	X*	X	X*
Long-billed Corella	*Cacatua tenuirostris*				X		X	X	
Little Corella	*Cacatua sanguinea*	X*	X*	X*	X*	X	X	X	X*
Sulphur-crested Cockatoo	*Cacatua galerita*	X*	X*	X*	X*	X*	X*	X*	X*
Cockatiel	*Nymphicus hollandicus*					X			
Rainbow Lorikeet	*Trichoglossus haematodus*	X	X	X	X*	X	X	X	X
Australian King-Parrot	*Alisterus scapularis*	X	X	X	X*	X	X*	X*	X*
Superb Parrot	*Polytelis swainsonii*	X	X*	X*	X	X*	X*	X	X
Crimson Rosella	*Platycercus elegans*	X*	X*	X*	X*	X*	X*	X*	X*
Eastern Rosella	*Platycercus eximius*	X*	X*	X*	X*	X*	X*	X*	X*
Red-rumped Parrot	*Psephotus haematonotus*	X*	X*	X*	X*	X*	X*	X*	X*
Turquoise Parrot	*Neophema pulchella*					X			
Eastern Koel	*Eudynamys orientalis*			X	X		X*		X
Channel-billed Cuckoo	*Scythrops novaehollandiae*						X		
Horsfield's Bronze-Cuckoo	*Chalcites basalis*	X	X*	X	X	X*	X	X	X
Shining Bronze-Cuckoo	*Chalcites lucidus*	X*	X*	X	X	X	X	X	X
Pallid Cuckoo	*Cacomantis pallidus*	X	X	X	X	X	X	X	X*
Fan-tailed Cuckoo	*Cacomantis flabelliformis*	X	X	X*	X	X	X	X	X
Brush Cuckoo	*Cacomantis variolosus*	X	X	X	X	X	X	X	X
Powerful Owl	*Ninox strenua*					X			
Southern Boobook	*Ninox novaeseelandiae*	X			X		X		X
Eastern Barn Owl	*Tyto javanica*							X	
Laughing Kookaburra	*Dacelo novaeguineae*	X*	X*	X	X	X*	X	X	X
Red-backed Kingfisher	*Todiramphus pyrrhopygius*			X	X				
Sacred Kingfisher	*Todiramphus sanctus*	X*	X*	X*	X	X*	X*	X	X*
Rainbow Bee-eater	*Merops ornatus*	X	X	X*	X*	X	X*	X*	X
Dollarbird	*Eurystomus orientalis*	X	X	X*	X	X*	X*	X	X*
Superb Lyrebird	*Menura novaehollandiae*	X	X	X	X	X	X	X	X
White-throated Treecreeper	*Cormobates leucophaea*	X	X*	X*	X*	X*	X*	X*	X*

Table 2 continued

Common name	*Scientific name*	2005	2006	2007	2008	2009	2010	2011	2012
Red-browed Treecreeper	*Climacteris erythrops*	X	X	X		X	X		
Brown Treecreeper	*Climacteris picumnus*	X	X	X*	X*	X*	X	X	X*
Satin Bowerbird	*Ptilonorhynchus violaceus*	X	X	X	X*	X*	X	X	X
Superb Fairy-wren	*Malurus cyaneus*	X*	X*	X*	X*	X*	X*	X*	X*
Pilotbird	*Pycnoptilus floccosus*	X				X	X	X	
White-browed Scrubwren	*Sericornis frontalis*	X*	X*	X*	X*	X*	X	X*	X
Chestnut-rumped Heathwren	*Hylacola pyrrhopygia*						X		X
Speckled Warbler	*Chthonicola sagittata*	X*	X	X*	X*	X*	X*	X*	X
Weebill	*Smicrornis brevirostris*	X*	X	X*	X*	X	X*	X*	X
Western Gerygone	*Gerygone fusca*	X	X	X	X	X	X	X	X
White-throated Gerygone	*Gerygone albogularis*	X*	X	X*	X	X	X*	X	X*
Striated Thornbill	*Acanthiza lineata*	X*	X*	X*	X	X*	X*	X*	X*
Yellow Thornbill	*Acanthiza nana*	X	X	X	X	X*	X*	X	X
Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*	X*	X*	X*	X*	X*	X*	X*	X*
Buff-rumped Thornbill	*Acanthiza reguloides*	X*	X*	X*	X*	X*	X*	X*	X*
Brown Thornbill	*Acanthiza pusilla*	X	X*	X*	X	X*	X*	X*	X*
Southern Whiteface	*Aphelocephala leucopsis*	X	X*	X	X	X	X	X	X
Spotted Pardalote	*Pardalotus punctatus*	X*	X*	X*	X*	X*	X*	X*	X*
Striated Pardalote	*Pardalotus striatus*	X*	X*	X*	X*	X*	X*	X*	X*
Eastern Spinebill	*Acanthorhynchus tenuirostris*	X*	X*	X	X	X	X	X	X
Yellow-faced Honeyeater	*Lichenostomus chrysops*	X	X*	X	X*	X*	X	X	X
White-eared Honeyeater	*Lichenostomus leucotis*	X*	X	X*	X*	X*	X	X	X
Fuscous Honeyeater	*Lichenostomus fuscus*	X*	X	X*	X*	X	X*	X	X*
White-plumed Honeyeater	*Lichenostomus penicillatus*	X*	X*	X*	X*	X*	X*	X	X*
Noisy Miner	*Manorina melanocephala*	X*	X*	X*	X*	X*	X*	X*	X*
Red Wattlebird	*Anthochaera carunculata*	X*	X*	X*	X*	X*	X*	X*	X*
White-fronted Chat	*Epthianura albifrons*					X	X	X	X
Crescent Honeyeater	*Phylidonyris pyrrhopterus*				X	X	X	X	
New Holland Honeyeater	*Phylidonyris novaehollandiae*	X	X*	X*	X	X	X	X	X
Brown-headed Honeyeater	*Melithreptus brevirostris*	X	X	X	X*	X	X	X*	X*
White-naped Honeyeater	*Melithreptus lunatus*	X	X	X	X*	X*	X	X	X*
Noisy Friarbird	*Philemon corniculatus*	X*	X*	X*	X*	X*	X*	X*	X*
Spotted Quail-thrush	*Cinclosoma punctatum*	X	X	X	X	X	X	X	X
Eastern Whipbird	*Psophodes olivaceus*		X	X	X	X	X	X	X

Table 2 continued

Common name	*Scientific name*	2005	2006	2007	2008	2009	2010	2011	2012
Varied Sittella	*Daphoenositta chrysoptera*	X*	X*	X*	X	X*	X*	X	X*
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*	X	X*	X*	X*	X*	X*	X*	X*
Cicadabird	*Coracina tenuirostris*				X	X	X		X
White-winged Triller	*Lalage sueurii*	X*	X*	X*	X	X	X	X	X*
Crested Shrike-tit	*Falcunculus frontatus*	X	X*	X	X	X	X	X	X
Olive Whistler	*Pachycephala olivacea*							X	
Golden Whistler	*Pachycephala pectoralis*	X	X	X	X	X	X	X	X
Rufous Whistler	*Pachycephala rufiventris*	X*	X*	X*	X*	X	X*	X	X
Grey Shrike-thrush	*Colluricincla harmonica*	X	X*	X*	X*	X	X*	X	X
Olive-backed Oriole	*Oriolus sagittatus*	X	X	X*	X*	X	X*	X	X
Masked Woodswallow	*Artamus personatus*		X	X	X	X		X	X
White-browed Woodswallow	*Artamus superciliosus*		X*	X*	X	X		X	X
Dusky Woodswallow	*Artamus cyanopterus*	X*	X*	X*	X*	X*	X*	X*	X*
Grey Butcherbird	*Cracticus torquatus*	X*	X*	X	X	X*	X*	X*	X*
Australian Magpie	*Cracticus tibicen*	X*	X*	X*	X*	X*	X*	X*	X*
Pied Currawong	*Strepera graculina*	X*	X*	X*	X*	X*	X*	X*	X*
Grey Currawong	*Strepera versicolor*	X	X	X*	X*	X*	X*	X	X*
Rufous Fantail	*Rhipidura rufifrons*	X		X	X	X	X	X	
Grey Fantail	*Rhipidura albiscapa*	X*	X*	X	X*	X*	X*	X*	X*
Willie Wagtail	*Rhipidura leucophrys*	X*	X*	X*	X*	X*	X*	X*	X*
Australian Raven	*Corvus coronoides*	X*	X*	X*	X*	X*	X*	X*	X*
Little Raven	*Corvus mellori*	X*	X	X*	X*	X*	X*	X*	X*
Leaden Flycatcher	*Myiagra rubecula*	X*	X*	X*	X*	X	X*	X*	X*
Satin Flycatcher	*Myiagra cyanoleuca*	X	X	X	X	X	X	X	X
Restless Flycatcher	*Myiagra inquieta*	X	X	X		X		X	X
Magpie-lark	*Grallina cyanoleuca*	X*	X*	X*	X*	X*	X*	X*	X*
White-winged Chough	*Corcorax melanorhamphos*	X*	X*	X*	X*	X*	X*	X*	X*
Jacky Winter	*Microeca fascinans*	X	X*	X	X	X	X	X	X
Scarlet Robin	*Petroica boodang*	X*	X*	X	X*	X*	X	X*	X
Red-capped Robin	*Petroica goodenovii*	X	X*	X*	X	X	X*	X	X
Flame Robin	*Petroica phoenicea*	X	X*	X*	X*	X*	X*	X*	X*
Rose Robin	*Petroica rosea*	X	X	X	X	X	X	X	
Hooded Robin	*Melanodryas cucullata*	X*	X*	X*	X	X*	X	X*	X
Eastern Yellow Robin	*Eopsaltria australis*	X*	X*		X	X	X	X	X*
Eurasian Skylark	*Alauda arvensis*	X	X	X	X*	X	X	X	X*
Golden-headed Cisticola	*Cisticola exilis*	X	X	X	X	X	X*	X	X*
Australian Reed-Warbler	*Acrocephalus australis*	X*	X	X	X	X*	X*	X*	X*
Little Grassbird	*Megalurus gramineus*	X	X	X	X	X*	X	X	X

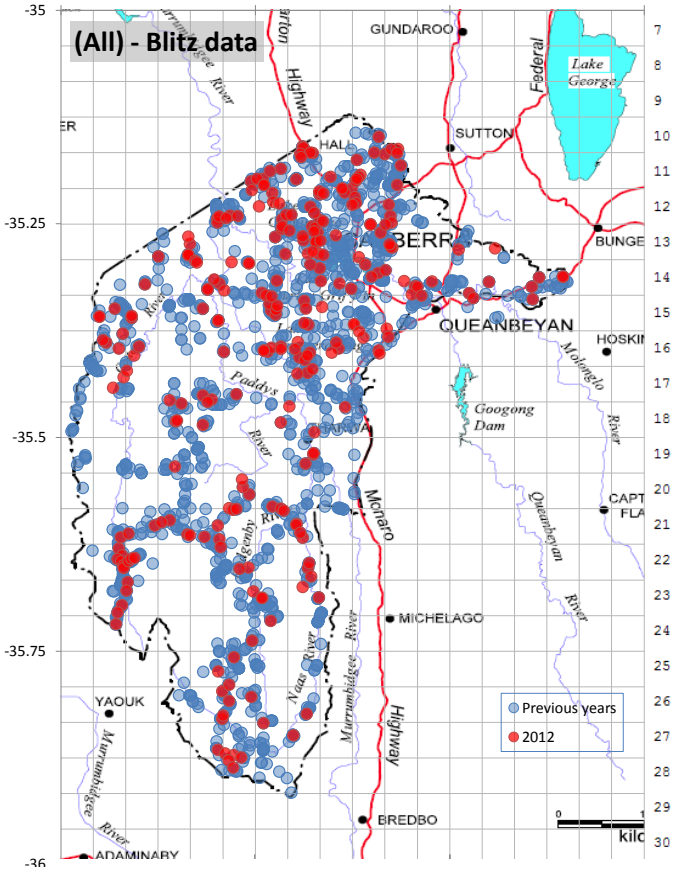
Table 2 continued

Common name	*Scientific name*	2005	2006	2007	2008	2009	2010	2011	2012
Rufous Songlark	*Cincloramphus mathewsi*	X	X	X	X	X	X	X*	X*
Brown Songlark	*Cincloramphus cruralis*	X*	X	X*	X	X		X	X
Silvereye	*Zosterops lateralis*	X	X	X*	X	X	X*	X	X*
Welcome Swallow	*Hirundo neoxena*	X*	X*	X*	X*	X*	X*	X*	X*
Fairy Martin	*Petrochelidon ariel*	X	X	X*	X*	X*	X*	X*	X*
Tree Martin	*Petrochelidon nigricans*	X*	X*	X*	X*	X*	X*	X	X*
Bassian Thrush	*Zoothera lunulata*	X	X		X	X			X
Common Blackbird	*Turdus merula*	X*	X	X*	X	X	X	X*	X*
Common Starling	*Sturnus vulgaris*	X*	X*	X*	X*	X*	X*	X*	X*
Common Myna	*Sternus tristis*	X*	X*	X*	X*	X*	X*	X*	X*
Mistletoebird	*Dicaeum hirundinaceum*	X*	X	X	X	X*	X*	X	X*
Double-barred Finch	*Taeniopygia bichenovii*	X	X*	X*	X*	X	X	X*	X
Red-browed Finch	*Neochmia temporalis*	X*	X*	X*	X*	X*	X*	X*	X*
Diamond Firetail	*Stagonopleura guttata*	X	X	X	X	X	X	X	X
House Sparrow	*Passer domesticus*	X*	X*	X*	X*	X*	X*	X*	X*
Australasian Pipit	*Anthus novaeseelandiae*	X	X	X*	X*	X*	X*	X*	X
European Goldfinch	*Carduelis carduelis*	X	X*	X	X	X	X	X	X
Common Greenfinch	*Chloris chloris*	X				X	X	X	X
Mallards, Black Duck-Mallard hybrids and variants		X	X	X	X	X	X	X	X

Notes

Domestic ducks and geese, which frequent the lakes, have been excluded, as have domestic chickens even when recorded far from civilisation. The peafowl have been included as they appear to be a naturally reproducing “wild” population, in suburbia. The “mallard” group has been lumped as their exact identity cannot be assured – it probably includes crosses with domestic birds. The Emu and Magpie Geese are – or were - probably part of the semi-captive population at Tidbinbilla Nature Reserve.

Map 1. Blitz coverage 2005-2011 (blue) and 2012 (red) [lighter grey and darker grey respectively in b/w print]



NOTES

DO BARN OWLS NEST IN THE ACT?

JERRY OLSEN AND SUSAN TROST

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Barn Owls (*Tyto javanica*) frequently show up in the ACT, sometimes the RSPCA has 10 or more individuals in care, apparently starving or injured from magpie and currawong attacks. In Australia their breeding is poorly known (Higgins 1999). Researchers claim they can breed at any time of the year if prey is abundant, in some cases twice in a year. Most are said to use a tree hollow, or sometimes caves or empty mine shafts. Often they nest on a pile of old castings, feathers or faecal material. Though we see quite a few Barn Owls in the ACT, we have never found a nest, and we urge COG members to look for nests as a verified breeding record would be a first for the ACT. Barn Owls prey mainly on small terrestrial mammals, primarily small rodents, 61–99 per cent by number in a summary by Higgins (1999), so there should be plenty of available food here especially House Mice (*Mus musculus*) and Black Rats (*Rattus rattus*). ACT Black-shouldered Kites (*Elanus notates*) and Southern Boobook (*Ninox novaeseelandiae*) do fine on these prey species.

We have occasionally searched for breeding Barn Owls in ACT outbuildings, warehouses and sheds, but the problem with this approach is that Australian Barn Owls differ from Barn Owls in Eurasia and North America, even from Barn Owls in close-by Timor or Sumba and Roti in Indonesia. Barn Owls there like nesting in churches, especially church towers, sheds, and abandoned buildings, but Australian Barn Owls don't. I have never seen a photo of an Australian Barn Owl nest (as opposed to roost) in a barn, church or shed. Pizzey and Knight (2007) and Simpson and Day (1999) make no mention of Barn Owls nesting in buildings. Debus (2009) said they nest in buildings; Hollands (1991, 2008) said the vast majority of nests were in trees but some were in buildings. Though he describes a Barn Owl nesting in a vacated observation hide; a hide could be seen by owls as an artificial nest tree. Fleay (1968) argued that farmers should save the large trees on their farms to attract Barn Owls, which would control rodents, and he does not record wild pairs nesting in buildings. König and Weick (2008) describing *Tyto delicatula* in Australasia said they nest in 'natural cavities, chiefly in hollow trees', which ignores the evidence for Barn Owls nesting in churches and other buildings on Sumba in nearby Indonesia (Olsen et al. 2009). Olsen (2011) said "... it is not clear why Barn Owls routinely nest inside buildings around the world, even on small islands like Sumba, but not in Australia."

In Australia, Barn Owls commonly roost in buildings, as do most other species of Australian owls, for example Southern Boobooks, and there seem to be published stories of people finding Australian Barn Owls nesting in barns and churches as they do in Indonesia and Europe. However, in the ACT it might be more fruitful to search large trees, especially *Eucalyptus melliodora*. If you happen to be outside the ACT, especially in the arid interior where Barn Owls are more common, look for nests in buildings. It is easy to find them roosting in buildings (Olsen 2011) but can anyone provide clear photographic evidence showing a brood of Barn Owl nestlings or a clutch of eggs in a barn or church in Australia? Why is barn and church nesting so common in islands to Australia's north, but so rare in Australia?

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Barn Owl (*Jerry Olsen*)

RECORD NUMBERS OF FRECKLED DUCKS IN COG'S AREA OF INTEREST (AOI) IN 2012/13

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Rarely have Freckled Ducks been recorded in the ACT so regularly and over such an extended period, starting with 3 being seen at West Belconnen Ponds in October 2012 and continuing until now, June 2013. However, the influx into our region started much earlier and on a larger scale at Lake George and Lake Bathurst. This note provides a brief summary of the observations.

ACT records

On 6 Oct 2012 P. Christian reported 3 Freckled Ducks (*Stictonetta naevosa*) from the West Belconnen Ponds (Birdline Australian Capital Territory, record 6/10 # 146159). This was the beginning of a series of observations of this species in varying numbers from this pond, the Jerrabombera Wetlands (JW), including the Fyshwick Treatment Plant (FTP), the large dam at Mulligan's Flat and a couple of other bodies of water in the ACT. The highest number of 46 Freckled Ducks was seen by A. Smith (pers. commun.) on 15 Nov 2012 at the JW & FTP. Small numbers of this species were still reported well into June 2013 from sites within the ACT or very close to it (e.g. L. Hansch, Jerrabomberra estate (NSW) 17 May 2013, COG chatline 17 May 2013; S. Wallace, West Belconnen Ponds, COG chatline 2 Jun 2013).

Wider COG AOI

On the eastern side of Lake George 64 birds were sighted on 29 Jul 2012. At the next survey of this area on 16 Sep 2012 890 birds had gathered along the shore, and by 9. Dec 2012 1330 Freckled Ducks were present, the highest number ever recorded in the AOI. The last time significant numbers of Freckled Ducks were seen at Lake George was on 17 March 2013 with 562 birds (all observations J. Kamprad and M. Lenz). The Freckled Ducks favoured low rocks at or close to the shore as resting places (see also Davey and Fullagar, this issue of CBN, p. 175 and photos p. 173).

In April and May 2013 no more than 29 birds were found on Lake George. A small number of Freckled Ducks persisted also at a pond along Lake Road on the SW side of Lake George well into June, e.g. 14 on 13 Jun 2013 (S. Haygarth, pers. commun.).

At Lake Bathurst the first Freckled Ducks appeared also in July with 18 birds on 23 Jul 2012. Numbers peaked as they did at Lake George in December: 227 birds on 19 Dec 2012. By 20 Jan 2013 only 76 birds were left. Numbers were of similar order in February and March, and ranged from 2 to 20 birds in April and May 2013 (all observations by M. Lenz, J. Leonard or P. Milburn).

Part of a large flock of Freckled Ducks at Lake George, 9 Dec. 2012 (*Michael Lenz*)

Regional Consideration

The combined number of Freckled Ducks seen in December 2012 between Lake George and Lake Bathurst of a little over 1500 birds is, considering the present conservation status of the Freckled Duck in Australia, a nationally significant concentration. A quick search of Birdline Australia sites revealed that although Freckled Ducks were reported from many wetlands in SE Australia over the period covered here, nowhere did numbers come close to those seen in COG's AOI.

According to the Birdlife Australia website (http://birdlife.org.au/bird-profile/freckled-duck), the Freckled Duck is threatened in Victoria and vulnerable in New South Wales and South Australia. Both lakes clearly represent important temporary resting sites in times when favoured wetlands in inland Australia dry up and Freckled Ducks are forced to move further East.

Acknowledgement

We would like to thank landholders from the Taylor's Creek/Lake George area and around Lake Bathurst for giving permission to access their land. We also thank especially Ruth and Sue Corrigan (Taylor's Creek) for their assistance with the Lake George surveys and their hospitality.

Reference

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SEX RATIO IN A LARGE FLOCK OF FRECKLED DUCK AT LAKE GEORGE IN JANUARY 2013

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On 6 Jan 2013 CD accompanied Michael Lenz and Julienne Kamprad on one of their surveys to count the birds at Lake George (see Lenz and Kamprad, this issue of CBN, p. 172).. On this visit 720 Freckled Duck were present, either loafing on the shore or close by on the water. On occasions all birds would move to deeper water but would soon return to their loafing spots. Good views of them could be obtained with the aid of a telescope.

All the Freckled Duck appeared to be in good condition; none showed any sign of red pigment to the bill indicative of a male in breeding condition. None of the birds appeared to be in wing moult because all the birds could fly. All appeared to be in fresh body and wing plumage suggesting the birds were in their basic plumage. No aggressive behaviour between individuals was noted – an unusual situation for Freckled Duck.

Male Freckled Duck in breeding condition (*Peter Fullagar*)

Both authors have extensive experience with Freckled Duck having bred them in captivity and spent many hours observing birds both in captivity and in the wild. Males are differentiated from females and young birds by the red of the bill while in breeding condition and, in both breeding and non-breeding condition, the shape of the head, the slightly more prominent crest and the darker plumage around the head. Heads become progressively darker the brighter the red becomes on the bill (see Marchant and Higgins 1990, Fullagar et al. 2005).

During the visit on 6 January it became obvious that most of the birds were males. Indeed many had relatively dark heads, differing from the grey of females. To confirm this observation CD and PF returned to the area on 17 January. The birds were in the same location although slightly fewer in number. Random counts gave a ratio of 81% males (n = 120) with the remainder females or possibly some young birds. A search of the shore-line revealed a few body feathers and no wing feathers, indicating that birds were not moulting in the area.

When first sighted on 29 July 2012 none of the birds were in breeding condition, with only a few showing a hint of red on the bill. Although it appears that numbers increased between 29 July and 9 December 2012, it is possible that many of the birds would have been present on Lake George for at least 4 months, time enough for them to have gone through a body and possibly a wing moult. Alternatively, the birds may have arrived at Lake George already in new plumage. Whichever is the case, the skewed sex ratio was of interest with the suggestion that during 2012 Lake George may have been a male-dominated moulting site. It is also possible that females and young birds had left Lake George or were elsewhere on the lake by the time of the visit by Lenz, Kamprad and CD on 6 January.

References

Fullagar, P., Davey, C., Shepherd, P. and Peters, C. 2005 Freckled Duck *Stictonetta naevosa*. In Kear J. (ed). Ducks, Geese and Swans Volume 1, University Oxford Press, Oxford.

Marchant, S. and Higgins P. J. (eds) 1990. Handbook of Australian, New Zealand and Antarctic Birds, Volume 1: Ratites to ducks. Oxford University Press, Melbourne.

Accepted 14 June 2012

HOUSE WINDOWS PROVIDE A FOOD SOURCE FOR NIGHT-BIRDS

MARTIN BUTTERFIELD

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A recent post to the COG Chatline linked to a BBC report (http://www.bbc.co.uk/news/magazine-22395664) on the number of birds killed by hitting windows. This topic has also been discussed in other Chatline posts including a link to a birding-aus post (http://bioacoustics.cse.unsw.edu.au/archives/html/canberrabirds/2011-01/msg00241.html) on how to prevent this from happening. At our home in Carwoola, and elsewhere in the area around the ACT, there have been a number of observations of night birds feeding on Swift Moths (*Oxycanus sp.*) attracted to windows of lit rooms.

At a property on the Lake George Escarpment in one evening the predators included a Southern Boobook (*Ninox novaeseelandiae*), an Australian Owlet-nightjar (*Aegotheles cristatus*) and a marsupial mouse (*Antechinus sp.*). Another occurrence of a Southern Boobook feeding on the moths was reported from Wamboin.

In Carwoola one of the resident Tawny Frogmouths (*Podargus strigoides*) flew to a window and perched on the deck, eating moths within 1m of the observer.

For all three species the studies of stomach contents reported in HANZAB (Higgins 1999) include the Moth family (Lepidoptera) with specific reference to *Oxycanthus sp* in the account for Tawny Frogmouth.

Reference

Higgins, P J (Ed.) 1999 Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbird

Accepted 15 May 2013

COLUMNIST'S CORNER

Why there are fewer and fewer birds – and why there's not much you can do about it

I'm talking about the birds around here – in the northern half of the ACT. Okay, there are more of some kinds of birds, but fewer of the interesting ones like the ten bird species declared threatened in the ACT. In New South Wales 125 are declared threatened, so there must be fewer of them.

As we all know, you only get a limited number of hardy urban-tolerant species in heavily built-up areas, and Canberra's now-green margins are heading in the heavily-built direction. Most bush birds retreat as they are deprived of their habitat.

So, what's going to happen next in the northern half of the ACT? More and more suburbs, that's what. Recent official estimates indicate a population of 400,000 by 2018 and 500,000 by 2043. In 2012 the ACT planning minister described the government's 'population policy' as follows: "We rely on demographic projections to plan for a city which, on every indication, will continue to grow. The government does not have a specific target or objective in relation to population …"

No objective? Really? Perhaps the planning minister should have spoken to the Minister for Economic Development whose stated aim - indeed job - is growing more suburbs. The attracting of businesses directly affects land use. The 'Economic Development Directorate' states proudly 'our commercial and industrial land release strategies are designed to support continued population and economic growth'.

The ACT's strategic planning document says: To support an estimated population of 453,000 by 2030, Canberra will need approximately 50,000 extra jobs. This requires significant marketing of Canberra and the region's liveability, and the advantages it offers business. Have I got that right? Is the reason we need more businesses so we can reach the population projection (or is that target)?

Let's be frank: the ACT government pursues a population-growth objective. Now what about a bit of public consultation on whether population growth should be pursued? After all, this is supposed to be a democracy. It's too late to object to a new major road (like Gungahlin Drive extension) AFTER the new suburb that needs the road has already been decided on, or even built (as Gungahlin was).

It's not that we don't get plenty of references to ecology, the environment and the bush capital in ACT government reports and releases. That planning minister's statement on population policy was made to a Legislative Assembly standing committee conducting a (promisingly named but disappointing) inquiry into 'Ecological Carrying Capacity of the ACT and Region'. The committee would have had a more realistic starting point if they had asked the Minister for Economic Development what the government's population policy was.

Anyway, as I was saying, more and more suburbs are on the way. Predictably they will be relatively high density with minimum buffers at the edges and wide connecting roads to

ease bottlenecks during Canberra's brief but ferocious rush hours. Token nature parks will be specified. Conveniently, these will make use of steep hillsides and soggy patches not much use for anything else. Soggy patches can be good; steep hillsides are probably the least birdy places in the area.

COG's efforts in pressing for reserves such as Mulligans Flat and Kama should be recognised as having some success. However such campaigners hold a weak hand when the deck is stacked in favour of more and more development. After all, it's hard to get past the fact that the ACT was intended as a national capital, not a wildlife reserve. So, in the ACT resign yourself to ticking off garden birds (if any), and expect conditions to become less rather than more favourable for those threatened species, action plans or no action plans.

Looking beyond the ACT, we see adjacent and nearby parts of NSW (eg greater Queanbeyan) rivalling the ACT as the fastest-growing communities in inland Australia. Local authorities there are just as keen as the ACT government to see ratepayers and not roos occupying the spaces under their jurisdiction. Indeed there seems to be competition between local authorities to entice new residents to their respective developments.

Looking even further afield, a more serious cause of declining bird numbers and species is said to be agriculture replacing grasslands and woodlands. In and around the ACT the damage was done years ago with the clearing of the grassy woodlands, so most arguments now are about felling the remnants not for grazing but for houses and related infrastructure.

A notable trend is the partial revegetating of the old sheep paddocks. That might occur either under programs conducted by Landcare or Greening Australia or simply as a result of rural acreage-holders planting out trees and shrubs around their houses.

The jury is out on just what effect on bird life that new greening will have over a broad scale and long period. We are told that monitoring to date shows more common woodland birds turning up here and there around the plantings where there were previously only magpies, ravens and pipits. It's probably not helpful to generalise: to see what birds might flourish in the new green islands you would need to investigate species by species as survey information becomes available.

But will such spotty revegetating really attract species on the threatened list, or reverse the retreat of other dwindling species? In time, we will know. So there is something you can do. Join in and plant a casuarina for a Glossy Black-Cockatoo. Perhaps, one day, it will attract a Glossy. Given enough years, your tree might even host some mistletoe, and attract a Painted Honeyeater, just as the Painteds used to come to the river casuarinas at Uriarra Crossing years ago. Perhaps.

Stentoreus

BOOK REVIEWS

CAYLEY & SON: The Life and Art of Neville HENRY Cayley & Neville WILLIAM Cayley. By **Penny Olsen**. National Library of Australia, March 2013,
ISBN 9780642277893, Hardback, Au $49.99 rrp. Distribution: New South Wales Books

Australian Bird Names: A Complete Guide. By **Ian Fraser and Jeannie Gray**.
CSIRO Publishing. Collingwood, May 2013, ISBN 9780643104693, Paperback,
rrp Au $49.95

Reviewed by GEOFFREY DABB, Narrabundah, ACT

So far this year, we have seen two books by Canberra-based authors fill significant gaps in the literature of Australian birds. It seems we have so many working authors in this town that Canberra's status as the nation's literary capital, at least for bird books, is unchallenged. .

Penny Olsen has a record of producing interesting books based on the holdings of the National Library of Australia (NLA). This one is about the **Cayley father and son**, both important painters of Australian birds.

As with most compilations of this kind, the text and the illustrations can be considered separately. On Cayley senior (Neville Henry) there are about 30 pages of text, some shared with pictures, and rather more pages on the son, the better-known Neville William.

Neville Henry (1854-1903) was a prolific professional artist. However, as Barry Pearce said in his own book on Australian artists and birds: "Not a lot is known about Neville Henry Cayley's life". This new book fills that gap comprehensively, with a well-researched account of a mobile painting career, a struggling career at times, entailing several changes of home base.

The narrative is garnished with evocative graphics. Some are Cayley's own work: a view across Yamba Bay (1886), a whimsical five-men-in-a-boat sketch of a camping party on the Clarence River (1882), 'View over Bowral' (1890), and an undated 'Cobb & Co. Coach on The Road in Forest Setting'.

A couple are of less direct relevance: a print of the Melbourne docks a year after Cayley had disembarked there, and a photo of Pitt Street, Sydney, in 1886 included because Cayley's agent, William Aldenhoven, owned a gallery in that street. Those inclusions add some historical flavour.

A representative selection of Cayley's bird illustrations is scattered through the narrative, including an 'aged or ailing' cockatoo (finely detailed), an albino kookaburra, and, apparently dashed off as payment for a debt, a European Robin in snow (the so-described 'sprig of mistletoe' is in fact holly). All this makes for an informative and readable story.

Much more has been known and recorded about the son, Neville William (1886-1950). This book gives some space to NWC's close involvement with surfing and the surf life-saving movement. He was made a life member of the Cronulla club and served on the national council. It seems that Cronulla in the earlier 1900s had less restrictive regulations

and dress code than the northern Sydney beaches, and Cayley and his associates enjoyed the relative freedom. The book illustrates this with a photo of an overdressed crowd on Manly Beach in 1900 and another photo of Cayley and friends at Cronulla beach with Duke Kahanamoku. (If you don't know who Duke Kahanamoku was, it doesn't matter. I think those photos give the biography a nice touch.)

Much of Neville William's story was about educating the Australian public in relation to birds, and his involvement with the Royal Australasian Ornithologists' Union and the Gould League of Bird Lovers, both founded in Victoria in 1909. It was the Gould League that supported production of the famous field guide, What Bird Is That?.

Most of the Penny Olsen book is devoted to examples of the art work of the two Cayleys, drawn mainly from the collections of the NLA Apart from the illustrations throughout the text section there is a separate 'portfolio' for each, 56 paintings by Neville Henry, 45 by Neville William. These enable a comparison of the two styles. The portfolios are necessarily selections, although thoughtfully made from a large field in each case. Neville William, like his father was remarkably productive, if with a slightly different purpose.

The book offers the judgment that the art of Cayley senior 'has greater artistic value as representative of the art of its time', a time of growing pride in an Australian identity when 'birds such as the lyrebird, kookaburra and rosella became icons'. (The kookaburra, for example, is estimated to appear over 1500 times in paintings by Neville Henry.)

On the other hand, Neville William's bird paintings are said to be more finely detailed and scientifically accurate but with the 'compositions … sometimes poor and his birds posed stiffly'. 'His greatest accomplishment was to popularise birds, to make them admired, appreciated and accessible to anyone …'.

The examples provided of Neville William's work will invite comparison with those large-format more recent editions of What Bird Is That? revised by Terence Lindsey, which (at 3kg) are about as far removed from a field guide as a single volume can be. Those editions present all 430 of the paintings Cayley made for his never-published 'big book' on Australian birds. The NWC paintings in Cayley & Son are fewer but evidently drawn from a wider field, using the resources of the NLA.

There is little in Penny Olsen's book about the technical aspects of the bird art of Neville William, perhaps because that aspect is covered so well in the Lindsey editions, in particular in the note by Allan McEvey.

Anyone interested in Australian birds in the 1950s or 60s will undoubtedly know the handier-size What Bird Is That? and associate the name of Cayley with that book. Many of those now-ageing birdwatchers will appreciate Cayley & Son simply because of their memories of that early field guide, so valuable at the time.

As Cayley & Son, pictures apart, has a biographical approach, it would be an unfair criticism that it does not place What Bird Is That? within the broader story of the field guide in Australia - or globally. Curiously, it dates the publication of Leach's An Australian Bird Book ('the first field guide for the nation') as 1923. The Leach book was in its sixth edition in that year, having been first published in 1911.

An Australian Bird Book belonged to an even earlier field guide generation, often marked by crude illustrations. (It has been criticised for presenting – as it stated itself – only 82.5% of species occurring in New South Wales, although 100% of the Victorian ones.)

For its time (1931), What Bird Is That? was a remarkable advance, even by then world standards of illustration for such a book. It contained all Australian species (although no pictures of the introduced ones), and it appeared three years before the first of the celebrated Peterson field guides in North America. A main aim was to get Australians interested in their birds, and in that it was clearly successful. One of the best things about it was that the plates were just nice to look at, stiffly-posed birds and all.

In Andrew Isles' foreword to Cayley & Son he commends the book 'to anyone with an interest in birds, the history of Australian ornithology, or natural history art'. Those are appropriate comments. I would add that anyone who made much use of their old Cayley field guide will really enjoy this book.

'Australian Bird Names: A Complete Guide'. by **Ian Fraser and Jeannie Gray** is a welcome arrival and fills a gap of a different kind, and must be commended 'to anyone with an interest in birds, the history of Australian ornithology, or words'. It is a chunky soft-cover, comprehensive and packed with information.

It begins with a concise summary of how common and scientific names are derived. The main section is a species-by-species explanation – so far as ascertainable – of the common and scientific names of each species on the Australian list, taking Christidis and Boles (2008) as the relevant list. 'Other' common names are also listed, with comments. The length of each entry depends on whether there is an interesting story to tell about the name, and how many 'other' names need to be covered. On average there are about four species to a page, with common elements covered in a preliminary section on family and genus to avoid repetition.

The result is a reference book that is easy to read or consult, although likely to be used for dipping-into, rather than reading all at once. What might otherwise be occasionally dull fare is leavened by Ian Fraser's lively and conversational style. Ian does not hold back on the adjectives - or exclamation marks!

Jeannie Gray has expertly rendered the scientific names into English, with comments on any alternative interpretations, arriving at a suggested, if often weird-sounding, English label, thus, for example: 'eyelet egg-leaver'; 'beautifully robed Californian'; 'crested bumfoot'; 'Amboin big-bum'; 'doubtful reed-bellower'; 'nasty migrating kite'; 'not very black falcon'; 'Iredale's hen-like bird of ill-omen'; 'little heron little heron'; 'really stupid bird'; 'senseless clawed saw'; 'little woodpecker ladder-climber'; 'New Holland affectionate part-sunbird'; 'smaller butcher'. Well, that sort of thing should satisfy your curiosity about any scientific name, and I'll leave you to investigate where those belong if you wish. After all, Jeannie can only tell you what the words mean, not take responsibility for them. Perhaps just as well Jeannie didn't go on to the subspecies though.

The quick guidance on pronouncing scientific names is useful. You will need to read carefully the explanation of the approach taken. The 'correct' pronunciation is sometimes modified in favour of common usage. An example is 'gerygone' where in conformity with

general usage the correct, hard, first 'g' is given as a soft 'dj'. However the suggested pronunciation is given as 'dje-RI-go-ne', which with the indicated short final 'e' is an unusually clipped ending for an Australian voice. (The usual rendering of the common name is 'dje-RI-go-nee' – see Macquarie Dictionary.). Anyway, as the book sensibly concludes, idiosyncrasies are to be tolerated in this area.

An enormous amount of research must have gone into producing this volume. For the English names, the basic references, like a longer dictionary, Lockwood's Oxford Dictionary of Bird Names, the brief notes in HANZAB, and the species accounts by John Gould, will take you a certain distance, but getting to the end of the trail for some names must have required considerable perseverance.

Given all the scientific and personal names the text-checking would have been a severe challenge by itself. I mention the following nit-pickings only because this work invites such close attention to words. Surviving textual errors that strike my eye are the missing hyphen from C&B2008's 'Night-Heron' (leading to the indexing of those species under 'H' instead of 'N' in the Fraser/Gray book), and a reference to the 'biographical zone' in relation to the Torresian Crow. That last is surely a slip of the Freudian kind, given the informative biographical notes in so many entries. The 'Port Addis' to which Herbert Purnell (remembered in the genus Purnella) accompanied Gregory Mathews in 1914 is probably Point Addis between Torquay and Anglesea, known to users of Bell's Beach and seekers of bristlebirds.

An interesting feature is Ian's own judgments on whether particular common names are appropriate. Examples: 'an evidently apposite name' (Red-footed Booby), 'not totally helpful even here' (Little Egret), 'misleading' (Mulga Parrot); 'a notably bland and unhelpful name' (Brown Thornbill); 'not a very satisfying name for a magnificent bird' (Grey Shrike-thrush). Usually it is indicated where a descriptive name refers only to the male. However, not so with 'Blue-billed Duck', which is pronounced 'an inevitable and most appropriate name!', notwithstanding that it will be 'helpful' for less than half the Blue-billed Ducks you might come across – and not the ones where you might need some help.

The truth is in many cases your preferences for names flow from your own experience and perception of the bird and sense of language. I would have thought 'Harmonious' rather than 'Grey' for the shrike-thrush had a disagreeably pretentious quality. To me, 'Wedge' rather than Ian's preferred 'Diamond' aptly describes the tail of the eagle, especially if your early memory is of the perched bird - as in the Cayley illustration.

The book ridicules the choice of 'quail-thrush' by the RAOU in 1926 on the ground that it lacks any sensible basis. However, anyone who has had the birds explode quail-like from beneath their feet is likely to find the name particularly apt. The characteristic quail-like whirring flight is mentioned by both HANZAB and the Reader's Digest book.

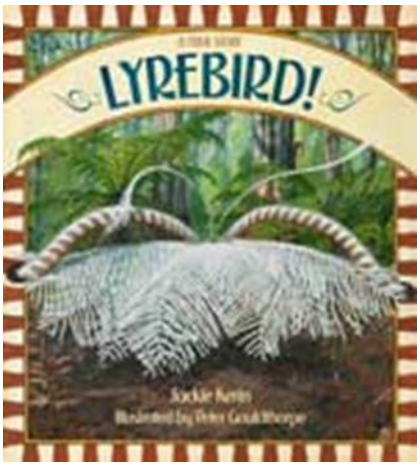
A name that might make you reach for this book is 'Jacky Winter'. While admitting 'the precise origin … is unlikely to be resolved', Ian Fraser favours the reason given by one authority 'that it sings all through the winter, when nearly every other species is silent'. However, he mentions the possibility that the 'Peter Peter' call could also be heard as 'Winter Winter'. I had thought myself that the name simply came from the two-part call:

'jacky jacky jacky, [then] winter winter winter'. Listen to Peter Fullagar's recording on the COG website and see what you think. Finding that explanation anywhere in print might be more difficult, although JD Macdonald (Australian Birds by Common Name) hears the 'jacky jacky' but (unlike Ian) not the 'winter winter'.

Quibbles aside, this is an impressive book. I do not know of anything quite so comprehensive for the birds of any other region, and indeed its practical layout could serve as a model for future books on bird names for other regions. The black and white illustrations drawn from the 19th century work of Silvester Diggles fit in well with the text, even if they do not elucidate it.

Lyrebird. By **Jackie Kerin, illustrated by Peter Gouldthorpe**, Museum Victoria, 2012., ISBN 978-1-921833-04-5, rrp Au S16.95(available in good bookshops)

Reviewed by SUE LASHKO, Cook, ACT



Jackie Kerin and Peter Gouldthorpe have combined perfectly to retell a true story that is both ornithologically correct and beautifully illustrated. The human heroine, Edith, a keen gardener, lived in the Dandenongs. In the summer of 1930, a young male Superb Lyrebird (Menura novaehollandiae) appeared in her garden and immediately became quite comfortable in Edith's presence, inspiring her to write a song of welcome:

You really are a cheeky bird.
Your name to me sounds quite absurd.
To say Menura takes some skill
And all the rest is harder still!
You like to tease with silly games.
I think that I shall call you…James!

Despite James doing what comes naturally to lyrebirds, scratching away in search of food, Edith thought "his company was worth every penny." His morning visits continued right through winter and into spring, until a rather "shabby", moulting James disappeared for several months, only to return in January of 1931 with a magnificent tail. Edith continued to write songs of James's exploits, particularly his dancing and mimicry, the latter often done from a perch on her verandah rail. In the second winter, James found a mate, Nancy, but continued his visits to Edith's garden.

Later that year, Edith's peaceful world began to change as roads were built and bush cleared, and she feared for James's future. He, however, continued to visit and perform on a stage that Edith had built outside her lounge room window, and still found time to build seven display mounds.

Edith resisted the requests of nature lovers to come and see James, except for Ambrose Pratt, the President of the Royal Zoological Society of Victoria, who was so entranced by James's singing and dancing that he named him "A Miracle of the Dandenongs."

This children's book would be an ideal choice for bird-loving children, parents or grandparents

RARITIES PANEL NEWS

The most pleasing rarity for this list is undoubtedly the nationally listed vulnerable species, the **Australian Painted Snipe**. One or two birds were still being recorded at West Belconnen Pond to the end of the year, having been first detected in mid-October. Another pair (or the same? – the locations are about 4km apart) were detected at a pond north-east of the Belconnen Pony Club in late December, and a female was recorded at Kama NR in February. On the other side of town, a male was recorded at a wetland off Horse Park Drive in January; and a pair, possibly more, was recorded on a private property on the Hoskinstown Plain also in January. This follows on from the widely publicised group of up to four birds which frequented Kellys Swamp in October 2011 and occasional sightings, mostly from Jerrabomberra Wetlands, from 1964 onwards. The Panel encourages COG members to pay close attention to all wetlands and to report all sightings as soon as possible so that we can build up a clearer picture of this remarkable species.

It was pleasing too to receive another **Eastern Osprey** record, this time from Googong Reservoir in February. An influx of records is not expected, but there is no reason to suppose the occasional osprey will not venture into our airspace again. When seen clearly, the osprey is not hard to identify, with its prominent dark eyestripe.

The **Azure Kingfisher** sighting from Jerrabomberra Wetlands in February was the first endorsed record since May 2008 along the Shoalhaven. Its tiny size and bright colouring help to identify this little jewel, which can be expected to visit us only very occasionally from coastal regions. On the other hand, the inland-frequenting **Red-backed Kingfisher** with its streaked crown has started to appear singly or in low numbers in most years.

Arid-zone honeyeaters can be found every now and then singly or in low numbers in suitable habitat in the ACT and surrounds when the inland starts to dry out and so the presence of a male **Black Honeyeater** at TSR 48 in December, while "unusual", was not totally unexpected, some six years after the popular Mulligans Flat birds.
The **Red-whiskered Bulbul** has been recorded previously in the ACT, in Kambah in 1993.

And finally, with the concurrence of the observer, the Panel has decided to provide details of a record which it did not endorse for want of detail but which it considers a possible "first" for the ACT: an **Orange Chat**. The male bird was observed in October 2012 in the vicinity of the Parkwood tip. The closest to the ACT that the species has been reliably recorded is Cowra, some 120km away, though it and its congeners are known for wandering. It could be that this was a bird dispersing after an excellent breeding season in the centre. The Panel ruled out confusion with an African weaver from the Gold Creek Walk-in Aviary.

ENDORSED LIST 82, May 2013

Eastern Osprey *Pandion haliaetus*

1; 9 Feb 2013; Tony Willis, Ian Anderson & David Clark; Googong Reservoir GrO17

Australian Painted Snipe *Rostratula australis*

1-2; 24,29 Dec 2012, 1 Jan 21013 ; Roger Curnow; West Belconnen Pond GrI11
1-2; 22,23,29, 30,31 Dec 2012; Roger Curnow; NE of Belconnen Pony Club GrI12
1; 14 Feb 2013; Roger Curnow; Kama Nature Reserve GrI13
1; 13 Jan 2013; Mark Clayton; Horse Park Drive wetland GrL11
2; 3 Jan 2013; Garry Moffit & Martin Butterfield, Hoskinstown Plain GrS16

Azure Kingfisher *Ceyx azureus*

1; 21 Feb 2013; Matt Mullaney; Jerrabomberra Wetlands NR GrL14

Red-backed Kingfisher *Todiramphus pyrrhopygius*

1; 17 Dec 2012; Michael Lenz; Jerrabomberra Wetlands NR GrL14

Black Honeyeater *Sugamel niger*

1; 20 Dec 2012; Michael Lenz; TSR 48 GrO5

Red-whiskered Bulbul *Pycnonotus jocosus* Escapee?

1; 26 Dec 2011; Lucy Randall; Black Mountain peninsula GrK14

LIST OF "UNUSUAL" BIRDS IN THE ACT – May 2013 version

The Panel has revised its list of unusual birds. On this occasion it has restricted the list to birds of the ACT only, pending a closer appraisal of the situation in COG's broader area of concern. The list can nevertheless be used as a general guide to our region. The Panel's broad guiding principle has been that a bird is listed as "unusual" if there are fewer than ten records of probably independent occurrences of the species in the previous ten years. It has not adhered rigorously to this formula in the case of species which are particularly easy to identify or which are known to occur in specific locations. It has also excluded species which are presumed to be aviary escapes.

An unusual bird report, as found on the COG website, must be completed for the species here mentioned, then provided to COG's Rarities Panel and endorsed by that Panel before the record will be published in any formal COG publication. Please note that this list is highly selective - there are many additional species which might be considered "rare" on any number of grounds, including naturally occurring in very low numbers. "Rare" species which are particularly easy to identify, such as Regent Honeyeater, Caspian Tern and Red- necked Avocet, have not been included,

though reports on regular datasheets are encouraged and will be followed up in case of doubt. Nor has the plethora of possible waders which might appear at Jerrabomberra Wetlands NR been included, though unusual bird reports are encouraged for all but the Sharp-tailed Sandpiper. This list self-evidently excludes species which might turn up in the ACT at some time in the future and for which an unusual bird report is required if the bird does not appear on the COG datasheet or on the list of ACT birds on the COG website. Seek clarification from rarities@canberrabirds.org.au if in doubt.

White-throated Nightjar *Eurostopodus mystacalis*

Spotted Nightjar *Eurostopodus argus*

Eastern Osprey *Pandion haliaetus*

Banded Lapwing *Vanellus tricolor*

Australian Painted Snipe *Rostratula australis*

Little Button-quail *Turnix velox*

Turquoise Parrot *Neophema pulchella*

Black-eared Cuckoo *Chalcites osculans*

Barking Owl *Ninox connivens*

Azure Kingfisher *Ceyx azureus*

Singing Honeyeater *Lichenostomus virescens*

White-fronted Honeyeater *Purnella albifrons*

Spiny-cheeked Honeyeater *Acanthagenys rufogularis*

Crimson Chat *Epthianura tricolor*

Black Honeyeater *Sugamel niger*

Black-chinned Honeyeater *Melithreptus gularis*

Blue-faced Honeyeater *Entomyzon cyanotis*

Grey-crowned Babbler *Pomatostomus temporalis*

White-browed Babbler *Pomatostomus superciliosus*

Australasian Figbird *Sphecotheres vieilloti*

Contents continued from outside back cover

Canberra Bird Notes

Canberra Bird Notes is published three times a year by the Canberra Ornithologists Group Inc and is edited by Michael Lenz. Major articles of up to 5000 words are welcome on matters relating to the distribution, identification or behaviour of birds in the Australian Capital Territory and surrounding region. Please discuss any proposed major contribution in advance. Shorter notes, book reviews and other contributions are also encouraged. All contributions should be sent to cbn@canberrabirds.org.au.

Please note that the views expressed in the articles published in Canberra Bird Notes are those of the authors. They do not necessarily represent the views of the Canberra Ornithologists Group. Responses to the views expressed in CBN articles are always welcome and will be considered for publication as letters to the editors.

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Contents continued on inside back cover

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