

The Gang-gang Citizen Science Survey

Community engagement and evaluation report



Gang-gang pair at Torrens (David Flannery)



January 2016

Acknowledgements

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Summary

In 2014 the Canberra Ornithologists Group (COG) adopted the Gang-gang cockatoo as its 'Bird of the Year' to celebrate 50 years of birding in the ACT. COG developed an exciting citizen science project, the *Gang-gang survey*, to enlist the help of the community to collect information about the Gang-gang.

The Gang-gang cockatoo survey also aimed to introduce a wider audience to the fun and value of birdwatching and cultivate their interest in learning more about native birds and their habitat. Community participation in the survey suggests the project achieved this aim reaching over 600 participants, most outside of COG membership and for many, their first foray into citizen science.

Community involvement was greatly enabled by the development of an on-line web portal for the survey by the Atlas of Living Australia (ALA). Members of the public were able to register and log casual sightings of the bird or they could use a paper data form. The Casual survey commenced in February 2014 and ran for 12 months until the end of February 2015. Quarterly 'Muster' counts were also held for a week to determine the presence and absence of the cockatoo at locations across the ACT region.

The community response to the survey was outstanding with over 4,600 sightings logged in the ALA database and submitted on paper forms to the end of February 2015, and more than 2,500 sightings during the five quarterly Muster survey counts. Evaluation of the survey (see section 4.) suggests community uptake was greatly assisted by the media interest and coverage of the survey project and also local affection and concern for the Gang-gang Cockatoo – a charismatic, easily-recognised bird providing a focal point for community participation.

The survey team also drew on local networks and relationships with allied conservation groups and organisations to promote the project. Volunteers in Park care and Friends groups participated in the survey as a companion activity to their on-ground activities as did some ACT Parks and Conservation Service rangers and field staff who recorded observations in their day to day management of reserves.

Community events were used to build and maintain interest in the survey project and particularly to engage schools. The 'Imagining Gang-gangs' student art competition invited young people to create Gang-gang artworks and learn more about the ACT's faunal emblem in the process. Over 80 Canberra school students submitted entries from primary and senior schools with all works exhibited at the M16 Artspace gallery at Griffith and travelled to the Civic Library for display over the summer holidays.

Another aim of the survey project was to inform the design and implementation of future citizen science surveys in the ACT. A number of survey design and communication lessons for future citizen science projects have been compiled, drawing on experience of the survey team and feedback from participants.

Using the ALA portal to enter sightings was an enabler for most participants but created difficulties for others with registration and log-in. Some regular observers were also frustrated by the limits of the mapping tool, particularly the inability to set 'favourite' locations, a functionality that is now being built into the Atlas platform. The large number of participants also challenged the chosen communication mediums for the survey particularly given the year-long duration of the survey. The COG survey webpage and monthly newsletter were used for updates and announcements but many non-COG participants would have benefitted from a monthly email newsletter and the use of social media.

Overall, survey participants enjoyed being part of the survey and contributing to a project to learn more about the Gang-gang cockatoo. Most love watching Gang-gangs in their home gardens and local nature reserves and many are keen to participate in future bird surveys.

1. Background

In 2014, the Canberra Ornithologists Group (COG) celebrated 50 years of birding in the ACT and initiated a number of projects to expand knowledge about ACT birds and increase public awareness of the importance of birds. COG adopted the Gang-gang Cockatoo as its 'Bird of the Year' in 2014 and developed an exciting citizen science project, the *Gang-gang survey*, to enlist the community to help collect biological information about this iconic local bird species.

The Gang-gang Cockatoo holds special significance in the ACT, being the native bird and faunal emblem of the Territory, and the emblem of the ACT Parks and Conservation Service and COG. Despite this lofty status, little is known about the distribution of the Cockatoo across the ACT, the size of its population, its feeding and breeding behaviour and its reliance on both the mountainous nature reserves and urban habitat of the ACT. The Gang-gang cockatoo is an ideal bird species for a citizen science survey as it is easily observed, easily recognisable and has an unmistakeable squeaky gate call.

The Gang-gang survey project was designed to meet the following objectives:

1. To collect data on the occurrence of the Gang-gang Cockatoo across the COG Area of Interest*
2. To engage the local community in an ACT-region wide survey to log sightings of the bird
3. To identify key data and knowledge gaps to inform future research about the Cockatoo
4. To provide data about population size and range to allow for monitoring of the species over time
5. To inform the design and implementation of future citizen science surveys in the ACT

A small group of COG members commenced work on designing the Gang-gang survey in late 2013, including negotiating with the CSIRO to use the Atlas of Living Australia (ALA) interface to develop a web portal and, designing a project brochure (Appendix A).

In late February 2014, COG appointed a part-time Communications Manager to deliver the communication and engagement elements of the survey project. The ANU Fenner School of Environment and Society provided in-kind office and IT support for the part-time Gang-gang Survey Communications Manager and survey project.

The survey commenced in February 2014 and ran for 12 months until the end of February 2015. It involved 2 parts: casual daily sightings recorded in the ALA portal (or on a paper datasheet) and, five Quarterly week-long Muster (presence and absence) counts. Community participation in the survey was impressive with over 4,634 casual sightings logged in the online ALA database and submitted on paper forms to the end of February 2015, and more than 2,555 sightings during the five Muster counts.

The initial community response stretched COG's in-kind and volunteer resources and funding support was obtained under the ACT Environment Grants Program 2014/15 to assist with verification of observer sightings and presentation of survey data for future research and monitoring of the species.

At the conclusion of the survey project, participants were sent an evaluation form to provide feedback on the survey including about communications, survey tools and their motivations to participate.

This report describes the communication and engagement methods used during the survey and provides an evaluation of the survey drawing in the feedback of survey participants, including lessons for the design of future citizen science surveys and associated information and communication tools.

* The COG Area of interest extends from Goulburn to Adaminaby and Burrinjuck Dam to Lake Bathurst
<http://canberrabirds.org.au/wp-content/uploads/2012/05/MapCOGAoI1.pdf>

2. Communications Strategy and Methods

2.1 Overview of strategy and tools

A communications strategy was developed with a focus on delivering the following survey aim:

- *To engage the community in an ACT and region-wide citizen science project to log sightings of the Gang-gang cockatoo*

The intent was to reach and engage a new birdwatching audience while enlisting strong support for the survey from the existing local audience. The focus and messaging for these target audience/s was:

To reach and engage a new local audience by:

- Introducing people to the delight of spotting iconic birds in their own backyards, streets and parks and nature reserves.
- Encouraging schools and scouts to build survey into their learning and outdoor activities.
- Reinforcing the value of being part of a fun citizen science project.

To draw on and engage the existing local audience by:

- Enlisting COG member support to participate and promote to their friends, families and groups
- Using allied community conservation organisations and networks to participate and act as ambassadors for the project (e.g. Parkcare/Friends/COG volunteers visiting their local schools)
- Enlisting the support and participation of Parks Service rangers and field staff in more remote nature reserves.

As part of the Strategy, a series of ‘anchor’ events were devised to introduce the project, build community participation and maintain interest over the year of the survey (see section 2.3). These events included:

- Official survey launch - at a Gang-gang hot spot, Corroboree Park Ainslie
- Gang-gang Muster Counts – blitz style seasonal counts
- Community events staged to coincide with August and November Muster counts
- School art competition Launch - at a Gang-gang hot spot, North Ainslie Primary School)
- School art exhibition – at a ‘real’ gallery M16 so students can enjoy their art on public display.

A suite of communication tools and products were developed to facilitate participation in the survey and support messaging. These included:

Survey Brochure (Appendix A)

Survey webpage (note now archived <http://canberrabirds.org.au/archives/gang-gang-survey/>)

Survey query line ggquery@canberrabirds.org.au

Media releases at key stages of the survey

Short post/s for community email Newsletters

Flyer/Poster for libraries and community noticeboards

Flyers for Teachers/Scout leaders/Parkcare groups

Flyers/poster for PCS Noticeboards

Monthly progress reports (COG newsletter and web upload)

The COG survey webpage was the focal point for information about the survey, housing the instructions, data forms, link to the online portal and latest news, media coverage and monthly progress reports (Appendix B). The COG committee chose not to use social media because of the time and content commitment involved. The survey email query line allowed the project and communications manager to quickly respond to participants having problems with data entry or who had queries about observations and how to report.

Importantly, observers had the choice to use the online forms for logging sightings or completing a paper form (downloaded from the COG survey webpage) that could be posted, scanned and emailed, or collected at monthly COG meetings. Forms for the Muster week count were revised after the May 2014 count to provide room for observers to record information about feeding and bird interaction. By November 2014, a simple online form with mapping function had been developed for the Muster count.

2.2 Media engagement

The project received excellent media coverage in the local print media and on local ABC radio and TV. The full list of media stories and links (n=18) is at Appendix C. Media releases were prepared by COG to coincide with key dates and events in the survey project and messaging adapted to headline early survey results and show why it was important to keep watching out for Gang-gangs and also reporting when you don't see them. Key messages are described in Table 1, and copies of the media releases are provided at Appendix D.

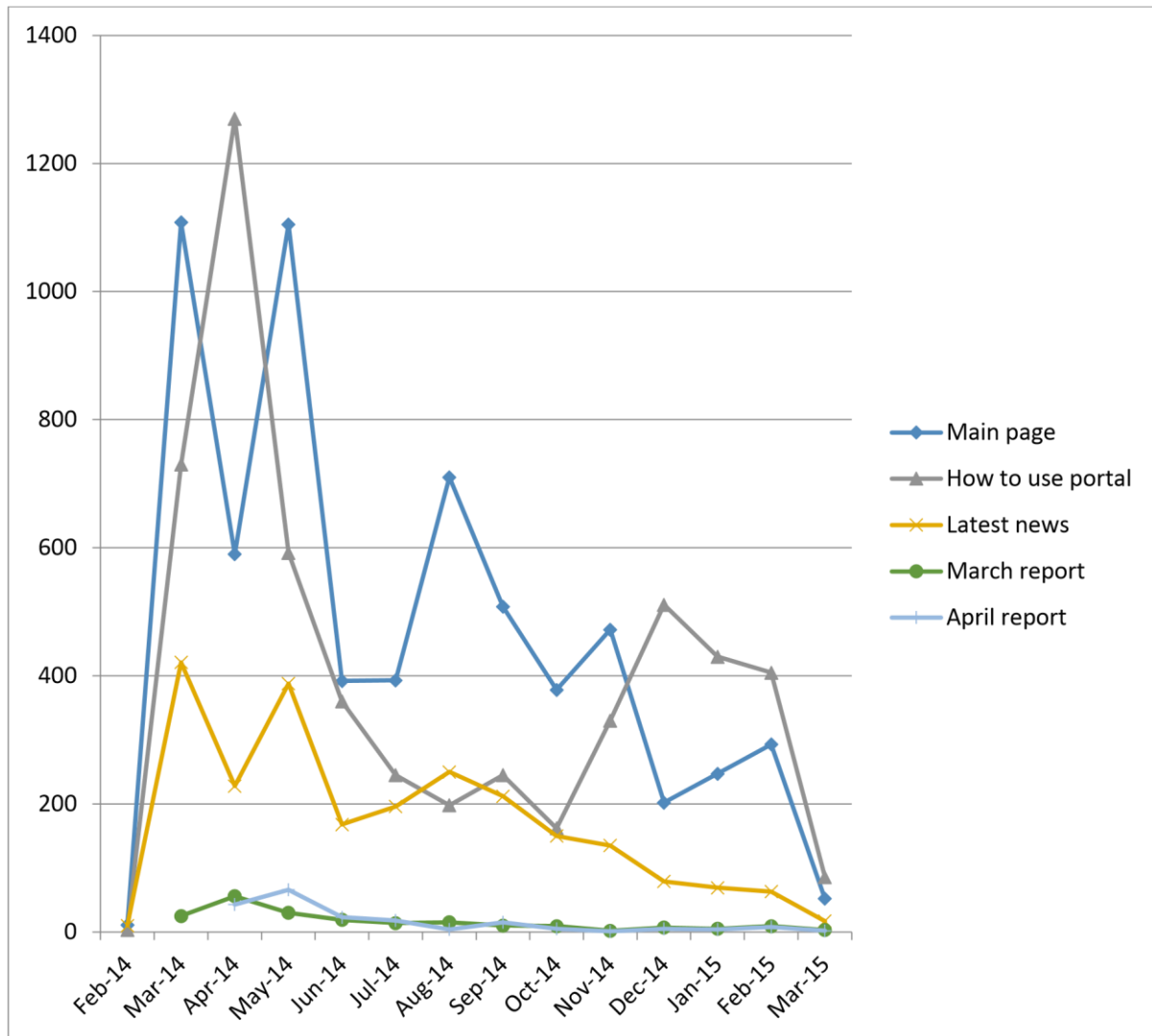
Table 1. COG Media releases and survey messages

| Media Release | Date | Message |
|--|---------------|--|
| Help Canberra birdos track the Gang-gang Cockatoo | March 2014 | Launch of exciting citizen science project inviting community to help with sightings of this special bird. |
| Gang-gang survey going gangbusters! | May 2014 | Great start to the survey with lots of sightings and get on board for May Muster <i>"Most sightings are coming from the Canberra suburbs near the Mt Ainslie and Black Mountain Nature Reserves... We want people to tell us whether they see Gang-gangs that (Muster) week and even if they don't see any birds, these nil reports are really important for the survey"</i> |
| Kids to use art to explore the Gang-gang cockatoo | August 2014 | Joint release with North Ainslie Primary School and TAMS to promote school participation in the art competition and encourage families to get involved in the August Muster Count |
| Gangs-gangs enjoy Canberra in Autumn | August 2014 | Feedback from the May Muster and what to look out for in August Count <i>"The May Autumn 'Muster' produced records from 52 suburbs, the top suburbs for Gang-gangs were Acton, O'Connor, Ainslie, Garran, Pearce and Deakin With the breeding season coming up, we are hoping to track movement of the birds in late winter to see whether the birds head up to the mountains for breeding or.. there is breeding..in urban areas".</i> |
| Have our Gang-gangs headed to the hills? | November 2014 | Feedback from the August Muster and what to lookout for in November <i>"The November Muster count will help us map whether the birds have headed up to the mountains to breed. We have assumed Gangs-gangs return to the cool mountain habitats over spring and summer but it is possible some birds are staying and breeding in our urban woodland reserves".</i> |
| Last chance to count Gang-gangs | February 2015 | Survey drawing to a close, feedback from November and what we hope to find with last Muster count <i>"The late summer count is important to help us map whether the birds have returned to suburbs. We saw a reduction in the number of Gangs-gangs recorded in the November Muster suggesting some birds may have returned to mountain habitats over spring and summer".</i> |

2.2.1 Print media - Canberra Times

The COG project team met with the Canberra Times journalist and Gang-gang columnist Ian Warden in early March 2014 ahead of the official launch of the project. Ian, a keen birdwatcher, used his column to develop an ongoing narrative about the survey and reported early findings supported by fabulous photos and anecdotes supplied by observers. These regular updates served to keep the momentum going and draw in new participants and also roused a few letter writers. Tim the Yowie Man also penned a fabulous 2 page article in the Canberra Times *Panorama* on 10 May 2014. There is a clear correlation with the print media coverage in the early months of the survey in 2014 with survey webpage hits, see Figure 1.

Figure 1. Gang-gang survey webpage – hits on key items



2.2.2 Other print and news media

A widely read local news magazine, *the Canberra Weekly*, published short pieces for COG in their 'Have you Heard' column covering the survey launch, school art competition and promoting the 5 Muster counts (see example in Appendix C). The survey was also referenced in 2 articles in *The Chronicle*, about COG's 50th birthday year, featuring COG Vice President Neil Hermes and COG member Chris Davey. The survey and the student art competition was promoted in the CSIRO's Inspiring Australia monthly newsletters and a blog about the project was featured on the ALA webpage (see Appendix C).

2.2.3 Radio and TV coverage

Louise Maher, the roving reporter for local ABC radio 666, produced 3 live stories about the Gang-gang project. These included a live cross to Genevieve Jacob's Morning program at the official Launch of the survey in March 2014; a live cross to Alex Sloan's Afternoon program at the launch of the *Imagining Gang-gangs* school art competition in August 2014, and a live cross to Adam Shirley's Drive program in November 2014 at the opening of the *Imagining Gang-gangs* art competition, including interviews with one of the students and their art teacher. These stories enabled information about the survey to be broadcast during three popular local radio programs and across different audiences, and also allowed Louise Maher to script an ongoing narrative about the survey.

We also participated in an interesting story on the ABC 666 local radio morning program with Genevieve Jacobs in July 2014 and featured Bruce Thornton who works at the ANU looking after Halls of Residence regularly sees up to 40 Gang-gangs at the residential halls along Daly Road.

Craig Allen from ABC television also produced a story about the survey. The story was shot at the Mt Ainslie Nature Reserve with the Campbell High School enrichment group featuring in the footage. The story screened on the ABC news, both 7pm and the late editions on 22 May 2014.

2.3 Community Events

2.3.1 Official survey Launch March 2014

The Gang-gang project was officially launched by Ian Fraser, Canberra's own well-known naturalist at Corroboree Park, Ainslie on Thursday 13th March with various media outlets in attendance. Corroboree Park was chosen for the launch due to its proximity to Mt Ainslie (local Gang-gang habitat) and because of its history of use by Gang-gangs. An old *Eucalyptus viminalis* tree in the park was found to be home to two Gang-gang nestlings when removed on safety grounds in 2009.

Ian Fraser delivered an entertaining historically based account about the Gang-gang cockatoo at the launch drawing on the many European descriptions of its call, which he noted, have included: "*a harsh grating 'cra-a-rk'; screaming; screeching; creaking notes; defiant scream; a melancholy 'caw-caw'; grates like a rusty hinge; clamour harshly; weird cry; wild cry; unearthly chidings ... a peculiar wheezing note; quaint growling; prolonged rasping screech and a strong stuttered squeaky growl*".

Louise Maher did a live cross to the ABC 666 local radio morning show and produced an online news story: <http://www.abc.net.au/local/stories/2014/03/13/3962708.htm>



Ian Fraser at the Survey Launch (centre left) with COG's Kathy Eyles, Chris Davey and Alison Russell—French and PCS ranger Craig Wainwright (Louise Maher)

2.3.2 Imagining Gang-Gangs - Launch of student art competition August 2014

Just ahead of the August Muster Count, the 'Imagining Gang-gangs' Student Art Competition was launched at North Ainslie Public School. North Ainslie has the Gang-gang as its school emblem and was a fitting venue for the launch. COG member and North Ainslie teacher, Megan Mears, assisted to facilitate the event at the school. One of the student leaders, Edward York chaired the launch and another leader, Nyssa Murphy read the Gang-gang poem composed for us by COG member, John Leonard (reproduced below). Parks and Conservation Service ranger and COG member, Michael Maconachie talked cockatoos and Gang-gangs with the students who displayed very good knowledge about our bird of the year. Louise Maher from ABC 666 produced a wonderful story about the launch, part of which was relayed live to Alex Sloan's afternoon program. The sound of the primary students mimicking the Gang-gang call was a priceless piece of journalism. Louise also produced an online story:

<http://www.abc.net.au/news/2014-08-15/gang-gang-competition/5674306>

The art competition was also promoted in the Inspiring Australia, ACT e-newsletter distributed by the CSIRO, on Radio Landcare (2XX) and through community conservation networks.



Ranger Michael Maconachie and students from North Ainslie Public School with their colourful artworks in the school foyer.
(Photo: Kathy Eyles)

2.3.3 Imagining Gang-Gangs - Exhibition of Student artworks

The *Imagining Gang-gangs* exhibition was held at the M16 Artspace Gallery Griffith, in the last week of November and was a great success. The student art competition attracted over 80 entries from 10 schools and an amazing array of creative artworks. The beauty of the competition was that the participating students had been observing and researching the bird to construct their artworks and most importantly, the excitement generated by seeing their work on display in a real art gallery.

Ian Warden from the Canberra Times was given a sneak preview before the opening and gave the exhibition great press, including a photograph of the drawing by Lara Hedley of Campbell High that was awarded the most popular senior artwork (and was the most popular artwork overall) as voted by visitors to the exhibition.

Louise Maher opened the exhibition and presented a live radio cross to ABC 666's Drive Show including an interview with Lara Hedley and her art teacher Louise Pinder. Many of the students that entered their artworks attended the opening and visited the exhibition with their families. There was great excitement and pride, especially among the junior artists, to see their artworks hung in a real gallery.



Louise Pinder, visual art teacher Campbell High with her students work (Kathy Eyles)

The prizes (\$250 for each winner) donated by bankmecu (now Bank Australia) were presented to Lara Hedley and Dan Leivesley from North Ainslie Primary (Dan won the most popular junior artwork) at a ceremony for the winning artists and their families at the bankmecu's Civic branch on 11th December 2014, officiated by COG Vice President, Neil Hermes, and bankmecu's Community Development Manager, Jo O'Sullivan.



Lara (left) and Dan (right) receiving their awards with Neil Hermes and Jo O'Sullivan (Kathy Eyles)

The artworks from *Imagining Gang-gangs* travelled to Civic Library mezzanine gallery for exhibition over the January 2015 school holidays (see photo below). Civic library staff reported that library users enjoyed the display on the mezzanine level with over 100 colourful but 'silent' Gang-gangs. Canberra families attending school holiday events and people attending public meetings at the library have viewed the exhibition. Ian Warden promoted the Civic library exhibition in Gang-gang in the Canberra Times and the Canberra Weekly also gave it a plug. Copies of the Gang-gang survey brochure and COG's *Where to find Birds in the ACT* have been provided for visitors to the exhibition.



2.4 Collaboration with allied conservation groups and organisations

2.4.1 ACT Parks and Conservation Service

Parks and Conservation Service rangers and field staff were particularly important observers in the rural and remote parts of the ACT and were encouraged to report sightings in rural nature reserves. In April and May 2014, the project team met with PCS staff at Casuarina Sands, Tidbinbilla and Namadgi depots and made contact the Ranger at Bendora Dam, Brandon Galpin, who sent in mountain sightings. Data forms and a collection box were left at each depot as well as poster for staff noticeboards (see Appendix E). A contact ranger was identified for ongoing liaison about the project at each depot.

2.4.2 ACT Parkcare and Friends Groups

ACT Parkcare and Landcare volunteers have a strong interest in wildlife conservation and were an important partner in promoting the survey. Park Care and Landcare Group Coordinators who had existing relationships with their local schools were encouraged to:

- nominate as Ambassadors for the project, and/or
- provide contact/s at their local schools and/or accompany COG on a future school visit
- hold a community activity/work party with a focus on Gang-gang habitat and food resources

An information flyer and email post was prepared for circulation through volunteer networks ahead of key survey dates (like Muster counts) and the project team attended the Parkcare Coordinators meeting in June 2014 to present the survey and particularly the role for volunteers spending time in reserves to keep an eye out for breeding activity later in the year. An example of a Parkcare flyer is provided in Appendix E.

2.4.3 Schools and Scout groups

Schools and Scouts were identified as a particular target groups for participation in the survey and allied activities although the project team also only had resources to respond to schools and groups who made contact and requested support and information. The project team followed up interest from ACT Scout groups following the distribution of a survey flyer via Scouts IT and the ACT Scouts Commissioner for Environment Activities, John Feint (see Appendix E). We presented to a lively group of scouts at the 13th Canberra Scout Group at O'Connor in April 2014. Scout leader Graham Downie is a keen amateur ornithologists and the scouts had lots of good questions about Gang-gangs and birds. The group went home with Muster forms and an Identification sheet to participate in the May Muster Count. Scouts were able to use the May and subsequent Muster counts toward their Environment Award ('badge').

A Flyer for ACT schools we sent out by email early second term (2014) inviting schools to participate in the Gang-gang survey and May Muster count (See Appendix E). Teachers/students were also encouraged to compile a bird list for the schoolyard or another study site. This was promoted as a companion activity to the Gang-gang survey or an enrichment exercise. Campbell High School kicked off 'bird watching' as an enrichment activity in Term 3 and we spoke at the School Assembly in early May about the Gang-gang survey and Muster Count.

Teachers Eva Bugledich at Campbell High School and Megan Mears at North Ainslie Primary promoted the Muster within their schools, and also local Scout leaders Graham Downie and Phil Greaves encouraged their scout and venturer groups to participate in the Muster Count. Our engagement with Campbell High proved fruitful with the birdwatching enrichment program attracting an eager group of students each term. Science teacher, Eva-Marie Bugledich, had an article published in the *Australian Teacher* about the enrichment program which incorporates COG's Gang-gang survey.

The “Imagining Gang-gangs” student art competition was designed to engage kids to learn more about the Gang-gang, the ACT’s faunal emblem, and imagine the Gang-gang using the art medium of their choice.

A second flyer was sent out to schools promoting the *Imagining Gang-gangs* Student Art competition and an A4 poster and flyer distributed through community email networks and on the COG webpage for download and for promoting on community noticeboards (see Appendix E). The Canberra Times assisted with a story about North Ainslie Primary and Campbell High School students preparing their artworks including a story about Louise Pinder’s ceramics classes working on artworks based on the Gang-gang, aided by the close proximity of the school to habitat of Mt Ainslie and reproducing a photo of a delicate Gang-gang picture drawn by a North Ainslie student



Left: Year 8 Student Sonya McNee-Darrach sculpting her Gang-gang series out of clay to be fired and decorated (Lou Pinder) Right: Chloe Davis Delicate Gang-gang (Megan Mears).

2.4.4 Observers anecdotes and photographs

Over the course of the survey, observers shared many anecdotes about behaviour, and submitted photo and videos about their encounters with the Gang-gang cockatoo with the project team. This engagement reinforces the affection for this bird in Canberra.

Examples are the photo taken by Tegan Liston overleaf and this interesting behavioural observation by Linda Beveridge on Australia Day 2015 about a pair of adults with a young bird possibly getting its flying wings at Rosenthal Street, Campbell:

“The adult male and female perched in a Euc. polyanthemus near 31 Rosenthal St, and watched the junior (possibly female) fly from this tree in a large slightly wobbly loop to an exotic tree in a neighbouring yard. Then adults flew to a Eucalyptus at the above address and called junior who flew in big loop still a little wobbly towards them then veered away and flew on to a Eucalyptus polyanthemus in Ferdinand Street (the next street up the hill). Direct distance between junior’s perches would have been about 100m, but with the loop probably more like 150m”.



2.5 Survey presentations and dissemination of results

2.5.1 Birds in the Landscape Forum July 2014

Project Manager, Chris Davey presented an informative talk about the Gang-gang survey at COG's 50th Birthday Public Forum, 'Landscapes for Birds' held at the ACT Legislative Assembly. Some early results were presented and a number of forum attendees expressed interest in being part of the August 2014 Muster Count and were added to the contact list.

2.5.2 Floriade, K2C and other fora

We were invited by the CSIRO to join the 'Inspiring Australia' showcase in the CBR marquee at Floriade on 30 September. Kathy Eyles presented on the Gang-gang survey, chatted to visitors and distributed information about the survey and *imagining Gang-gangs* student art competition (see photo below).



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The communications manager also presented on the survey at a Connectivity Workshop for Kosciuszko to Coast (K2C) landholders on 20th June 2014 and a number of landholders expressed interest in the survey. Updates were also issued through the K2C network ahead of each Muster count. On 20 March 2015, the project team presented on the survey to the Cumberland Bird Observers Club from Sydney as part of their ACT field trip.

2.5.3 Australian Citizen Science Association (ACSA) conference July 2015

COG submitted a poster presentation proposal to the inaugural ACSA conference, 24-25 July 2015 at the Shine Dome, Canberra, *The 'Maximising the Capacity of Citizen Science for Science and Society: A Fenner Conference on the Environment'*. The poster featured the key methods, results and lessons from the Gang-gang survey (see photo below and Appendix F). There was significant interest in the project during the break out poster sessions and it was one of only a handful community-initiated projects (as opposed to those initiated by researchers and agencies) featured at the conference.



2.5.4 Friends of ANBG and Parks Australia Managers Science Forum

The COG survey project team were invited to present on the survey findings as part of the ANBG Friends Lunchtime Seminar Series in 2015. The seminar held on 6 August was extremely well-attended and precipitated a further invite to present about the opportunities for citizen science at the Parks Australia Science Forum held at the ANBG on 15 October 2015.

2.5.5 Canberra Bird Notes 50th Anniversary Issue and presentation to COG AGM November 2015

An article about the Gang-Gang cockatoo survey was published in the special 50th Year Issue of Canberra Bird Notes, December 2014 <http://canberrabirds.org.au/wp-content/uploads/2012/03/CBN-39Anniversary-issue.pdf> and the project team presented on the (almost final) survey data results and community engagement program at the COG AGM on 11 November 2015.

3. Survey Evaluation

An evaluation of the project was undertaken with community participants to document their experience with the survey and review the systems and tools used as part of the survey. The aim of the evaluation was threefold: to obtain a snapshot of community participation; to contribute to a wider understanding about why people participate in citizen science projects, and to assist with the design of future citizen science surveys by COG and others.

3.1 Methods

3.1.1 Survey instrument and sample size

A short survey instrument was designed to circulate to survey participants after the survey concluded. (Attachment G). The feedback form sought demographic information; asked how people found out about the survey and their motivations for participation; asked about their experience with the survey and suggestions for future surveys.

The form was distributed in April 2015 by email to 450 survey participants. The sample included people who participated in both the Casual survey and Muster counts with a valid email address. Undelivered emails and participants with out of office messages were excluded from the sample. A total of 145 forms were returned, a response rate of 32%.

For the purpose of this evaluation, data from 145 respondents allows for some conclusions to be drawn about the survey participants and their motivations. The data primarily provides feedback about the survey and suggested improvements for future citizen science surveys, so even one response that can be used this way means the purpose of the feedback has in part been served (Nulty 2008).

3.1.2 Breakdown of community participation

One of the survey aims was to introduce a new audience to the fun and value of bird-watching and cultivating their interest in learning more about native birds and their habitat. The community response to the survey suggests the project achieved this aim reaching over 600 participants, the large proportion whom are not members of COG (see Table 2).

Table 2. Survey participants: COG and non-COG members

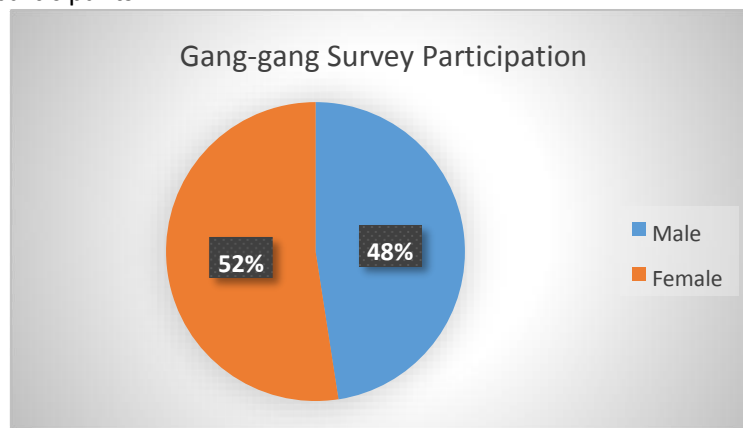
| Survey Type | Participants | COG Members | Non-COG Members |
|--------------------------|--------------|-------------|-----------------|
| Ad- hoc sightings | | | |
| Web portal users | 313 | 63 (20%) | 250 (80%) |
| Paper forms | 81 | 43 (53%) | 38 (47%) |
| Muster Count | | | |
| Online and Paper | 222 | 89 (40%) | 133 (60%) |

3.2 Snapshot of survey participants

3.2.1 Age and gender of survey participants

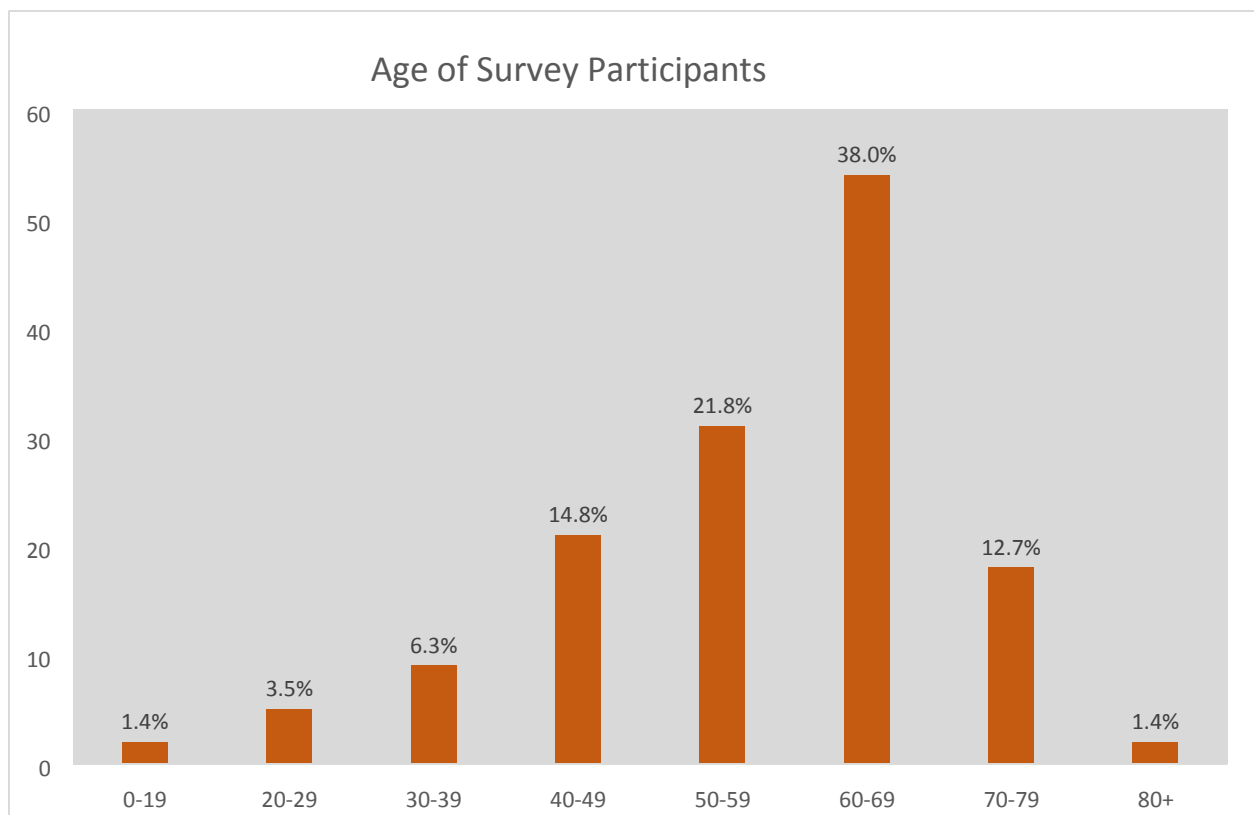
Participation of male and females was roughly equal, see Figure 2.

Figure 2. Gender of participants



Over 44% of respondents were over the age of 60 (see Figure 3). This older age profile is not dissimilar to other environmental volunteering programs (PCS 2014) a reflection of time and ability of the observers to contribute to the survey. Communication mediums chosen for the survey may also have had an effect on the participation of people under the age of 30, with this cohort more likely to use and receive information and news from social media platforms (API 2015).

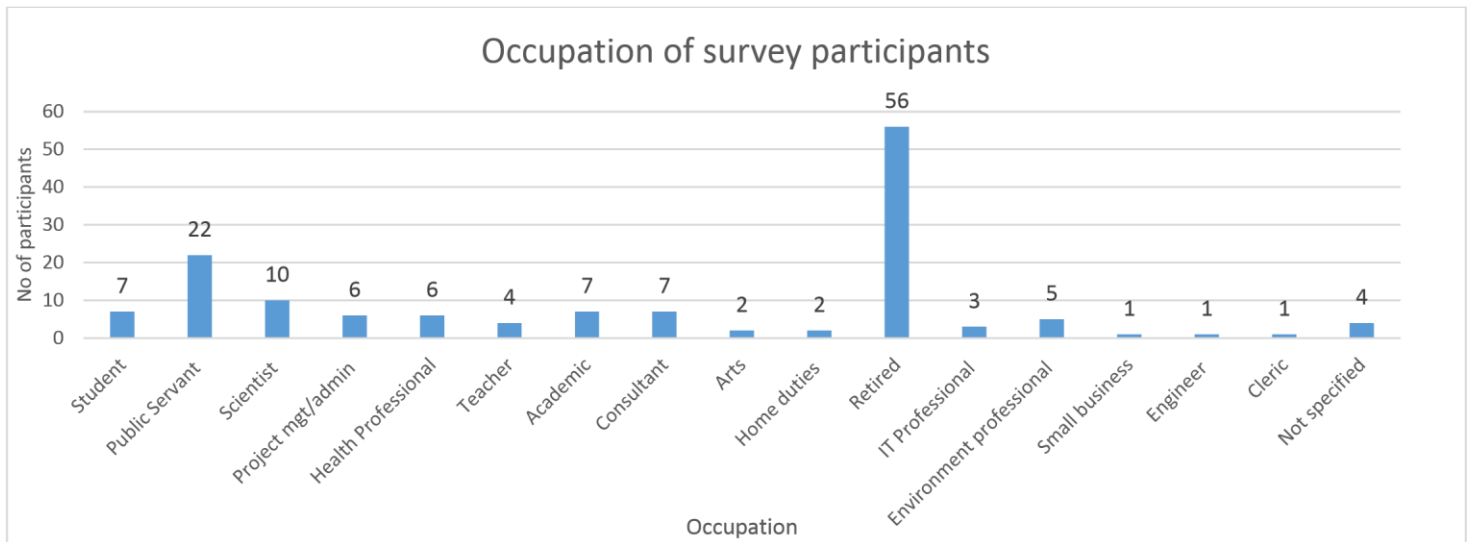
Figure 3. Age of survey participants



2.2.2 Occupation of participants

Respondents were asked to nominate their occupation (Figure 4). The large number of retired participants (39%) correlates with the older age structure of participants (see Figure 3). Public servants were the next largest category (15%) with a variety of professionals making up the bulk of remaining contributors (36%) from scientists to physicians. Overall 51% of participants were in employment.

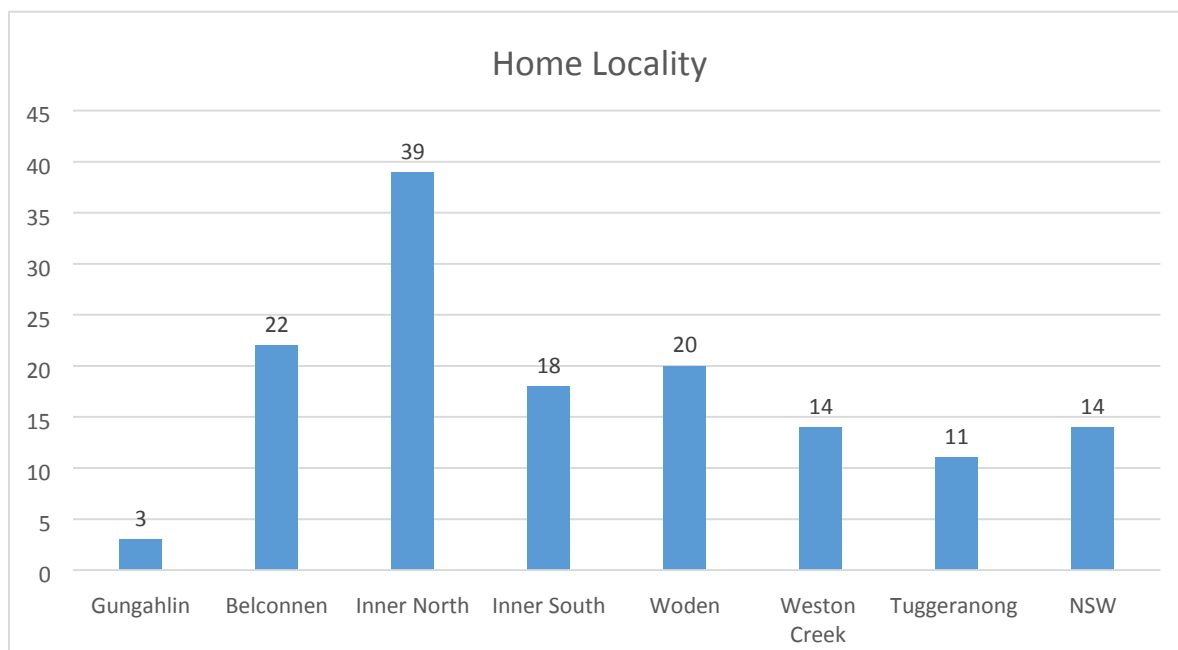
Figure 4. Occupation of survey participants



3.2.3 Home region of survey participants

Survey participants were asked to provide their home suburb see Figure 5. Over a quarter (27%) were from the inner north suburbs of Canberra, a noted Gang-gang hotspot.

Figure 5. Home locality of respondents

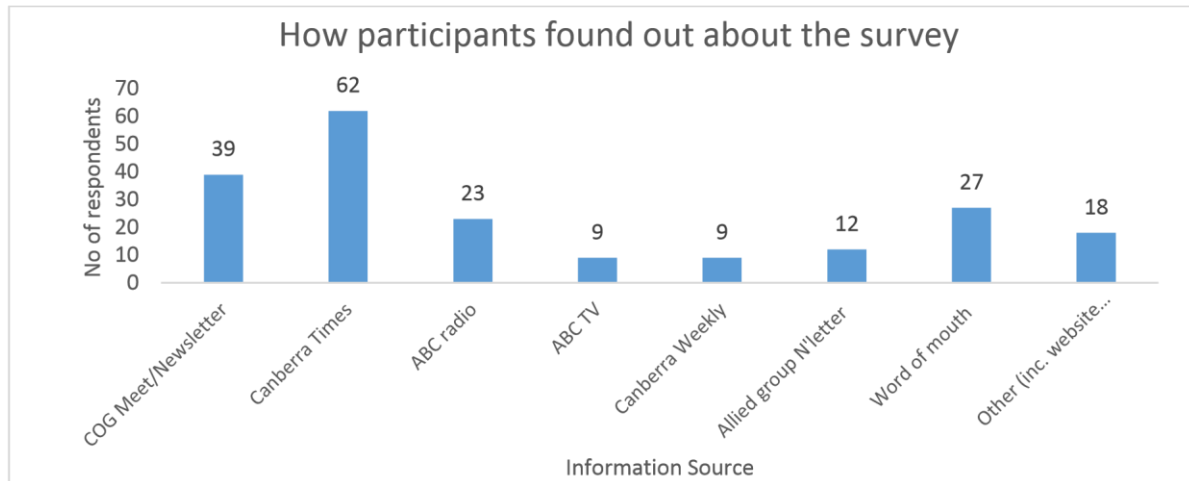


3.3 Survey Participation

3.3.1 How participants found about the survey

Participants were asked how they found about the survey (Figure 6). 43% of respondents found out about the survey via the Canberra Times with regular coverage in the Gang-Gang column and Tim the Yowie Man's Panorama article in May 2014. A further 22% heard about the survey via ABC Radio and TV and 19% by word of mouth. COG members that responded found out about the survey through monthly COG meetings and newsletter.

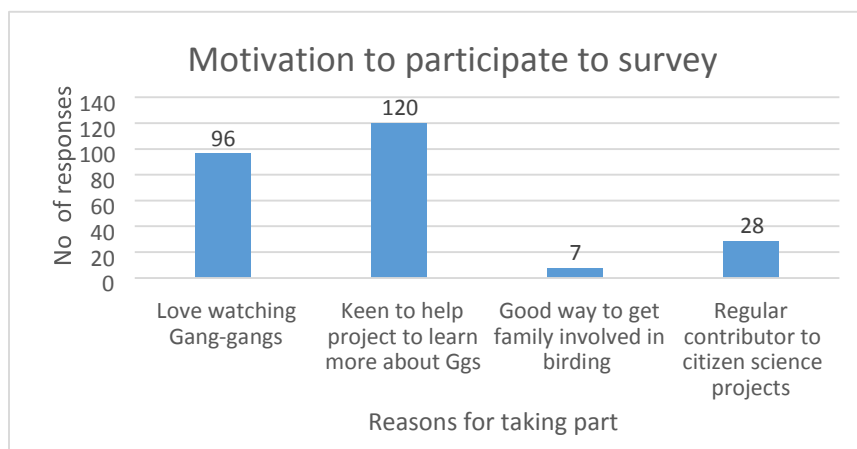
Figure 6. How participants found out about the survey



3.3.2 Motivation to participate

The primary reason nominated for participation in the survey was to assist a project to learn more about Gang-gangs with 82% respondents identifying this reason (Figure 7). This reinforces the value of citizen science projects as a vehicle for people to do something positive for nature. Closely coupled with this, is the local affection for the Gang-gang Cockatoo, also a strong motivator for participants with 66% or two thirds of respondents nominating their love of watching Gang-gangs. A much smaller proportion of respondents (19%) identified themselves as a regular contributor to citizen science projects, suggesting that for many observers this was their first foray into citizen science.

Figure 7. What motivated people to participate



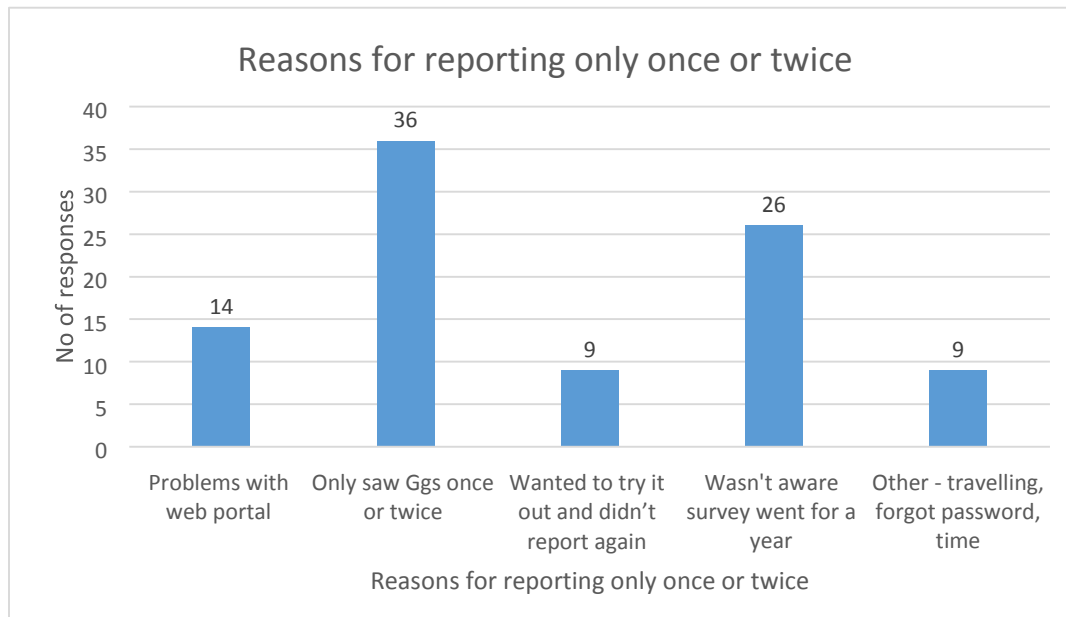
3.3.3 Reasons for reporting only once or twice

While the survey attracted a high overall number of participants, the majority of observers (80%) only submitted sightings between one and four data observation forms. We asked the respondents that fell in this category what the reasons were (see Figure 8). 15% reported that difficulties using the portal while others (19%) wanted to try it out, but forgot passwords and didn't attempt the survey again. Many observers (38%) only saw Gang-gangs once or twice, For example:

"We don't see Ggs regularly (only occasionally) so I'm not sure that I would have had a need to have completed your survey more than once".

A significant number (27%) indicated they were not aware that the survey ran for a year and would have benefitted from a reminder about the survey (see suggestions in Section 3.2 below and Table 2). This also ties into the fact that many contributors were also not aware that the survey had 2 parts (Figure 8)

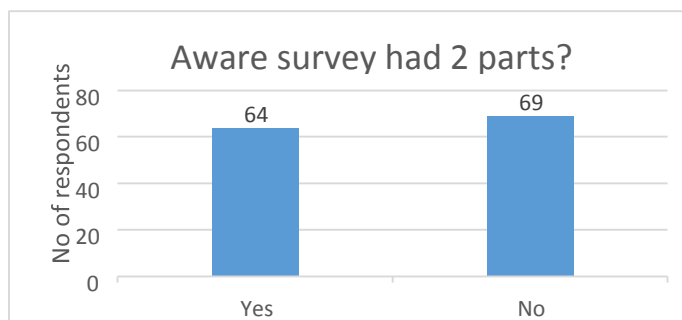
Figure 8. Reasons for reporting only once or twice



3.3.4 Awareness of scope of survey

Observers were asked whether they were aware that the survey had 2 parts: Casual daily sightings recorded in the ALA portal (or on a paper datasheet) and, the Quarterly week-long Muster counts. Slightly more observers were not aware of the 2 parts, see Figure 9.

Figure 9. Aware of the scope of the survey



Of those respondents that were aware, 57% indicated they had participated in both parts of the survey. Those respondents who were aware but did not participate in both parts were asked why not. Table 3 lists these responses grouped under three main headings that encapsulate most responses.

Table 3. Reasons for not participating in both parts of survey

| Uncertainty | Time and other commitments | Website problems |
|--|---|---|
| <p><i>Only new to this sort of thing wasn't fully aware of what was expected</i></p> <p><i>Just didn't see Gang-gangs those (Muster) weeks but perhaps I should have sent in zero count sheets</i></p> <p><i>Not easy to take part because wasn't sure I would regularly visit a place where there was a representative chance of seeing or not seeing GGs</i></p> | <p><i>Disorganised and busy liked the idea but more convenient to record sightings when they occurred</i></p> <p><i>Did not think I would be able to participate in Muster consistently</i></p> <p><i>Was only home 5 of 7 days</i></p> <p><i>I was away often for Muster Counts so couldn't participate</i></p> <p><i>Easier for me to record ad-hoc sightings when time available to do so</i></p> <p><i>Happy observing Gang-gangs at home, didn't have time to do a Muster</i></p> <p><i>Didn't want the extended engagement but to tell you about the ubiquitous presence of Ggs in Portus place Bruce</i></p> | <p><i>Had trouble with the site and gave up</i></p> <p><i>Data entry problem</i></p> <p><i>I didn't think I had registered in the end or entered anything I had so many problems I didn't bother again.</i></p> |

3.4 Improvements for future surveys

Participants were asked for suggestions about how COG could improve future surveys based on their experience with the Gang-gang survey. The feedback reveals that more regular email communication and tweaking of the data entry system and tools may have assisted some observers. Table 4 presents the responses grouped under the 3 main headings that encapsulate most responses. The discussion that follows under each heading includes some specific comments made by participants.

Table 4. Respondents suggested improvements to survey

| Improvements for future surveys | | |
|---|--|---|
| Web portal and technology | Communications | Explanatory Information |
| Location mapping too tedious and difficult (n=3) | Regular email updates to casual observers and to notify Muster weeks (n=15) | The field 'Time spent observing' was ambiguous – need more explanation (n=1) |
| Need easier registration, and more user friendly data entry (n=7) | No unsolicited email (n=1) | Better information on how to log location using map function (n=2) |
| Website worked well (n=4) | Publish results along the way to maintain interest (n=6) | Clearer information about what was required especially how often to report from same location (n=5) |
| Need mapping function to bookmark favourite locations and save time (n=6) | Use traditional media (n=1) | More information and descriptors about behavior like nesting (n=2) |
| Website Muster form didn't work (n=1) | Provide feedback to observers on their sightings (n=3) | More information about statistical basis of survey and questions to be answered and who will use the data (n=2) |
| Use mobile/smartphone app to enter obs in the field (n=4) | Use observers to spread word (n=1) Offer incentive to COG members to sign people up (n=1) | Better notification of survey close date (n=1) |
| Online recording like national surveys (n=1) | Use social media (n=3) | Gg query line was useful and responsive (n=2) |
| Need field to be able to tick Seen AND Heard (n=1) | Use E-bird to communicate (n=1) | |

The full suite of observer suggestions (additional to those above) is provided in Appendix G.

3.4.1 Web portal and technology

The ALA web portal was used by most participants in the Casual survey and there was a mixed response about the utility of the portal. Many observers were able to easily navigate the system, for example:

"Having it online was an excellent idea, making for ease of response and for collation and analyzing".

"the GPS function to precisely map the sighting was great"

"loved the ability to use the map locater - so accurate"

"survey portal easy to use"

For other users, the ALA portal presented difficulties for example:

"the web portal was awful"

"had trouble recording on survey site"

"I had difficulty registering the location using maps on the website - not sure if that was only my experience or a technical difficulty with the site"

In particular, the time involved in logging daily sightings was noted by some observers, for example:

"I participated in Muster counts - daily sightings simply too much work to submit especially with the ALA portal"

"I found inputting data tedious so that, although I had made lots of notes of sightings in my desk diary, to input was tedious because each time I had to input the same location information rather than use what was the same as the last sighting".

The use of a smartphone app to allow records to be entered while out and about was suggested by some observers, and a number of regular contributors suggested improvements to the portal mapping function that would have assisted recording sightings especially being able to return to a 'favourite' or 'home' location each time you entered a sighting. For example:

"was very difficult to enter grid references the same each time - all my records were from my garden but I had to go through the complex business of zooming in on the map each time - would have been better to have an option for home that I could have used repeatedly"

"all of my sightings were at a small number of locations would have been handy to be able to save favourite locations, rather than input every time"

The GG query line was designed to assist participants having problems with the web portal and some observers commented on the utility of the help and support line. For example:

"really liked the immediate feedback"

"thanks for the emails and managing my poor data entry"

The responses revealing difficulties with the portal suggests many observers were not aware or did not avail themselves of the survey help/query line.

3.4.2 Communications

Some observers were expecting feedback on their sightings and this may affected their ongoing participation. While sightings were checked, contact was only made with the observer if there was a question about the data and in most cases this was about locational data that had been incorrectly entered, or to follow up a nesting observation. This process needed to be better explained, as the number of observations and participants meant it was not possible to provide feedback on all sightings.

Many respondents suggested email reminders with survey updates may have assisted their ongoing participation both in quarterly Muster counts and the Casual sightings. For example: *"regular feedback during the survey would encourage further participation"*

"after submitting the first 2 sightings I forgot the survey was ongoing - perhaps an occasional reminder that the survey was on"

"send out reminder emails with a bit about how the survey is running, how many sightings anything particularly interesting"

On the other hand, not every participant would have appreciated email updates, for example:

“of course it must be tempting to keep sending emails around to all the email addresses .., and perhaps works for some; but I have quite a resistance to unsolicited and impersonal junk mail”

A few observers noted that social media may have assisted survey communication, and this is particularly relevant for younger participants and observers outside of COG. For example *“use social media to connect with younger cohort”*

The project team was not inclined to regularly email observers in the Casual survey as permissions had not been obtained to use email contacts for this purpose. Muster count participants were emailed following the August 2014 Muster and then for subsequent Musters. All survey participants were emailed to notify close of the survey and circulate the feedback form.

3.4.3 Explanatory information

Some survey respondents suggested clearer information about the frequency of reporting would have assisted their participation for example:

“Some guidance on how frequently it was useful to report sightings from the same location i.e. twice a day, daily, once a week. I often observed birds at one spot several times in a day but did not bother reporting all occasions”

The responses suggest some observers were not aware or did not avail themselves of the survey email help line to seek or clarify instructions.

3.5 Other observer comments about the survey

Observers were asked for any other comments about the survey, which have been grouped under four main headings based on the responses, see Table 5. These responses primarily reveal how much many observers enjoyed participating in the survey with many keen to participate in future surveys and awaiting the results.

Table 5. Other respondent comments about the survey

| Satisfied | Keen for results | Keen for more | Other comments |
|--|--|---|---|
| <i>All pretty straightforward - excellent survey</i> | <i>Love to know results</i> | <i>Sad it is over as I see Ggs frequently</i> | <i>We are overrun with Ggs and I was really keen to participate but gave up</i> |
| <i>It was very well communicated</i> | <i>It will be good to see results when they are published</i> | <i>Keep it going long-term</i> | <i>I think the Ggs hide from me when survey is underway</i> |
| <i>Doing a good job</i> | <i>Good to know the results - this would encourage me to participate in future surveys</i> | <i>I wish I had recorded more sightings as they are common in our area and I would like to encourage and preserve their habitat</i> | <i>We noticed a different flock during the survey, compared to the last almost 20 years. Regulars are back!</i> |
| <i>Great idea to open the survey to the public because many people take an interest in nature without necessarily belonging to a group</i> | <i>I notice Ggs come back in Autumn. Some feedback on results would be great as I'd be interested to know the general movements of Gang-gangs e.g. whether move to another area for summer</i> | <i>I was away often for Muster Counts so couldn't participate. Please offer other bird watching exercises or surveys that volunteers could be part of</i> | <i>Showed up how clunky and user unfriendly the COG Atlas system is - time is now for COG getting a new online data entry system, and for multi species recording - one already exists in eBird</i> |
| <i>Thought the survey was well set up and little need for improvement</i> | <i>Hope there will be some interesting info to report back to the contributors and share with other Canberra residents</i> | <i>I will know what to expect next time</i> | <i>If you want GG central its Wanna Rd Carwoola</i> |
| <i>Great project loved participating</i> | <i>Make sure respondents have a chance to see the results</i> | <i>I would report random sightings in diverse areas of the ACT on a regular basis if this is beneficial</i> | <i>I know is doesn't fit the count methodology but I wonder whether it would be useful to invite overall comments /impressions about the occurrence of Ggs</i> |
| <i>Thanks for the great work and good luck!</i> | <i>Would be good to get the final outcomes</i> | <i>Willing to participate again</i> | <i>keep as simple as possible</i> |
| <i>I think this is a very worthwhile activity</i> | <i>I hope the results are published in the Canberra Times</i> | <i>I would do it again</i> | |
| <i>Great work keep it up</i> | <i>Find out whether nesting in Canberra or the hills - we never see their young</i> | | |
| <i>Family found it fun</i> | <i>Wondered if the birds wandered off to more available food</i> | | |
| <i>Enjoyed the ad hoc survey</i> | | | |
| <i>Think it is a great way to involve people and make them think</i> | | | |
| <i>Enjoyed doing it</i> | | | |
| <i>Pleased COG doing surveys</i> | | | |

4. Discussion and project lessons

The Gang-gang survey aimed to introduce a wider audience to the fun and value of bird-watching and cultivate their interest in learning more about native birds and their habitat. Community participation in the survey suggests the project achieved this aim reaching over 600 participants, most outside of the membership of COG and for many, their first foray into citizen science.

The number of observations submitted during the survey was outstanding with 4,634 sightings logged in the ALA database and submitted on paper forms to the end of February 2015, and more than 2,555 sightings during the five quarterly Muster survey counts.

The survey evaluation suggests community uptake was greatly assisted by the media interest and coverage of the survey project and also local affection and concern for the Gang-gang Cockatoo – a charismatic, easily-recognised bird providing a focal point for community participation.

The relationships cultivated with local print, radio and TV reporters yielded excellent publicity for the project. The Canberra Times coverage of the survey was nominated as the main source of information about the survey from non-COG members. There is a clear correlation with the print media coverage in the early survey months of March April and May 2014 with survey webpage hits and portal registrations.

Headline survey results were provided using media releases, all of which appeared in the Gang-gang column in the Canberra Times, aided by the use of quirky anecdotes and photos provided by observers. Promoting these grass roots observations was important to maintaining public interest in the survey. This is also where social media could have been used most effectively, allowing observers to post their own experiences and encounters over the year.

The survey team was also able to draw on valuable local networks and relationships with allied conservation groups and organisations to promote the project. Many Parkcare and Friends volunteers participated in the survey as a companion activity to their on-ground activities as did some ACT Parks and Conservation Service rangers and field staff who recorded observations in the course of day to day management activities. Anchor events were successfully used to build and maintain interest in the project and in particular to engage schools. The *Imagining Gang-gangs* student art competition was able to channel young creative energies into making Gang-gang artworks and learning more about the ACT's faunal emblem. Over 80 Canberra school students submitted entries from more than 10 primary and senior schools. Uptake by schools and scouts in the observational parts of the survey was disappointing but not surprising given the crowded school curriculum and many competing activities for scouts

The duration of the survey and its 2 parts (Casual and Muster counts) appears to have created some confusion for some observers. This is possibly because the Gang-gang survey was different to other citizen science projects like the Bio blitz that runs over one weekend and the annual Frogwatch census that runs during National Water Week. Messaging appears to have missed the mark in differentiating these 2 elements of the Gang-gang survey.

Monthly progress reports were published on the COG website survey page and in the monthly COG newsletter. These were quite detailed reports about the progress of the survey with sightings (numbers, distribution, feeding records) and an update on community engagement. A monthly statistics table was also provided on the webpage but was not always up to date.

Publication using these mediums meant participants had to seek out the information rather than it arriving in their inbox. Many of the observers were not aware the updates on the website and the progress reporting was not in a form accessible for the bulk of the survey audience. Also one observer noted that once they had bookmarked the portal website, they no longer had any need to go back to the main survey webpage.

The COG webmaster has reviewed the survey webpages and suggested a simpler single web-based status page with more gloss, brighter, more regularly updated with ongoing results, and higher visibility. A mock-up of how a survey page could be developed for future projects is provided in Appendix H.

Many observers noted they would have benefitted from an email reminder about the survey and the use of social media was also suggested. The project team was not inclined to send out unsolicited email to participants given permissions had not been obtained to use personal email addresses that observers had used to register on the web portal. This could be addressed by an 'opt in/out' facility for email updates about the survey when observers first registered for the ALA portal, ameliorating the project team's concerns about observer privacy and permissions. Those who opt in, would then receive an email update and some 'quick survey facts' ahead of each quarterly Muster for example.

There is little doubt that community participation was greatly enabled by the development of an on-line web portal for the survey by the Atlas of Living Australia (ALA). The Gang-gang survey webpage was also designed to be self-explanatory, with instructions about how to participate in daily sightings either using the ALA portal or a paper data form and also to complete quarterly week-long Muster Counts.

This information platform was backed up by an email query line (ggquery@canberrabirds.org.au) that could be used by observers seeking clarification about sightings or what to record or having difficulties with the web portal. The survey feedback reveals that some users that experienced difficulty with the portal did not seek help or were not aware about the query line.

Some of the information tools used for the survey were able to be improved on an iterative basis, for example updating dates and instructions on the webpage and revising the data form used for Muster counts to provide better explanations of terms and the observational data required.

While on-line entry using the ALA portal was an enabler for most survey participants, it created difficulties for others, some with the registration process and log-in process. Regular observers were also frustrated by the limits of the mapping tool, particularly the inability to set 'favourite' locations, a functionality that is now being built into the Atlas (Peter Brenton CSIRO, pers.comment 2015).

A set of project lessons has been compiled drawing on this discussion, the experience of the Project team over the course of the survey and participant feedback. These lessons have been summarised under 2 key headings, covering the information platforms and engagement methods used to support the survey, see Table 6 overleaf. These practical insights can be used by COG and other proponents to assist with the design of future citizen science surveys and associated information tools.

Table 6. Survey Project Lessons

| Survey information platform and tools | Communications and Engagement |
|---|--|
| <ul style="list-style-type: none"> □ Pilot survey instructions and registration process across a diverse cohort - both computer and less computer literate □ Small web glitches will deter participants so iron out bugs as quickly as possible and useful tips for trouble-shooting □ Match reporting functions to likely observer scenarios to enable ease of reporting - mapping functions should allow for saving 'favourite' locations □ Use a survey query line and promote widely as first point of contact for trouble-shooting □ Set up function to allow users to 'opt in' to receive email updates about the project as part of any online registration process | <ul style="list-style-type: none"> □ Deliver communication content direct to inbox and/or upload on social media (like Facebook) to capture and maintain audiences attuned to streaming and sharing content. □ Update project webpages regularly, use high visibility and interactivity (video clips). □ Work with local reporters in mainstream and community media to promote headline survey results and build the narrative. □ Partner with allied organisations to expand the reach of the survey using free air and print time via networks and newsletters, and coopt groups as project ambassadors □ Build on community affection and the charismatic wildlife effect – promote observer anecdotes, photos and videos to excite others about being a citizen scientist. □ Stage complementary events to promote the project – engage young people in creative ways to explore the subject of survey. |

5. References

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Nulty D.N (2008) The adequacy of response rates to online and paper surveys what can be done. *Assessment and Evaluation in Higher Education*, 33(3), 301-314.

6. Appendices

Appendix A Survey Brochure



An adult male Gang-gang has a full scarlet hood and crest
Young males have incomplete red colouring and small crest
© Julian Robinson



An adult female Gang-gang has a grey head and a faint crest
Young females also have a grey head and crest
but with less colour on the breast
© Stuart Rae



Gang-gang Survey
Canberra Ornithologists Group
PO Box 301,
Civic Sq,
ACT
2608

Canberra Ornithologists Group is committed to the study and conservation of native birds. From small beginnings 50 years ago, COG has grown into a large, influential organisation that supports research and has effective authority on conservation issues.

We welcome anyone with an interest in birds: first-time birdwatchers, enthusiasts, professionals or anyone with a general interest in nature.

Our aims are

- to encourage interest in, and develop knowledge of the birds of the Canberra region
- to promote and co-ordinate the study of birds
- to promote the conservation of native birds and their habitat.

The Group holds monthly indoor meetings, regular field outings and conducts numerous bird surveys. For further information see our website :
<http://canberrabirds.org.au/>

Cover: A splendid adult male Gang-gang Cockatoo sits above his nest hole © Stuart Harris

Design: Stuart Rae

Have you seen this bird



Gang-gang Cockatoo



WE NEED YOUR HELP

During 2014 the Canberra Ornithologists Group (COG) celebrates 50 years of birdwatching within the Australian Capital Territory (ACT) and the surrounding region. As part of a range of activities to mark this occasion, COG is running a study of the local population and ecology of the Gang-gang Cockatoo *Callocephalon fimbriatum*. And they would like you to contribute.

The Gang-gang holds a special significance to the ACT as it is proudly displayed in the logos of both COG and the ACT Parks and Conservation Service. It is also a species that local and visiting birders like to, and expect to see, for it's dramatic colouring and Canberra is well known as a place to see them. However, despite this, little is known about the bird's abundance or seasonal movements within the area; what foods they eat at various times of year; what nest sites they use; or their breeding success.

Our landscapes are rapidly changing and knowledge of any birds' habitat requirements are necessary if they are to be efficiently conserved. So, this project aims to meet these requirements and help secure the ACT area for the Gang-gang Cockatoo.

Members of the public can greatly help this project by recording any sightings of Gang-gangs from the area between Yass and Goulburn in the north to Bredbo in the south. The survey runs over an 18 month period starting in January 2014.

Any notes on the location, date and time of the following would be helpful:

- Numbers in a group
- Ages and sexes of birds
- Feeding tree species
- Roosting sites
- Nest hole sites
- Fledged young



A pair of Gang-gangs mutual preening
© Julian Robinson



A male Gang-gang inspects a potential nest hole
© Stuart Rae

Observations can be recorded on-line at:

<http://root.ala.org.au/bdrs-core/cog/home.htm>

Alternatively, observations can be entered on a specifically designed data sheet which should be returned to COG for analysis. Data sheets are available for downloading from the COG website: <http://canberrabirds.org.au/> and follow the link to 'Gang-gang Project'. Sheets will also be available at the COG monthly meetings. For details of meetings see: <http://canberrabirds.org.au/> and follow the link to meetings.

For area of study see:

<http://canberrabirds.org.au/Maps/MapCOGAoL.pdf>

Appendix B

Copies of COG Progress Reports about the Gang-Gang survey project

Gang-gang project update – April 2014

The Gang-gang project was officially launched by Ian Fraser, Canberra's own well-known naturalist at Corroboree Park, Ainslie on Thursday 13th March with various media outlets in attendance. Louise Maher did a live cross to the ABC radio morning show and Ian Warden wrote an article in the Gang-Gang column in the Canberra Times.

Observations have been collected since the start of February and at the time of writing there have been over 373 observations placed on-line through the COG-ALA portal from over 88 contributors whilst an additional 58 observations have been received on paper forms.

Of the 88 contributors 50% have entered a single observation possibly indicating the early stage of the project and/or a distribution of occasionally observed individuals. It will be interesting to see if this picture changes with the seasons. So far the seeds from Eucalyptus spp, Liquidamber and Chinese Pistachio appear to be the flavour of the moment.

Interesting sightings; one off the east coast of Argentina and another off the east coast of Japan; all easily fixed and explainable with the addition of a minus sign to the record or the same longitude coordinate as the latitude coordinate corrected. No names will be mentioned!

The first Muster was held during the week 19-25 February. The Muster was based on COG's longrunning Garden Bird Survey with reporting required each day rather than once a week. So far 30 sheets have been received covering 22 suburbs with one form received from outside the urban area. It was most encouraging to receive 14 forms with no observations. This invaluable information will allow us to map in some detail the distribution of Gang-gangs within urban Canberra. The largest number reported was 14 on Friday 21st February at a site in Red Hill.

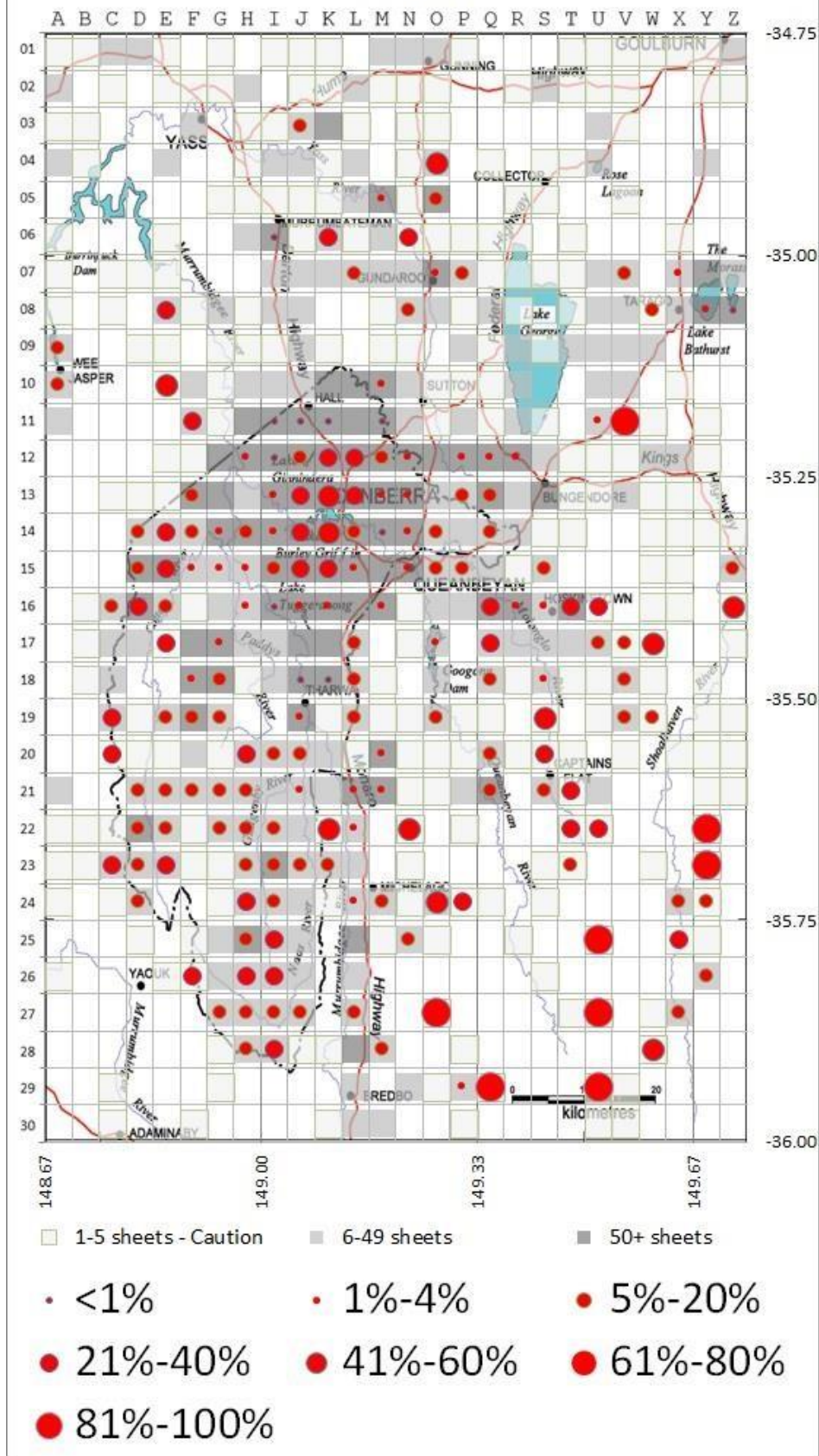
The next Muster will be held during the week May 21-27th and work is underway to engage school and scout groups in the May Muster. To assist this work, could COG members with contacts in their local school or scout groups please forward the contact details for environmentally motivated teachers or scout leaders to kathy.eyles@anu.edu.au.

Members may also be part of other groups (like U3A, Walking for Pleasure, Wednesday Walkers etc.) who may be interested in the GG survey.

The map below shows the Gang-gang reporting rate over the period 1st July 2003 to 30th June 2013, the larger the dot the higher the reporting rate which takes into account the number of COG Observation Sheets submitted for each cell and the number of those sheets that report Gang-gangs. A large dot does not necessarily mean hot spots for Gang-gangs. Thanks to Steve Wallace for producing this map from data extracted from the COG database.

Of particular importance for the project will be to locate breeding sites within the survey area. If anyone knows of breeding sites could they please let us know via ggquery@canberrabirds.org.au. All information will be kept confidential so please DO NOT enter the location of known nesting sites on the COG-ALA on-line data entry portal. Possible breeding sites are those where birds are seen to frequently inspect hollow or are seen to frequently visit tree hollow during the breeding season. Sites where adults have been observed feeding young or where birds have been observed hollow inspecting very occasionally or out of the breeding season do not indicate breeding sites. If you have any queries or wish to report problems please send an email to: ggquery@canberrabirds.org.au.

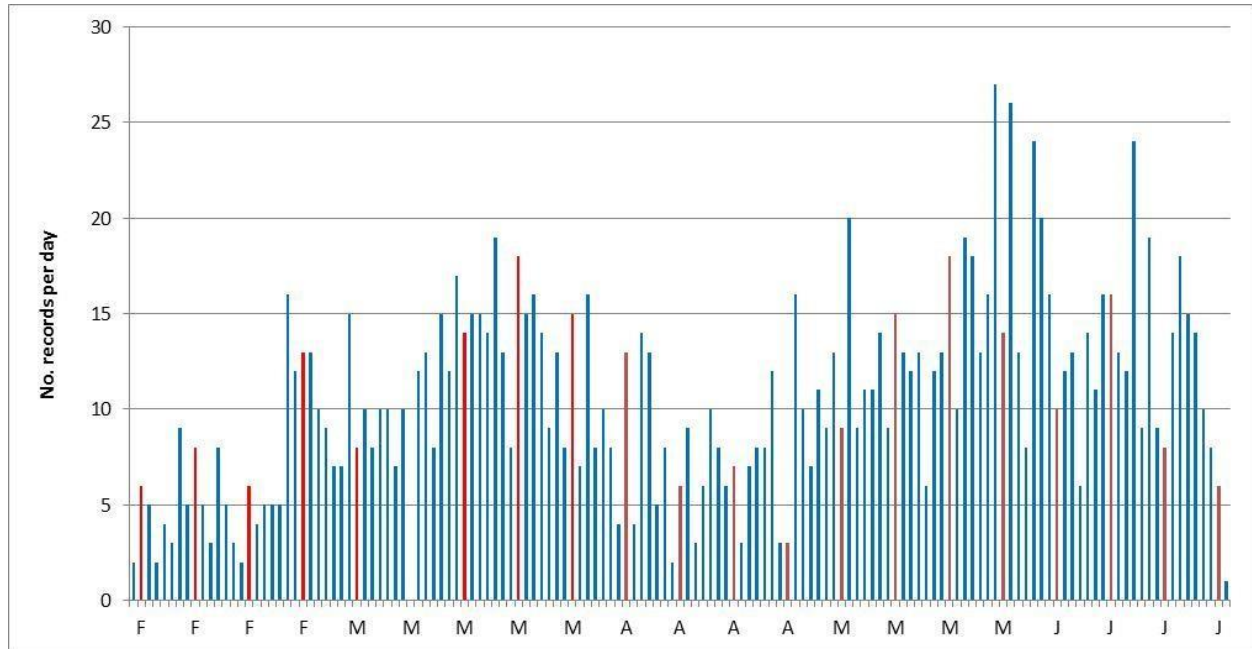
Gang-gang Cockatoo - Reporting Rate 1 July 2003 - 30 June 2013



Gang-gang Cockatoo Project Update- July 2014

Sightings

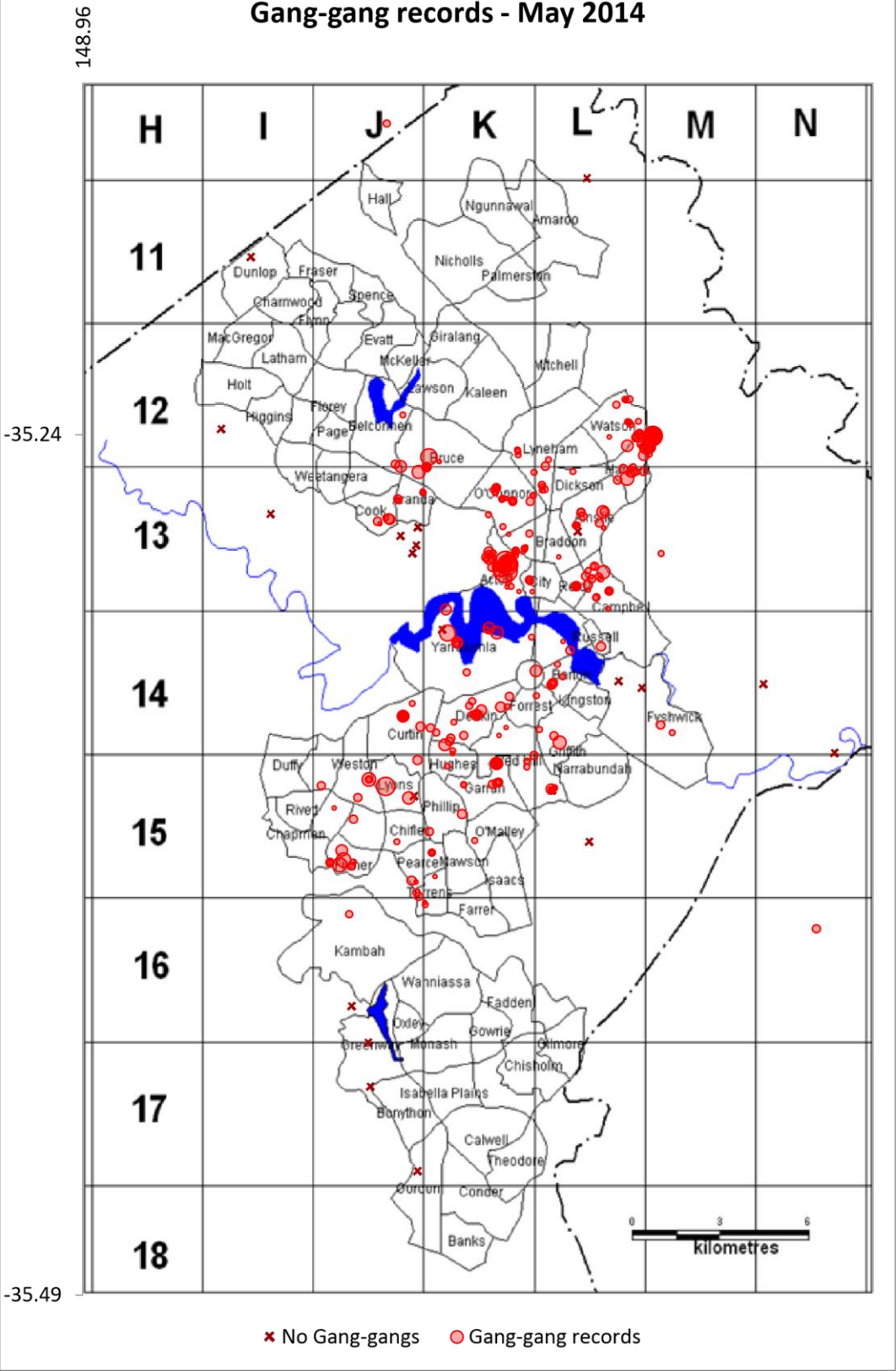
Many thanks to all contributors for another great month of records. Thanks also to Anne Carrick for data entry of general observations and to Michael Robbins for the entry of the Muster observations. At this stage (23rd June) the number of on-line observations is similar to that for April (263-April, 278- June). The month of May ended up with the largest monthly input with 492 records, no doubt due to the interest caused by the Muster at the end of May. There are now 336 registered on-line users who have recorded 1628 observations. The number of daily on-line records is shown below. With no COG meeting at the usual venue in June the Red Box was unavailable and many paper forms are still to be included in the overall count.



The number of daily on-line records between February and June 2014. The red bar indicates Sundays. (Note: this will only be visible on the web version of the newsletter).

Again, with thanks to Steve Wallace for plotting the observations and to Nicki Taws for providing the base maps the distribution of urban records for May is shown below. Each point represents an observation, the larger the dot size the greater the number of birds observed. It should be noted that the intensity of the dot colour increases with additional records from the same point. Muster records are not included.

Gang-gang records - May 2014



A feature for May was the Muster which ran from 21-27th May. To date, 69 site observations on paper forms and 55 on-line site observations have been received. Observations were received from 52 suburbs with 68% of sites recording no Gang-gangs over the seven-day period. The Muster survey confirms the overall picture obtained from the general survey with areas such as Acton, O'Connor, Ainslie, Garran, Pearce and Deakin reporting birds virtually every day. The largest number of birds reported on any one day was 34 in Deakin, 29 in Pearce, 18 in Campbell and Ainslie and 16 in Hackett.

Within suburbs there was some variation. For instance, in Acton there were eight sites of which three did not record any Gang-gangs, Ainslie nine sites of which four did not record any, O'Connor six sites of which four did not record any possibly indicating restricted distribution with particular suburbs at that time of the year.

The allure of the Gang-gang has spread beyond our region. Tim the Yowie Man's blog in the Sydney Morning Herald encouraged a birding reader to take the trip from Sydney to Canberra over the June long weekend to spot some Gang-gangs. We helped out by directing this keen birdo to a hastily devised Gang-gang trail along Dickson Road ANU and up to the ANBG. Our Sydney birdo sighted 40 birds in this gang-gang 'hotspot' and the records have been entered into our survey database.

As we move into the breeding season, we are working to engage people who spend a lot of time outdoors, including our urban Park Care and landcare volunteers working in urban nature reserves, PCS rangers and rural landholders in the COG area of interest. Observers of breeding behaviour and/or nesting activity are asked to send in these sightings via ggquery@canberrabirds.org.au

Presentations have been made at the June meeting of the ACT Park Care and Landcare Coordinators and to the Kosciuszko to Coast (K2C) Partners forum and K2C Landholders Connectivity Workshop: Landscaping for birds, both held in Queanbeyan on 20 June 2014. The landholders had lots of questions and anecdotes about the Gang-gang and interest in its habitat requirements and we secured a few more recruits for our August Gang-gang Muster.

We will be looking to ramp up media interest again ahead of the August Muster where we want as many people as possible involved in our winter count. This Muster will be of particular interest given the expected movement of birds from the mountains to the plains. A revised hard copy data form has been developed to provide room for observers to record information about feeding and bird interactions.

If you are unsure how to participate in the Gang-gang survey details of how to contribute can be found at <http://canberrabirds.org.au/observing-birds/gang-gang-survey/> If you have any queries please email to gquery@canberrabirds.org.au

The GG survey project team

Gang-gang survey Progress Report - September 2014

Survey progress

Community participation in the Gang-gang survey continues to grow. As of 27 August, there are 400 registered users and 2452 records in the ALA Gang-gang survey database. Together with paper records, we have over 2,500 sightings.

At the time of writing this report, we are in the midst of the August Muster Survey count so no data is yet available from the Muster week.

No sightings of breeding activity have been sent through to the survey query line. We are keen for observers to report any obvious breeding behaviour as we head into spring and particularly adult birds inspecting and working on hollows. Observers of breeding behavior and/or nesting are asked to send in these sightings via ggquery@canberrabirds.org.au

A sighting at Mt Taylor Nature Reserve on 24 August recorded parent birds feeding a clutch of juveniles. Any dependent behaviours (feeding cry, begging and feeding) should be noted in your observation records.

If you are unsure how to participate in the Gang-gang survey details of how to contribute can be found at <http://canberrabirds.org.au/observing-birds/gang-gang-survey/> If you have any queries please email to ggquery@canberrabirds.org.au

Community engagement

Just ahead of the August Muster, we launched the 'Imagining Gang-gangs' Student Art Competition and Exhibition at North Ainslie Primary School. North Ainslie has the Gang-gang as its school emblem and was a fitting venue for the launch. COG member and North Ainslie teacher, Megan Mears, facilitated the event at the school. One of the student leaders, Edward York chaired the launch and another leader, Nyssa Murphy read the Gang-gang poem composed for us by John Leonard (reproduced below). Parks and Conservation Service ranger and COG member, Michael Maconachie talked cockatoos and Ganggangs with the students who displayed very good knowledge about our bird of the year.



Ranger Michael Maconachie and students from North Ainslie Public School in front of their artworks in the school foyer. (Photo: Kathy Eyles)

Louise Maher from ABC 666 radio produced a wonderful story about the launch, part of which was relayed live to Alex Sloan's afternoon program. The sound of the primary students mimicking the Ganggang call was a priceless piece of journalism.

Make sure your families and local schools are aware of the Gang-gang student art competition. There is an A4 poster and flyer on the webpage that members can place on community noticeboards. Campbell High School students are busy creating their Gang-gang artworks. Students from Ms Louise Pinder's ceramics classes are working towards producing artworks based on Canberra's territory emblem the Gang-gang and their habitat, as the birds reside in close proximity of the school. The photo below shows Year 8 Student from Campbell High Sonya McNee-Darrach sculpting her gang series out of clay to be fired and decorated for exhibition.

A big thanks to Ian Warden for keeping the momentum going in his Gang-gang column in the Canberra Times and the Canberra Weekly team for promoting the Muster counts.



Designing Gg artworks at Campbell High School (Photo: Louise Pinder)

Gang-gang Friends, by John Leonard

I can hear my grey friends calling
From the gum trees in the morning.

I see them flapping slowly from tree
To tree, swooping up to a branch.

The male: bright red head,
Curling wispy crest, grey body;

The female: grey curly crest, Grey
body barred with orange-yellow.

You can see them chew gum nuts,
Holding them in the left foot,

Or inspecting leaves for larvae
With intent black eye,

Always cautious, often hidden,
But curious, unafraid, watching.

Hear them growl and creak,
See them fly away suddenly!

Canberra's special bird, special sound, My
grey Gang-gang friends.

Gang-gang survey Progress Report - October 2014

Survey progress

Community participation in the Gang-gang survey continues to grow. As of 25 September, there are 420 registered users and 2850 records in the Atlas of Living Australia Gang-gang survey database. Together with paper records, we have well over 3,000 sightings eight months into the survey.

Results the May Muster are summarised in the following table. There was a total of 143 sites surveyed with sheets received from 56 suburbs and 4 rural sites.

| May Muster | Wed | Thur | Fri | Sat | Sun | Mon | Tues |
|---|------------|-------------|------------|------------|------------|------------|-------------|
| Total number of sites | 131 | 130 | 129 | 125 | 125 | 125 | 128 |
| Total number of sites GG's observed | 28 | 27 | 28 | 29 | 30 | 25 | 26 |
| Total number of sites GG's observed (%) | 21.37 | 20.77 | 21.71 | 23.20 | 24.00 | 20.00 | 20.31 |
| Total number of individual Gang-gangs | 168 | 160 | 161 | 134 | 165 | 171 | 156 |

At the time of writing this report, the project team is reviewing the August Muster Survey data and forms are still coming in from the Muster week. Please send in your Muster Form if you have yet to do so.

Very few sightings of breeding activity have been sent through to the Gang-gang survey query line. We are keen for observers to report any obvious breeding behaviour through spring and particularly adult birds inspecting, working on and occupying, hollows. Observers of breeding behavior and/or nesting are asked to send in these sightings via ggquery@canberrabirds.org.au

Also for observers, please note any changes in feeding behaviour and the group size/age of birds in your online or paper form reports. We would expect that group sizes may be changing and some movement of the birds to the mountains.

If you are unsure how to participate in the Gang-gang survey details of how to contribute can be found at <http://canberrabirds.org.au/observing-birds/gang-gang-survey/> If you have any queries please email to ggquery@canberrabirds.org.au

Community engagement

Make sure your families and local schools are aware of the 'Imagining Gang-gangs' Student Art Competition and Exhibition. The school holidays is a great time to get the kids/grandkids involved in an art project. Entries close on the 7 November and the student's art will be exhibited from 26 to 30

November at M16 Artspace Griffith – please put this date in your diaries. There is an A4 poster and flyer on the webpage that members can place on community noticeboards.

The art competition was also promoted in the Inspiring Australia in the ACT e-newsletter distributed by the CSIRO and on Radio Landcare (2XX). We will be at the upcoming Scouts ACT EnviroACTION Forum on Friday 10 October at Hackett Community Centre promoting COG and the Gang-gang survey. There will be a lineup of interesting speakers at the Forum and community tables to introduce young people (16-24 years) to the many opportunities for environmental volunteering in the ACT.

<https://www.facebook.com/events/264388547083221/>

Further media coverage about the Gang-Gang survey will be sought when the August Muster results are compiled and ahead of the November Muster Count.

The GG survey project team



Female Gang-gang feeding on ANU campus in winter (Photo: Yuri Amelin)

Gang-gang Cockatoo Project Update- November 2014

Survey progress

With the help of Anne Carrick and Paul Fennell a backlog of around 1500 observations submitted between July and October has now been cleared. Not including the Muster observations a summary from June is as follows:

| | No. records | No. observers | Group size | Ratio | Ratio |
|-----------|-------------|---------------|------------|--------------------|--------------|
| | | | | adult male: female | adult: young |
| June | 468 | 87 | 5 | 1: 0.91 | 1: 0.21 |
| July | 421 | 71 | 4.5 | 1: 0.88 | 1: 0.26 |
| August | 457 | 92 | 4.3 | 1:0.97 | 1:0.18 |
| September | 402 | 66 | 3 | 1:0.87 | 1: 0.14 |
| October | 181 | 38 | 3 | 1: 0.87 | 1: 0.11 |

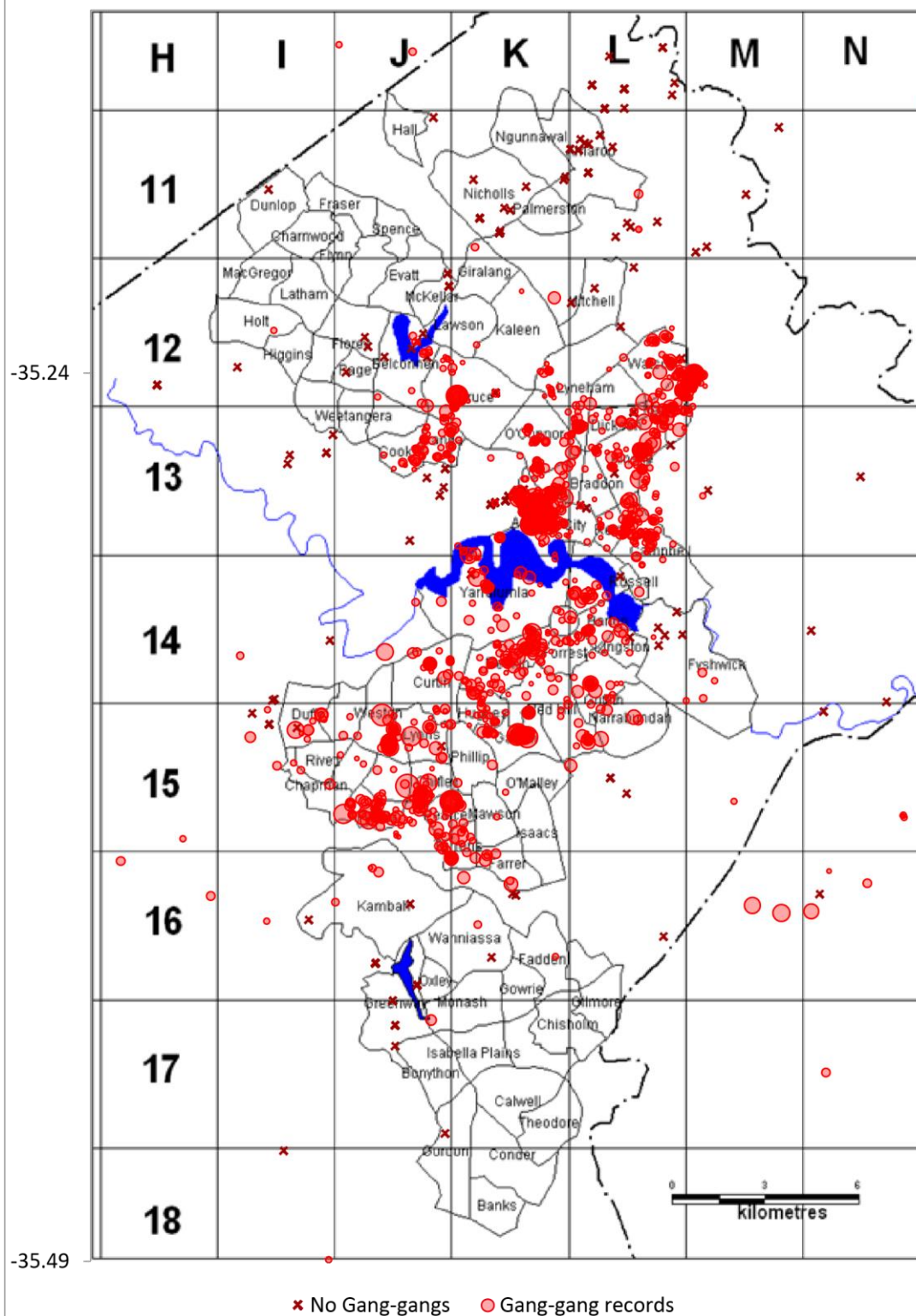
Of these 2000 records over 90% were submitted through the COG/Atlas of Living Australia on-line data entry portal.

Despite now being well into Spring there does not appear to be any change in the urban distribution with the hot spots continuing to border various Canberra Nature Reserves:

| Canberra Nature Reserve | Suburbs |
|------------------------------------|--------------------------------|
| Mt. Majura | Watson, Hackett |
| Mt. Ainslie | Ainslie, Campbell |
| Black Mt, Bruce Ridge, Gossan Hill | Acton, Aranda, Bruce, O'Connor |
| Mt. Taylor | Pearce, Fisher |
| Red Hill | Red Hill, Deakin, Garran |

The map below shows all of the urban and peri-urban observations between March and September and clearly shows the majority of sightings in close proximity to various Canberra Nature Parks. Each dot represents an observation; the larger the dot the greater the number of birds observed. It should be noted that the intensity of the dot colour increases with additional records from the same or similar point. Muster records are not included.

Gang-gang records - 7 months between Mar 2014 and Sep 2014



Observations on hollow inspecting have been reported throughout the year but since September activity around potential nest hollows has become more intense with both male and female at the same hollow, accompanied by much head-bobbing and mutual preening with occasional copulations observed. Every effort is being made to follow up the September and October inspecting observations but to date there have been no reports of successful breeding. This is not surprising given that most pairs do not commence to nest until October-November, and fledging normally takes place in January-February. If you have reported hollow inspecting could you please return to the area and report any further activity.

The 21-27th August Muster observations are still being received. To date the number of observations is well down compared to the May Muster

| | No. sites | No. suburbs inc. rural observations |
|--------|-----------|-------------------------------------|
| May | 146 | 56 |
| August | 61 | 38 |

The reasons for this decline are unknown although at this stage it appears unlikely to be the result of birds moving away from the urban area to the Ranges to breed. If this were the case there would be a proportional increase in the number of returns with nil observations and this does not appear to be the case. In addition, although the rural observations are sparse, there is no indication of an increase in sightings from the Ranges.

Observations from the next couple of months are critical for us to understand whether Gang-gangs are breeding within the urban area or whether they leave the area to breed elsewhere. So, please continue submitting your observations. Forms are available on the COG website, or at the Members Night on 12th November. Observations can be entered on-line at <http://root.ala.org.au/bdrs-core/cog/home.htm>

November Muster Count - 20-26 November.

A reminder that the November Muster Count is coming up (20- 26 November) and we want as many people as possible in the COG region involved in our spring count. This Muster will help us track the expected movement of birds back to the mountains for breeding or perhaps reveal we have a population of resident birds.

The paper data form for Muster week can be downloaded from the website and forms will also be available at the November COG meeting. As for the previous Muster counts, records can also be entered using the electronic form at the end of the Muster week. Instructions for the Muster count and both forms can be found on the Muster page. <http://canberrabirds.org.au/observing-birds/gang-gangsurvey/gang-gang-muster-instructions/>

If you are unsure how to participate in the Gang-gang survey details of how to contribute can be found at <http://canberrabirds.org.au/observing-birds/gang-gang-survey/> If you have any queries please email to ggquery@canberrabirds.org.au

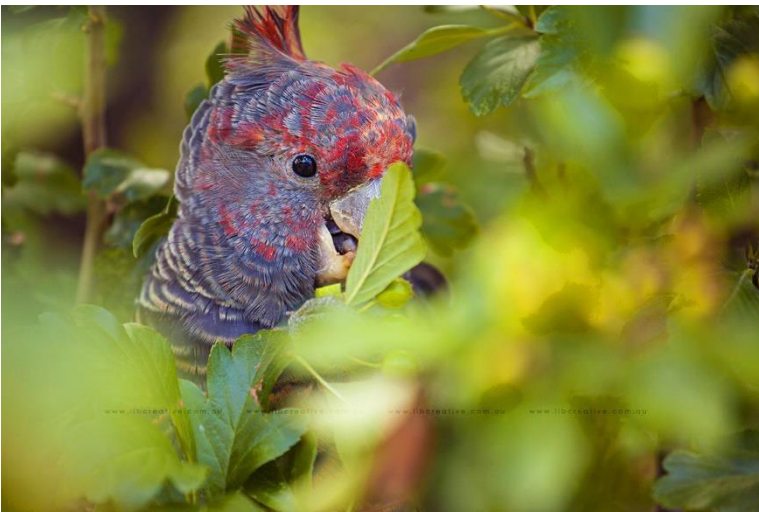
Community Engagement

We were invited by the CSIRO to join the 'Inspiring Australia' showcase in the CBR marquee at Floriade on 30 September. Kathy Eyles presented on the Gang-gang survey, chatted to visitors and distributed information about the Gang-gang survey and *imagining Gang-gangs* student art competition. Our *imagining Gang-gangs* competition was also promoted by Ian Warden at the start of the school holidays in his Gang-gang column in the Canberra Times and competition flyers were left at busy school holiday venues like the CSIRO Discovery Centre and Botanic Gardens.

Student entries to *imagining Gang-gangs* close on 7 November 2014 and our exhibition of student art will be held at the M16 Artspace at Griffith from 26th to 30th November. The official opening will be at 4pm on Wednesday 26th so please come along and support this COG event and vote on your favourite junior and senior student Gang-gang artwork. The most popular choice in the junior and senior category will win a \$250 mysaver bank account with bankmecu.

We were also invited to attend the Scouts ACT EnviroACTION Forum at the Hackett Community Centre on 10 October 2014, to promote the Gang-gang survey and COG. The Forum was targeted to young people (16-24 years) and while a disappointing turn out, some good networking with allied community groups.

Beautiful photos of Gang-gangs appear in the ggquery mail box from time to time including this gem of an immature male by professional local photographer, Lib from LibCeative, who has also given us permission to use on the COG website.



Our engagement with Campbell High has proved fruitful with the birdwatching enrichment program attracting an eager group of students this term. Science teacher, Eva-Marie Bugledich, had an article published in the *Australian Teacher* about the enrichment program which incorporates COG's Gang-gang survey. <http://www.educationhq.com.au/news/11344/the-search-for-the-elusive-gang-gang-cockatoo-provesenriching-for-pupils/>

Gang-gang Cockatoo Project Update- December 2014

Survey progress

As this report is being written we are in the middle of the November Muster; the fourth Muster and one to cover the Spring distribution of Gang-gangs. It is great to see ABC Canberra News picking up the story with a short interview on what the survey is about and what information we hope to gather. A young Gang-gang and Gang-gang Muster participant shown below (Photo: Michael Maconachie)



The first Table in the November newsletter indicated 181 records submitted for October by the time the article needed to be submitted. By the end of the month this had increased to 356 records. At present the number of records for November stands at 165. Given a similar increase for the remainder of November this would indicate a slight drop in the number of submitted Spring records when compared with other seasons. It is hoped that the November Muster results will help us determine if this drop is due to a change in behaviour or distribution by the birds or due to changes in surveyor participation.

To date there has been no records of successful breeding. This is not surprising for this early stage of the breeding season. Hopefully observations from December and into mid-January will tell a different story. The COG Blitz held over the weekend 25-26 October will provide some very useful distribution information but to date the records are still being checked and analysed.

Up to 22 November there are eight observations of Gang-gangs hollow-inspecting from the following or surrounding areas; Watson, Ainslie, Anzac Parade, Deakin, Curtin, Aranda and Greenleigh. A reminder that if any successful breeding is observed, in order to protect the site, could you please submit any location data to ggquery@canberrabirds.org.au

Apart from Sunflower seeds there are only a few observations on what the birds are presently feeding. The only plants mentioned are Eucalyptus bicostata, E. melliodora and Cootamundra Wattle. Many thanks to all those who contributed their observations since the start of the project in March 2014. Please keep the records coming in over the Summer period. The next Gang-gang report will be in the February 2015 newsletter, by which time the project will have been going for nearly 12 months.

Community Engagement

Our imagining Gang-gangs student art exhibition has attracted over 60 entries to date and an amazing array of creative artworks about our much loved faunal emblem. The beauty of the competition is that the participating students have been observing and researching the bird to construct their artworks and most importantly, will be very excited to see their work on display in an art gallery. We hope to travel the exhibition around Canberra to highlight the students work and excite people about how lucky we are to share our city with the Gang-gang cockatoo. A photo by Lillian Burless, age 12 from the exhibition below:

A big thank you to our local Canberra journalists, Ian Warden from the Canberra Times, Panorama's Tim the Yowie Man and Louise Maher from ABC 666, who have all generously contributed print and radio air space to get the word out about the Gang-gang survey this year.

The GG survey project team



Gang-gang Cockatoo Project update - February 2015

Survey progress

The November update (Gang-gang newsletter December 2014) indicated that at the time of writing we were in the middle of the November Muster week. How time flies for it is now time to think about the final Muster for the survey.

The project will finish at the end of February having been going for the past 12 months. The final Muster will as usual go for a seven day period starting 19 February to coincide with GBS week number 8. Results for this Muster compared with the February 2014 Muster will be of particular interest. A copy of the Muster sheet can be found in this newsletter or on the web at

<http://canberrabirds.org.au/observingbirds/gang-gang-survey/gang-gang-muster-instructions/>

Remember that it is possible to enter your sightings on-line at the above link but cannot be done so until the 7 days of observations have been collected. For those new to the Muster survey information can be found at the above link. Any queries about the survey please send to

ggquery@canberrabirds.org.au

For general observations not associated with the Muster the on-line data entry portal will remain open until the middle of April for those wishing to submit forgotten observations. The portal can be found at

<http://root.ala.org.au/bdrs-core/cog/home.htm>

As we write (mid- January) general observations continue to be submitted with 45 on-line entries for January. An analysis of the number of general observations submitted over the last four months indicates a reduction in the number of records submitted due partly to a reduction in the number of records per observer and in December to a reduction in the number of observers.

| | Sep | Oct | Nov | Dec |
|---------------------|-----|-----|-----|-----|
| Number of records | 409 | 355 | 298 | 238 |
| Number of observers | 54 | 49 | 52 | 33 |
| Number of suburbs | 36 | 32 | 33 | 27 |

The Muster results show a slightly different pattern.

| | Aug | Nov |
|--|------|------|
| Number of sites | 83 | 67 |
| Number of Gang-gangs per site | 1.35 | 0.52 |
| Number of Gang-gangs per site with birds | 5.32 | 2.41 |
| Number of suburbs | 44 | 40 |
| Number of suburbs reporting Gang-gangs (%) | 56.6 | 56.7 |

A large reduction in the number of sites, in the number of birds per site and in the number of birds per site which recorded Gang-gangs but only a slight drop in the number of suburbs which submitted observations (including zero sightings) and no drop in the number of sites reporting birds indicating a drop in the number of birds in the area. Whether this is due to birds moving out of the area or to a change in behaviour is unknown.

During November and December there were 23 records from nine suburbs of birds observed inspecting hollows. To-date none appear to have produced any young. Information from three sites with multiple observations indicates that the heavy rain in mid-December may have put an end to any successful breeding. **Any reports of adults with begging young are especially important at this time of the year.**

Linda Beveridge filed this interesting observation on Australia Day about a pair of adults with a young bird possibly getting its flying wings at Rosenthal Street, Campbell.

The adult male and female perched in a Euc. polyanthemus near 31 Rosenthal St, and watched the junior (possibly female) fly from this tree in a large slightly wobbly loop to an exotic tree in a neighbouring yard. Then adults flew to a Eucalyptus at the above address and called junior who flew in big loop still a little wobbly towards them then veered away and flew on to a Eucalyptus polyanthemus in Ferdinand Street (the next street up the hill). Direct distance between junior's perches would have been about 100m, but with the loop probably more like 150m.

Community engagement

The *Imagining Gang-gangs* student art exhibition, held at the M16 Artspace Gallery Griffith, in the last week of November was a great success. Ian Warden was given a sneak preview before the opening and gave the exhibition great press, including a photograph of the drawing by Lara Hedley of Campbell High that was awarded the most popular senior artwork (and was the most popular artwork overall) as voted by visitors to the exhibition. Louise Maher opened the exhibition and did a live radio cross to ABC 666's Drive Show including an interview with Campbell High student Lara Hedley and her art teacher Louise Pinder. Many of the students that entered their artworks attended the opening and visited the exhibition with their families. There was great excitement and pride, especially among the junior artists, to see their artworks hung in a real gallery.

The prizes (\$250 for each winner) donated by bankmecu were presented to Lara Hedley and Dan Leivesley from North Ainslie Primary (Dan won the most popular junior artwork) at a ceremony for the winning artists and their families at the bankmecu's Civic branch on Thursday 11th December 2014. COG Vice President, Neil Hermes, and Jo O'Sullivan, Community Development Manager bankmecu, presented certificates to the winners (see photos below). A big thanks to all the enthusiastic students and their teachers for making the exhibition such a memorable event in COG's 50th birthday year, and to bankmecu for their generous support.



Dan (left) and Lara (right) receiving their awards with Neil Hermes and Jo O'Sullivan (Kathy Eyles)

The artworks from *Imagining Gang-gangs* travelled to Civic Library for exhibition over the January 2015 school holidays. Civic library staff report that library users are enjoying the display on the mezzanine level with over 100 colourful but 'silent' Gang-gangs. Canberra families attending school holiday events and people attending public meetings at the library have viewed the exhibition. Ian Warden promoted the Civic library exhibition in Gang-gang in the Canberra Times and the Canberra Weekly also gave it a plug. Copies of the Gang-gang survey brochure and COG's *Where to find Birds in the ACT* have been provided for visitors to the exhibition.

As part of reporting on the Gang-gang survey, we will be analysing community interest and engagement over the duration of the survey. Presentations about the survey findings will be made to the Friends of the Botanic Gardens on Thursday 6 August 2015 and at other community forums. A report will also be published in Canberra Bird Notes.

The Gang-gang project team

Gang-gang survey project update – March 2015

As the Gang-gang survey draws to a close at the end of this month, at the time of writing (mid-February) observers have logged over 4,500 sightings of birds over the 12 months of the survey. Observations from five quarterly Muster counts have provided over 2,000 additional observations. As mentioned in the February newsletter the ALA data entry portal will remain open until mid-April for those wishing to submit forgotten observations.

During February we have received many reports about Gang-gangs returning to the suburbs in larger groups with juvenile birds present. The final Muster count is now underway and will provide a better picture of these movements and hopefully widespread evidence of breeding success. Gang-gangs have been reported feeding in Chinese pistachio (see photo below by Tegan Liston) and other exotic (seed) trees and even feasting on magnolia flowers in Chifley.

Gang-gang enthusiasts have been capturing this late summer action on camera with great shots by Geoffrey Dabb of a parent bird feeding a begging juvenile posted on the chatline and Julian Robinson's shot of Gang-gang male antics at the Botanic Gardens that featured in Ian Warden's Gang-gang column.

We received good media coverage ahead of the final Muster count with thanks to Ian Warden at the Canberra Times and the team at the Canberra Weekly.



Female Gang-gang feeding in Chinese Pistachio tree (Photo: Tegan Liston)

Data from the survey will be compiled and analysed by the project team ahead of publication in Canberra Bird Notes and a presentation at the Friends of Botanic Gardens Lunchtime talk on 6 August 2015 and other community forums.

The Gang-Gang project team

Appendix C

Media articles and programs about the Gang-gang cockatoo survey project

Survey coverage in the Gang-gang Column, Canberra Times - May 2014



Links to media articles and programs about the Gang-gang Cockatoo survey project.

[Gang-gang: Magpie moves inspire city's martial artists](#) about
the final muster

Ian Warden, Canberra Times, 17 February 2015

[Gang-gang: Kestrels and Nonsense](#) about
the student exhibition reopening
Ian Warden, Canberra Times, 1 January 2015

[Imagining Gang-gangs art show opens at M16 Artspace](#)
Ian Warden, Canberra Times, 26 November 2014

[‘Citizen scientists surveying Canberra’s gang-gang cockatoos’](#)
ABC, 23 November 2014

[‘Downy eagle nestling on way to becoming a lean killing machine’](#)
regarding North Ainslie Primary School and Imagining Gang-gangs
Canberra Times, 23 October 2014 – Ian Warden

[‘The search for the elusive Gang-gang cockatoo proves enriching for pupils’](#)
Sarah Duggan, EducationHQ – 26 September 2014

[‘Imagining Gang-gangs’](#)
Canberra Times, 28 September 2014 – Ian Warden

[‘Pupils draw on cocky imagination’](#)
Canberra Times, 18 August 2014 – Ian Warden

Louise Maher, 666 ABC Canberra, writes online about [‘Imagining gang-gangs: students encouraged to create art inspired by much-loved birds’](#)

[Gang-gang. PGR. It’s a jungle out there](#)
Canberra Times, 4 July 2014

<http://www.abc.net.au/news/2014-05-22/counting-the-gang-gang-cockatoos/>
7pm TV news ACT, 22 May 2014

[Tim The Yowie Man: Gang-gang secrets](#) *SMH*
blog, 9 May 2014

[Are Canberra’s Gang-gang cockatoos boycotting Tuggeranong, Gungahlin? – Ian Warden](#)
Canberra Times, 9 May 2014

[Citizen scientists track Gang-gangs in Canberra](#) *Atlas*
of Living Australia blog, 28 April 2014

[What’s their game? Cockatoos favour playing at the net – Ian Warden](#)
Canberra Times, 17 Mar 2014

[Canberra survey: Gang-gang style – Louise Maher](#)

666 ABC Canberra, 13 Mar 2014

[Going gah-gah over beautiful gang-gangs – Ian Warden](#)

Canberra Times 5 Mar 2014

[Canberra's gang-gang cockatoos under threat from smugglers](#)

Canberra Times 27 Feb 2014

[Noisy Gang-gangs' lives remain a mystery – Ian Warden](#)

Canberra Times 24 Feb 2014

[Winging it on cocky knowledge: Gang-gang survey](#)

Canberra Times 14 Feb 2014

Canberra Weekly – examples from 'Have you Heard' column.

news

Gang-gang muster
As the Canberra Ornithologists Group's year-long citizen science Gang-gang survey winds up this month, Canberra residents are urged to get on board for the last Gang-gang Muster count from 19 to 25 February. The week-long survey counts record the presence and/or absence of Gang-gangs across the region.

Instructions about the Gang-gang muster can be found at canberrabirds.org.au; a simple online electronic form can be used to enter records at the end of the week or you can download a paper form. Gang-gang survey results will be available later in the year with talks planned for various community forums.

Lifeline EPIC Bookfair
Find your reading pleasures and treasures among the hundreds of thousands of items on offer at the Lifeline EPIC Bookfair from Friday 13 to Sunday 15 February. Held over three days at Exhibition Park in Canberra (EPIC) with a full range of fiction and non-fiction, including rare books and collectables, children's books, textbooks, comics, vinyl, CDs, DVDs and more – there's something for everyone. Saturday 14 February is family day with fun activities for the kids and a special appearance by Prime Possum at 10am. Proceeds go towards Lifeline's 13 11 14 telephone crisis support service – saving lives in our community. For more information, visit act.lifeline.org.au

Share your community event. Email news@canberraweekly.com.au in the subject field. Deadline is 10 days prior to Thursday edition date.

HAVE YOU HEARD?
■ what's on ■ must do ■ must see

Join the Gang-gang survey
To celebrate 50 years of birding in the ACT in 2014, Canberra Ornithologists Group (COG) has initiated the Gang-gang Muster – an exciting citizen science project to engage the Canberra community in tracking the much loved Gang-gang cockatoo across our gardens, nature reserves and other urban spaces. The Gang-gang is a special symbol of our bush capital: the native bird and wildlife emblem of the ACT, the emblem of the Parks and Conservation Service and COG. The project is designed to help COG learn more about urban habitat and behaviour of this emblem bird. The project is gathering momentous data: 90 local people already signed up to record sightings and over 250 records to date. The Gang-gang survey will run until 2014's 'muster' weeks in May (21-27), August (18-24) and November (20-26) 2014 and February 2015. Find out more at canberrabirds.org.au or email ggquery@canberrabirds.org.au with any queries.

Join the Gang-gang survey

To celebrate 50 years of birding in the ACT, the Canberra



Ornithologist Group (COG) **Earth Hour 2014** has initiated 29 March, 6:30pm – the Gang-9:30pm gang Muster

–an exciting Join the ANU and citizen science project to engage the Canberra community in tracking the loved Gang-gang cockatoo across nature reserves and other environmental issues and urban spaces. action against climate change.

The project is designed to help the Canberra community learn more about the urban habitat and behaviour of this fascinating bird. Over 90 locals have

already signed up to record sighting with over 250 records to date. For any queries about the project please email gquery@canberrabirds.org.au.

[READ MORE](#)



Canberra community for Earth Hour to celebrate much-our commitment to our gardens, environmental issues and

[READ MORE](#)



31 March, 5:30pm–6:15pm



Appendix D

Copies of COG media releases about the Gang-gang cockatoo survey project



HELP CANBERRA BIRDOS TRACK THE GANG-GANG COCKATOO

Canberra Naturalist, Ian Fraser, today launched the Gang-Gang Muster – an exciting citizen science project to track the Gang-gang cockatoo across the Canberra region.

“The Gang-Gang is a much-loved and engaging bird whose ‘squeaky gate’ call can be regularly heard across Canberra. The Muster is a great opportunity for schools, community groups and local people to log sightings of the Gang-gang cockatoo in our urban gardens, streetscapes and nature reserves.” Mr Fraser said.

The survey, created by the Canberra Ornithologists Group (COG), is part of a number of activities to celebrate COG’s 50 years of birding in the ACT. The Gang-gang was chosen as the ‘Bird of the Year’ for 2014, reflecting its significance for the ACT and identity as COG’s emblem.

COG President, Alison Russell French explains, “This is a really exciting project that we launched. The Gang-gang is the ACT’s official native bird and wildlife emblem as well as the emblem of COG and the ACT Parks and Conservation Service”. Surprisingly, not a lot is known about our special bird.

“This survey will help us learn more about the local population, its breeding and the habitat it uses as well as its behaviour. We want to encourage the community to record sightings of Gang-gangs all year round or during our 4 special Muster weeks. It is also a pilot for future ‘Bird of the Year’ projects to enlist community help to survey local birds” Ms Russell-French said.

The Gang-gang survey will run until 2015 with Muster weeks in May, August, and November 2014 and February 2015.

To find out more about the survey visit www.canberrabirds.org.au

Date: 11 March 2014
Media Contact: Kathy Eyles



Gang-gang survey going Gangbusters!

Its official, Canberra residents love the Gang-gang Cockatoo. Over 200 people have reported sightings of this engaging bird since February, as part of Canberra Ornithologists Group's (COG) Gang-gang survey.

"We are thrilled with the fantastic response from the Canberra community," said Chris Davey, Project Manager for the survey. "We have over 700 on-line sightings ranging from single birds in home gardens to a flock of 30 birds seen out at Tidbinbilla".

"Most sightings are coming from the Canberra suburbs near the Mt Ainslie and Black Mountain Nature Reserves" Mr Davey said. "People who want to join in the Gang-gang survey can go to the COG website, register and then enter sightings into the survey portal created by the Atlas of Living Australia".

The Gang-gang survey also includes four week-long 'Muster' counts, with the next count running from 21 to 27 May. Mr Davey is encouraging everyone to get on board for the May Muster. "We want people to tell us whether they see Gang-gangs that week and even if they don't see any birds, these nil reports are really important for the survey"

Mr Davey said the Gang-gang Muster is a simple bird-watching activity that anyone can take part in. "Choose somewhere you spend a little time most days of the week, like your home garden or the local park, and record whether you see or hear any Gang-gangs, or not."

A simple on-line electronic form can be used to enter records at the end of the week or people can download a paper form. Both forms can be found on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gangsurvey/gang-gang-muster-instructions>

Date: 12 May 2014

Media Contact: Kathy Eyles 0407 899 698



Gang-gangs enjoy Canberra in Autumn

The general public are helping to build a regional picture about the habitat and feeding behavior of the Gang-gang cockatoo, as part of the Canberra Ornithologists Group's (COG) Gang-gang survey.

"Over 300 people have entered 1800 sightings in the Atlas of Living Australia survey web portal," said Chris Davey, Project Manager for the survey. "When combined with paper records, we have over 2000 public sightings of Gang-gangs to the end of June."

"These sightings show the birds are using habitat in and around our nature reserves in Canberra's inner north and south, and around Woden and Weston Creek" Mr Davey said. "We are also getting a good idea about what the birds are feeding on, mainly small seeds and fruits from Eucalyptus sp., Chinese Pistachio, Elm and Hawthorn trees."

The Gang-gang survey also includes four week-long 'Muster' counts, to record the presence and/or absence of Gang-gangs. Mr Davey said the May Autumn 'Muster' produced records from 52 suburbs. "The top suburbs for Gang-gangs were Acton, O'Connor, Ainslie, Garran, Pearce and Deakin but importantly, 68% of sites recorded no Gang-gangs during the week, which will allow us to more accurately map the distribution of the bird."

With the breeding season coming up, Mr Davey urged people to log daily sightings and participate in the next 'Muster' count week from 21 to 27 August. "We are hoping to track movement of the birds in late winter to see whether the birds head up to the mountains for breeding or whether this is changing and there is breeding activity in urban areas. "

Mr Davey said the Gang-gang Muster is a simple bird-watching activity that anyone can take part in. "Choose somewhere you spend a little time most days of the week, like your home garden or the local park, and record whether you see or hear any Gang-gangs, or not. Even if you don't see any birds, these reports are really important for the survey"

A simple on-line electronic form can be used to enter records at the end of the week or people can download a paper form. Both forms can be found on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gangsurvey/gang-gang-muster-instructions>

Date: August 2014

Contact: Kathy Eyles 0407 899 698



Kids to use art to explore the Gang-gang cockatoo

ACT park rangers and the students of North Ainslie Primary School have something very special in common – the Gang-gang cockatoo is their official emblem and proudly worn on their respective uniforms.

Students teamed up with local park rangers today to launch an exciting new project – the *Imagining Gang-gangs* student art competition and exhibition.

Students across the ACT are invited to make artworks about the Gang-gang cockatoo, as part of the Canberra Ornithologists Group's (COG) Gang-gang survey project. Student artworks will be exhibited later in the year.

"We are delighted to host the launch of this wonderful project," said Louise Owens, Principal of North Ainslie Primary School. "The Gang-gang is our school emblem and part of our school's identity. This project encourages students to be both curious and creative which fits perfectly with the inquiry approach to learning at our school," Ms Owens said.

Park ranger, Michael Maconachie, helped launch the project. "The Gang-gang cockatoo is a great subject for kids art with contrasting feather colouring, delicate markings and a quirky 'squeaky gate' call. We know the birds use the forest habitat on nearby Mt Ainslie and these lucky students will be sure to see and hear Gang-gangs," Mr Maconachie said.

"Ainslie is one of the top suburbs for Gang-gang sightings so far in the survey," said Kathy Eyles from COG's Gang-gang project. "School families can join the Gang-gang survey by participating in the 'Muster' count week from 21 to 27 August. Choose a spot you spend time most days of the week, like your home garden, and record whether you see or hear any Gang-gangs, or not. Even if you don't see any birds, these reports are really important for the survey," Ms Eyles said.

Information about the *Imagining Gang-gangs* student art competition and the August Muster Survey count can be found on the Canberra Birds website: <http://canberrabirds.org.au/observing-birds/gang-gang-survey/>

Date: 15 August 2014

Contact: Kathy Eyles - 0407 899 698



Have our Gang-gangs headed to the hills?

Canberra residents are urged to get on board for the November Gang-gang Muster count, as part of Canberra Ornithologists Group's (COG) year long citizen science Gang-gang cockatoo survey.

With almost 2000 public sightings since June, we are getting a pretty good picture of the distribution of Gang-gangs in Canberra" said Chris Davey, Project manager of the survey. "While group sizes are getting smaller moving into spring, the birds are most often recorded in suburbs adjoining forested habitats on Mt Majura, Mt Ainslie, Red Hill, Black Mountain and Mt Taylor".

The Gang-gang survey also includes four week-long 'Muster' counts, to record the presence and/or absence of Gang-gangs with the next count coming up from 20-26 November.

"The November Muster count is important to help us map whether the birds have headed up to the mountains to breed" Mr Davey said. "We have assumed Gangs-gangs return to the cool mountain habitats over spring and summer but it is possible some birds are staying and breeding in our urban woodland reserves".

"The November count should shed some light on movement of the birds and changes to group sizes as we expect last years juvenile birds will become more independent of their parents" Mr Davey said.

Mr Davey said the Gang-gang Muster is a simple bird-watching activity that anyone can take part in. "Choose somewhere you spend a little time most days of the week, like your home garden or the local park, and record the maximum number you see or hear each day. Even if you don't see any birds, these reports are really important for the survey. To measure any changes in distribution it is particularly important that those who contributed to previous Musters do so again from the same site for the November Muster".

A simple on-line electronic form can be used to enter records at the end of the week or you can download a paper form. Forms on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gangsurvey/gang-gang-muster-instructions>

Gang-gang fans should also head down to the M16 Artspace Gallery, Griffith for the *Imagining Ganggangs* exhibition of student artworks. The exhibition opens at 4pm on Wednesday 26 November and runs through to Sunday 30 November. Visitors will be invited to vote for their favourite artwork by a primary and a senior year student. The most popular two works will win \$250 from bank mecu so get along check out the creative talents of the students.

Date: 13 November 2014

Contact: Kathy Eyles 0407 899 698



Last chance to count Gang-gangs

Canberra residents are urged to get on board for the last Gang-gang Muster count, as the Canberra Ornithologists Group's year long citizen science Gang-gang survey winds up at the end of February. The week-long 'Muster' survey counts record the presence and/or absence of Gang-gangs with the final count coming up from 19-25 February 2015.

Chris Davey, project manager of the survey, said the late summer count is important to help us map whether the birds have returned to suburbs. "We saw a reduction in the number of Gangs-gangs recorded in the November Muster suggesting some birds may have returned to the cooler mountain habitats over spring and summer".

Despite some promising observations about hollow preparations and nesting behavior over spring, there were no positive breeding events recorded in Canberra's urban nature reserves. "Nesting hollow competition appears to be a factor and where birds had taken up residence, a heavy rainfall event in early December led to nests being abandoned in Mt Majura and Mt Mugga Mugga Nature Reserves" Mr Davey said.

The results of the November count shows both a drop in the overall numbers of birds from the May and August Musters and much smaller group sizes. "The February Muster count will give us a better idea about the seasonal distribution of the birds and we may see an increase in group sizes with a new crop of juvenile birds" Mr Davey said.

Mr Davey said the Gang-gang Muster is a simple bird-watching activity that anyone can take part in. "Choose somewhere you spend a little time most days of the week, like your home garden or the local park, and record whether you see or hear any Gang-gangs, or not. Even if you don't see any birds, these reports are really important for the survey".

A simple on-line electronic form can be used to enter records at the end of the week or you can download a paper form. Forms on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gangsurvey/gang-gang-muster-instructions> Results of the Gang-gang survey will be available later in the year with talks planned for the Friends of the Botanic Gardens and other community forums.

Date: 2 February 2015

Contact: Kathy Eyles 0407 899 698

Appendix E

Examples of flyers and posters for allied groups (rangers; scouts; schools and care volunteers) about the Gang-gang cockatoo project



Gang-gang survey 2014

Can you help?



This year the Canberra Ornithologists Group (COG) celebrates 50 years of birding within the ACT and local region. One of our special projects for the year is a survey of the Gang-gang Cockatoo.

The Gang-gang is not only the ACT wildlife emblem but also the emblem of the Parks and Conservation Service (PCS) and the COG logo.

COG wants to find out more about this engaging bird including:

- Regional distribution
- Movement patterns
- Breeding sites
- Food preferences

The project includes the collection of observations from both the urban and rural areas and the involvement of PCS rangers and field staff who are working in nature reserves will be of great value. You can help by logging sightings of birds on the survey website or using the paper form. Further information is on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gang-survey/>



Gang-gang survey 2014

Can you help?



The Gang-gang Muster is one of series of projects initiated by the Canberra Ornithologists Group (COG) to celebrate 50 years of birding in the ACT. Find out more: <http://canberrabirds.org.au/>

Joeys, Cubs and Scouts

Get on board with the Gang-gang Muster survey – a great project to put towards the Environment parts of the award scheme. There are 2 ways you can get involved:

- Log sightings on-line when you see or hear Gang-gangs at home, walking to school and out scouting!
- Recording sightings in your home garden during the Muster Weeks (May, August and November 2014)

Venturers and Rovers

Lead a younger group and report Gang-gang sightings during the Muster Weeks perhaps using the Scout hall or nearby nature reserve as your Muster location.

Develop an ACT Gang-gang discovery trail – self-guided activity that can be promoted to local Scout groups. This might involve identifying areas of urban Canberra frequented by Gang-gangs (like the ANBG) and describing the season, times of the day when you might sight the birds, what to look and listen for (bird plumage and calls) and their habitat (trees for feeding and possible breeding sites).

Help set up a Youth chapter of the Canberra Ornithologists Group (COG), that could be promoted to Scouting and other youth groups. Tap into local walks to watch birds and learn from experienced ACT “birdos”.

All the info about reporting Gang-gang sightings is on the Canberra Birds website:

<http://canberrabirds.org.au/observing-birds/gang-gang-survey/>



Get on board with the *Gang-gang* survey

A fun and educational activity for your class and school

The Canberra Ornithologists Group (COG) has initiated the Gang-gang survey as part of its 50th year celebration of birding in the ACT. The Gang-gang is both the native bird and wildlife emblem of the ACT and is easily observed with its unique slate grey and red plumage and squeaky gate call.

Already over 200 Canberra residents are taking part in the Gang-gang survey, logging over 700 sightings of this much loved bird in home gardens, streets, parks and nature reserves.



Male Gang-gang feeding on Chinese pistachio seeds Torrens (Photo David Flannery)

COG is keen to work with teachers and schools who are interested in including this simple and fun birdwatching activity into their programs. There are two (2) ways your school can get involved:

- Reporting any Gang-gangs observed or heard in the schoolyard or adjoining nature reserve or parkland.

Students would record date and time; location; number of birds seen or heard; male or female (if possible); flying/perching/feeding behaviour.

- Participating in the week-long Muster counts in May, August and November this year. The upcoming May Muster runs from 21-27 May.

The Muster count would involve students picking a site, looking and listening within a radius of 100m for a short time every day and recording the number of birds seen or not.

The survey could be run as an early morning enrichment exercise or a class based activity to support specific parts of the science curriculum. The survey could also be led by school Environment leaders or student groups that undertake community service and outreach activities.

No bird-watching expertise is needed and survey forms and identification materials are available on the COG website. <http://canberrabirds.org.au/observing-birds/gang-gang-survey/>

A copy of the May Muster Form is also provided overleaf for interested teachers and students.

COG is also developing a simple Bird-Observer and Identification form that can be used to compile a bird list for the schoolyard or another study site. This survey could then be repeated to compare birds at the site across the seasons. This form will be ready ahead of the August Gang-gang Muster Count.

Compiling a school bird list is an interesting companion activity that students could undertake at the same time as the Muster count.

Please contact kathy.eyles@anu.edu.au if you need more information about the Gang-gang Survey and about the companion birding activity.

Imagining Gang-gangs



Student art comp and exhibition about the Gang-gang cockatoo

Photo: Gang-gangs at big school Kathy Eyles

School students (5-18 years) are invited to make artworks about the Gang-gang cockatoo using their medium of choice. Distinctive feathering, a quirky call and antics will make for exciting art.

Entries close **7 November 2014** - Artworks will be displayed at the *imagining Gang-gangs* exhibition, 26-30 November @M16 Artspace Griffith
Forms and info: <http://canberrabirds.org.au/observing-birds/gang-gang-survey/>

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responsible banking™

supports *imagining Gang-gangs* with a \$250 bankmecu MySaver account to be awarded to a primary and a secondary entry as voted by people's choice.





Launch of *imagining Gang-gangs* Student Art Competition North Ainslie Public School – Friday 15 August 2014

Dear Parents/Carers,

The Gang-gang cockatoo is the ACT's wildlife emblem and a much loved bird that visits our home gardens, urban parks and nature reserves. Our ACT park rangers, your school and the Canberra Ornithologists Group (COG) all share something special in common, the Gang-gang is our emblem.

To celebrate 50 years of birding in the ACT, COG is engaging the local community to help us survey the Gang-gang cockatoo.

As part of the Gang-gang project, we are running the '*Imagining Gang-gangs*' student art competition and exhibition. School students across the ACT are invited to make artworks about the Gang-gang cockatoo using the medium of their choice. A selection of student artworks will be exhibited later in the year.

Your school is hosting the launch of this exciting project at the school assembly on Friday 15 August and we have invited local park rangers to talk to the students about Gang-gangs and help us with the launch.

It is more than likely that local media will also be present at the launch. To enable your child to be involved, the media clearance must be completed and returned to your child's classroom teacher by Friday 15 August.

Warm thanks,

Kathy Eyles,
For COG Gang-gang Survey Project



Gang-gang Survey Project
Canberra Ornithologists Group
PO Box 301
Civic Square ACT 2608

MEDIA RELEASE

Imagining Gang-gangs Student art competition – Launch

I give permission to the Canberra Ornithologists Group (COG) for my child.....
..... a student at North Ainslie Primary School to participate in the
launch of the 'Imagining Gang-gangs' Student Art Competition. I understand that his/her
involvement may include, but not be limited to:

1. Participating in a school assembly on Friday August 15, 2014, 2:00-3:00pm where 'Imagining Gang-gangs' will be launched, coordinated by COG.
2. Use of his/her name, likeness and limited biographic details (e.g. age) in COG publicity associated with the project, including in audio, visual (moving and still images) and audio/visual recordings on the day and for the life of the project.
3. I understand that his/her photograph/film footage and limited biographical details may be used by media representatives who may attend to cover the launch on the day on behalf of media outlets.
4. I acknowledge that COG has no control over whether or how the attending media covers the launch.
5. I understand that all queries in connection to the 'Imagining Gang-gangs' school art competition should be directed to Kathy Eyles at the Gang-gang Survey project on 0407 899 698 or email at Kathy.eyles@anu.edu.au

Signed.....

Date.....

Relationship to student.....



Parkcarers and Landcarers

We need your Group to get on board the Gang-gang Survey Muster Count 20-26 November 2014

We need your help to tell us whether you see any Gang-gangs (or not) in our November Muster Week. Pick a location you spend time every or most days (like your home garden, your local park or nature reserve, the grounds of your workplace). Listen and look for Gang-gangs and record the 'largest number' you see at 'one time' or record 0 (zero) if you don't see any birds.

We need as many people across the ACT participating in the Muster count so we can map the regional distribution of the birds. ***The November count is important to help us learn more about whether the birds head up to the mountains over spring and summer or stay in urban Canberra to breed.***

Nil observations will provide important data for the survey. Muster count instructions and forms are available from: <http://canberrabirds.org.au/observing-birds/gang-gang-survey/gang-gangmuster-instructions/>

As we move into the breeding season, we are seeking observations about mating behaviour and potential nesting sites in our urban parks and nature reserves. Volunteers who spend a lot of time in reserves are ideally placed to watch for breeding activity. Given the sensitivity of this data, email these sightings and a Gang-gang data sheet - http://canberrabirds.org.au/wpcontent/uploads/2014/02/GG_Survey_2014_final.pdf to ggquery@canberrabirds.org.au rather than into the online database.

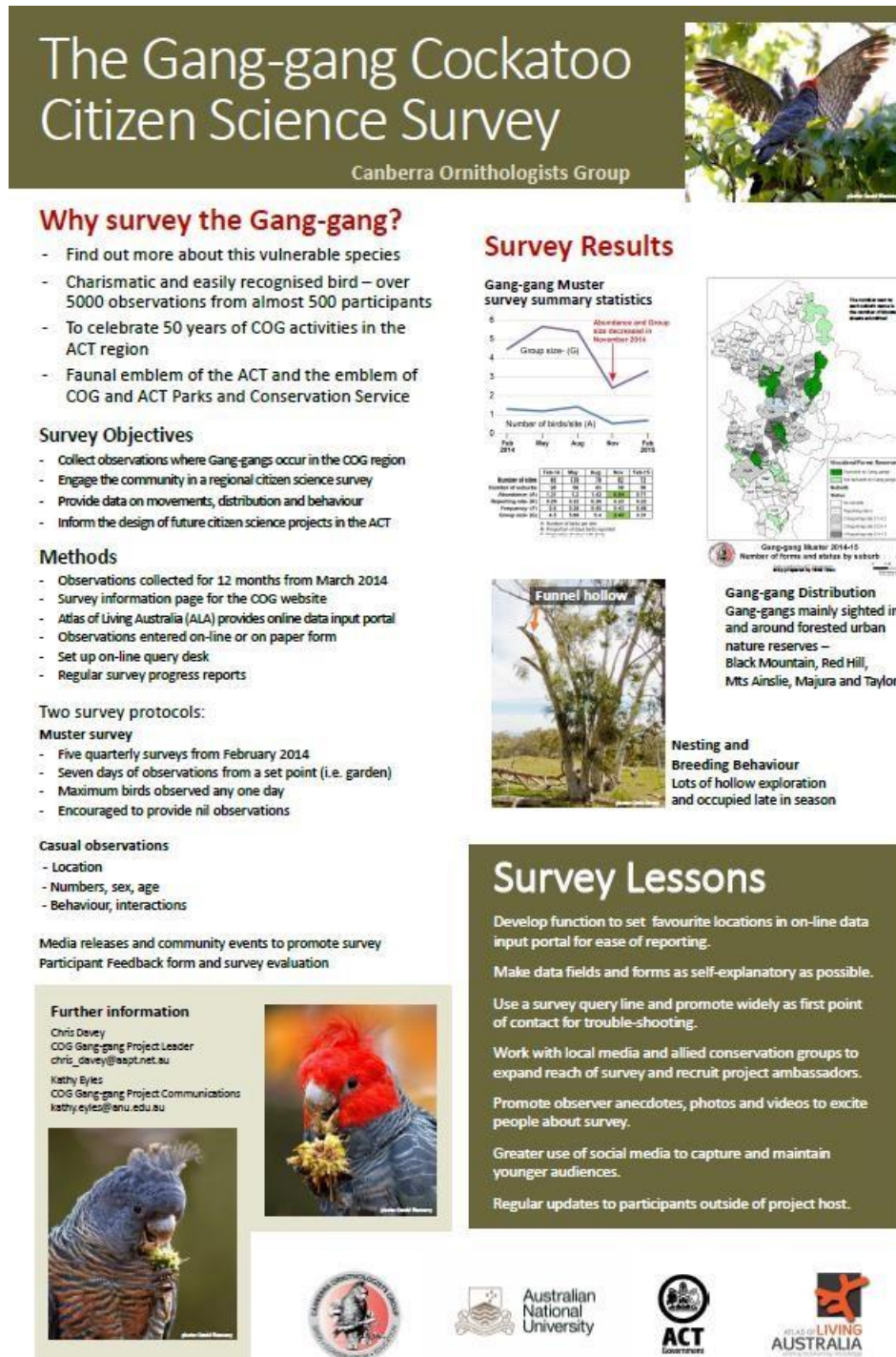
Hearty thanks from the COG Gang-gang Survey Project Team



Gang-gangs in Garran – David Flannery

Appendix F

Poster presentation Gang-gang Cockatoo project Citizen Science Survey Australian Citizen Science Association – Fenner Conference 25-26 July 2015



Appendix G

Copy of e-mail invitation to participants for feedback and survey Instrument/Feedback Form

Email invitation

Dated 4/7/15

Feedback Form attached

Dear Gang-gang survey participant

Thank you for participating in the Canberra Ornithologists Group's Gang-gang survey. We have been delighted by the fantastic response from the Canberra and region community to the survey and are now busy analysing the 1000's of observations submitted by 100's of observers. As part of our analysis we are also hoping to gain a better understanding about community engagement in the survey. Please take a few minutes to complete the attached feedback form. We want to hear from all participants whether you submitted 1 or 100 Gang-gang observations. Your feedback will help us with the design of future surveys and also contribute to a wider understanding about why people participate in citizen science projects. Please note that the information you provide COG is confidential and will not be used to reveal your identity in any written form.

We will draw 2 names from the completed forms to win a copy of Meredith Cosgrove's fabulous new book, *Photographic Guide to Native Plants of the ACT*. You can check the book out online at meadowargus.com. Please return your form by cob 1 May to kathy.eyles@anu.edu.au to go into the book draw. Our sincere apologies if you receive this email twice, your email address will have been recorded for both the Muster and adhoc surveys but you only need to complete one feedback form.

Kind regards

Kathy

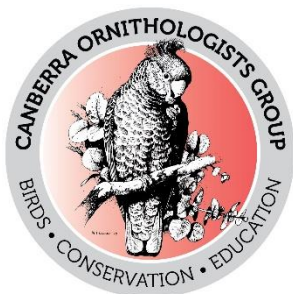
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Kathy Eyles

for the COG Gang-gang Project Team

t: 0407 899 698 e:

kathy.eyles@anu.edu.au



Gang-gang Cockatoo Survey

Participant Feedback Form

Thank you for being part of the Gang-gang survey project, your feedback will help us to plan future survey projects. The information you provide us is confidential and will not be used to reveal your identity in any written form.

| | | | | |
|--------------------|-------------|--------------------------|---------------|--------------------------|
| Gender | Male | <input type="checkbox"/> | Female | <input type="checkbox"/> |
| Age | | | | |
| Home Suburb | | | | |
| Occupation | | | | |
| COG Member | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

How did you find out about the Gang-gang Survey?

| Information Source | Please mark with an 'x' all those that apply |
|--|--|
| COG Meeting/Newsletter | <input type="checkbox"/> |
| Canberra Times (Gang-gang column) | <input type="checkbox"/> |
| ABC radio | <input type="checkbox"/> |
| ABC TV | <input type="checkbox"/> |
| Canberra Weekly | <input type="checkbox"/> |
| Newsletter (e.g. Scouts, Park Care - please specify) | <input type="checkbox"/> |
| Other (please specify) | <input type="checkbox"/> |

What motivated you to register and contribute to the Gang-gang survey?

| Reasons | Please mark with an 'x' all those that apply |
|--|--|
| Love watching Gang-gangs | <input type="checkbox"/> |
| Keen to help a project to learn more about the Gang-gang | <input type="checkbox"/> |
| Good way to get the family involved in birding | <input type="checkbox"/> |
| Regular contributor to citizen science projects | <input type="checkbox"/> |
| Other (please specify) | |

If you reported sightings only once or twice, we are keen to know why you didn't continue to report sightings?

| Reasons | Please mark with an 'x' all those that apply |
|--|--|
| Problems with the web portal (registration/data entry) | <input type="checkbox"/> |
| Only saw Gang-gangs once or twice | <input type="checkbox"/> |
| Wanted to try it out and didn't get around to it again | <input type="checkbox"/> |
| Wasn't aware about year long duration of the survey | <input type="checkbox"/> |
| Other (please specify) | |

The survey had 2 parts: (i) Ad-hoc daily sightings recorded in the ALA web portal or using paper data form: and (ii) Quarterly week long Muster Counts. **Were you aware about the 2 parts?** Yes ☐ No ☐

If Yes, did you participate in both parts of the survey? Yes ☐ No ☐ **If No, can you tell us why?**

Do you have any suggestions about how we could improve future surveys (e.g. records, communication)?

Any other comments about the survey? (note whether comments about ad-hoc survey and/or Muster Count)

Please return completed form to: kathy.eyles@anu.edu.au by 8 May to be eligible for the book draw.

Appendix H

Suggestions for future surveys

| Respondents suggestions for future surveys | | |
|---|---|---|
| Website and technology | Communications and engagement | Explanatory information |
| <p><i>location report became too tedious to maintain (lat and long) perhaps there was a means to go to the same location but not for me</i></p> <p><i>Better and easier registration and data entry</i></p> <p><i>Website Muster form did not work</i></p> <p><i>Survey website not so user friendly.</i></p> <p><i>Simpler way to record short sightings While the ALA portal was generally good I found the embedded map was very slow to use. I used Google earth to get the coords of a sighting and then copied and pasted them into the web portal Not sure whether COG has control over the portal but would be good if this could be improved</i></p> <p><i>Easier access on webpage. I always had trouble with the emails virus scanner always quarantined emails (guess ggs close to something else)</i></p> <p><i>A mobile phone app (ios and Android) Should be supplied for such surveys.</i></p> <p><i>I used app for all my Gg obs but had to enter them a second time in the portal</i></p> <p><i>would have been good to have the option of ticking both seen and heard as mostly it was both</i></p> <p><i>If possible make site more user friendly for casual users of the internet</i></p> <p><i>When entering multiple data it would have saved a lot of time if the map stayed at area last record was entered. My records were usually from the same area. Given we had to log onto the online survey, our location should be locked in so that we could then just enter our sightings or adjust for sightings in other areas. Using that map to pinpoint my</i></p> | <p><i>No communication with year-long Contributors that the musters were about to take place. I heard about two of them through the Canberra Times and missed one completely. COG subsequently contacted me about that one (as I had previously participated in a muster). An alert on the log-in page or an email to contributors would have been helpful. Once registered for the year-long survey, I went straight to the log-in page each time rather than navigating via the home page, so wouldn't have seen Muster info there</i></p> <p><i>more media esp social media Facebook reminder emails</i></p> <p><i>I'd actually be happy with a fortnightly or monthly email – preferably with a link to the webpage (and direct entry with no password?!). Then I could enter the ad hoc ones easily, after a friendly reminder!</i></p> <p><i>I like to see data summaries along the way</i></p> <p><i>I don't recall seeing any feedback about sightings or the overall data collection. It is encouraging for participants in CS surveys to get info on what their little bit of the puzzle has contributed to even if it is some data on the overall no of sightings or records and perhaps some highlights of particular behaviours observed or other new info</i></p> <p><i>Occasional communication from COG about progress with GG count and results to hand.</i></p> <p><i>An occasional reminder for us to continue even when Ggs not around</i></p> <p><i>Use eBird to communicate with citizen scientists -it is free</i></p> <p><i>Email to people who had submitted sightings in ad hoc section that the Muster was about to start would have been useful - I almost missed one of them</i></p> | <p><i>wasn't sure when finished so missed counts in Jan. Notice on website would have been useful</i></p> <p><i>better information on how to log location using map would have been useful clearer instructions</i></p> <p><i>explain what you meant by the accuracy of the location box; what did you want us to put in here?</i></p> <p><i>Make it clearer as to what is needed by the participants and when</i></p> <p><i>The entry "Time spent observing" is ambiguous. It doesn't cover casual sightings walking past or other less structured events. Is it the full duration of a walk or just at the site where GGs were observed?</i></p> <p><i>Clearer instructions on web and at COG meetings</i></p> <p><i>I sometimes found the form difficult to complete to accurately record what I was seeing/hearing. Some more descriptors about behaviour would be good</i></p> <p><i>in future surveys be more specific about the timing, frequency and duration of observations, and then reporting which you are seeking respondents to observe</i></p> <p><i>What comes of all this data, How is this data used and who uses it? Do you make public about our findings and if so how is it presented? Does anyone follow up with survey contributors to find out more</i></p> <p><i>there was a question in the survey about behaviour I think I thought observed nesting when they may have just been exploring a hollow - maybe a bit more coaching would help</i></p> <p>Continued overleaf</p> |

| | | |
|--|--|--|
| <p><i>location Each and Every time - even for multiple entries done together about the same location was tedious and a disincentive.</i></p> | <p><i>I read the CT and watch ABC TV news - an item in these media esp. with a photo of a Gg works well to communicate with the likes of me.</i></p> | <p><i>I would have liked substantially more info in advance on the statistical basis of the surveys, and the specific questions they were designed to answer</i></p> |
| <p><i>Maybe develop an app for smartphones utilising GPS capability to record future surveys</i></p> | <p><i>Would have been nice to know if anyone was monitoring my records or interested in further info on any record. Project Manager did contact me about a nesting hollow towards the end of the survey</i></p> | <p><i>Feedback needed so I could see what I did was correct</i></p> |
| <p><i>Smartphone app</i></p> | | |
| <p><i>Online recording like national surveys</i></p> | <p><i>The weeks for the subsequent Muster surveys needed to be more readily known publish some interim results/stats halfway</i></p> | |
| <p><i>Difficult to track down through google knew it existed but had trouble finding - got friend to send me link</i></p> | <p><i>E-prompt at quarterly survey times</i></p> | |
| | <p><i>Could email all participants and ask to forward to friends and colleagues Many people I know who would have an interest didn't know about the survey</i></p> <p><i>Reminder mail out/email to all previous contributors</i></p> | |
| | <p><i>Muster count well advertised in CT, but not year long one</i></p> | |
| | <p><i>Definitely get more social media presence (facebook) perhaps some interim results/stats halfway</i></p> | |
| | <p><i>Send a reminder re Muster</i></p> | |
| | <p><i>perhaps send occasional reminders to people who have registered at least one sighting to remind them to keep doing it (say every 2 months) Could also be a way to get people involved in the Muster Counts (if needed I wasn't aware of that activity)</i></p> | |
| | <p><i>More social media like a Facebook page</i></p> | |
| | <p><i>Regular communication with volunteers</i></p> | |
| | <p><i>perhaps if we'd arranged a prize for the COG member who enrolled the most non members to report we could have achieved more geographical and temporal coverage</i></p> | |

Appendix I

Web page enhancements for future surveys - COG webmaster

Example of the content of the single accessible high-profile constantly updated project page

What is the GGang survey? one sentence with "...more"

link at the end for complete info.

What is a Gang Gang Cockatoo, what does it look like and where do I find one?

Single sentence and link to lots of good info.

How can I participate?

One sentence with ...more at the end, and big link buttons or equivalent for each activity

Report GG sightings

GG Muster

School Art Comp

Highest number of reports comp

Grand Opening

What people are saying about the GG Survey

Just a link to another page

Progress so far (eg)

Number of observations so far: 1234 Gang gangs seen: 234 No gang gangs: 1000

Top reporters: Mary Lou 22 submissions Bill Blogs 21 submissions

Highest number seen at one time: 30

Suburb with most Ggangs: Lyneham

Suburbs with no Ggangs: a b c d - link to full list, or list of all suburbs with stats for each.

+ Nice simple relatable map showing exactly where seen (small dots) so people could get a feeling for whether their home/location was gg territory, thus might be encouraged to enter an obs if none shown on map but they know there are some there.

Highlights – personal gg anecdotes from people in the field.

Simple chart(s) showing num of cumulative obs, num obs per month, num ggs seen cumulative and per week/month (which would show sharp increase in survey weeks) etc

