

**Grey-crowned Babbler survey report: Lurg Hills & environs, VIC
April 2023**



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[Cover photograph, Lisa Brophy: Family AF with Noisy Miner 27th Mar 2023]

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Overview

This report documents the results of the annual Grey-crowned Babbler (GCB) survey in the Lurg Hills and environs, near Benalla in Victoria. The purpose of the survey, which commenced in 2001, is to monitor outcomes associated with the area's Regent Honeyeater (RHE) Project, including the relationship between RHE plantation health (in the form of recent local weather observations) and the GCB population size and location spread.

The conservation status listing for Grey-crowned Babbler *Pomatostomus temporalis* is 'endangered' in Victoria. (Victorian Biodiversity Atlas, Species Checklist, Vic Advisory Status).

The 2023 survey results show a stable GCB population.

Survey method

Most bird survey methods involve an incomplete count or timed count at planned locations or 'transects'. These are conducted for a predetermined time period and are usually a shorter method.

The Lurg Hills and environs is a complete bird count over the entire area, often referred to as a 'census'. While much more time-consuming, the aim is that the resulting observations, combined with other factors such as habitat condition and weather data, will provide a more useful long-term monitoring program.

The survey was conducted over 8 days during late March and early April 2023. Various methods are used, consistent with previous surveys to locate GCB families, nests and suitable habitat. Depending on daily weather conditions, simple observations and listening proved successful at many sites but others required more diligence. Known or likely locations were revisited several times until a result was achieved.

The survey was conducted daily by a small team of 1 – 3 observers, comprising RHE volunteers Mick Moylan and at various times Lisa Brophy, Helen Vaughan, Chris Vaughan, Henry Berry, Rob Richardson and Josh Graf. Photography by the team as acknowledged.

Naming convention

GCB families or groups are assigned an alphabetical character in the order of their discovery i.e.

Groups 1-26 are assigned A, B - Z

Groups 27-52 are assigned AA, AB – AZ

Groups 53-78 are assigned BA, BB – BZ

etc.

Where a new family is discovered in the Lurg Hills environs, it is assigned the next vacant alphabetic group identifier.

Where it is apparent that a group has moved to an adjacent territory, it is assigned a numeric suffix which links it to the previous territory e.g. where family A is not recorded at the last year's location and a new family is discovered in an adjacent territory and evidence of movement exists, the new family is assigned the identifier A2 (former family A in second location). If this re-occurs in subsequent

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years, the new family is assigned A3 (family A in third location) etc. This way, migration of families can be tracked over time.

Where a family group cannot be located after 12 months, it is noted as 'Not found yyyy', If the group is not located during the following year's survey, it is noted as 'Defunct yyyy'. This 'absence' data is important to a long-term monitoring program.

Survey limitations

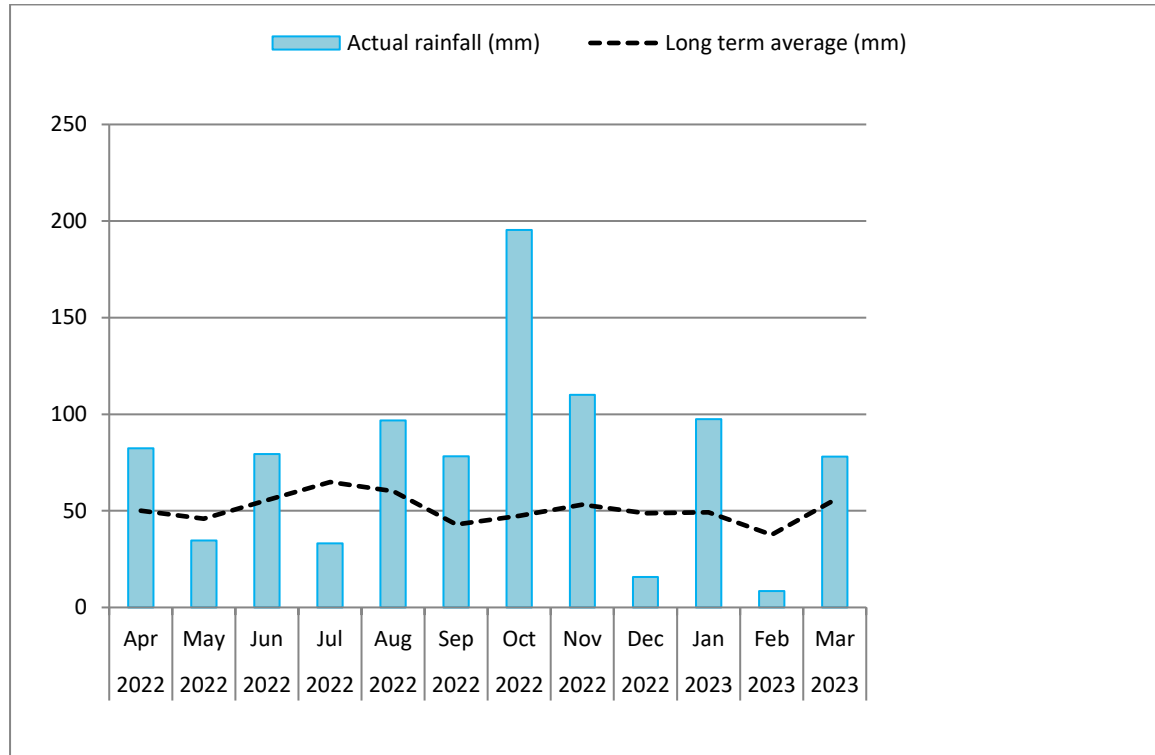
Because the survey relies on observations i.e. birds are not individually identifiable by banding or similar, the accuracy of recording family group movements and the discovery of new families is not necessarily 100% accurate. While the survey is designed to manage limitations by using multiple observers and third party reports, errors such as double-counting can occur. Another limitation is that GCBs are not always discoverable, due to weather conditions, bird responsiveness and limited access to private property. A longer term view will improve the accuracy and better quantify the bird numbers, group numbers and population trends which are reported annually.

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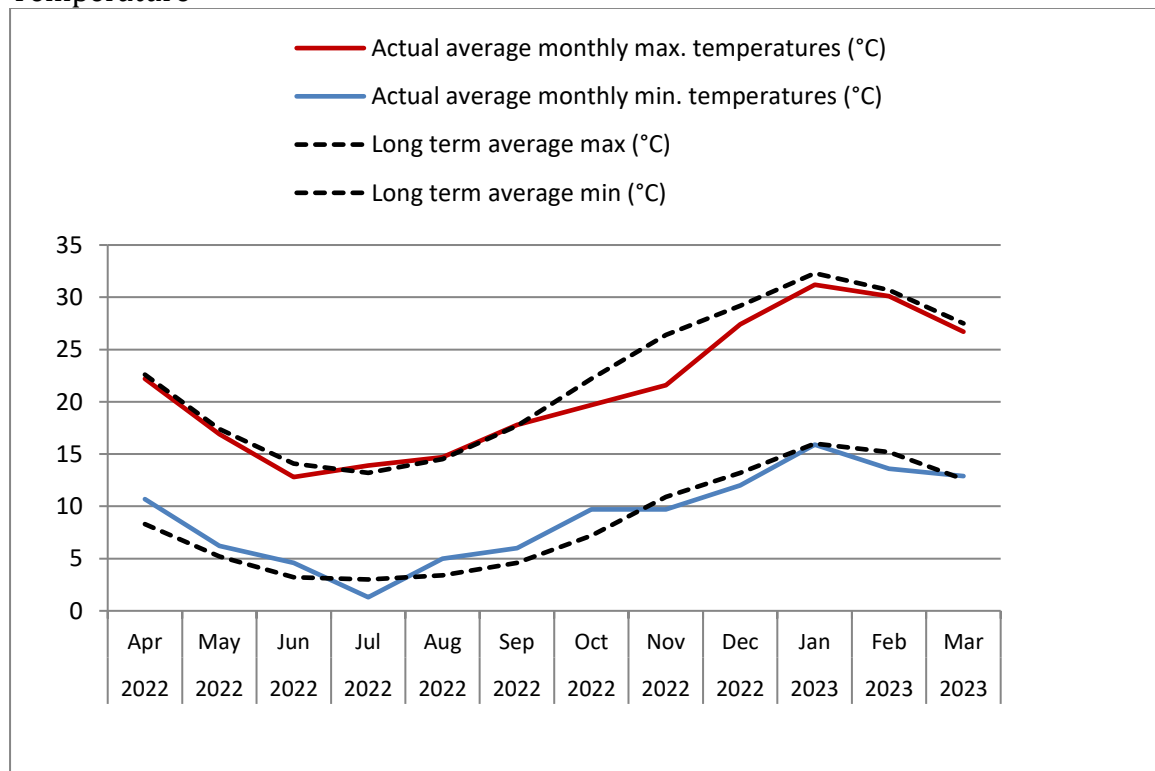
Weather conditions

Refer to the charts below for the monthly breakdown of actual recordings against long term averages, for the 12 months preceding the survey.

Rainfall



Temperature



Source: Bureau of Meteorology, Benalla Airport weather station, except for Sep22 rainfall, which is from Molyullah weather station, as Benalla data is incomplete for this month.

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Weather conditions in the 12 months preceding the survey were wetter and cooler overall. A rainfall total of 910mm was recorded, which is significantly higher than the long-term average for this period, 612mm.

As the graph above shows, average monthly maximum temperatures were between 2°C and 5°C lower, for the period of October to December 2022.

Bird count and family locations

Overall results.

Relevant observations

Evidence of late-season breeding activity was observed this year. Large increases in size for families H and AC, with some juveniles seen to be quite small and therefore young, with a corresponding absence of birds in the intervening family X territory, suggests agglomeration is happening. Many new nests in this area were observed as well.



Family A had been stable at 2 birds until the first week of the survey, when one bird went missing. It could not be found on two separate days and the other bird was seen both times. At the same time, seven birds of the nearest group, family B, were observed in the northern extremity of their territory. A single bird approached the southern end of the territory shortly after this observation.

The next day, the second bird from family A returned home. It is likely that it was approaching the nearest neighbour 4.6km away for breeding purposes.

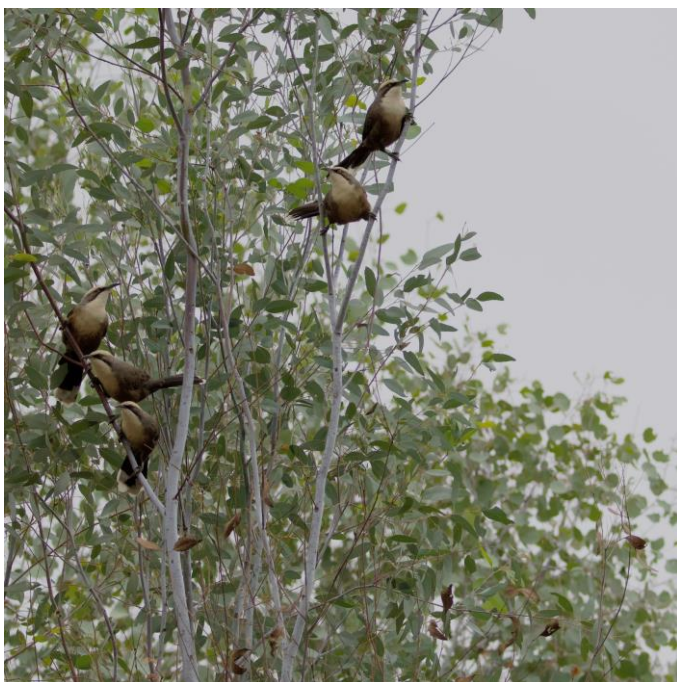


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Family T has decreased from 7 to 5 birds but the landholder observed the birds busily building a new nest, a few days after the survey.

Two birds were located at family AH, however the landholder reports that four birds were near his house a few days prior to the survey visit. This territory is north of the Hume Freeway near Eleven Mile Creek and only 2-3 kilometres away from several groups south of the freeway in Chivers and Glenrowan West Rds. The Eleven Mile Creek is also a possible corridor between these groups and Winton Wetlands. Coincidentally, the Chivers Rd family AL, which had two birds in 2022, was not found this year.

Six families increased in size, six decreased and eight stayed the same. Two families (two birds and seven birds) were not found. The larger group X has most likely merged temporarily as noted. The above-mentioned small group AL may still exist but multiple attempts to locate it were unsuccessful.



Lisa Brophy: Five members of Family AF

One new bird was found at Humphrey's Hill in Winton Wetlands. This group was observed to be at least two birds in July 2022 by RHE staff working at the location. A follow-up visit confirmed just one bird.

PV solar farm development continues in the Winton/Glenrowan area. Two families, O and AJ are located on territory very close to large arrays. O decreased from 8 to 7 birds while AJ increased from 3 to 5 birds. A new PV farm is being constructed in Chivers Road and several large old-growth trees were observed to have been felled. Perimeter plantings have been started.

A large remnant Ironbark tree appears to have apparently died suddenly this year, in a paddock in Family Z2 territory.

Grey Box trees are currently flowering profusely in the district, while Ironbark and White Box are yet to flower.

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Bird count and location table

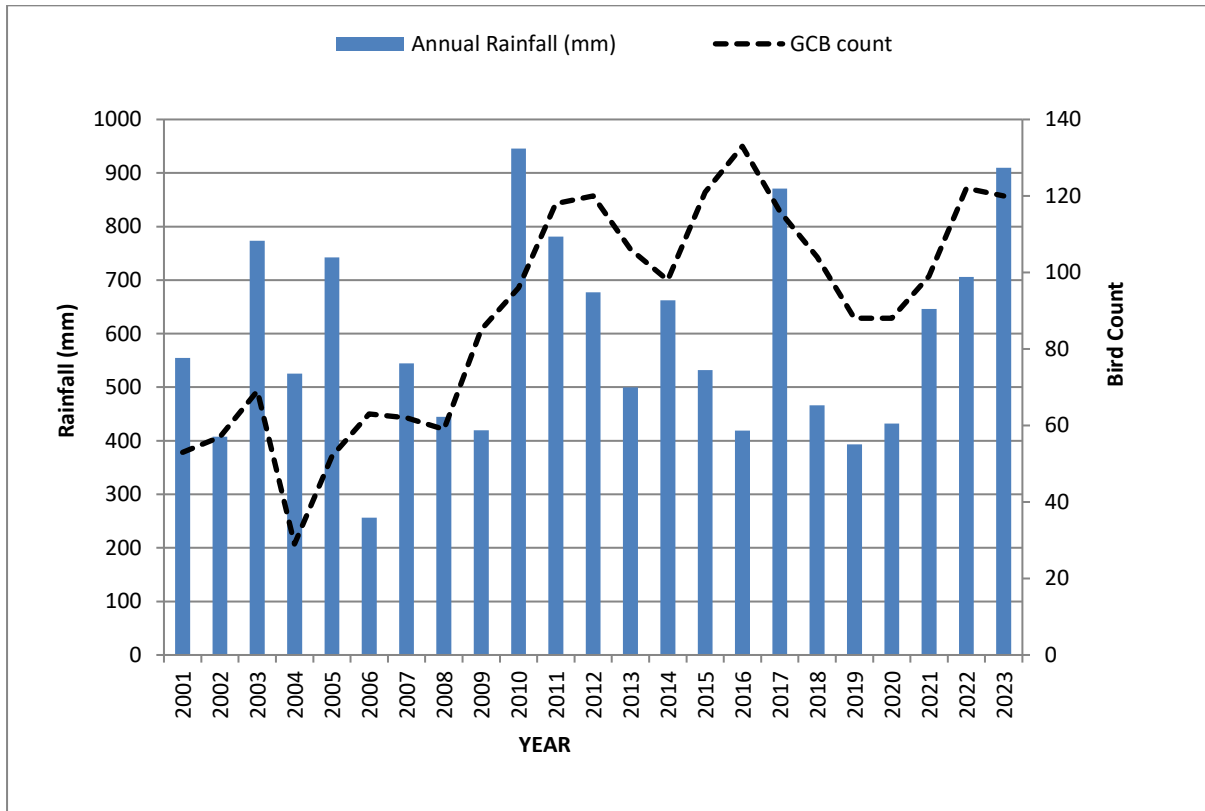
The GCB count for 2023 is 120 birds- a net decrease of 2 for the 12 month period.

Date	GCB Family	No. of Birds	Latitude	Longitude	Altitude metres	Nearest Town
01Apr23	A	2	36° 35' 41.6"S	146° 05' 07.9"E	195	Benalla
31Mar23	B	7	36° 33' 23.2"S	146° 02' 14.9"E	191	Benalla
30Mar23	G	4	36° 31' 51.0"S	146° 05' 08.6"E	191	Winton
04Apr23	H	12	36° 31' 00.3"S	146° 05' 32.3"E	196	Winton
28Mar23	J	3	36° 31' 24.5"S	146° 07' 21.5"E	238	Glenrowan West
30Mar23	K	4	36° 31' 39.7"S	146° 08' 20.5"E	233	Glenrowan West
04Apr23	L	2	36° 30' 39.4"S	146° 10' 00.8"E	215	Glenrowan West
28Mar23	M	4	36° 31' 43.8"S	146° 09' 33.5"E	223	Glenrowan West
03Apr23	O	7	36° 29' 18.5"S	146° 10' 45.7"E	207	Glenrowan
03Apr23	P	5	36° 29' 11.2"S	146° 11' 06.8"E	168	Glenrowan
29Mar23	Q	6	36° 33' 50.4"S	146° 06' 29.5"E	216	Benalla
28Mar23	S	8	36° 31' 16.3"S	146° 09' 19.9"E	216	Glenrowan West
28Mar23	T	5	36° 31' 45.9"S	146° 07' 01.9"E	200	Winton
	X	Not found 2023				Winton
28Mar23	Z2	6	36° 32' 31.2"S	146° 06' 36.1"E	209	Winton
03Apr23	AB2	7	36° 27' 39.3"S	146° 07' 48.2"E	173	Winton Wetlands
04Apr23	AC	14	36° 31' 45.6"S	146° 06' 16.9"E	204	Winton
	AE2	Defunct 2023				Glenrowan West
27Mar23	AF	8	36° 32' 58.3"S	146° 06' 49.2"E	214	Winton
29Mar23	AG	5	36° 33' 25.0"S	146° 06' 10.7"E	220	Winton
03Apr23	AH	2	36° 28' 49.2"S	146° 08' 36.4"E	200	Glenrowan
30Mar23	AJ	5	36° 30' 02.3"S	146° 08' 07.7"E	200	Winton
28Mar23	AK	3	36° 31' 58.9"S	146° 09' 33.3"E	232	Glenrowan West
	AL	Not found 2023				Glenrowan
03Apr23	AM	1	36° 26' 19.0"S	146° 08' 27.8"E	175	Winton Wetlands
TOTAL		120				

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Relationship with rainfall

The chart below compares annual rainfall with total GCB count for the survey years to date.



Source: Bureau of Meteorology, Benalla Airport weather station & 2023 GCB survey

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Trends 2001 - 2023

Family	Year																					Comments	
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	21#	22		23
A	2	2	1	1	2	2	2	2	2	3	3	2	2	4	3	5	6	7	2	1	2	2	Possible Y2 Merge 2016
B		3	4		5	5	5	4	7	8	8	8	8	8	8	7	4	5	3	6	7	7	
C	6	7	5		2	3	3	4	4	4	8	6	9	9	10	10	9	6	7	0	0		Defunct 2022
E	3	8DE*	5	8DE*	3	0						6	6	6	6	7	3	0	0				Shifted 2018
E2																			2	0			Defunct 2022
G	5		5		6	6	5	4	8	6	6	8	8	8	8	8	7	4	4	6	3	4	
H			2	0								8	9	9	9	6	7	13	7	4	7	12	
J	2	8	8	4	7	6	7	8	8	9	9	6	6	2	4	8	3	3	2	3	3	3	
K	5	0	2		2	0	3	5	5	7	7	8	4	5	3	5	5	5	0	0	4	4	Defunct 2021, reappeared 2022
L	5	6	5		4	7	4	0	0	0	6	6	4	9	12	2	2	2	2	2	3	2	
M			8	6JK*	3	4	3	4	8	8	5	6	6	5	8	11	6	4	8	8	7	4	
N	15 JKM*	16 JKM*	5		5	5	5	4	7	9	9	8	6	5	6	5	0						Defunct 2017
O	3	4	3		2	5	5	3	3	3	4	7	3	3	4	4	4	4	8	7	8	7	
P			2	4	3	3	3	2	4	6	6	5	4	6	10	10	6	3	2	5	8	5	
Q	3	3	5		4	6	6	7	10	8	6	7	5	5	5	6	4	4	7	6	6		
R	4		3	6OP*	2	3	3	3	6	7	7	2	1	1	0								Defunct 2015
S			6		2	3	2	3	3	3	5	6	6	2	3	4	0	5	7	5	10		Not found 2017
T						2	2	3	5	5	5	3	3	2	4	4	5	5	5	7	7	5	
U						3	4	3	3	3	3	3	3	0									Shifted 2014
U2														2	4	0							Defunct 2016
V									2	5	8	3	0										Shifted 2013
V2													1	0									Defunct 2015
W										3	5	3	4	0	3	5	0	0					Defunct 2019
W2														4	0		0	0					Defunct 2019
X											2	4	3	5	5	3	5	5	7	5	7		Not found 2023
Y											3	4	3	2	0								Defunct 2015
Y2															3	0							See A 2016
Z															4	5	4	0					Shifted 2018
Z2																		8	8	7	6		
AA															2	3	2	0	0				Defunct 2019
AB																7	3	3	0				Not found 2019, see AB2
AB2																				6	7	7	Shifted 2021
AC																	5	4	3	5	5	14	Possible agglomeration with X 2023
AD																	5	6					Defunct 2021
AE																	7	0					
AE2																		9	0	4	0		Defunct 2023
AF																		4	3	2	7	8	
AG																		3	4	0	5	5	Not found 2021

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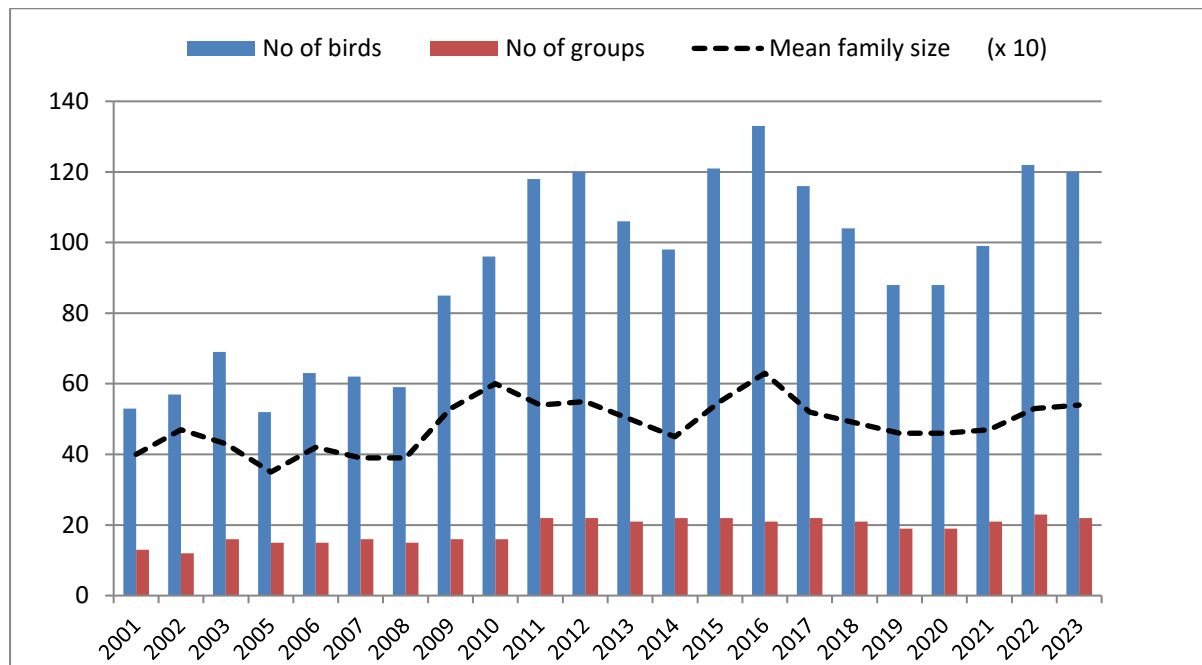
Family	Year																							Comments
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	21#	22	23		
AH																				4	2	2	New 2021	
AJ																				2	3	5	New 2021	
AK																				2	2	3	Closely adjacent M 2021, 2022	
AL																				2	2		Closely adjacent P. Not found 2023	
AM																						1	New 2023	

* Agglomeration of families as noted. # 2004 casual observations only – no systematic survey conducted. #No survey 2020 due to COVID pandemic

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Family size and population trends

The population trend is demonstrated by this chart of average family sizes, number of families and total bird counts for the period.



The following table shows a more detailed breakdown of the number of families of various sizes encountered since the annual surveys began.

Year	01	02	03	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	21	22	23	
Group Size																						
1 bird	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	1	0	1	
2 birds	2	1	3	6	2	3	2	2	0	1	2	1	5	1	0	2	1	5	4	4	3	
3 birds	3	3	2	3	5	5	5	3	4	7	3	6	1	4	2	3	4	3	1	4	2	
4 birds	1	1	1	2	1	3	5	2	1	1	2	2	3	7	4	3	6	3	3	1	3	
5 birds	6	3	6	2	3	3	1	2	2	3	2	0	5	1	5	6	5	1	4	2	4	
6 birds	1	2	1	1	3	1	0	1	1	2	7	6	2	2	1	4	2	0	3	1	2	
7 birds		1	0	1	1	1	1	2	2	2	1	1	0	0	3	3	1	4	3	8	3	
8 birds		1	2				1	3	2	4	5	2	2	3	2	0	0	3	2	2	2	
9 birds								0	3	2		2	2	2	0	1	1	0	0	0	0	
10 birds								1	1					2	2	0	0	0	0	1	0	
11 birds															1	0	0	0	0	0	0	
12 birds															1	0	0	0	0	0	1	
13 birds																	1	0	0	0	0	
14 birds																					1	
No of groups	13	12	16	15	15	16	15	16	16	22	22	21	22	22	21	22	21	19	21	23	22	
Mean size	4.0	4.7	4.3	3.5	4.2	3.9	3.9	5.3	6.0	5.4	5.5	5.0	4.5	5.5	6.3	5.2	4.9	4.6	4.7	5.3	5.4	
Total birds	53	57	69	52	63	62	59	85	96	118	120	106	98	121	133	116	104	88	99	122	120	

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Overall changes and conclusion

There has been a slight reduction, in both the number of birds and the number of groups, over the past 12 months. Nevertheless, the marked improvement in plantation habitat and bird population strength, as reported in 2022, is being sustained. Sadly, the decline in old-growth trees is still evident both in paddocks and roadsides.

Above-average rainfall and healthy habitat conditions would suggest that numbers should have increased in 2023. Other factors may be influencing the trend, for example a very wet winter and a much cooler spring and early summer.

The late breeding activity observed in some areas could be due to these weather conditions. If so, it is a cause for optimism for next year.

The continuing PV solar farm development appears to have not affected the territories or growth of nearby GCB families.

Appendix 1: GCB locations and family size mapping. (Attachment)

Appendix 2: Satellite view of survey mapping. (Hyperlink)

https://www.google.com/maps/d/edit?mid=1y1etrqKloxJh_2nPTVsrW2ZlvqplIOs&usp=sharing



Mick Moylan: Family B bird feeding in an old growth roadside tree.