KANGAROO ISLAND

Glossy Black-Cockatoo 2025 Census Report

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LANDSCAPE SOUTH AUSTRALIA KANGAROO ISLAND

Title: Kangaroo Island Glossy Black-Cockatoo 2025 Census Report

Year: 2025

Publisher: Kangaroo Island Landscape Board

This publication may be cited as: Berris, K. K., Welz, T., Leigh, S. and Mooney, T. (2025). Kangaroo Island Glossy Black-Cockatoo 2025 census report. Kangaroo Island Landscape Board KILB. Kingscote, KILB Publication Number KILB-Dec-01

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Front Cover Image Credit: Torran Welz

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Date: December 2025

Distribution: Public Domain

ACKNOWLEDGEMENT OF COUNTRY AND SEA COUNTRY

The Kangaroo Island Landscape Board acknowledges and respects the Traditional Custodians of the Kangaroo Island region, and we also pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep spiritual attachment and the relationship that Aboriginal and Torres Strait Islander people have to Country.

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ACKNOWLEDGEMENTS

The 2025 glossy black-cockatoo (GBC) population census and report were supported by the Kangaroo Island Landscape Board (KILB). Thank you to the 48 landholders who allowed us access to their properties and/or helped us to undertake these surveys, particularly those who were impacted by the 2019-20 bushfires. Thank you to the 40 volunteers who contributed 238 hours to the 2025 census surveys, these surveys could not have been conducted without you. In particular, thank you to Trish Mooney (Charles Darwin University) for assistance with field work and contributing 100 volunteer hours to the 2025 census. Thank you to Kirsty Hankel (KILB) who provided review comments on draft versions of this report.

SUMMARY

- This report summarises the results of the population census for glossy black-cockatoos (GBC) (*Calyptorhynchus lathami halmaturinus*) on Kangaroo Island by staff from the Kangaroo Island Landscape Board in 2025.
- A minimum population count of 446 GBC was recorded in 2025, which is similar to counts obtained in 2020 (454) and 2023 (453).
- Post-fire count data indicates the population trajectory is no longer increasing, but has remained relatively stable since 2020.
- From a regional perspective, a decline has been recorded in the population size of GBC in the fire-affected north coast region of Kangaroo Island, but regional population sizes in eastern unburnt Kangaroo Island were slightly higher.
- Low numbers of fledglings were recorded in fire-affected western areas between 2022 and 2025 compared to unburnt eastern areas. This could be due to the combined effects of fewer pairs breeding and low fledgling survival in some areas. Lower overall numbers of fledglings in 2025 could also be due to reduced food availability impacting breeding productivity following a dry 12 month period.
- A highlight of the 2025 census was the largest ever number of GBCs recorded on the Dudley Peninsula since the Recovery Program started in 1995 (56 individuals in 2025).
- Census surveys for glossy black-cockatoos were carried out on properties belonging to 48 different private landholders, as well as on 5 separate public lands.
- Census surveys were carried out with assistance from 40 volunteers that contributed 238 hours of their time.
- Priority actions to support the recovery of the GBC population on Kangaroo Island continue to be revegetation with drooping sheoak, control of nest predators and competitors, and the provision of nest boxes in key breeding areas.

INTRODUCTION

Background

The South Australian glossy black-cockatoo (*Calyptorhynchus lathami halmaturinus*; GBC) is restricted to Kangaroo Island, and became extinct in its former range in the Mount Lofty Ranges and lower Fleurieu Peninsula in the 1970s (Berris *et al.* 2018). Clearance of drooping sheoak (*Allocasuarina verticillata*) feeding habitat, the primary food source of GBCs, was the likely cause of their extinction on mainland South Australia (Berris *et al.* 2018). During the early 1990s, a lack of recruitment into the adult population due to high rates of nest predation by brushtail possums (*Trichosurus vulpecula*) caused the decline of the GBC population on Kangaroo Island to less than 200 individuals (Garnett *et al.* 1999; Berris *et al.* 2018). A recovery Program started in 1995 and has implemented on-ground management actions to mitigate threats which includes protection of nests from predators and competitors, revegetation with drooping sheoak feeding habitat and installation of nest boxes to provide additional nesting habitat. In addition to these management actions, annual monitoring of the population size has been carried out in most years since 1995 during the non-breeding season to track the response of the population to management actions.

The GBC population census between 1995 and 2016 tracked the response of the population to threat intervention measures and provided useful information on population recovery and expansion (e.g. see Berris and Barth 2020). Since 2020, the population census has provided valuable information on the effect of large-scale wildfires on the GBC population following the 2019-20 Black Summer bushfires, which burnt 54% of drooping sheoak woodlands on Kangaroo Island (Berris *et al.* 2020). It will take an estimated 15-20 years for burnt woodlands to recover and start producing the drooping sheoak seed on which GBC feed. Therefore, the GBC population is likely to have a much lower food availability as a result of the fires. The annual population census is a valuable tool for monitoring the effect of fire and other cumulative impacts on the population trajectory of GBC. It also provides an opportunity to measure recruitment into the population by counting fledglings from the most recent breeding season. The census has been carried out 29 times over the past 33 years and provides a valuable long-term dataset that is maintained by the Kangaroo Island Landscape Board (KILB).

Objectives

The objectives of the 2025 census were to:

- determine flock sizes in all occupied GBC flock regions and estimate the minimum population size on Kangaroo Island;
- determine the number of juvenile GBC from the most recent breeding season in each of the flocks to estimate breeding productivity and fledgling survival in different areas;
- provide further information on the long-term effects of the 2019-20 bushfires on flock sizes and breeding productivity of the GBC population.

METHODS

Population count for Kangaroo Island

Between 9 September and 26 September 2025, drooping sheoak foraging habitat on Kangaroo Island was surveyed by KILB staff for evidence of feeding by GBC. All unburnt foraging habitat in the De Mole, Western River, Middle River, Stokes Bay and Southern flock areas was checked by staff, volunteers or landholders. Some foraging habitat in the Wisanger and Eastern (Dudley Peninsula) flock regions was not searched due to time constraints and there being no evidence during the year or in previous years of those areas being used. Sightings of feeding GBCs were recorded, as was evidence of recent feeding activity which includes fresh 'chewings', recognisable by their cream and green colouration. When GBC were located, the number of birds, gender and age class of individuals were recorded where possible. Once the main feeding areas in a flock region (Fig. 1) were located, staff revisited known feeding sites in the evening and counted flocks with the assistance of volunteers as they moved out of feeding habitat to roost sites.

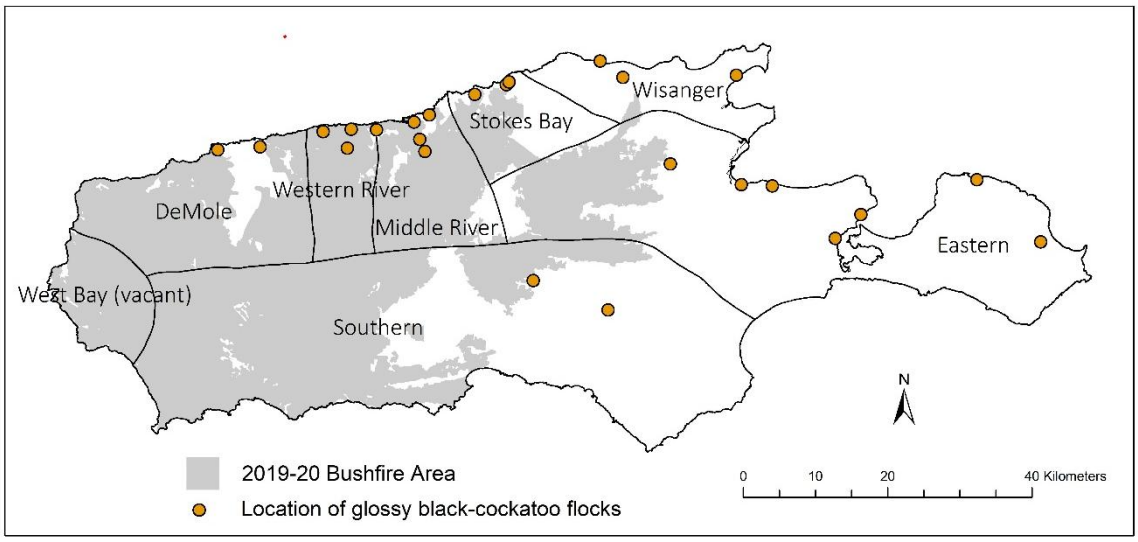

Figure 1. Map of flock regions on Kangaroo Island, as defined by Mooney and Pedler (2005), with the Eastern flock region expanded to include all of the Dudley Peninsula, reflecting recent range expansion of GBCs in this flock. Orange dots represent where glossy black-cockatoos were found in 2025.

All flocks were systematically surveyed from west to east across the island to reduce the chances of GBCs moving between flocks and being double counted. In the De Mole River, Middle River and Dudley Peninsula areas, searching and counts were carried out over two days to provide more time for searching habitat in these areas and locating more dispersed smaller flocks. During the survey counts, staff and volunteers were positioned in locations that enabled accurate counts of flocks as they flew to roost sites in the evenings. Surveys started at approximately 16:00 each afternoon and finished at dark. GBCs were most active between 17:00 and 18:30, when they flew up to large *Eucalyptus* trees to roost.

For the purpose of this census, juvenile GBCs were defined as those <1 year old and from the current breeding season (i.e. still dependent on their parents). Juveniles were identified within the flock by their distinctive begging calls, behaviour (i.e. close to parents, begging, not feeding

completely independently) and plumage. Immature GBCs were independent birds that had not yet developed adult plumage and were approximately 1-4 years of age. Binoculars and digital cameras with high zoom capabilities were used to identify birds to gender and check for the presence of a leg band. Juveniles with leg bands were known to be from monitored nests and attempts were made to identify individual banded adults and juveniles. Dates and locations of flock counts (where birds were present) during census week are shown in Table 1. Data obtained during the 2025 census were compared to long-term census data collected by the Recovery Program since 1995. Changes in total population counts, flock counts in different areas and the proportion of adults, immature and juvenile birds were compared over the years.

Table 1. Dates and areas where glossy black-cockatoos were located during the 2025 census survey.

Date	Flock region	Location of glossy black-cockatoos
9 & 10 September	De Mole River	Snug Cove Forbin Gully
11 September	Western River	Valley Creek Inchant Gully Horse Gully South of Pebbly Beach
15 September	Middle River Gorge	North and south revegetation sites
16 September	Middle River Coast	Lower King George Creek Lower Middle River
17 September	Stokes Bay	Christensen Track Deep Gully
18 September	Wisanger	Dashwood Bay Rose Cottage Road
19 September	Cassini	Eastern Lathami
22 September	Southern	Murray's Lagoon Eleanor River
23 September	Cygnet River	Cygnet Park North Cape
24 September	American River	American River township Muston Nepean Bay township Min Oil Road
25 September	Dudley Peninsula west	Baudin Conservation Park
26 September	Dudley Peninsula east	Lashmar Lagoon

RESULTS

Population count for Kangaroo Island

A minimum population count of 446 GBCs was recorded during census surveys in 2025. This count was similar to counts recorded in four of the past five years (Fig. 2, Table 2). The population consisted of 16 flocks of five or more individuals, and a further nine locations that contained pairs or trios located away from main flocks. The five-year moving-average trend line continues to show a somewhat stable population trend post-fire, compared to a mostly increasing population trend pre-fire (Fig. 2).

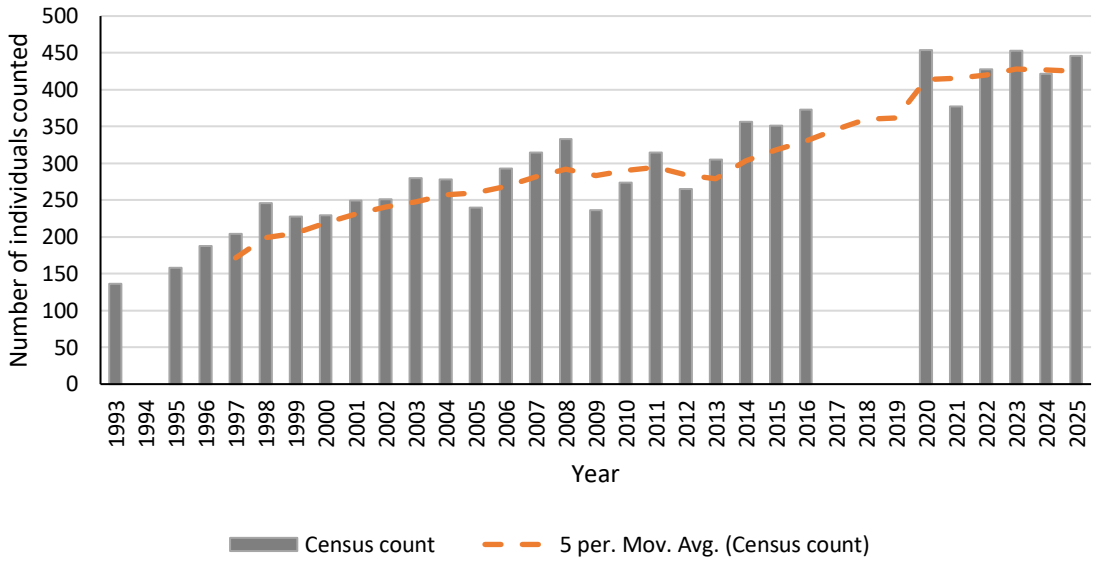

Figure 2. Census count totals between 1993 and 2025, with a five-year moving average (orange dashed line). Census counts were not carried out in 1994 and between 2017 and 2019.

Flock region counts

Flock region counts were generally consistent with previous years, however some small differences were observed. There was a higher count in the North-west region in 2025, and lower count for the Mid-north coast. Much of the changes in flock sizes observed in these two regions can likely be explained by the movements of individuals between these adjacent areas on a seasonal or annual basis, which has been confirmed through band resighting data. The North-west region contained 20 more individuals than in 2024, but the Mid-north coast contained 19 fewer, so overall there was little change in population size along the north coast of Kangaroo Island in the last 12 months (Table 2). Numbers of glossy black-cockatoos in both areas was still lower than the 2020 count carried out immediately post-fire (Table 2). As reported in previous years, our band resighting records indicate the southern, Cygnet River, American River and Dudley Peninsula flocks are very interlinked with regular movement of individuals occurring between them. In these south-eastern areas, we recorded our highest overall count since monitoring began.

Table 2. Census counts of flock size in different flock regions from 2013 to 2025. For flock sizes prior to 2012, see Barth and Morgan (2013).

Area	**2013**	**2014**	**2015**	**2016**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
De Mole	*51*	*72*	*69*	*51*	*100*	*81*	*99*	*104*	*107*	*102*
Western River	*57*	*71*	*57*	*55*	*78*	*29*	*55*	*65*	*34*	*59*
Total North-west	108	143	126	106	178	110	154	169	141	161
Middle River	*53*	*60*	*64*	*56*	*63*	*52*	*47*	*73*	*55*	*45*
Stokes Bay	*38*	*43*	*39*	*48*	*70*	*47*	*60*	*37*	*52*	*62*
Wisanger	*18*	*14*	*15*	*20*	*5*	*22*	*21*	*26*	*31*	*12*
Total Mid-north Coast	109	117	118	124	138	121	128	136	138	119
Total North Coast	**217**	**260**	**244**	**230**	**316**	**231**	**282**	**305**	**279**	**280**
South Region	*45*	*37*	*33*	*41*	*16*	*34*	*26*	*21*	*28*	*22*
Cygnet Region	*0*	*4*	*0*	*0*	*28*	*35*	*39*	*21*	*27*	*34*
American River	*32*	*31*	*39*	*66*	*49*	*46*	*43*	*60*	*58*	*54*
Dudley Peninsula	*11*	*24*	*35*	*36*	*45*	*31*	*38*	*46*	*28*	*56*
East Region Totals	43	55	107	102	94	77	81	106	86	110
Total South East	**88**	**96**	**107**	**143**	**138**	**146**	**146**	**148**	**141**	**166**
TOTAL	**305**	**356**	**351**	**373**	**454**	**377**	**428**	**453**	**422**	**446**

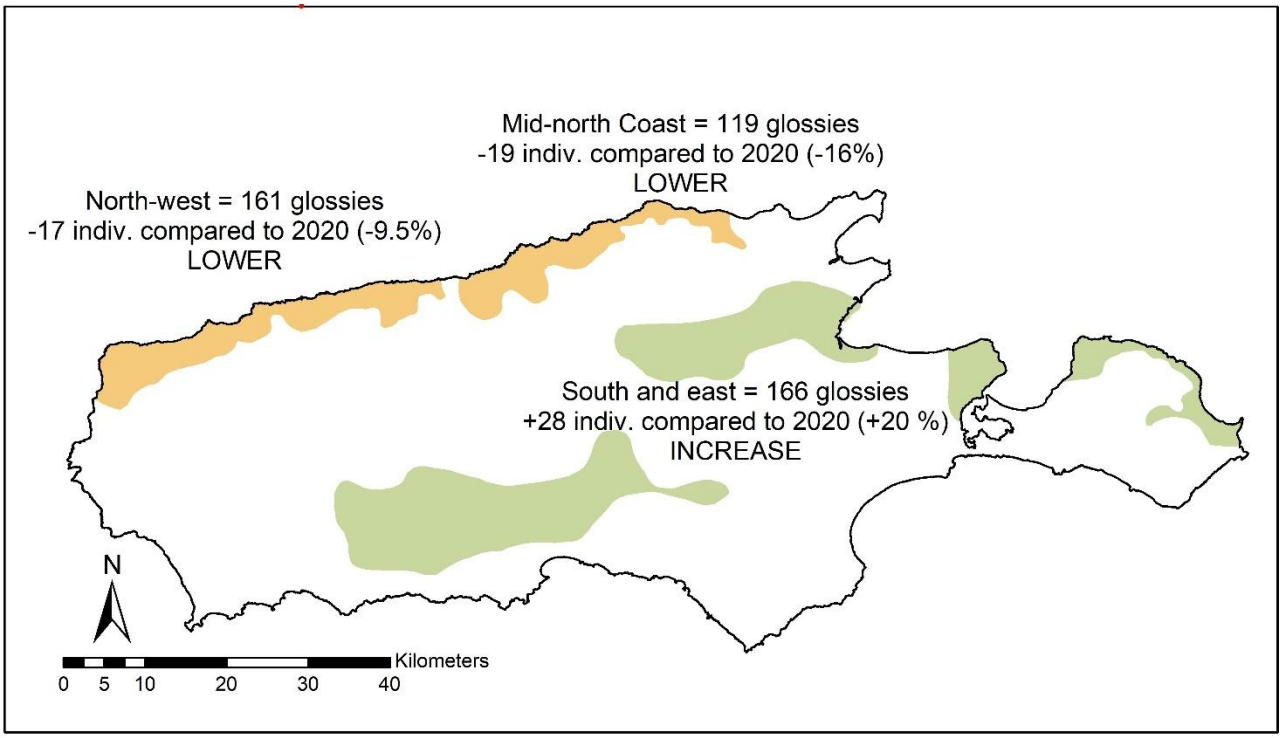

Figure 3. Regional changes in the GBC population size in broader geographical regions of Kangaroo Island between 2020 and 2025.

Population composition

In 2025, 309 GBCs (69%) were identified to gender and/or age class during the census. Flock composition by region is shown in Table 3. During 2025, 96 adult females were identified during the census, the highest number recorded in any census. Based on the individuals identified to gender, the ratio of adult male to adult female GBCs was 1.5: 1, which is similar to the ratio recorded in 2024 (Fig. 4). This ratio suggests a significant male bias still persists in the population, which has been recorded since 1996 (Fig. 4). The two largest flocks were at Snug Cove and Penneshaw, and due to the large flock size, it was these two sites that had the largest numbers of unidentified individuals. During the 2025 census, 34 juvenile GBCs from the most recent breeding season were counted. The proportion of adult GBCs in the population (based on the 309 identified) was 78%, and the proportion of immature and juvenile GBC was 22%. The proportion of females across the island with a dependent juvenile was 35.4 %, slightly lower than the long-term average (38.3 % ± 7.7) (Fig. 5).

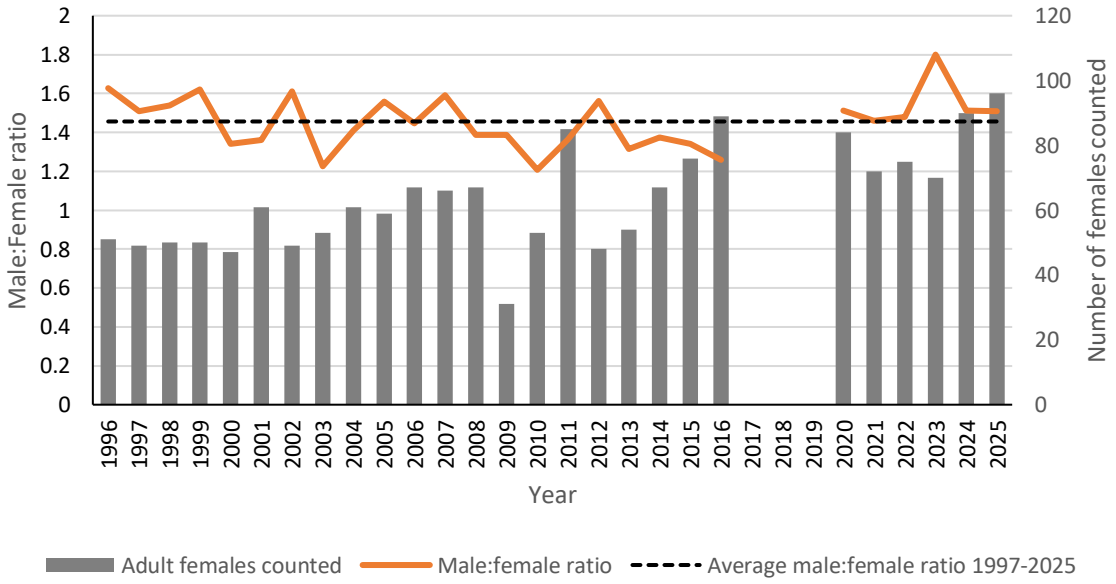

Figure 4. The male: female ratio, average sex ratio between 1997 and 2025 and the total number of females recorded in census counts between 1996 and 2025. Census counts were not carried out between 2017 and 2019.

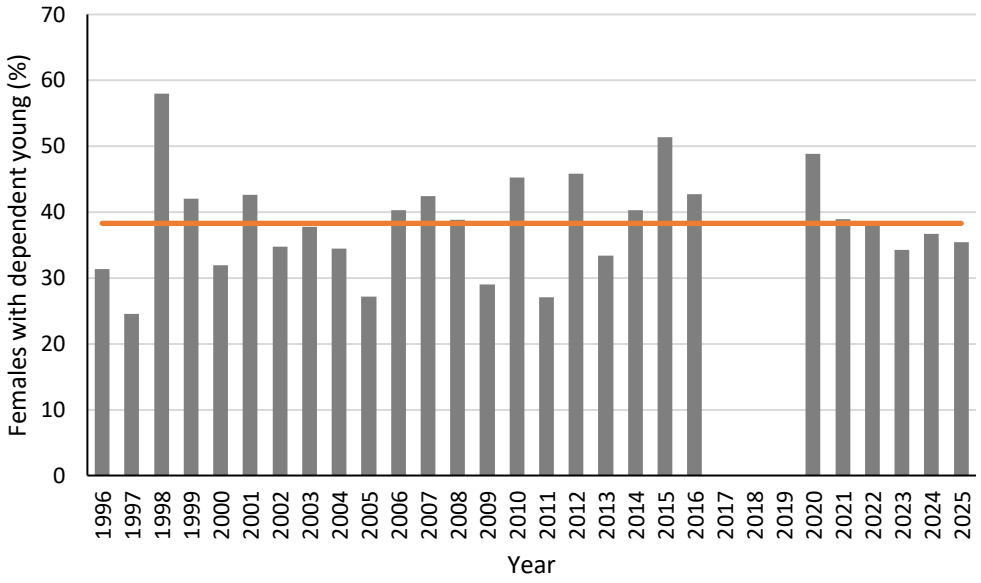

Figure 5. The percentage of adult females with a dependent juvenile from the most recent breeding season during census counts between 1996 and 2025. Census counts were not carried out between 2017 and 2019. Orange line indicates average over all years.

Data on the occurrence of juvenile GBCs was then split into two categories; 1) areas that experienced high fire impacts (West: De Mole River, Western River, Middle River, and Southern flock regions) and 2) areas that experienced no or lower fire impacts (East: Stokes Bay, Wisanger and Eastern flock regions). In the eastern areas with minimal fire impacts, 39 % of females identified during the census had dependent young with them. In western areas that were more heavily fire impacted, 31 % of females had dependent young (Fig. 7).

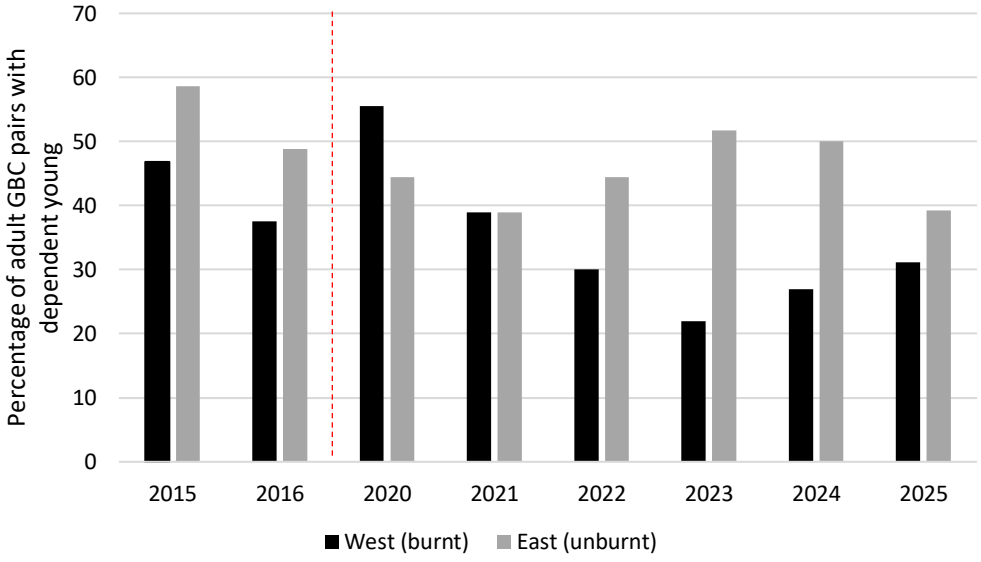

Figure 6. The percentage of adult pairs that had dependent young during 2015 and 2016 (pre-fire) and 2020-2025 (post-fire) in burnt western areas and unburnt eastern areas. Red line separates pre-fire and post-fire data.

Table 3. The number of glossy black-cockatoos counted in each flock region during the 2025 census counts. The number identified to gender and/or age class at each location is provided.

Flock region	Location	Adult		Immature		Juvenile			Unknown Sex / Age	Total
		M	F	M	F	M	F	Unknown		
De Mole	Snug Cove	16	7	4		1	1		70	99
	Forbin Gully	1	1			1				3
Western River	Valley Creek	2	1				1			4
	Inchant Gully	2		1					2	5
	Horse Gully	6	4	1	1				3	15
	Upstream from Pebbly Beach	19	10	5		1				35
Middle River	Middle River Gorge	5	3		1	1	1			11
	King George Creek	7	6			1	2		4	20
	Middle River Mouth area	6	5			1			2	14
Stokes Bay	Christensen Track	4	4			1			6	15
	Deep Gully	20	13	2	2	1	1	3		42
	East of Deep Gully Creek	2	2				1			5
Wisanger	Dashwood Bay	4	4					1	1	10
	Rose Cottage Road	1	1							2
Southern	Murray Lagoon	3	3				1	1	3	11
	Eleanor River	5	5				1			11
Eastern 1	Cygnet Park	11	8	4	2	3	1		1	30
	North Cape	2	2							4
	Nepean Bay Township	2	2				1			5
	Min Oil	7	1	2	3					13
	American River - township								6	6

	Muston Gully	8	5	2	1	1		1	12	30
Dudley Peninsula	Penneshaw	12	9	3		3	1	1	22	51
	Lashmar Lagoon								5	5
	Totals	**145**	**96**	**24**	**10**	**15**	**12**	**7**	**137**	**446**

Landholder Engagement

During the census surveys, 48 separate landholders allowed us access to GBC habitat on their property to undertake surveys or assisted us with surveys by surveying their property and providing us with the results of their surveys. In addition to this, surveys were also carried out in five different Conservation Parks or Wilderness Protection Areas within the Department for Environment and Water reserve network.

Community Engagement

The census surveys were conducted with assistance from 40 volunteers, who contributed 238 hours of their time to the surveys. Kangaroo Island Landscape Board staff or board members and National Parks and Wildlife staff made up 35 % of the volunteers that contributed. Of the volunteers that assisted in 2025, 67.5 % were returning volunteers that had assisted with the census in previous years.

DISCUSSION

A total of 446 individuals were recorded during the 2025 GBC population census. Census results between 2020 and 2025 indicate that the GBC population on Kangaroo Island has stabilised post-fire, the most recent count providing further evidence that the increasing population trend recorded pre-fire has ceased in recent years. At a regional level, the population size of GBCs along the fire-affected north coast of Kangaroo Island was slightly lower than when counted in 2020 immediately post-fire. This may be the result of decreased availability of food following the 2019-20 bushfires. Consistent with previous years, most patches of drooping sheoak feeding habitat in western fire-affected regions had evidence of GBC feeding activity, suggesting food availability may be a limiting factor in GBC population growth in this region. This highlights the need to protect unburnt *Allocasuarina verticillata* on western Kangaroo Island from removal or loss through fire, particularly until the sheoak burnt during the 2019-20 bushfires matures to produce cone crops once again (estimated 10-20 years post-fire). In contrast, the population size on eastern Kangaroo Island was slightly higher than the count recorded in 2020 immediately post-fire. This is likely due to continued strong breeding rates in areas that were not impacted by fire and is supported by our observations of more breeding pairs with fledglings from the most recent breeding season in unburnt eastern areas compared to fire affected areas. The largest number of GBCs ever recorded on the Dudley Peninsula was recorded in 2025 (56 individuals). This is evidence of the continued growth and expansion of the population on Dudley Peninsula, which only recorded its first breeding activity on the peninsula in 2015.

Overall, the number of pairs with a fledgling was slightly lower across the island in 2025 compared to most other years since 2020. During the 2025 breeding season, we also recorded fewer nesting attempts across the island. Nesting also seemed to start slightly later in 2025 compared to previous years, which may have been due to several periods of very hot weather early in the year and a period of significantly lower than average rainfall in the 12 months prior. Additionally, during the 2024 census, staff anecdotally noticed that sheoak trees in many areas were dropping a portion of their immature cone crops following the very low rainfall winter of 2024. In central New South Wales, fewer glossy black-cockatoo pairs (subspecies *lathami*) have been observed attempting to nest following drought or low rainfall conditions (Cameron 2009). Reduced unripe cone availability on Kangaroo Island at the start of 2025 may have contributed to fewer pairs choosing to breed in the 2025 breeding season. Nesting success of pairs that did breed was similar to previous years, indicating that food availability did not lead to a reduction in nesting success, but likely contributed to the overall lower number of pairs attempting to breed.

In 2025, more smaller flocks were counted than in previous years, and GBCs seemed to be dispersed quite widely within the unburnt feeding habitat on western Kangaroo Island. Many areas that usually contain a larger single flock had multiple smaller flocks occupying the landscape in 2025. This could be due to good winter rains in 2025, contributing to more water being available in the landscape, as flocks usually congregate around drinking water sources. It could also be because of lower food availability due to the dry period in 2024 and early 2025, which could have prohibited flocks from congregating in high density due to reduced food density. However, despite changes to flock sizes at a local scale, it is still encouraging to see that the total GBC population on Kangaroo Island remains stable six years after the 2019-20 bushfires. Recovery efforts between

1995 and 2019, which saw increases in breeding success, population size and area of occupancy of the population, are likely the reason this population has shown resilience despite widespread habitat loss.

As well as obtaining important data on population trajectory, the census surveys are supported by large numbers of landholders and community volunteers. More than 88 individual landholders or volunteers were contacted and engaged with during the three weeks of surveys, and all received feedback on the results of the census surveys after their conclusion. This engagement is also important to the long-term conservation of GBCs with a large proportion of feeding and nesting sites occurring on privately owned land.

NEXT STEPS AND FUTURE PRIORITIES

GBCs are continuing to persist in all flock regions post-fire. However, threats for the Kangaroo Island population identified through census surveys include flocks of GBCs restricted to small unburnt patches of drooping sheoak in fire-impacted areas, and a lower prevalence of fledglings from the most recent breeding season, particularly in fire-impacted areas. There was evidence of current or recent feeding activity in most revegetated drooping sheoak patches surveyed during the census, providing further evidence of the habitat value and importance of past, present and future revegetation programs to the GBC population.

The priority management actions for the Kangaroo Island GBC population remain largely unchanged from previous reports, and include:

- Revegetation of drooping sheoak in areas where low amounts of available foraging habitat are present. Well-spaced revegetation (4-6 metres between seedlings) is likely to produce seed faster than natural fire regeneration. Some plantings planted in 2020 are now being utilised by GBCs for feeding.
- Protection of nests from predators and competitors in all occupied flock regions.
- Provision of nest boxes in strategic locations to support continued breeding where natural tree hollows are lacking.
- Drooping sheoak revegetation in areas further afield from current feeding areas, to create ‘stepping stones’ between existing foraging habitat, and act as insurance habitat in the event of further widespread bushfire events. Examples of this include the drooping sheoak revegetation at Murray Lagoon and North Cape.
- Protection of unburnt sheoak patches on the western half of Kangaroo Island from fire and other forms of disturbance (grazing, clearance).
- Continuation of support for the PhD project undertaking research on feeding behaviour in unburnt versus burnt areas of the island, and survival of fledglings in different areas of the island.
- Continuation of census surveys to determine the long-term impact of reduced food availability on the Kangaroo Island population and future population trends.

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