

Same-day fledging of a brood of Galahs in the Hunter Region, New South Wales

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INTRODUCTION

The Galah *Eolophus roseicapillus* is a small pink and grey cockatoo which is widespread and abundant in open habitats in Australia (Higgins 1999). It forages on the ground for seeds and other foods in the morning and afternoon (Noske 1980; Pidgeon 1970). It forms monogamous pairs and breeds in hollows in *Eucalyptus* spp. trees from July to December in southern Australia (Australian Museum 2021). A clutch usually contains 3-4 eggs which hatch on average 23.4 days after being laid (Rowley 1990). Incubation of the eggs and care of the young is by both parents. The mean nestling period is 49.4 (Rowley 1990) to 52 days (Smith & Saunders 1986).

Fledging occurs when a chick leaves the nest and flies away with its parents. The Galah fledging process has been described by Rowley (1990). Fledging is preceded by escalating calls from the parents and chick, and demonstration flights by the parents. The parents may refuse to feed a chick, to encourage it to leave, and they call for it to leave for hours or even days. When a chick fledges, its parents fly on either side of it to a crèche (nursery) where Galah fledglings are cared for in a group. Chicks usually fledge in the early morning (Higgins 1999) or late afternoon (Pryor 2018). The interval from the first chick fledging to the third chick fledging is 2-15 days (Pryor 2018) and the last chick may fledge up to 12 days after its siblings (Rowley 1990).

Parental and chick behaviour during fledging of young Galahs in a suburban environment is not well documented. To gain insights into this behaviour, since 2002 I have observed wild Galahs nesting in my backyard at Thornton (32°24'S, 150°38'E), New South Wales (Pryor 2018; Pryor 2023). Since 2008 I have recorded the fledging times of the chicks. This report describes previously undocumented breeding behaviour by

Galahs in 2023 and compares the annual fledging behaviour by Galah chicks over 2008-2023.

METHODS

Since 2002, nest boxes of various sizes have been built to attract Galahs, Eastern Rosellas *Platycercus eximius* and Common Brushtail Possums *Trichosurus vulpecula* (Dengate 1997). They have been installed in *Eucalyptus* spp. trees or on steel poles at heights of 2, 5.5 or 6.5 m in the back right corner of our residential property (total area 765 m²). The native shrub understorey includes *Callistemon* spp., *Banksia* spp. and *Grevillea* spp. (Pryor 2018). The wild birds that nested were passively observed without interference in their behaviour unless the chicks were at risk from lice or mites while in the nest box or from pets while on the ground after fledging.

On 14 August 2023, a nest box containing fresh *Eucalyptus* leaves sprayed with lice and mite spray was mounted 5.5 m above the ground on a steel pole in our backyard beside a *Eucalyptus* tree (approximately 21 m tall). A custom-made camera was fixed to the ceiling of the nest box to allow opportunistic viewing of the eggs and young. The photograph of Chick 1/2023 fledging (**Figure 1**) was saved from a video (<https://youtu.be/yKpRmAuLrk8>) taken with an Apple iPhone 12 Pro. The photograph of the Galahs in the nest box was taken with a Canon 5D Mark IV camera with a Sigma 150-600 mm f/5-6.3 DG OS contemporary lens. Sunrise and sunset times were obtained using an online geodetic calculator (Geoscience Australia 2024). Fledging times relative to sunrise or sunset were calculated manually and graphed using Microsoft Excel.

RESULTS

In 2023, all three chicks fledged on the same day, 12 November (**Table 1**). Chick 1/2023 fledged at 0509 h while Chick 2/2023 was beside it and also looking out of the nest box entrance hole (**Figure 1**). It flew away with the parents while Chick 2/2023 watched. Chick 2/2023 fledged 167 min

later, at 0756 h. Chick 3/2023 was last seen at 1430 h and the nest box camera confirmed that it had left by 1540 h. Thus, the three chicks fledged in less than 631 min.

From 2002 to 2007 inclusive, up to 14 chicks fledged (times not recorded). From 2008 to 2023 inclusive, a total of 27 Galah chicks fledged (Table 1). I was able to record the exact fledging time of 22 of those chicks. Fifteen of them (68%) fledged in the morning, and 13 of these 15 (86.7%) fledged within 120 min after sunrise (Figure 2; Table 1). The average fledging time for all 15

morning-fledging chicks was 66 min after sunrise. The other seven chicks (32%) fledged in the late afternoon and five of these seven (71.4%) fledged within 120 min before sunset (Figure 3; Table 1). The average fledging time for all seven was 89 min before sunset. Overall, 81.8% of chicks fledged either within 120 min of sunrise or 120 min of sunset. None of 23 Galah chicks (the 22 recorded plus Chick 3/2023) fledged between 0756 h and 1410 h, a 374 min window in the middle of the day.



Figure 1. Chick 2/2023 watched from the nest box entrance hole while Chick 1/2023 fledged and flew to the crèche with the parents.

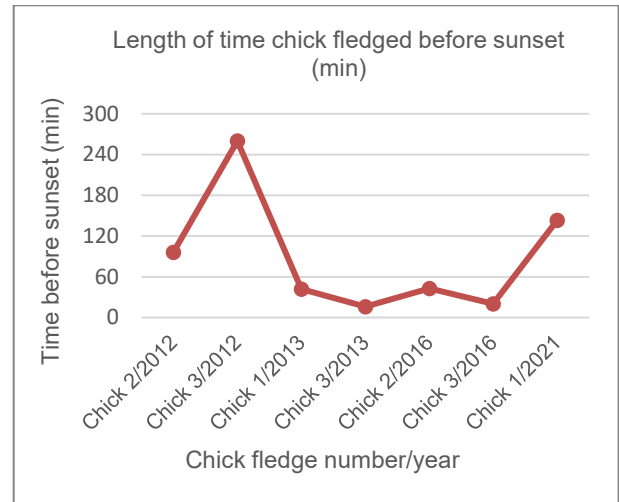


Figure 3. Length of time chick fledged before sunset (min)

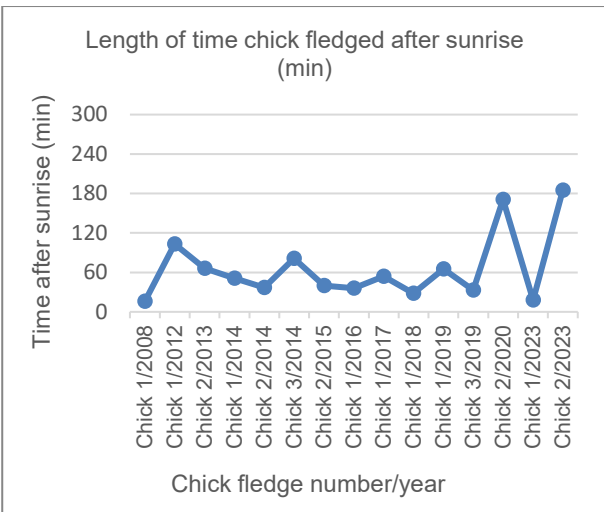


Figure 2. Length of time chick fledged after sunrise (min)

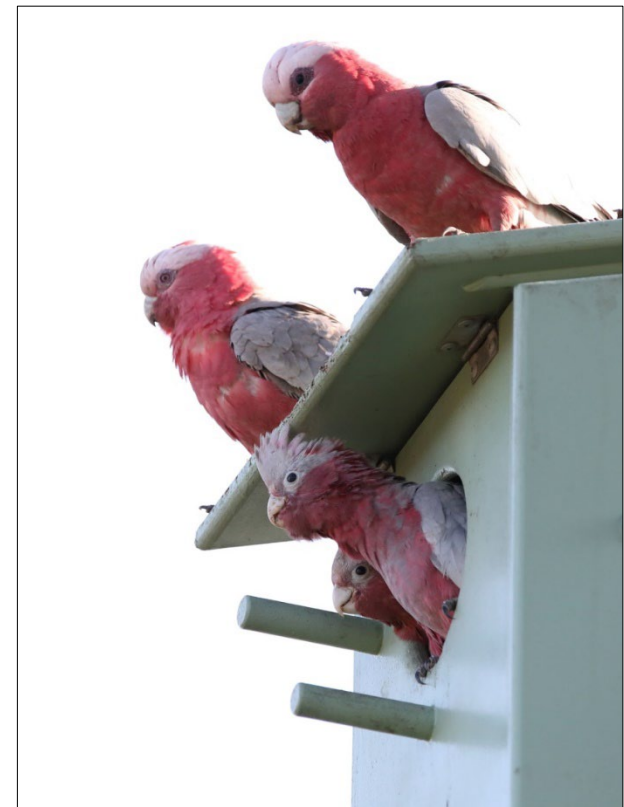


Figure 4. (Right) Chick 1/2023 and Chick 2/2023 looked out of the nest box entrance hole at the same time while their parents perched on the roof.

Table 1. Timing of fledging of Galah chicks relative to sunrise and sunset (Australian Eastern Standard Time)

Chick hatch number / year	Date chick left nest box	Time chick left nest box (h)	Sunrise ¹ (h)	Time after sunrise (minutes)	Sunset ¹ (h)	Time before sunset (minutes)
Chick 1/2008	10/12/08	0500	0444	16	1857	
Chick 1/2012	2/11/12	0641	0458	103	1824	
Chick 2/2012	4/11/12	1650	0457		1826	96
Chick 3/2012	9/11/12	1410	0453		1830	260
Chick 1/2013	19/10/13	1730	0513		1812	42
Chick 2/2013	20/10/13	0618	0512	66	1813	
Chick 3/2013	21/10/13	1758	0511		1814	16
Chick 1/2014	23/10/14	0600	0509	51	1815	
Chick 2/2014	3/11/14	0535	0458	37	1824	
Chick 3/2014	7/11/14	0615	0454	81	1828	
Chick 1/2015	Not observed					
Chick 2/2015	13/11/15	0530	0450	40	1833	
Chick 1/2016	22/10/16	0545	0509	36	1815	
Chick 2/2016	26/10/16	1735	0505		1818	43
Chick 3/2016	27/10/16	1759	0504		1819	20
Chick 1/2017	16/10/17	0610	0516	54	1810	
Chick 1/2018	20/10/18	0540	0512	28	1813	
Chick 1/2019	24/10/19	0613	0508	65	1816	
Chick 2/2019	24/10/19	Not observed	0508		1816	
Chick 3/2019	25/10/19	0540	0507	33	1817	
Chick 1/2020	24/12/20	Not observed	0449		1905	
Chick 2/2020	25/12/20	0740	0449	171	1906	
Chick 1/2021	20/12/21	1640	0447		1903	143
Chick 1/2022 ²	19/11/22	Not observed	0447		1839	
Chick 1/2023	12/11/23	0509	0451	18	1832	
Chick 2/2023	12/11/23	0756	0451	185	1832	
Chick 3/2023 ³	12/11/23	Not observed	0451		1832	

¹ (Geoscience Australia 2024)

²Chick 1/2022 left nest box in the morning (confirmed with nest box camera)

³Chick 3/2023 left nest box between 1430 h and 1540 h (confirmed with nest box camera)

DISCUSSION

These appear to be the first ever reports of: 1) a Galah chick fledging while a sibling was in the nest box entrance hole; 2) two siblings leaving on the same morning; and 3) three siblings leaving on the same day. Other studies have not detailed the time intervals between fledging events (Higgins 1999; Rowley 1990; Smith & Saunders 1986). These new observations will enhance our understanding of parental and chick behaviour during fledging.

1. A Galah chick was capable of fledging when perched beside a sibling in the entrance hole of a nest. This was a surprising finding because a chick usually leans forwards, filling the entrance hole with its body, immediately before leaving the nest (KP pers. obs.). Moreover, although two chicks often look out of the entrance hole at the same time (**Figure**

4), younger siblings usually stay in the bottom of the nest box while the parents are urging a chick to leave (KP pers. obs.). In the 2023 fledging event, it is assumed that Chick 1/2023 and Chick 2/2023 were ready to fledge at the same time and Chick 1/2023 responded to the parents' urging first.

- Two Galah siblings fledged on the same morning. This was an unexpected finding because in previous years, after a fledging event, Galah parents did not urge another chick to leave until the next afternoon or morning (KP pers. obs.). In 2023, it is likely that the parents responded to cues from Chick 2/2023 that indicated its readiness and eagerness to fledge.
- Three Galah chicks in a brood fledged on the same day. Moreover, the strong third chick left shortly after its siblings, with minimal urging

from the parents. In my long-term study, three strong siblings have left on two and three consecutive days (2019 and 2013 respectively) (**Table 1**). However, in many other broods, the youngest sibling has taken longer to fledge and has sometimes leapt from the nest box and lived in the garden for several days before achieving enough lift to fly from the backyard (e.g. Chick 2/2007, Chick 3/2014).

The new observations spanning 2018 to 2023 support my earlier finding that Galah chicks usually fledge either within 120 min after sunrise or within 120 min before sunset (Pryor 2018). They are also in line with other studies which found that young Galahs usually fledge in the morning (Higgins 1999). Galahs forage for 1-4 h soon after sunrise and again in the mid to late afternoon (Noske 1980; Pidgeon 1970). It is likely that after foraging, the parents return to the nest, feed younger nestlings then urge a nestling that is ready to fledge to leave the nest. Such parental behaviour would ensure that younger nestlings are satiated in case the parents spend more time than expected escorting a fledgling to the crèche.

The new observations spanning 2018 to 2023 also support the previous finding that Galah chicks do not fledge between mid-morning and mid-afternoon (Pryor 2018). This is likely because during the hottest part of the day, the parents shelter in trees (Australian Museum 2021) and do not call to their chicks and while the chicks often spend hours in the nest box entrance hole, they do not call to their parents (KP pers. obs.).

CONCLUSIONS

If all Galah chicks in a brood are strong and healthy, they may fledge in quick succession on the same day. They are most likely to fledge within 120 min after sunrise or within 120 min before sunset.

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