Australian National University

Saving swift parrots: bud surveys 2025

A report to NRM South

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Dr Dejan Stojanovic

Fenner School of Environment and Society

P: 0408 264 761

dejan.stojanovic@anu.edu.au

The Australian National University

Canberra ACT 2600 Australia

www.anu.edu.au

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Results at a glance:

1. Black gum budding is widespread with relatively high intensity
2. Blue gum budding is widespread with moderate intensity
3. Swift parrots are likely to breed in: Buckland, Bruny Island (north + south) and Maria Island
4. Breeding is possible in the Eastern Tiers, Wielangta and the Southern Forests
5. Widespread bud development means that some areas of suitable habitat may go unoccupied

Methods

We undertook surveys from late Feb 2025 across 9 swift parrot important breeding areas (SPIBAs – Fig. 1). We revisited randomly selected trees (initial visits were in 2024) to record the budding intensity of trees across the breeding range of swift parrots. We scored trees based on their over-all bud cover intensity, estimated as the proportion of the crown of each individual tree where buds occurred. We visited three species: blue gum *Eucalyptus globulus;* black gum *E. ovata;* and Brookers' gum *E. brookeriana.* For analysis, we pooled records of the latter two species (hereafter: black gums). We analysed the data using a simple generalised linear model:
proportional bud coverage of individual trees ~ SPIBA × species.

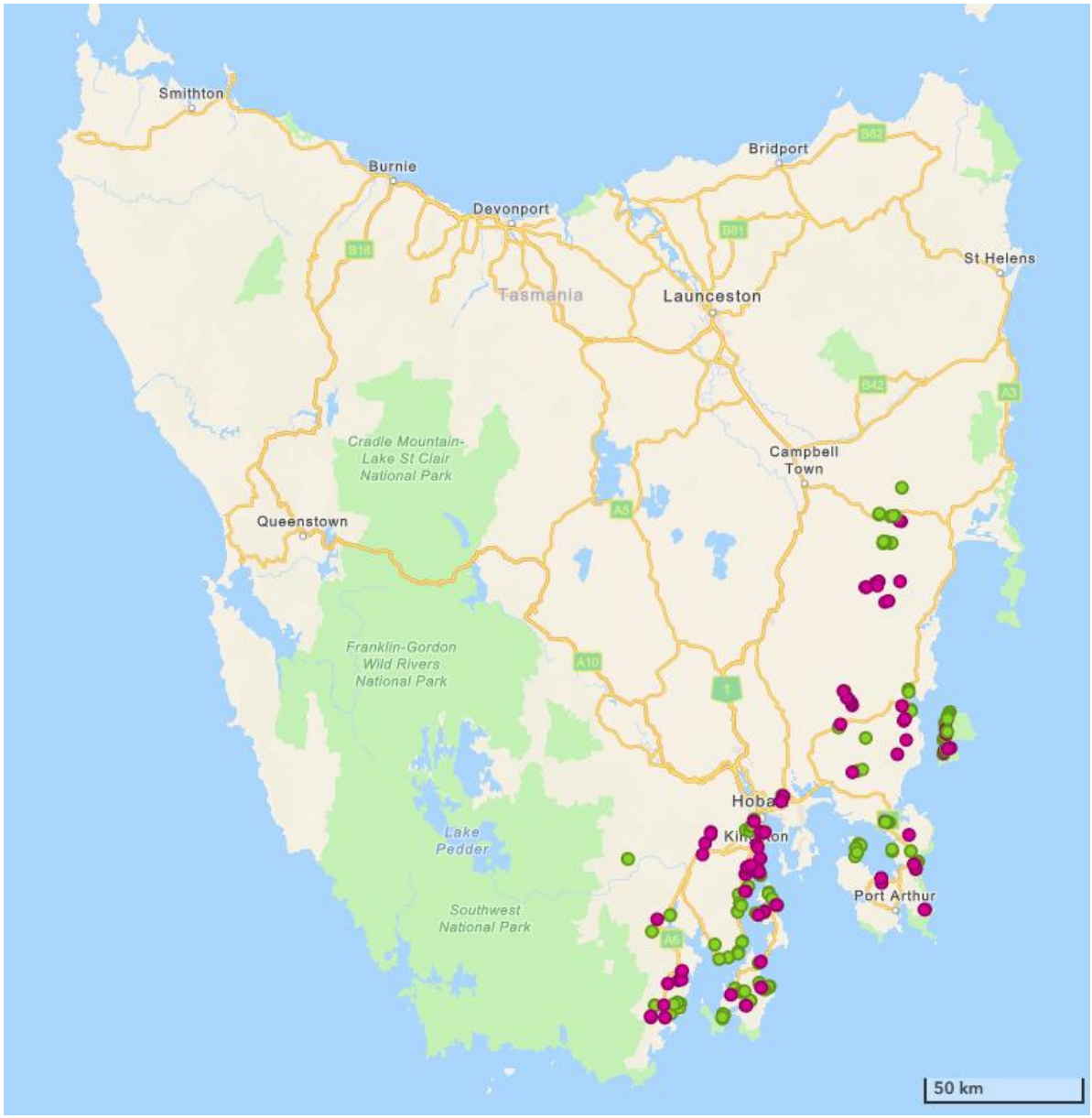

Figure 1. Map of trees surveyed. Magenta points indicate the locations of individual trees that have now received two years of survey – green points indicate trees surveyed only once so far in 2024 (further surveys will be undertaken in coming months).

Results of the 2025 bud survey

Raw data and proportion of trees per species and SPIBA budded are shown in Table 1. We found significant differences between SPIBAs in flowering intensity among the tree species surveyed. Modelled effects (expressed as the estimated bud coverage of an individual tree of each species at each SPIBA) are presented in Figure 2.

Black gum budding was widespread and relatively high across all SPIBAS, especially so on Maria Island, South Bruny, the Southern Forests and Wielangta. However, we caution that the sample of black gums was relatively small.

Blue gum budding occurred across in all SPIBAs, with >50% of surveyed trees budded in each region. The intensity of budding was moderate (~30-50% coverage per tree) across most SPIBAs. Only the Buckland SPIBA had high budding intensity and only the Lake Leake SPIBA had low budding intensity.

Based on the combination of both the prevalence and intensity of budding among both tree species, we predict that in the 2025 breeding season swift parrots are likely to breed in the following regions: Buckland, Bruny Island (north + south) and Maria Island. Breeding is also possible in the Eastern Tiers (Lake Leake SPIBA), Wielangta and the Southern Forests. Budding is relatively widespread this year, and we anticipate that if settlement in some areas (e.g., Bruny Island, where parrots are already present) occurs at high densities, other areas of potential habitat may go unoccupied.

Table 1. Sample sizes and proportion of each species with bud per SPIBA

SPIBA	species	N. Total	N. Budded	Proportion budded
Buckland	Black gum	35	33	0.943
	Blue gum	28	25	0.893
Channel	Black gum	73	70	0.959
	Blue gum	77	56	0.727
Forestier Peninsula	Black gum	12	12	1.000
	Blue gum	43	34	0.791
Hobart	Black gum	47	47	1.000
	Blue gum	114	85	0.746
Lake Leake	Black gum	45	42	0.933
	Blue gum	5	3	0.600
Maria Island	Black gum	9	9	1.000
	Blue gum	79	59	0.747
Meehan Range	Blue gum	69	39	0.565
North Bruny	Black gum	5	5	1.000
	Blue gum	96	92	0.958
South Bruny	Black gum	24	22	0.917
	Blue gum	88	78	0.886
Southern Forests	Black gum	38	38	1.000
	Blue gum	47	38	0.809
Tasman Peninsula	Blue gum	51	34	0.667
Wielangta	Black gum	9	7	0.778
	Blue gum	46	39	0.848

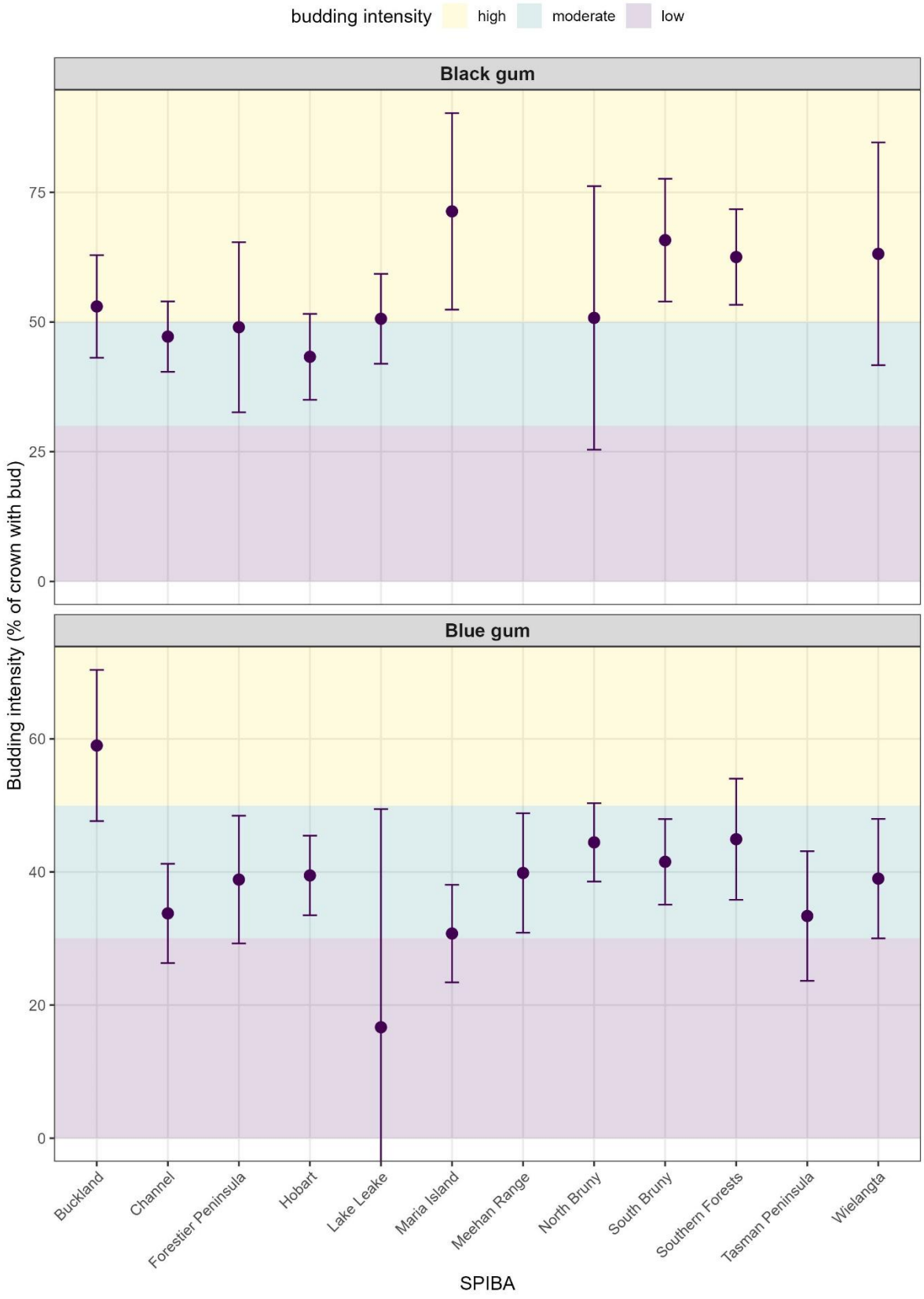

Figure 2. Modelled estimates of budding intensity (i.e., percentage of the crown of a given tree with bud) per SPIBA. Points indicate modelled means, error bars show 95% confidence limits. Shading represents a categorical assessment of high, moderate or low bud coverage.