

# Canning River Regional Park Bat Call Surveys 2016-2019

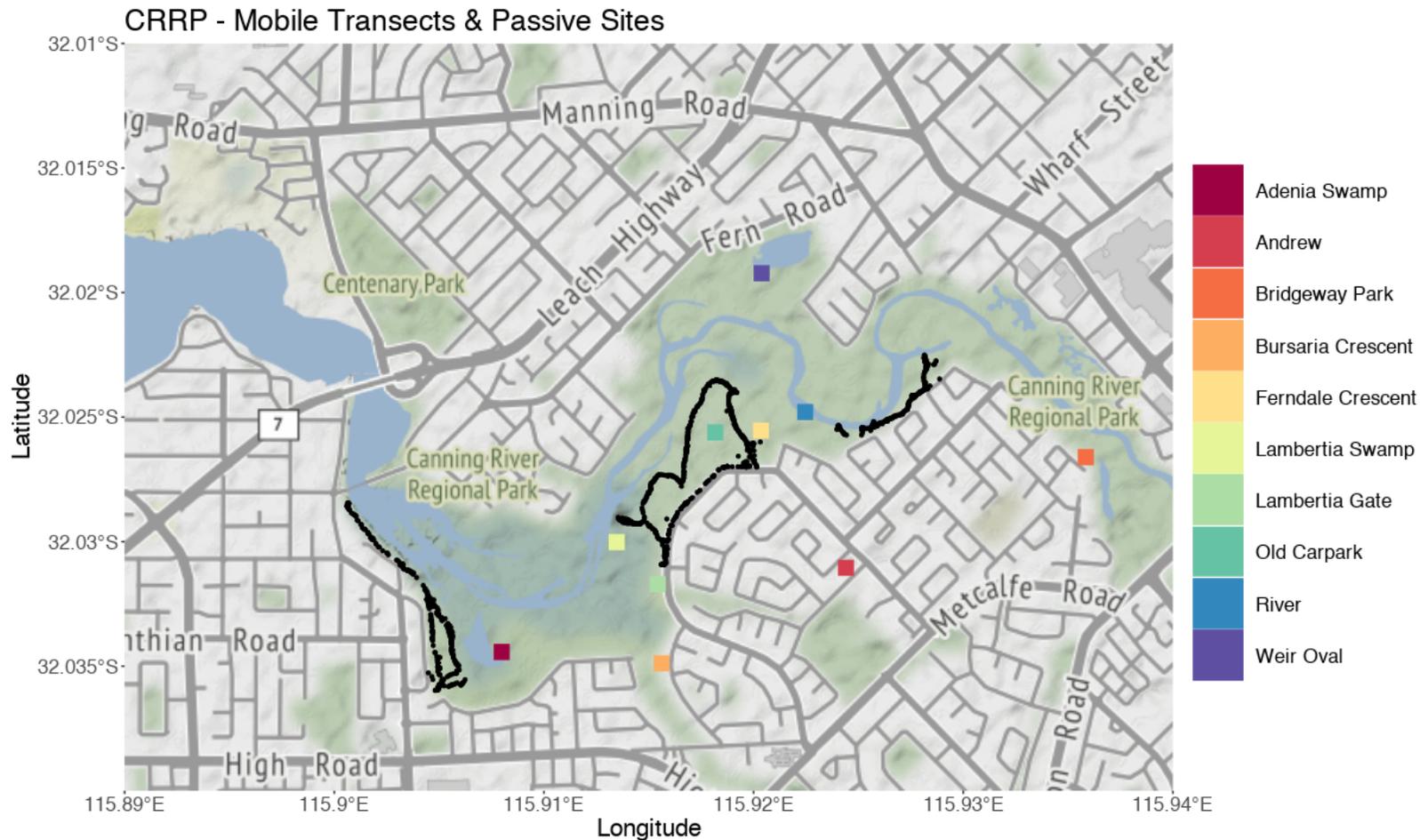


Figure 1. Bat call survey locations within the Canning River Regional Park (CRRP) from 2016 – 2019. The black dots represent locations where bats were recorded along the mobile transects while the filled coloured squares are sites surveyed using passive detectors.

## Survey Effort

Each mobile transect was surveyed either 2 or 3 nights in November 2016 and February 2019. Surveys consisted of walking the transect for 1-2 hours, recording bat calls with a handheld detector. Passive surveys consisted of placing a bat detector at each of the sites, recording for 7-8 nights in 1-3 survey sessions. See Figure 1 for survey locations within the Canning River Regional Park (CRRP).

	2016 Spring	2017 Spring	2018 Autumn	2018 Spring	2019 Autumn
<i>Mobile Surveys</i>					
Transect 1	12, 14 Nov				20-22 Feb
Transect 2	12 -14 Nov				20-22 Feb
Transect 3	12 -14 Nov				20-22 Feb
<i>Passive Surveys</i>					
Adenia Swamp		16-23 Oct		24 Sep – 1 Oct	
Andrew		13-20 Nov	23-30 Apr	3-10 Dec	
Bursaria Crescent			9-17 Apr	10-17 Dec	
Bridgeway		9-16 Oct	2-9 Apr	12-19 Nov	
Ferndale Crescent			5-12 Mar	15-22 Oct	
Lambertia Gate		11-18 Sep		22-28 Oct	
Lamb Swamp		30 Oct – 6 Nov			
Old Carpark		18-24 Sep	7-14 May	19-26 Nov	
River		6-13 Nov	16-24 Apr	5-12 Nov	
Weir Oval		2-9 Oct	9-16 Apr	1-8 Oct	

## Bat Species Detected

The CRRP is definitively home to two species of bat: the White-striped Free-tailed Bat (*Austronomus australis*, Gray 1838; AUAU) and Gould's Wattled Bat (*Chalinolobus gouldii*, Gray 1841; CHGO). Overall, 12 952 bat calls were recorded during the surveys with nearly two-thirds belonging to AUAU (57% or 7401 calls) and just over one-quarter belonging to CHGO (28% or 3644 calls). An additional 1903 calls (15%) were not of high enough quality to identify to species. Four calls were identified as Gould's Long-eared Bat (*Nyctophilus gouldi*, Tomes, 1858), with one call at Bridgeway Park, Ferndale Crescent, Lambertia Gate and Lambertia Swamp. This species of bat is known to have low amplitude calls so it may well live within, or travel through, CRRP but not be recorded by the detectors.

The tables below provide results for the bat calls recorded during the mobile and passive surveys, presented as mean ( $\pm$  standard error, SE) nightly calls and total number of calls during each survey for White-striped Free-Tailed Bats (AUAU), Gould's Wattled Bat (CHGO), and bat calls that were unable to be identified to species (Unknown).

<i>Mobile Surveys</i>	Year	Season	AUAU			CHGO			Unknown		
			Mean	SE	# Calls	Mean	SE	# Calls	Mean	SE	# Calls
Transect 1	2016	Spring	45.0	20.0	90	5.0	1.0	10	11.5	0.5	23
	2019	Autumn	9.7	1.8	29	5.0	2.0	10	5.7	1.5	17
Transect 2	2016	Spring	38.7	25.2	116	1.0	0.0	1	19.3	9.2	58
	2019	Autumn	14.0	2.5	42	0.0	0.0	0	2.0	0.0	6
Transect 3	2016	Spring	21.0	13.2	63	7.0	0.0	7	17.3	7.6	52
	2019	Autumn	19.7	1.2	59	2.5	1.5	5	9.0	0.6	27

<i>Passive Surveys</i>	Year	Season	AUAU			CHGO			Unknown		
			Mean	SE	# Calls	Mean	SE	# Calls	Mean	SE	# Calls
Adenia Swamp	2017	Spring	3.7	0.8	41	4.5	0.8	63	3.3	0.9	33
	2018	Spring	1.8	0.4	14	2.9	0.6	32	2.3	0.9	7
Andrew	2017	Spring	7.4	1.4	104	5.5	1.0	66	1.6	0.3	14
	2018	Autumn	5.0	1.0	70	2.5	0.3	27	2.3	0.2	18
		Spring	17.6	4.1	246	2.1	0.5	19	3.7	0.8	48
Bridgeway Park	2017	Spring	9.2	4.9	101	27.9	9.5	391	26.6	8.7	373
	2018	Autumn	71.3	53.7	784	7.5	2.4	82	21.1	10.0	211
		Spring	12.1	8.6	121	1.6	0.2	13	4.3	2.2	26
Bursaria Crescent	2018	Autumn	10.6	5.3	148	19.6	12.7	157	7.2	2.0	65
		Spring	30.2	12.0	362	5.2	1.0	67	5.0	1.5	70
Ferndale Crescent	2018	Autumn	21.5	8.8	280	44.3	10.1	620	5.1	1.1	51
		Spring	3.8	1.9	42	13.6	4.0	163	3.8	1.2	34
Lambertia Gate	2017	Spring	3.4	0.8	44	5.9	1.1	77	5.5	2.3	60
	2018	Spring	7.0	3.8	35	1.5	0.2	9	1.0	0.0	2
Lambertia Swamp	2017	Spring	3.9	1.3	43	4.5	1.1	58	2.5	0.7	25
Old Carpark	2017	Spring	10.9	3.6	120	18.9	3.9	189	4.3	0.8	47
	2018	Autumn	16.5	11.2	182	5.4	1.6	54	2.3	0.4	14
		Spring	155.0	63.7	1705	5.9	2.6	53	13.1	4.1	131
River	2017	Spring	69.7	14.9	976	24.7	3.5	346	10.0	1.5	140
	2018	Autumn	11.5	2.7	172	6.6	1.2	86	2.0	0.3	26
		Spring	89.9	28.4	1079	7.6	1.5	91	8.2	2.3	98
Weir Oval	2017	Spring	13.8	3.6	193	55.4	14.1	775	12.3	2.2	160
	2018	Autumn	7.5	1.6	97	11.5	2.3	150	4.1	0.7	53
		Spring	4.3	0.9	43	7.7	5.7	23	1.9	0.4	13

