

2019 MONITORING REPORT – SWIFT PARROT OFFSET

Location	466 EAST BAGDAD RD BAGDAD TAS 7030
Date	26/11/2019
Personnel	Matt Taylor, Sally Bryant

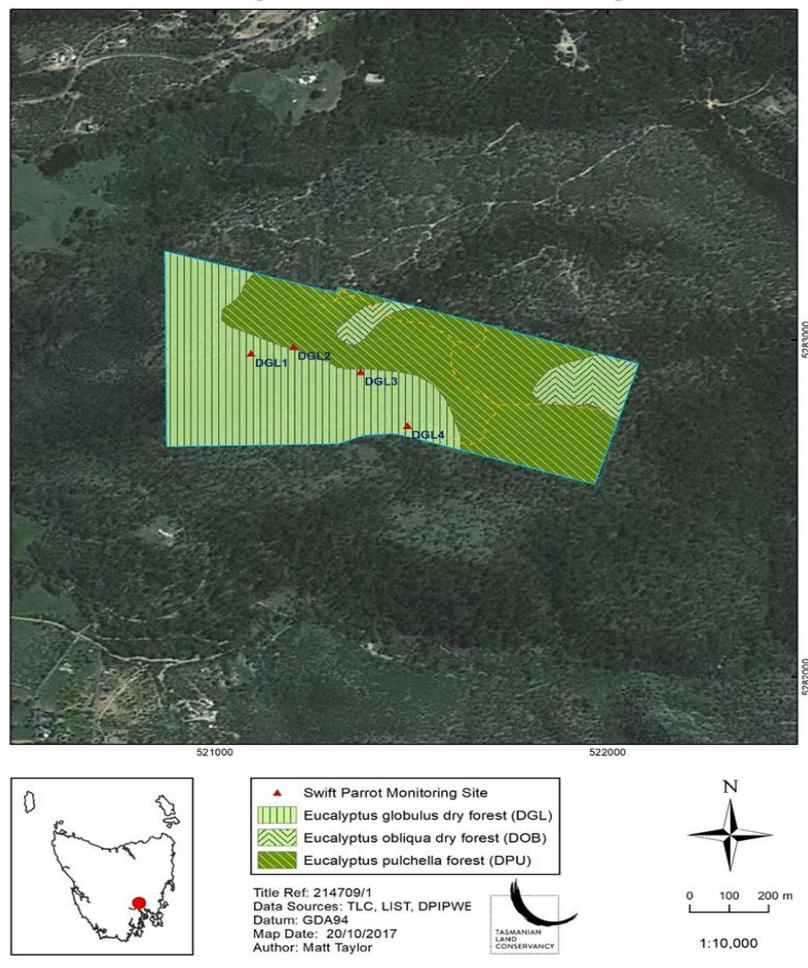
AIM

To evaluate whether swift parrot habitat has been maintained or improved over the past year and any subsequent changes since monitoring commenced in 2016.

METHODS

Habitat condition	Fixed photo-points at four sites on the property were re-surveyed (see map). A photograph was taken of the ground layer, understorey and canopy at each site. Structural complexity was calculated as the number of vegetation strata observed at each site. Recruitment was calculated as the number of cohorts per site. Canopy cover was estimated as a percentage for each site.
Bird Diversity	Two 20 minute 2 ha bird surveys were conducted at and while walking between two pairs of sites. Birds were recorded as present if they were heard or sighted. This survey methodology follows that used by BirdLife Australia for the Atlas of Australian Birds (www.birdsaustralia.com.au) for the two hectare search.

East Bagdad Rd - Swift Parrot Offset Monitoring



RESULTS

The fauna and vegetation values have declined since the previous survey. We believe this to be due to the ongoing dry conditions. There has been no additional disturbance to the vegetation in the vicinity of site 4, associated with the dwelling construction that was noted in the last report. However, there may be ongoing impacts on fauna associated with the residential use of this area and associated activities such as pet ownership and firewood collection. There is an obvious risk that these activities would impact on the breeding and foraging use by swift parrots of this site. No swift parrots were detected during this 2019 survey.

2019 Bird Diversity

Table 1 two ha bird surveys at Bagdad monitoring sites 14/11/2019			
Taxon name E – endemic	Taxon scientific name	Site DGL1 & DGL2	Site DGL3 & DGL4
Sulphur Crested Cockatoo	<i>Cacatua galerita</i>		calling
Tasmanian Green Rosella E	<i>Platycercus caledonicus</i>		calling
Tasmanian Superb Fairy-wren	<i>Malurus cyaneus</i>		calling
Spotted Pardalote	<i>Pardalotus punctatus</i>	calling	calling
Tasmanian Striated Pardalote	<i>Pardalotus striatus</i>	calling	calling
Yellow-throated Honeyeater E	<i>Lichenostomus flavicollis</i>	calling	calling
Grey Currawong	<i>Strepera versicolor</i>		calling
Tasmanian Grey Fantail	<i>Rhipidura fuliginosa</i>	calling	calling
Brown Thornbill (new sp this year)	<i>Acanthiza pusilla</i>	calling	calling
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	calling	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	seen	calling
Dusky Robin E	<i>Melanodryas vittata</i>		calling
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>	calling	calling
Brush Bronzewing	<i>Phaps elegans</i>	seen	
Species Richness 14 species	Species Richness per site	9 species	12 species

During the surveys conducted 14 November 2019, bird richness per site was 9 to 12 species with a total bird richness for the property of 14 species. One new species, the Brown Thornbill was recorded at both survey sites this year with a small number of thornbill noted foraging high in the canopy of *E. pulchella*. The species richness this year of 9-12 was relatively lower than for previous surveys especially 2017 and 2018 and the total species richness across the sites of 14 species was the lowest of all the surveys recorded to date (2016 - 15 species, 2017-26 species, 2018-26 species).

There were notable absences in all guilds of bird fauna this year despite being undertaken at the same time of the year as previously, especially cuckoos, and the number of birds detected were either singular or in pairs, with low activity and few calls. This finding reflects the noticeable poor ecological health of the habitat this year reflective of the desperately dry conditions. The vegetation in every habitat strata was parched with desiccated leaves, dieback of eucalypts was prolific and the cover was especially sparse in the mid storey which for most small to medium bird species provides the main nesting cover and food resources.

Since surveys began in 2016 a total of 33 bird species have been detected across the site. Species richness has varied from 15 in 2016 to as high as 26 species which typically reflects the seasonal variation to be expected in an open woodland ecotone under seasonal pressures. As four new bird species were identified in 2018 and

one new species this 2019 season, this gradual increase suggests that the maximum richness of species is yet to be recorded and that with repeat site visits may continue to increase when conditions improve.

In general bird richness has remained fairly steady state as the eucalypts continue to age and more nesting sites are created. The low number of exotic bird species and weeds at this site contribute to its ecological intactness which is further enhanced by the surrounding buffer of private protected lands.

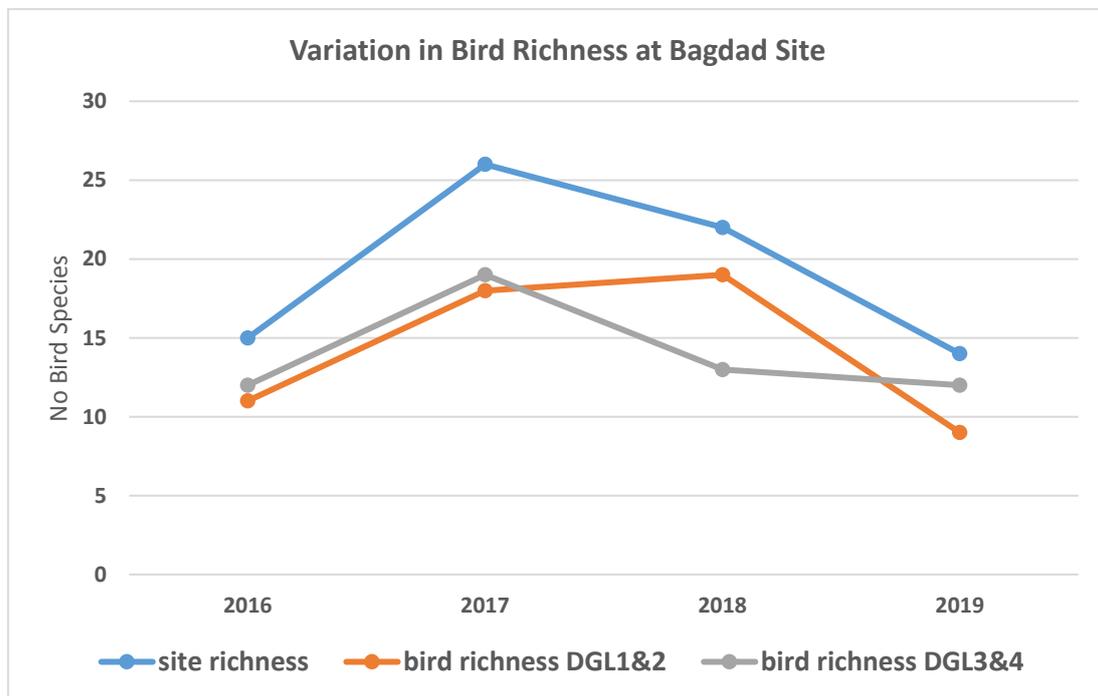
A small amount of eucalypt flowering was observed during the 2019 visit in *E. pulchella* and a small number of *E. viminalis*. No *E. globulus* was observed flowering nor was flowering prolific. This finding equates to the low number of honeyeaters detected and small number of individual birds foraging on site due to low levels of nectar availability and associated insect abundance. No swift parrot were detected on or in the vicinity of this property this season. Recent events held at Chauncy Vale by the TLC throughout November 2019 have also not detected any swift parrot presence or activity and this is directly related to the lack of blue gum flowering and general small level of flowering in other eucalypt species. This finding is in stark contrast to more southerly properties in the Hobart, Kingborough and Channel areas where swift parrots have been noticeably more abundant, visually and vocally active and regularly recorded at long-term monitoring sites throughout the breeding season.

A comparison over four years is shown in Table 2 and Fig 1. Eight species have been detected on each year of survey and a further six species in three of four years meaning or less than half of the species detected have been recorded regularly. The uniformity and physical closeness of the sites suggests the bird fauna on the property would be found consistently in both zones. It is evident from Figure 2 that species richness has declined over time but whether this represents fluctuations of natural variability or due to environmental stress factors such as drought requires a longer monitoring duration to ascertain. As monitoring progresses it may be possible to detect differences and undertake more sophisticated analysis.

Taxon name E – endemic		2016	2017	2018	2019
Spotted Pardalote	<i>Pardalotus punctatus</i>	2	2	2	2
Striated Pardalote	<i>Pardalotus striatus</i>	2	2	2	2
Yellow-throated Honeyeater E	<i>Lichenostomus flavicollis</i>	2	2	2	2
Sulphur Crested Cockatoo	<i>Cacatua galerita</i>	2	2	2	1
Tasmanian Green Rosella E	<i>Platycercus caledonicus</i>	2	2	1	1
Grey Fantail	<i>Rhipidura fuliginosa</i>	2	1	2	2
Superb Fairy-wren	<i>Malurus cyaneus</i>	1	2	1	1
Grey Currawong	<i>Strepera versicolor</i>	1	1	1	1
Southern Forest Raven	<i>Corvus tasmanicus</i>	2	2	2	
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>		2	2	2
New Holland Honeyeater	<i>Phylidonyris novaehollandiae</i>	2	1	1	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>		1	1	2
Grey Shrike-thrush	<i>Colluricincla harmonica</i>		1	2	1
Dusky Robin E	<i>Melanodryas vittata</i>		1	1	1
Black-headed Honeyeater E	<i>Melithreptus affinis</i>	2	2		
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	2	1		
Black Currawong E	<i>Strepera fuliginosa</i>		1	2	
Brush Bronzewing	<i>Phaps elegans</i>			1	1
Australian Magpie	<i>Cracticus tibicen</i>		1	1	
Grey Butcherbird	<i>Cracticus torquatus</i>		1	1	

Noisy Miner	<i>Manorina melanocephala</i>	1	1	
Yellow Wattlebird E	<i>Anthochaera paradoxa</i>		1	1
Dusky Woodswallow	<i>Artamus cyanopterus</i>		2	
Strong-billed Honeyeater	<i>Melithreptus validirostris</i>		2	
Rooster	<i>Gallus domesticus</i>			2
Brown Thornbill	<i>Acanthiza pusilla</i>			2
Scarlet robin	<i>Petroica boodang</i>		1	
Brown quail	<i>Coturnix ypsilophora</i>		1	
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>		1	
Shining Bronze-Cuckoo	<i>Chalcites lucidus</i>	1		
Brown Goshawk	<i>Accipiter fasciatus</i>	1		
Golden Whistler	<i>Pachycephala pectoralis</i>			1
Pallid Cuckoo	<i>Cacomantis pallidus</i>			1
Site Total 33 Species				

Fig 1 Change in Bird Species Richness over time.



2019 Habitat Condition

Habitat condition			
site	structural complexity (strata)	recruitment (cohorts)	canopy cover (%)
DGL1	4	3	45
DGL2	5	3	35
DGL3	6	3	50
DGL4	4	3	5
average	4.75 (decrease 21%)	3.00 (decrease 8%)	33.75 (decrease 21%)

2019 Vegetation Condition

Despite the ongoing dry conditions, tall open forest dominated by *Eucalyptus globulus* continues to occupy the covenant area and provides good foraging and nesting habitat for swift parrot (*Lathamus discolor*). The condition of understorey has remained relatively unchanged since the last survey in 2018. The understorey remains open, with a sparse layer of sub-canopy trees such as *Acacia dealbata* and shrubs such as *Bursaria spinosa*. The density of ground layer vegetation has decreased since last year, probably due to the dry conditions. It remains dominated by native grasses such as *Poa labillardierei*, but both grass cover and herb cover has noticeably decreased. There has also been a decrease in the diversity of understorey species, especially herb species, with few species and low numbers of annual dicot plants. There remains a high number of mature, hollow bearing trees, but canopy cover has decreased at all sites due to drought and insect attack. Recruitment of canopy species is good with multiple age cohorts still present at all sites.

Photo Monitoring Sites

DGL1 (521092E 5282961S)



DGL2 (521200E 5282981N)



DGL3 (521371E 5282906N)



DGL4 (521491E 5292747N)

