

Targeted Striped Legless Lizard *Delma impar* Survey within a Proposed Offset Site, Cressy, Victoria (DRAFT)

Date: 30th November 2018

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Ref: 11651

1 Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by Star Pronunciation to provide information on the current status of the nationally significant Striped Legless Lizard *Delma impar* within a proposed offset site located at 6060 Hamilton Highway, Cressy, Victoria (Figure 1).

2 Study Area

The proposed offset site covers approximately 272 hectares and is located approximately 130 kilometres west of the Melbourne CBD. The study area is privately owned and supports extensive areas of perennial native grasses that corresponds with the nationally significant ecological community *Natural Temperate Grassland of the Victorian Volcanic Plain*.

According to the Department of Environment, Water, Land and Planning (DEWLP) Native Vegetation Information Management Tool (NVIM) (DEWLP 2018), the study area occurs within the Victorian Volcanic Plain bioregion. It is located within the jurisdiction of the Corangamite Catchment Management Authority (CMA) and the Colac Otway Shire municipality.

3 Methods

20 rectangular grids (each grid comprising 5x10 tiles at five metres apart) (25 metres x 50 metres) were established within areas identified as potential Striped Legless Lizard habitat. All grids were deployed in late winter 2018 (10 Tile Grids in the East and 10 Tile Grids in the West) (Figure 1). This included habitat comprising embedded rock and serrated tussock grasses within the property.

The tile surveys were conducted in accordance with the recommended survey guidelines detailed in *EPBC Act Referral Guidelines for the Vulnerable Striped Legless Lizard, Delma impar* (SEWPaC 2011). Tile grids were checked when ambient temperatures did not exceed 28°C to detect for the presence of shed Striped Legless Lizard skins (SEWPaC 2011).

3.1 Site Assessment

An independent targeted Striped Legless Lizard survey within the study area (east and west locations) (Figure 1) were undertaken by two qualified zoologists on 29 October 2018. Each tile was lifted by hand, with the abundance and species of fauna recorded for each tile grid shown in Table 2 below.

4 Results

4.1 Vegetation Description

The study area provides confirmed high-quality habitat for Striped Legless Lizard due to the presence of favourable habitat structure and a suitable cover of native grasses including Kangaroo Grass *Themeda triandra*, Spear grass *Austrostipa spp.* and Wallaby-grass *Rytidosperma spp.*, interspersed with perennial serrated tussock-grass *Nassella spp.* Overall rock cover throughout study area comprised approximately 15% cover (Plates 1–4).



Plate 1. Plains Grassland and embedded rock within the study area (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 2. Native grasses and serrated tussocks within Tile Grids (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 3. Plains Grassland interspersed with embedded rocks and serrated tussocks within Tile Grid area (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 4. Plains Grassland interspersed with embedded rocks and serrated tussocks (Ecology and Heritage Partners Pty Ltd 29/10/2018).

Based on the condition of habitat(s) within the study area, and the extent and quality of habitat structure (inter-tussock space) and cracking clay soils within the proposed offset site, this makes the area suitable habitat for the species.

4.2 Targeted Survey Results

Targeted surveys for Striped Legless Lizard were conducted within the proposed offset site on 29 October 2018, when survey conditions were suitable to detect Striped Legless Lizard (BOM 2016) (Table 1).

Table 1. Date, time and climatic conditions during the targeted Striped Legless Lizard survey.

Survey	Date	Survey times	Temp. (°C)	Wind (km/hr)	Wind Direction	Cloud Cover (%)	No. SLL
Survey (East)	29/10/2018	09:30 – 11:30	11.2	22.2	ESE	50	19
Survey (West)	29/10/2018	11:30 – 13:30	13.9	22.2	E	0	11

Thirty single adult and juvenile Striped Legless Lizards were detected across most tile grids within the study area (Plate 5 and Plate 6) except Tile Grids 5 to 7, and 15 to 17. In some Tile Grids where no live individuals were observed, the skins of Striped Legless Lizard were detected under tiles (Plate 7 and Plate 8).



Plate 5. Striped Legless Lizard from Tile Grid (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 6. Striped Legless Lizard from Tile Grid (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 7. Striped Legless Lizard skin from Tile Grid (Ecology and Heritage Partners Pty Ltd 29/10/2018).



Plate 8. Striped Legless Lizard skin from Tile Grid (Ecology and Heritage Partners Pty Ltd 29/10/2018).

Table 2. Species recorded during site assessment at each tile grid.

Tile Grid Number	Species	#Individuals (n)	Adults / Juvenile	Comments
Survey (East)				
1	SLL	7	J	-
2	SLL	3	A	-
3	SLL	1	A	-
4	SLL	2	A	-
5	-	-	-	Skin only
6	-	-	-	Skin only
7	-	-	-	-
8	SLL	1	J	-
9	SLL	3	J	-
10	SLL	2	J and A	-
Survey (West)				
11	SLL	-	-	-
12	SLL	1	A	-
13	SLL	3	J and A	2 Juveniles and 1 Adult
14	SLL	1	A	-
15	-	-	-	-
16	-	-	-	-
17	-	-	-	Skin only
18	SLL	1	J or A	-
19	SLL	3	J and A	2 Juveniles and 1 Adult
20	SLL	2	J and A	1 Juvenile and 1 Adult

Note: SLL: Striped Legless Lizard; n: number of individuals detected; Juvenile: J; Adult: A

5 Conclusion

A targeted Striped Legless Lizard survey was undertaken within the proposed offset site on 29 October 2018 where 30 adult and juvenile Striped Legless Lizards were detected. The skins of Striped Legless Lizards were also discovered in several tile grids.

Based on the results of the targeted survey, even distribution of records across the study area including, photographic evidence of individual Striped Legless Lizards and shed skins in almost all tile grids, as well as the high-quality habitat features for Striped Legless Lizard observed throughout, it is considered that the study area supports a large, extant population of Striped Legless Lizard.

As such, it is considered that the study area supports 272 hectares of confirmed habitat for Striped Legless Lizard.

Please feel free to contact me should you require any additional information.

Kind regards,

Andie Wong,



Zoologist

Ecology and Heritage Partners Pty Ltd

References

- BOM 2016. Australian Government Bureau of Meteorology. Daily Weather Observations for Colac (Mt Gellibrand) Weather Station 090035. Commonwealth of Australia. <http://www.bom.gov.au/climate/dwo/IDCJDW3015.latest.shtml>
- DELWP 2018. Native Vegetation Information Management Tool [WWW Document] URL <http://nvim.depi.vic.gov.au/> Victorian Department of Environment and Primary Industries.
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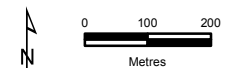


Legend

- Study Area based on property boundary
- Tile grids
- Suitable Striped Legless Lizard habitat (272.12 ha)



Figure 1
Location of tile grids and suitable habitat
Targeted Surveys for Striped Legless Lizard for 6060 Hamilton Highway, Cressy



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