Biodiversity records from native forest and cleared pasture adjacent to the proposed North Stoneville development site (Structure Plan 34)
2017- 2020

Andrew Wallace
22 April 2020

ENDORSEMENTS

Professor Kingsley Dixon

I can support the survey effort detailed in the report by Andrew Wallace that demonstrates a high level of observational diligence which has resulted in a comprehensive survey of faunal activity. The site exhibits high diversity including nationally threatened species and would be appropriately reserved for conservation on the evidence provided.

Kingsley Dixon FLS
John Curtin Distinguished Professor
Director
ARC Centre for Mine Site Restoration
Curtin University
School of Molecular and Life Sciences
kingsley.dixon@curtin.edu.au

Simon Cherriman

Andrew Wallace's exceptional report is the equivalent of an Annotated Fauna Species List, a scientific framework used widely by biologists to publish natural history data collected over long-term periods. This approach provides much more detail than the standard Environmental Impact / Assessment Report used in the Environmental Approvals process, which gives, at most, a mere snapshot of a site's flora and fauna values and does not shed any light on seasonal change. Andrew's findings complement those of reports and submissions made by a wide range of environmental professionals residing in the Shire of Mundaring, affirming the fact that the SP34 (North Stoneville) site -

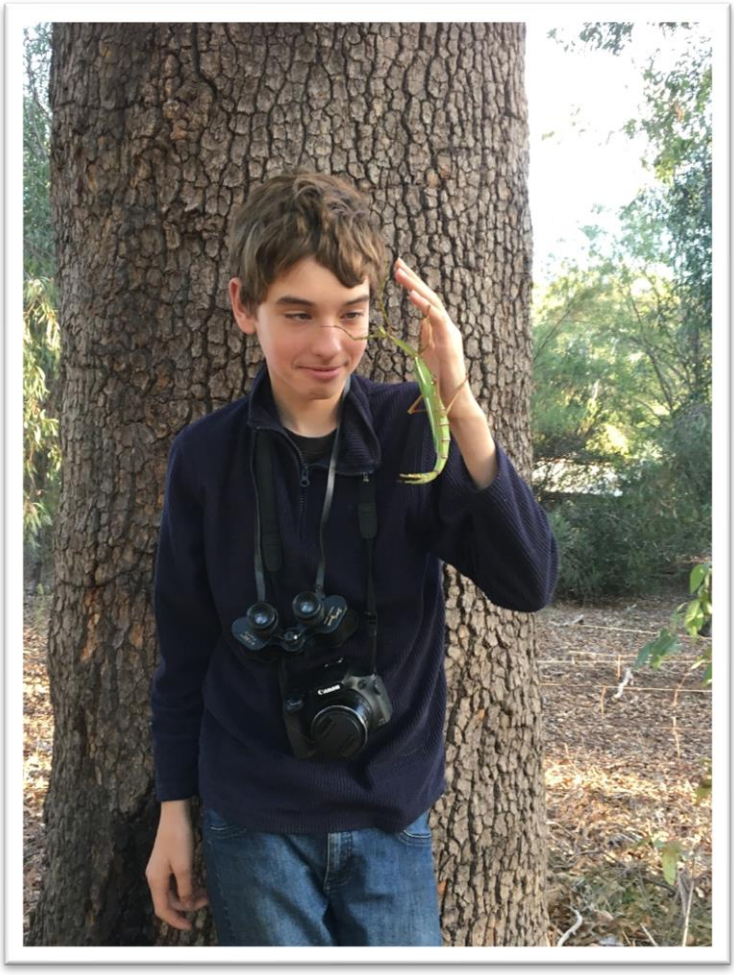
- has extremely significant conservation values, and,
- development for housing, as proposed by SP34, would severely compromise such values, resulting in significant net loss of the Perth Hills' valuable environmental assets.

Simon Cherriman
Environmental Scientist – Perth Hills.
B.Sc. Hons (Env. Biol), M.SciComm (Nat. Hist. Film.)
Environmental Biologist, Educator and Filmmaker
Wedge-tailed Eagle Specialist
Qualified Tree Climbing
aquila84@iinet.net.au

INTRODUCING ANDREW WALLACE

Andrew Wallace, also known as Drew, is a 13-year-old Perth Hills' teenager who has a passion for nature beyond his years. Over the last few years his areas of environmental interest have extended to include insects, orchids, native plants, birds, arachnids, and breeding keeping captive insects.

Drew's youthful expertise was recognised by the founding member of the Darling Range Branch of the Naturalists Club when he was just nine years old after he was featured on 720 ABC radio talking about spiders. Drew has been an avid member of the club ever since and been honoured with an 'apprenticeship' under an Elders program with Eric McCrum OBE (ABC Radio's bird expert). Drew is invited to speak at many events about different aspects of nature and the environment which are fantastic opportunities for him to help others become aware and understand the importance of protecting our natural environment.



ACKNOWELDEGMENT

Special thanks to Dr Andrew S Gardner PhD. FLS for your assistance during the review phase.

SURVEY INTRODUCTION

Over the period 2017 to 2020, I have collected natural history observations and records on a 56 acre site north of Parkerville. This site is adjacent to the north western corner of the proposed North Stoneville residential development SP34, being directly across Roland Road.

The area comprises a 50 acre covered in Marri – Jarrah woodland together with at 6 ¾ acre residential block which is mainly cleared pasture with patches of remnant forest. There are two water bodies, which are artificial dams. The site lies on a watershed, with the northern sector draining north into the Susannah Brook catchment, while the southern sector drains south towards the Jane Brook catchment.

The forest has been logged historically, but remains in very good condition. The cleared areas allow non-woodland species to occur, and may increase the biodiversity of the site.

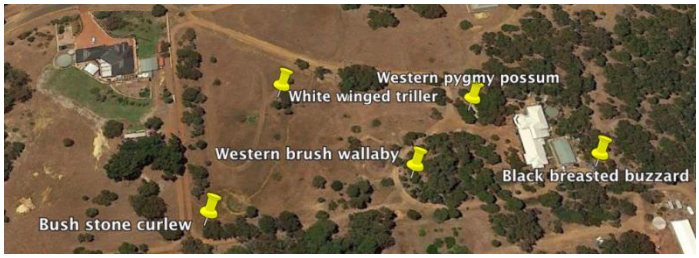
The value of these observations are that they provide biodiversity records over a long period of time in an area adjacent to the proposed development. The SP34 area itself was subject to an ecology survey, but this involved field work over just a few days. No trapping surveys were undertaken and the survey was inadequate in terms of seasonality.

The biodiversity of the study site reported here should be virtually identical to that of the wooded areas of the SP34 site as they are adjacent and similar in habitats and structure.

The flora consists of mainly Marri and Jarrah with lots of old growth with many tree hollows suitable for nesting and shelter.
There's little understory in many areas yet in curtain areas it is quite dense with many hakeas, native grasses and poison peas creating a rich and diverse habitat.

The bird fauna is diverse, with 77 bird species noted.

Many animals are struck by cars on Roland Road between the SP34 site and the present study area, including uncommon native mammals such as phascogales.



SURVEY

Frogs	Commonness	Other	Scientific name
Quacking frog	common		*Crinia georgiana*
Bleating frog	Very common		*Litoria dentata*
Ticking frog	uncommon		*Geocrinia leai*
Moaning frog	rare		*Heleioporus eyrei*
Western Banjo frog	common		*Lymnodynstes dorsalis*
Slender tree frog	Very common		*Litoria adelaidensis*
Motorbike frog	Very common		*Litoria moorei*
Crawling toadlet	common		*Pseudophryne guentheri*

Mammals	Commonness	Other	Scientific name	Number (individual)
Western grey kangaroo	common	Breeding	*Macropus fuliginosus*	~30
Red fox	uncommon	Introduced/ breeding	*Vulpes vulpes*	~5
Rabbit	Very common	Introduced/ breeding	*Oryctolagus cuniculus*	~30
Brush tailed possum	rare	Has not been seen in years (likely killed foxes)	*Trichosurus vulpecula*	~7
Feral cat	rare	introduced	*Felis catus*	~2
Western Pygmy possum	Very rare		*Cercartetus concinnus*	~1
Western brush wallaby	Very rare		*Macropus irma*	2
Short beaked Echidna	rare		*Tachyglossus aculeatus*	~1-2
White-striped free-tail bat	common		*Tadarida australis*	~9
Brush-tailed phascogale	rare		*Phascogale tapoatafa*	~4
House mouse	Very common	introduced	*Mus musculus*	~16
Bush rat	rare		*Rattus fuscipes*	~5
Brown rat	Very rare	introduced	*Rattus norvegicus*	1

Reptiles	Rarity	Other	Scientific name
Bobtail skink	rare		*Tiliqua rugosa*
Gould's goanna	uncommon		*Varanus gouldii*
Burtons legless lizard	Very rare		*Lialis burtonis*
Barking gecko	uncommon		*Underwoodisaurus milii*
Blind pot snake	uncommon		*Anilios australis*
Common skink	common		*Cryptoblepharus buchananii*

Birds	Rarity	Other	Scientific name	Number (induvial birds)
Australian wood duck	common	Seasonal winter	*Chenonetta jubata*	~10
Australian shelduck	Very rare	Seasonal winter	*Tadorna tadornoides*	1
Pacific Black duck	rare	Seasonal winter	*Anas superciliosa*	2
White faced heron	uncommon	Seasonal Winter/ Only / 12:00pm-2:00 pm	*Egretta novaehollandiae*	1
Australian white ibis	common	Seasonal winter	*Threskiornis moluccus*	~40
Straw neck ibis	common		*Threskiornis spinicollis*	~17
Bush stone-curlew	Very rare		*Burhinus grallarius*	1
Black shouldered kite	Very rare		*Elanus axillaris*	1
Square tailed kite	rare		*Lophoictinia isura*	1
Black breasted buzzard	Very Rare		*Hamirostra melanosternon*	1
Collard sparrow hawk	common	Suspected nesting	*Accipiter cirrocephalus*	2
Wedge tail eagle	Very rare		*Aquila audax*	2
Peregrine falcon	Very rare		*Falco peregrinus*	2
Southern Boobook owl	common		*Ninox boobook*	~12
Barking owl	Very rare		*Ninox connivens*	1
Tawny frog mouth	rare		*Podargus strigoides*	1

Australian owlet nightjar	Very rare		*Aegotheles cristatus*	1
Spotted nightjar	rare		*Eurostopodus argus*	~4
Spotted turtle dove	Very rare	introduced	*Spilopelia chinensis*	1
Common bronze wing	common		*Phaps chalcoptera*	~20
Baudin's cockatoo	uncommon	Seasonal Spring-autumn	*Calyptorhynchs baudinii*	~40
Carnaby cockatoo	common	Seasonal Spring-autumn	*Calyptorhynchs latirostris*	~90
Red tailed black cockatoo	Very common	Seasonal Spring-autumn	*Calyptorhynchs banksii*	10's
Galah	Very common		*Eolophus roseicapilla*	~70
Little Corella	uncommon	Peak in spring-leave in summer	*Cacatua sanguinea*	~15
Western Corella	rare		*Cacatua pastinator*	~20
Long billed Corella	common	Peak in spring-leave in summer	*Cacatua tenuirostris*	~25
Purple crowned lorikeet	uncommon	Seasonal summer	*Glossopsitta porphyrocephala*	~7
Ring neck parrot	Very common		*Barnardius zonarius*	~50
Red capped parrot	uncommon		*Purpureicephalus spurius*	10's
Western Rosella	rare		*Platycercus icterotis*	10's
Elegant parrot	Very common		*Neophema elegans*	~20
Fan tailed cuckoo	uncommon		*Cacomantis flabelliformis*	2
Pallid cuckoo	rare		*Cacomantis pallidus*	1

Laughing kookaburra	common	Introduced	*Dacelo novaeguineae*	~3
Sacred kingfisher	Very rare	Seasonal Late Spring-early summer	*Todiramphus sanctus*	1
Rainbow bee-eater	Common	Seasonal Spring and summer/ nesting	*Merops ornatus*	~70
Welcome swallow	Common		*Hirundo neoxena*	~ 17
Tree martin	Common		*Petrochelidon nigricans*	~12
Splendid Blue wren	Uncommon	nesting	*Malurus splendens*	~15
Red winged fairy wren	Very rare		*Malurus elegans*	2
Variegated Fairy wren	Vary rare		*Malurus lamberti*	1
White browed scrub wren	Vary rare	Feeding with *M. splendens*	*Sericornis frontalis*	1
Western gerygone	common		*Gerygone fusca*	10's
Western thornbill	common		*Acanthiza inornata*	~20
Yellow-rumped thornbill	Very common		*Acanthiza chrysorrhoa*	~40
Inland Thornbill	Common		*Acanthiza apicalis*	~14
Weebill	uncommon		*Smicrornis brevirostris*	~17
Spotted pardalote	uncommon		*Pardalotus punctatus*	~5
Striated pardalote	uncommon		*Pardalotus striatus*	~9
Gilberts honey eater	uncommon		*Melithreptus chloropsis*	~6
Brown headed honey eater	rare		*Melithreptus brevirostris*	4
Western spinebill	uncommon	nesting	*Acanthorhynchus superciliosus*	~12

Brown honey eater	common		*Lichmera indistincta*	~9
New Holland honey eater	Very common		*Phylidonyris novaehollandiae*	~30
White checked honey eater	uncommon		*Phylidonyris niger*	~3
Tawny crowned honey eater	rare		*Gliciphila melanops*	1
Red wattle bird	Very common	nesting	*Anthochaera carunculata*	~10
Western wattle bird	common		*Anthochaera lunulata*	~20
Varied sittella	uncommon		*Daphoenositta chrysoptera*	7
Black faced cuckoo shrike	uncommon	nesting	*Coracina novaehollandiae*	~4
White winged triller	rare		*Lalage tricolor*	1
Western whistler	uncommon		*Pachycephala occidentalis*	~20
Rufous whistler	common		*Pachycephala rufiventris*	~6
Grey shrike thrush	uncommon		*Pachycephala rufiventris*	~7
Australian Magpie	Very common	nesting	*Cracticus tibicen*	~40
Australian raven	common	nesting	*Corvus coronoides*	~30
Grey fan tail	Very common		*Rhipidura albiscapa*	~20
Willy wag tail	rare		*Rhipidura leucophrys*	~ 4
Restless flycatcher	rare		*Myiagra inquieta*	3
Jacky winter	Very rare		*Microeca fascinans*	1
Scarlet robin	uncommon		*Petroica boodang*	~4

Western yellow robin	Very common		*Eopsaltria griseogularis*	~16
Hooded robin	rare		*Melanodryas cucullata*	3
Australian pipit	rare		*Anthus novaeseelandiae*	1
Silver eye	uncommon		*Zosterops lateralis*	~ 30
Mistletoe bird	rare		*Dicaeum hirundinaceum*	3

SPECIES OF PARTICULAR CONSERVATION IMPORTANCE

While the rich biodiversity of the woodlands on SP34 and this study area is of very high value, some species are of particular conservation concern. For example, the South-western Brush-tailed Phascogales (*Phascogale tapoatafa wambenger*) is listed as specially protected fauna. The SP34 ecology survey states '*The survey area has very limited to no denning sites for the Chuditch and Phascogale, however, the area is potential foraging habitat.*'

No evidence for their presence was noted, and yet the results presented here prove otherwise. One individual was found as roadkill on Roland Road within 10 m of SP34 and live individuals have been observed in the present study area.

The area is prime feeding and breeding habitat for Black Cockatoos and is used by a nesting pair of Wedge-tailed Eagles.

While SP34 suggests that these areas of woodland in the NW of the site will be retained, the presence of 4000 people together with their pets, vehicles, lights and noise in close proximity will massively affect the biodiversity and conservation value of these areas. Ecological linkages will be cut and loss of biodiversity will be inevitable.

CONCLUSION

The bush surrounding and in North Stoneville is diverse and should be preserved with care.

Many of its fauna is rare or endangered and are only found in small remnant pockets around Perth.

If North Stoneville (SP34) goes ahead, it will result in biodiversity loss and the further fragmentation of habitats. The bush land here is crucial breeding area for many animals and hundreds of valuable tree hollows will be lost.

Andrew Wallace
April 2020