LAND FOR WILDLIFE

Department of Environment and Conservation

Mount Clarence & Mount Adelaide Bush Reserve Fauna Survey 2002 – 2011

Honey Possum – *Tarsipes rostratus*

by Sylvia Leighton, Department of Environment and Conservation

Supported By: City of Albany

Great Southern Institute of Technology

Acknowledgements

Firstly I would like to thank all my colleagues at the Department of Environment and Conservation (DEC) including my supervisor, Penny Hussey, who allows me to carry out community based fauna surveys as part of the *Land For Wildlife* programme. It is wonderful to have the supportive encouragement to carry out an activity which allows local people to 'get up close' to the native animals that live in the bush around them. Thanks to Claire Hall for her editing services.

I would like to thank all the students from the Albany Great Southern Institute of Technology –who assisted with installing the field equipment for this survey. They were studying their Certificate II, III, IV & Diploma level of the Conservation and Land Management Course in 2009 & 2010. I would especially like to acknowledge Bobby Cooper who took on the public survey as part of his Diploma level works project.

Volunteers from the Great Southern Institute of Technology - Albany

Leah Goodrem - tutor
Carl Dusenberg - tutor
Jon Marwick - tutor
Peter Stewart – tutor
Hans Blom - tutor
Laura Rice
Marnie Vaux
Bobby Cooper
Graeme Tracey
Adrian Chester
Jalisa Small
Michael Baesjou
Kyle Badger
Brendan Foster
Jason Aurisch
Eloise Brown
Graeme Cornish
Megan Lanigan
Rob Shenfield

I would also like to thank all the members of the public who have a keen enough interest in their local environment to come up into the reserve in the early hours of the morning to see what native animals we were catching in the survey trap lines. We have also had over 1050 people accompany the voluntary team leaders on spotlighting walks looking for Western Ringtail and Brushtail Possums over the last nine years. I appreciate and thank all the school teachers, students and members of the public who have ventured forth into the cold nights to walk the Mount Clarence and Mount Adelaide bush trails.

The Volunteer Spotlighting leaders

John Watson – Depart. of Environ. & Conserv. (DEC)
Sandra Gilfillan – Depart. of Environ. & Conserv.
Stephanie Hill – Depart. of Environ. & Conserv.
Luke Coney – Depart. of Environ. & Conserv.
Sandra Macjewieski – Depart. of Environ. & Conserv.
Peter Wilkins – Depart. of Environ. & Conserv.
Abbey Berryman - Depart. of Environ. & Conserv.
Renee Hartley - Depart. of Environ. & Conserv.
Mark True - Depart. of Environ. & Conserv.
Sarah Barrett - Depart. of Environ. & Conserv.
Jon Pridham - Depart. of Environ. & Conserv.
Dorothy Redreau – LFW Officer – DEC
Atlanta Veldt – Bushcarer's Association
Nancy Harris – Bushcarer's Association
Bryan Thom – Bushcarer's Association
Val Davies – Bushranger Cadets Coordinator
Steve Davies – Bushranger Cadets Coordinator
DEC – Bushranger Cadets – ASHS, NASHS, GSG
Tim Mitchell – Forest Products Commission
David MacNamarra – Green Skills Assoc.
Annabelle Harvey – Green Skills Assoc.
Aidan Mitchell - Volunteer
Jonas Mitchell- Volunteer
Thom Mckenzie - Volunteer
Peter McKenzie- Volunteer
Teal Worrell - Volunteer
Ryan Munro – Green Corps Team Leader
Jon Marwick – Great Southern Institute of Technology
Peter Bunn – Friends of Lake Seppings
Peter Morris - Bushcarer's Association

Participating Schools and Groups

Spencer Park Primary School
Community Nightstalk
Yakamia Primary School
Little Grove Primary School
Bremer Bay Primary School
Albany Primary School
Department of Environment & Conservation Bushranger Cadets 2004 - 2008
The Young Naturalists Group – Albany WA Museum

To all the people that have helped over the years and I have forgotten to include your name – Apologies and Thankyou!!!

Sylvia Leighton, *Land for Wildlife* Officer , Department of Environment and Conservation, July 2012

Executive Summary

The Mount Clarence and Mount Adelaide Bush Reserve Fauna Survey 2002 – 2010 presents the results of three different surveys carried out to determine which species of native fauna still reside in this inner urban bush reserve on the south coast of Western Australia. Each component had a priority goal of increasing public awareness about local native fauna and provided the opportunity for members of the public to see some of the smaller animas up close.

The three survey methods included:

1. Fauna trapping survey: Over the course of 24 months traps were set in seven different locations in the Mount Clarence and Mount Adelaide Bush Reserve to capture and record some of the small animals.

2. Spotlighting surveys: Since 2002 there have been spotlighting walks coordinated by *Land For Wildlife* and made available to the members of the public to observe the activity of nocturnal fauna – especially the Western Ringtail Possum (listed as a Threatened 'Vulnerable' Fauna species) and the Common Brushtail Possum.

3. Fauna sightings recorded by members of the public: Survey forms were delivered to residents living directly adjacent to Mount Clarence and Mount Adelaide Bush Reserve.

The project revealed that there are definitely more than 160 different native species of fauna present in this 216 ha bush reserve including; 11 mammals, eight frogs, six reptiles, 11 different kinds of insects and over 125 different sorts of birds. Bats were not surveyed in this project and this could be easily done in the future using a sonic recorder. The reptiles and invertebrates could also be surveyed in much more detail.

In comparison, the high profile, inner urban, 437 ha reserve of Bold Park in Perth, Western Australia, has three native mammals, 28 reptiles, three frogs, 91 bird species and 300 invertebrate fauna including 47 ant species and 11 butterfly species. Bold Park has been adopted as a special reserve for educational and research institutions and the diversity of biota within the park has encouraged considerable use of the reserve for environmental education. The Mount Clarence and Mount Adelaide Bush Reserve also has the potential in the future to be a special reserve for public education profiling south coast fauna species of WA including one of the most accessible sites to spotlight the 'Vulnerable' Western Ringtail possum.

Kings Park is another of the states inner urban reserves promoted for its special biodiversity including; over 70 bird species, 20 reptile species and hundreds of different invertebrates. It is approximately double the size of the Mount Clarence and Mount Adelaide Bush Reserve and contains 324 plant species compared to the 350 species listed for Mount Clarence and Mount Adelaide Bush Reserve. Kings Park has three major plant communities recognised to occur within its boundaries. Mount Clarence and Mount Adelaide Bush Reserve has over sixteen different recognised plant communities. This large range of plant communities may provide habitat for a diverse array of unsurveyed fauna species like the invertebrates. This kind of data may be revealed in future fauna surveying of the Mount Clarence and Mount Adelaide Bush Reserve.

The *Land For Wildlife* Mount Clarence and Mount Adelaide Bush Reserve Fauna Survey 2002 – 2010 demonstrates that there are significant faunal values in this south coastal inner urban reserve. The data presented in this report provides the opportunity for the managing authority, The City of Albany, to build on the findings and to enhance its management for fauna conservation.

Contents

no numbered page 3&5.

Tables and Figures

1.0 Introduction

1.1 The *Land For Wildlife* Programme

Land for Wildlife is a voluntary conservation programme which began in Western Australia in 1996 and is at the Department of Environment and Conservation (DEC). The program encourages and facilitates land managers and groups to contribute to regional biodiversity conservation by maintaining and improving native habitat on their properties. The program builds the capacity of members through workshops, environmental assessments on properties, newsletters, advice and access to the local conservation network. *Land For Wildlife* also operates in Victoria, Queensland, Tasmania, New South Wales and the Northern Territory with over 13, 000 properties registered.

Land for Wildlife members contribute to natural resource management on private land by managing habitat as well as controlling threatening processes like invasive weeds, feral animals, erosion and altered fire regimes. They are encouraged to contribute to the conservation of remnant native vegetation upon which survival of plants and animals is dependant. Wildlife corridors are created or maintained between nature reserves or surrounding natural areas, allowing wildlife movement and genetic interchange between populations of plants and animals.

1.2 Biodiversity Surveys

Land for Wildlife has conducted community biodiversity surveys in the past. These can be used as baseline data in determining the success of particular land management activities being carried out and add to the knowledge of species distributions. The *Land for Wildlife* program encourages the involvement of stakeholders and other volunteers during these surveys. This teaches valuable skills to the participants as well as enhancing knowledge of local flora, fauna and their interactions within an ecosystem.

This report presents the results of three different forms of survey to determine which species of native fauna still reside in the Mount Clarence and Mount Adelaide Bush Reserve area. The first survey was a small animal trapping survey, the second was a longterm spotlighting survey and the third was a public input survey recording animal species sighted in the reserve by nearby residents. Each component had a priority goal of increasing public awareness about local native fauna and providing the opportunity for members of the public to see some of the smaller animals 'up close'.

The data presented in this report will assist the City of Albany to carry out management of the Mount Clarence and Mount Adelaide Bush Reserve by highlighting the fauna that remain and so the need for specific habitat protection and management. The report also provides some suggestions about possible future fauna surveys that could be undertaken to monitor any change in population numbers.

1.3 Mount Clarence and Mount Adelaide Bush Reserve

Mount Clarence and Mount Adelaide Bush Reserve is located in the heart of the City of Albany on the south coast of Western Australia about 400 kilometres south east of Perth (refer to Fig. 10). The reserve contains 219 hectares of bushland which incorporates two exposed granite hills called Mount Clarence and Mount Adelaide. The reserve is made up of a number of reserves vested with the City of Albany as given in Table 1.

The Mount Clarence and Mount Adelaide Bush Reserve is bordered by King George Sound on its western boundary and rises from sea level to an elevation of 186 metres on top of Mount Clarence. The change in elevation in the reserve landscape provides the perfect situation for the reserve to profile a diverse range of vegetation community associations ranging from coastal heath through to closed marri and jarrah forest. Approximately 350 plant species have been identified in the reserve. The reserve is large enough in size to also provide habitat for a diverse range of native fauna. However it is an inner urban reserve with limited vegetation corridor connections linking it to other bushland areas in the nearby landscape. It is exposed to the impacts of degradation caused by high density human habitation on its boundaries. The Mount Clarence and Mount Adelaide Fauna Survey was carried out to determine which fauna species still reside in the bush reserve.

Figure 1: Aerial image showing Mount Clarence and Mount Adelaide Bush Reserve and surrounding features in the landscape.
Image courtesy of Google Earth

Table 1: The listed reserves vested with the City of Albany which contain natural bushland and make up the majority of Mount Clarence and Mount Adelaide Bush Reserve.

Reserve No.	Purpose	Area (ha)	Status
Mount Clarence			
R2682	Public Park	114.3	Natural bushland
R575 (In trust to CoA since 1883)	Public Garden	2.2	natural bushland, some evidence of disturbance
Mount Adelaide			
R27068	Recreation and Parklands	84.7	Natural bushland containing State Heritage Listed Point King Lighthouse Ruins
R38226	Parklands and Recreation	16.7	Natural bushland containing State Heritage Listed Albany Forts
R26149	Recreation	3.2	Natural bushland, partly developed

2.0 Methodology

This project is broken down in to three different surveys

1. Fauna trapping survey: Over the course of 24 months traps were set in seven different locations in the Mount Clarence and Mount Adelaide Bush Reserve to capture and record some of the small animals.

2. Spotlighting surveys: Since 2002 there have been spotlighting walks coordinated by *Land For Wildlife* and made available to the members of the public. The main goal of these 'night stalks' is educational. It provides the opportunity for school children and members of the public to walk through the bush at night time and observe the activity of nocturnal fauna – especially the Western Ringtail Possum (Threatened 'Vulnerable' Fauna species) and the Common Brushtail Possum.

3. Fauna sightings recorded by members of the public: Survey forms were delivered to residents living directly adjacent to Mount Clarence and Mount Adelaide Bush Reserve. They were asked to fill out a survey form to the best of their knowledge recording which species of fauna they have observed in the reserve.

2.1 Trapping Survey Methodology

The Mount Clarence and Mount Adelaide Bush Reserve fauna survey was undertaken under a 'Licence To Take Fauna for Scientific Purposes' issued to Sylvia Leighton as a *Land For Wildlife* Officer of the Department of Environment and Conservation. The methodology for the project was reviewed and accepted by the WA State Animal Ethics Committee. Written permission was received from the City of Albany to undertake the survey in lands vested with The City.

The challenge for this survey was to maintain site security by selecting sites which had minimal visual and recreational exposure to human users of the reserve. Another challenge was finding sites with deep soil profile allowing the installation of the pit traps to a depth of 40 cm. Many of the areas of the bush reserve contain shallow laterite rock or exposed granite outcrops. Another selection criterion was finding different vegetation associations which were typical and representative of the vegetation communities in the bush reserve (refer to Table 2 for a description of the selected vegetation associations and Figures 8 - 14 for visual representations of the sites). The final influencing component to the site selection was ensuring survey sites were not located near one of the three official Indigenous Heritage Sites registered with the Department of Indigenous Affairs for the Mount Clarence and Mount Adelaide Bush Reserve.

Seven field survey sites were selected (refer to Fig. 7 for a map of the survey site locations.) Each survey site contained five pit traps, six baited Elliott box traps and four baited wire cage traps. Due to limited trap availability some sites were only surveyed over a period of 12 months and then the traps were moved to another site. The traps were opened over five consecutive nights in different seasons of the year. The Mediterranean climate provides seasonal variation in fauna presence; frogs favour the cooler wet winter months and reptiles are sighted more often during the warmer summer months. Each pit trap was placed approximately three meters apart with a line of aluminium netting running through the distance of the five pits. The traps would be set in the afternoon then checked early in the morning to see if any animals had been trapped. The traps were left closed during the course of the day due to the risk of invasion by ants. Auditory calls were also used to help identify birds and frogs.

Fig 2 & 3: GSIT Cert IV CLM students digging in Sites 1 – 4 in March 2009

Fig 4: A cage trap which was baited with 'universal bait'

Fig 5: An Elliott Box trap which was baited with 'universal bait'

Fig 6: A pit trap with the fly wire connecting the five buckets

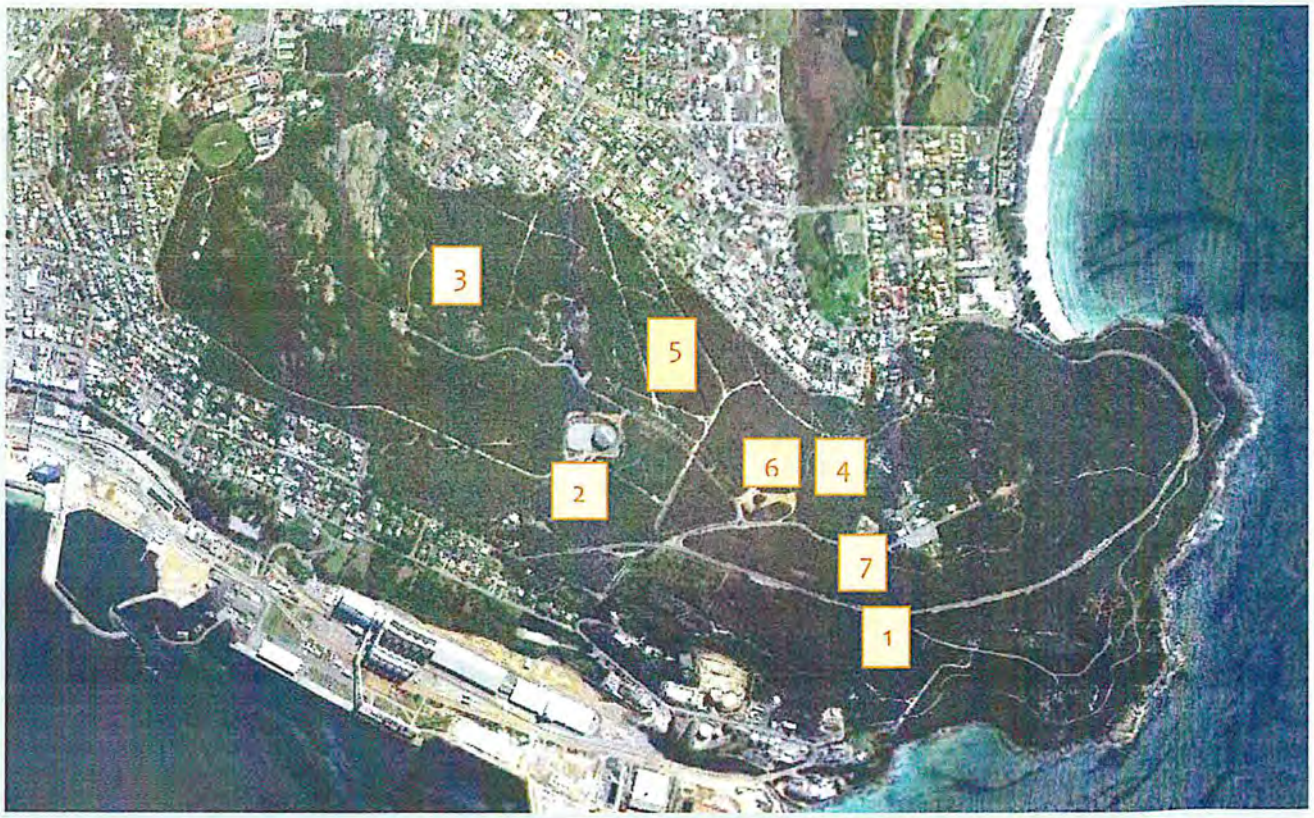


Fig. 7 – Approximate locations of the fauna survey sites in the Mount Clarence & Mount Adelaide Bush Reserve

Table 2: Vegetation Association descriptions and GPS locations of each survey site. (Vegetation Associations identified using the *Albany Regional Vegetation Survey*, 2010, by L. Sandiford)

Site No.	GPS location of Site	Elevation (above sea level)	Dates of Survey	Description of Vegetation Community at Fauna Survey Site and brief list of main plant species present
1	S 35° 02' 04.8" E 117 ° 54' 39.6"	43 metres south side of hill close to harbour entrance	01/02/09 -30/12/09	Coastal Jarrah Open Scrub - *Eucalyptus marginata, Jacksonia horrida, Adenanthos cuneatus, Acacia littorea, Taxandria theiformis, Leucopogon obovatus, Spyridium globuosum, Taxandria parviceps, Melaleuca thymoides, Desmocladus flexuosus,, Xanthosia rotundifolia*
2	S 35° 01' 50.1" E 117 ° 54' 03.9"	96 Metres South side of hill below large watertank	01/02/09 -30/12/09	Peppermint low forest– *Agonis flexuosa, Spyridium globulosum, Billardiera fusiformis, Bossiaea linophylla, Hibbertia cuneiformis, Rhagodia baccata, Hakea ruscifolia, Hardenbergia comptoniana, Hovea elliptica, Desmocladus flexuosus, Pteridium esculentum, Clematis pubescens, Lepidosperma effusum, Xanthorrhoea preissii,* moss
3	S 35° 01' 29.8" E 117 ° 53' 52.5"	92 Metres North side of hill	01/02/09 -01/12/2010	Marri/Jarrah Woodland (some of the largest trees on Mount Clarence) - *Corymbia calophylla, Eucalyptus marginata, Acacia myrtifolia, Acacia browniana, Acacia hastulata, Bossiaea linophylla, Persoonia elliptica, Persoonia longifolia, Cassytha* sp., *Dasypogon bromeliifolius, Hibbertia cuneiformis, Hovea elliptica, Isopogon* sp., *Leucopogon verticillatus, Leucopogon obovatus, Pteridium esculatum, Agonis theiformis, Xanthosia rotundifolia, Anarthria scabra*
4	S 35° 01' 48.1" E 117 ° 54' 30.5"	69 Metres North side of hill	01/02/09 -30/12/09	Sheoak Open Woodland - *Allocasuarina fraseriana, Nuytsia floribunda, Jacksonia spinosa, Melaleuca thymoides, , Acacia browniana, Adenanthos cuneatus, Daviesia sp., Lysinema ciliatum, Tetratheca setigera, Billardiera fusiformis,, Dampiera striata, Dasypogon bromeliifolius, Johnsonia lupilina, Drosera sp, Stylidium sp., Leucopogon obovatos, Stylidium sp., Xanthosia rotundifolia*
5	S 35° 01' 39.9" E 117 ° 54' 10.8"	94 metres Faces north east near saddle of hill	01/01/10 -01/12/2010	Marri/jarrah Coastal Hills Open Forest - *Corymbia calophylla, Eucalyptus marginata, Allocasuarina fraseriana, Banksia formosa, Hakea trifurcata, Bossiaea linophylla, Agonis theiformis, Acacia myrtifolia, Leucopogon obovatus, Leucopogon verticillatus, Xanthorrhoea preissii, Dasypogon bromeliifolius, Hovea elliptica*
6	S 35° 01' 46.4" E 117 ° 54' 20.7"	77 metres north side of hill	01/01/10 -01/12/2010	*Hakea elliptica* Granite Shrubland (long unburnt site) - *Hakea elliptica, Hakea trifurcata, Melaleuca thymoides, Taxandria marginata/ Taxandria augustifolium, Kingia australis*
7	S 35° 01' 58.8" E 117 ° 54' 38.5"	86 metres south east side of Mt. Adelaide	01/01/10 -01/12/2010	Coastal Jarrah/Peppermint mixed mallee/open scrub - *Eucalyptus marginata, Banksia formosa, Hakea elliptica, Melaleuca thymoides, Anarthria prolifera, Leucopogon obovatos*

Fig. 8: Site 1 - Coastal Jarrah Open Scrub

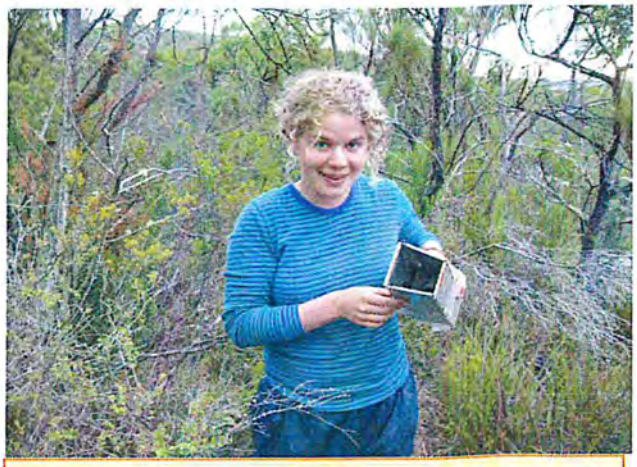


Fig. 9: Laura Rice at Site 4 - Sheoak Open Woodland on the lower slopes of Mt. Adelaide

Fig. 10: Site 2 - Peppermint Low Forest

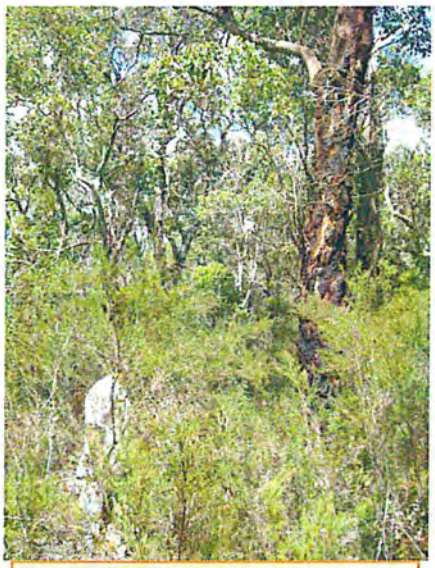


Fig. 11: Site 3 - Marri/Jarrah Woodland

Fig. 12: Adrian Chester at Site 6 - *Hakea elliptica* Granite Shrubland (long unburnt)

Fig. 13 Site 5 - Marri/jarrah Coastal Hills Open Forest

Fig. 14: Site 7 - Coastal Jarrah Peppermint Mixed Mallee/Open Scrub

2.2 Spotlighting Survey Methodology

Spotlighting walks in the Mount Clarence and Mount Adelaide Bush Reserve have been coordinated by *Land For Wildlife* in the Albany District since 2002 and advertised to encourage participation by the general public. The main goal of these 'night stalks' is educational. It provides the opportunity for school children and members of the public to walk through the bush at night time and observe the activities of nocturnal fauna.

The availability of spotlighting walks was promoted to the community through school liaison, local newspapers and occasionally on the local radio. *Land For Wildlife* has mapped out specific bush walks on Mount Clarence and Mount Adelaide that are most suitable for taking groups at night time and that have a high chance of sighting the larger possums. An Emergency Response Plan for the spotlighting excursions was compiled and group leaders were also provided with guidance on how best to manage a small tour group along a trail at night time. Parents were informed that they must accompany children and take all responsibility for their safety. The City of Albany Insurance covered any liability for injuries.

The Albany DEC office received the phone calls from interested participants and would allocate the person to a group. They would provide details of the meeting place and say that a team leader would meet them at a particular time. It was important to try and keep the groups to a small size (10 people or less). The team leader would be provided with a group list, a spotlighting torch and a map of which trail they were to walk. The *Land For Wildlife* Officer would seek out the team leader after the event and get them to pinpoint on an aerial map where they had identified possums along their walk trail. Some of this data was kept on record and unfortunately some of this data was not retained.

2.3 Fauna Sightings Recorded by Members of the Public - Survey Methodology

A survey form was compiled to seek input from local residents who live in houses adjoining the Mount Clarence and Mount Adelaide Bush Reserve. The survey was seeking the observations from the local residents concerning the fauna sightings they had experienced over the last two decades.

The forms were delivered to every resident living directly adjacent to the Mount Clarence and Mount Adelaide Bush Reserve. There were 145 survey forms handed out. The forms were delivered by hand as this was the easiest and most efficient way to get the mail to each residence. A deadline for the return of the survey forms was given to make sure there was enough time for the data to be collected and documented. To boost the profile of the survey a media release was placed in the local newspaper (see Appendix 2).

The survey form was compiled so that it was detailed enough to provide the information needed but also easy enough to fill out and understand, so that residents would be confident to complete the form and return it. An educational element was added to the survey by providing identification guides. A visual aid was compiled with coloured photos of the smaller mammals and frog species known to occur in the area (unfortunately there were too many bird species to include this identification guide). A web page reference to hear the different frog species calls was also included. The photos were detailed enough so the major differences between the animals could be easily viewed. The photos also had a short description attached giving the size and colour of the animal.

The survey form was organised in a 'tick the box' format listing the species and categories of where the animal was seen and a timeframe e.g. regularly, occasionally, once. There was a column to identify when the animal was last seen. The bird species survey sheet was separate to the mammal, reptile and amphibian sheet due to the large number of bird species recorded on the Australian Bird Atlas database occurring in the Albany area. This form was also in a 'tick the box' format but only provided information if the bird had been seen or not. A reply paid envelope was also given to return the survey forms to the City of Albany.

3.0 Results

3.1 Trapping Survey Results

It was intended that there would be at least four trapping sessions in each of the four typical seasons experienced in Albany. However, the extremely wet and cold conditions for the planned winter session in 2009 caused the traps to be closed and this session was cancelled. It was also found that the recreational visitation levels to the Mount Clarence and Mount Adelaide Bush Reserve in the high tourism season of summer made this an unsuitable time to carry out the trapping due to site security.

The full results for the whole of the trapping survey can be found in Appendix 1. For the purposes of this report these results have been collated into the tables below representative of each of the major groups of trapped animals; mammals, amphibians, reptiles and invertebrates. The more difficult to identify species such as skinks required reference keys to confirm their identification and the invertebrates have only been identified to their class or order (due to the lack of expertise in this field). Photos of all surveyed animal species were taken to provide a record of their presence .

3.1.1 Trapping Survey Results - Mammals

Table 3: Total mammal species captured/sighted at each trapping site

Species Name	Site 1	Site 2	Site 3 Year 1	Site 3 Year 2	Site 4	Site 5	Site 6	Site 7	Total
Western Bush Rat ***Rattus fuscipes***	20	11	23	15	12	28	33	30	172
Southern Brown Bandicoot ***Isoodon obesulus***	1			1			2		4
Western Ringtail Possum ***Pseudocheirus occidentalis***						2 sighted in trees at site	1 sighted in tree at site		3
Common Brushtail Possum ***Trichosurus vulpecula subsp. vulpecula***			1	1					2
Grey Bellied Dunnart ***Sminthopsis grisoventer***								1	1
Honey Possum ***Tarsipes rostratus***								1	1
Feral Black Rat ***Rattus rattus***		4		1		1	1		7
Feral House Mouse ***Mus musculus***		2							2

Fig. 15 & 16: The nocturnal Western Bush Rat (*Rattus fuscipes*) with its tail length no longer than its body length. The bush rat can be impacted by habitat disturbance and inappropriate fire regimes as it requires good understorey.

S. Leighton, DEC, 2012

Fig. 17: In comparison to the Western Bush Rat is the Feral Black Rat (*Rattus rattus*) has a tail length longer than its body length. There was a notably strong population of these animals at Site 2 which is a site that has experienced understorey disturbance due to two infrastructure instalments nearby (water tank and firebreak)

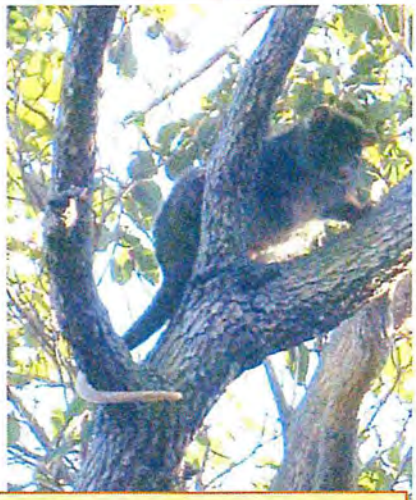


Fig. 18 & 19: Western Ringtail Possum (*Pseudocheirus occidentalis*) sighted in trees at Site 6 early in the morning. It is listed as 'Vulnerable' on the Threatened Fauna list under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999. These possums particularly enjoy feeding in Peppermint trees (*Agonis flexuosa*). They will also feed in Marri (*Corymbia calophylla*) and Jarrah (*Eucalyptus marginata*) woodland/forest areas and in banksia woodland

Fig. 20 & 21: The Common Brushtail Possum (*Trichosurus vulpecula subsp. vulpecular*) caught in a cage trap. This possum is very territorial and relies on the presence of old trees with hollows for shelter.

Fig. 22 & 23: Southern Brown Bandicoot (*Isoodon obesulus*) caught in both cage traps and a pit trap. This Priority 5 (DEC Threatened Fauna List) species forages in leaf litter and digs conical shaped holes looking for beetle larva and fungi. This ground dwelling species is especially vulnerable to predation by foxes, cats and dogs.

Fig. 24 & 25: Honey Possum (*Tarsipes rostratus*) was caught in a pit trap next to a *Banksia formosa* (pictured) thicket. These animals are reliant on an all year round nectar supply so the proteaceous rich vegetation association present in the Mount Clarence and Mount Adelaide Bush Reserve are very important.

Fig. 26 & 27: Grey Bellied Dunnart (*Sminthopsis grisoventer*) is a carnivorous ground dwelling animal. It is strictly nocturnal and forages under leaf litter feeding mainly on insects and small lizards which are over 3 cms in size.

3.1.2 Trapping Survey Results - Amphibians

Table 4: Total amphibians species captured/sighted/heard at each trapping site

Species Name	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Total
Quacking Frog ***Crinia georgiana***			1	2	2			5
Clicking Frog ***Crinia glauerti***					1			1
False Western Froglet/Western Sign Bearing Froglet ***Crinea insignifera & C.pseudinsignifera***			1			1		2
Moaning Frog ***Heleioporous eyrei***							2	2
Western Banjo Frog ***Limnodynastes dorsalis***			1					1
Slender Tree Frog ***Litoria adelaidensis***			1					1
Motorbike Frog ***Litoria moorei***							1	1

Fig. 2 : Moaning Frog (*Heleioporous eyrie*). The frogs distinctive call was used to help with identification

Fig. 29: Motorbike Frog (*Litoria moorei*)

Fig. 30: False Western Froglet/Western Sign Bearing Froglet (*Crinea insignifera & C.pseudinsignifera*). The frogs' calls were used to help with identification

Fig. 31: Clicking Frog (*Crinia glauerti*). The frog's call was used to help with identification

Fig. 32 & 33: Western Banjo Frog (*Limnodynastes dorsalis*) with a fairly distinct line down the middle of its back with a protruding gland on the upper surface of the frog's hind leg calf.

Fig. 34 & 35: Quacking Frog (*Crinea Georgiana*) is a slightly larger frog than the other Crineas with all individuals having a bright red patch in their groin and red or golden patches on the upper eyelids (call is also distinctive)

Fig. 36 & 37: Tree Frog (*Litoria adelaidensis*) is a larger frog dependant on water bodies to lay its eggs. It is very variable in colour and can be cream coloured through to lime green through to brown. The darker strip down through its eye and on the side of its body is one of its distinctive identification features
(*Litoria adelaidensis* images courtesy WA Museum)

3.1.3 Trapping Survey Results – Reptiles

Table 5: Total reptile species captured at each site

Species Name	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Total
King's Skink ***Egernia kingii***					3	9	1	13
Four Toed Mulch Skink Hemiergis peronii* subsp. *peronii			3	1			2	6
The Five Toed Mulch Skink ***Hemiergis initialis initialis***						2		2
Southwestern Cool Skink ***Acritoscincus trilineatum***					2	1		3
***Varanus rosenbergii* sighted not caught**		x						1
Red Legged Ctenotus ***Ctenotus labillardieri***	2					2		4

Fig. 38: The Four Toed Mulch Skink *(Hemiergis peronii* subsp. *peronii)*

Fig. 39: The Southwestern Cool Skink *(Acritoscincus trilineatum)*

Fig. 40& 41: The King's skink *(Egernia kingii)* caught in both pit traps and Elliott Box traps

Fig. 42 & 43: The Red Legged Ctenotus *(Ctenotus labillardieri)* with its breeding colours of a yellow belly

Fig. 44: The Five Toed Mulch Skink *(Hemiergis initialis initialis)*

3.1.4 Trapping Survey Results - Invertebrates

Table 6: Total invertebrate species captured at each site

Species Name	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Total
Scorpion *Cercophonius sp.*				1	1	1		3
Wolf Spider *Lycosa sp.*	3	1	4					8
Red Dot Spider *Mygalomorph Spider*		1		1				2
Cricket *Order Orthoptera*	1		1	23				25
Millipede Order - Diplopoda	2	3	7				2	14
Ground Beetles Family - Carabidae	2	2	5	3				12
Bull ants *Family Formicidae*	1							1
Amphopoda landhoppers		Many						Many
weevil						1		1
Unknown black hairy *Mygalomorph Spider*							1	1
Green beetle Family - Cleridae			1					1
Centipede Order - Craterostigmorpha			1					1

Fig. 45: Scorpion (*Cercophonius* sp.)

Fig. 46: This wolf spider is a (*Lycosa* sp.) and was regularly caught in the pit traps and spotted during the nightstalks.

Fig. 47 & 48: This spider appears to have its lungs external to its body on its upper abdomen leaning it toward the group of Mygalomorph spiders

Fig. 49: This 'Red dot' spider is possibly also in the ancient group of Mygalomorph spiders which includes the trapdoor spider group

Fig. 50 : This spider is similar to a wolf spider but a bit narrower in the body and legs possibly in the genus Miturga.

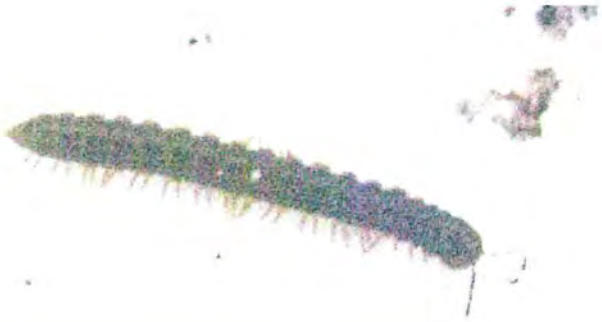


Fig. 51: A millipede in the Order - Diplopoda

Fig. 52: A ground beetle from the Family Carabidae

Fig. 53: Possibly one of the water strider group of insects in the Gerromorpha group

Fig. 54: Possibly in the leaf beetle group – of the family Chrysomelidae

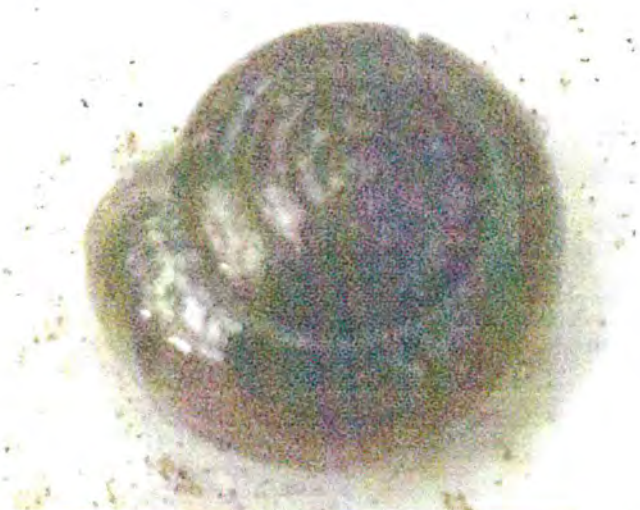


Fig. 55: Occasionally one of the Gastropod land snails would drop into the pit traps

Fig. 56: One of the weevils in the family Curculionidae

3.2 Spotlighting Survey Results

Due to the large number of different voluntary spotlighting leaders and the different types/age of the spotlighting groups over the years, the collection of the possum sighting data was not always a priority. Unfortunately some of the data was not collected and recorded from the walks. However, sightings that were submitted were recorded and are presented in Table 7. These sightings have been placed on an aerial map of the Mount Clarence and Mount Adelaide Bush Reserve (presented in Fig. 58). The spotlighting does have its limitations in that it has only ever been based around the suitable walking trails for guiding groups. Therefore the results do not give an indication of use by the larger possums in areas of the bush reserve where there are no walking trails. Spiders were also sighted during spotlighting with the silver eyes of the wolf spiders sighted on the tree trunks and on the ground. The large orb weaver spiders (*Eriophora* sp.) occurred seasonally and sometimes had their web spanning right over the walking trail (two metres wide).

Table 7: Spotlighting tours run between 2002 and 2011 looking for Ringtail Possums (RTP) and Brushtail Possums (BTP).

Month/Year	School Group	No of Participants	No. of Possums seen
23rd May 2002	Spencer Park Community School	107	6 RTPs & 3 BTPs
30th May 2002	Albany Community Nightstalk	33	9 RTPs & 2 BTPs
12th June 2002	Yakamia Primary School Yr 2/3	64	8 RTPs & 2 BTPs
23rd July 2002	Albany Community Nightstalk	4	4 RTPs
August 2002	Yakamia Primary School Yr 3- 4	60 students & 25 adult	No records kept
12th Sept. 2002	Albany Community Nightstalk	40	4 RTPs & 2 BTPs
9th Oct. 2002	Albany Community Nightstalk	30	No sightings
Dec. 2002	Yakamia Primary School Yr 6-7	35 students	No records kept
27th Feb. 2003	Albany Community Nightstalk	24	2 RTPs
18th March 2003	Little Grove Primary School Yr 3	48 participants	11 RTPs & 3 BTPs
19th June 2003	Yakamia School Yr 2	50 students & 20 adults	3 RTPs & 1 BTPs
11th March 2004	Training DEC Bushrangers Students	40 participants	No records kept
16thMarch 2004	Little Grove Primary School	60 participants	No records kept
4th May 2005	Bremer Bay Primary School	40 students & 10 adult	No records kept
26th May 2005	Yakamia Primary School	Over 60 participants	2 RTPs & 2 BTPs
14th June 2005	Albany Primary School, Year 2	Over 60 participants	No records kept
27th Feb. 2006	Albany Primary School, Year 2	40 participants	No records kept
3rd August 2006	Yakamia Primary School – Year 4	25 students & 12 adults	No records kept
27th July 2009	Yakamia Primary School- Year 2	45 kids & 25 adults	4 RTPs & 1 BTP
12th May 2009	Community Nightstalk	20 people	No records kept
31st March 2010	Little Grove Primary School	35 students & 20 adults	20 possums sighted
28th Aug. 2011	Yakamia Primary School, Year 3	39 students & 20 adults	No records kept

Fig. 57 & 58: The Yakamia Year 3 group out spotlighting in 2011 looking for the orange glowing eyes of the larger possums. They need to observe the tails and ears of the possums to get a positive identification as to whether they are Western Ring Tailed Possums (thin tail) or Brush Tailed Possums (big 'brushy' tail and bigger ears)

Fig. 59: Aerial map showing location where Common Brushtail Possums have been found during the spotlighting tours between 2002 and 2011 and the data collected from these walks

Fig. 60: Aerial map showing location where Western Ringtail Possums have been found during the spotlighting tours between 2002 and 2011 and the data collected from these walks

3.3 Results of Fauna Sightings Recorded by Members of the Public

Of the 145 survey forms were delivered, 46 residents filled out and returned their survey forms. This provided a 32% response rate. Four phone calls were also received that reported positive sightings of Southern Brown Bandicoots, Western Ringtail Possums and Common Brushtail Possums all on Mount Clarence. One of the callers also reported seeing an Echidna on Monumental Mason Road, another said they had nearly run over an echidna over on Marine Drive in 2003 (K. Baker), and another caller stated they saw an Echidna on The Boardwalk in 2010.

Table 8: Survey Results for sightings of native animals by members of the public in the vicinity of Mount Clarence and Mount Adelaide Bush Reserve.

Animals on Mt Clarence	Bush	Yard	Regul-arly	Occas-ionally	once	Last sighting
Western Grey Kangaroo	7			4	3	2007
Short Beaked Echidna	2				2	2006
Yellow Footed Antechinus (Mardo)		2			2	2005
Common Dunnart	1	1			1	2000
Southern Brown Bandicoot (Quenda)	35	28	22	14	2	2009
Western Pygmy Possum (Mundarda)						
Honey Possum (Noolbenger)	2	1		1	2	2009
Western Ringtail Possum	15	23	15	8	2	2009
Common Brushtail Possum	13	13	11	4	2	2009
Bat	3	5	1	5	1	2009
Western Bush Rat (Mootit)	6	6	2	6	2	2009
Motorbike Frog	4	9	6	3		2009
Quacking Frog	4	2	3			
Slender Tree Frog		10		6	3	2009
Spotted Thigh Frog		3		3		
Bleating Frog		1			1	
Moaning Frog		2		2		2009
Glauert's Frog	1			1		2008
Unknown Frog		2		1	1	2008
Banjo Frog (Pobblebonk)	4	5	3	2		
Geckoes	13	32	23	8		2009
Legless Lizards	2	9	5	4		
Long Necked Turtle	2			1	1	2000
King Skink	30	33	34	2	1	2009
Bob Tail Skink	13	19	7	12	1	2009
Skink (other)	4	10	7	2		2009
Racehorse Goanna (Rosenberg's Monitor)	20	11	2	14	6	2009
Blind Snakes						
Carpet Python						
Crowned Snake						
Tiger Snake		1			1	
Dugite	1			1		
Feral Cat	11	11	8	4	1	2009
Feral Fox	7	4		3	5	2009
Feral Black Rat	9	24	8	11	1	2009
Feral Mice	6	22	7	13		2009

Table 9: Survey Results for public sightings of bird species in the vicinity of Mount Clarence and Mount Adelaide Bush Reserve.

Birds Species Observed by Albany Residents on the edges of Mount Clarence and Mount Adelaide	Number of public sightings
Australasian Darter	1
Australasian Gannet	1
Australasian Grebe	1
Australasian Pipit	1
Australian Magpie	29
Australian Pelican	5
Australian Racing Pigeon	1
Australian Raven	28
Australian Reed-Warbler	1
Australian Ringneck	7
Australian Shelduck	2
Australian White Ibis	4
Australian Wood Duck	15
Baudin's Black Cockatoo	7
Black Swan	4
Black-faced Cuckoo Shrike	16
Black-faced Wood swallow	2
Black-shouldered Kite	4
Blue-billed Duck	1
Blue-breasted Fairy-wren	5
Brown Falcon	1
Brown Goshawk	3
Brown Honeyeater	6
Brown Quail	1
Brown Song lark	1
Brown-headed Honeyeater	1
Brush Bronzewing	2
Carnaby's Black Cockatoo	12
Caspian Tern	1
Chestnut Teal	2
Collared Sparrowhawk	1
Common Bronzewing	23
Common Sandpiper	1
Crested Pigeon	6
Crested Tern	2
Dusky Moorhen	1
Dusky Wood swallow	3
Eastern Barn Owl	1

Birds Species Observed by Albany Residents on the edges of Mount Clarence and Mount Adelaide	Number of public sightings
Eurasian Coot	2
Fairy Tern	1
Fan-tailed Cuckoo	3
Galah	25
Golden Whistler	14
Great Cormorant	1
Grey Butcherbird	7
Grey Currawong	16
Grey Fantail	17
Grey Plover	1
Grey Shrike-Thrush	3
Grey Teal	2
Ground Parrot	1
Hoary-headed Grebe	1
Horsfield's Bronze Cuckoo	2
Inland Thornbill	1
Jacky Winter	2
Laughing Dove	3
Laughing Kookaburra	28
Little Black Cormorant	2
Little Eagle	3
Little Egret	1
Little Pied Cormorant	
Magpie Lark	23
Masked Owl	1
Mountain Duck	4
Musk Duck	3
Nankeen Kestrel	6
New Holland Honeyeater	22
Northern Mallard	1
Pacific Black Duck	1
Pacific Gull	4
Pallid Cuckoo	6
Peregrine Falcon	2
Pied Cormorant	1
Purple Swamphen	4
Purple-crowned Lorikeet	3
Rainbow Bee-eater	1
Red Wattlebird	11

Birds Species Observed by Albany Residents on the edges of Mount Clarence and Mount Adelaide	Number of public sightings
Red-capped Parrot	19
Red-capped Robin	1
Red-eared Firetail	12
Red-tailed Black Cockatoo	5
Red-winged Fairy-wren	10
Restless Fly Catcher	1
Rock Parrot	2
Rufous Treecreeper	2
Rufous Whistler	3
Sacred Kingfisher	5
Scarlet Robin	4
Sharp-tailed Sandpiper	1
Shining Bronze Cuckoo	1
Silver Gull	12
Silvereye	23
Singing Honeyeater	3
Sooty Oystercatcher	1
Southern Boobook	10
Southern Emu-wren	2
Splendid Fairy-wren	11
Spotted Pardalote	9
Square-tailed Kite	3
Straw-necked Ibis	3
Striated Pardalote	3
Swamp Harrier	1

Birds Species Observed by Albany Residents on the edges of Mount Clarence and Mount Adelaide	Number of public sightings
Tawney-crowned Honeyeater	1
Tawny Frogmouth	7
Tree Martin	2
Varied Sittella	1
Wedge-tailed Eagle	4
Weebill	1
Welcome Swallow	8
Western Greygone	
Western Rosella	23
Western Spinebill	10
Western Wattlebird	10
Western Yellow Robin	3
Whiskered Tern	1
Whistling Kite	3
White-bellied Sea Eagle	1
White-breasted Robin	6
White-browned Babbler	1
White-browned Scrubwren	4
White-cheeked Honeyeater	5
White-faced Heron	3
White-naped Honeyeater	2
White-necked Heron	1
Willie Wagtail	20
Yellow-billed Spoonbill	1
Yellow-rumped Thornbill	4

4.0 Discussion

4.1 Trapping Surveys

The Mount Clarence and Mount Adelaide small animal trapping survey in 2009 – 2010 revealed 33 different species of terrestrial fauna; eight mammals, eight frogs, six reptiles and 11 different kinds of insects. Even though these species were found inside their normal boundary of distribution, they are an interesting record indicating which species are still surviving in this inner urban bush reserve which has high exposure to the impacts of human habitation on its boundaries.

It would be very useful to have permanent monitoring trapping stations within the reserve to collect fauna data over a long period of time. This would allow data to be collected which might indicate changes in the population levels of the different fauna species. It might also allow surveying in the different seasons and in other vegetation associations in the bush reserve. However, it is very difficult to maintain site security from human disturbance within this particular bush reserve and the risk of the traps being tampered with is too high. It is also a very costly exercise to carry out fauna survey trapping and *Land For Wildlife* does not have a budget to carry out a longterm project like this.

4.2 Spotlighting Surveys

The spotlighting surveys particularly focused on locating the presence of the two larger nocturnal arboreal possums; the Common Brushtail Possum and the Western Ringtail Possums which is listed as 'Vulnerable' on the Threatened Fauna list under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999. Over the nine years of spotlight sightings a pattern began to be observed as to where the two species of possums were located in the Mount Clarence and Mount Adelaide Bush Reserve. Repeated sightings indicated that the Brushtail Possums are restricted to the tall marri/jarrah forest and woodlands where the trees are old enough to have formed hollows. The Western Ringtail Possums, on the other hand, seem to be able to live in most vegetation associations where the vegetation structure is about two metres and taller. If there are no hollows present the Western Ringtail Possum will weave a drey (large enclosed nest about 30 x 30cm in size) to sleep in and leave their young. Therefore they tend to have been sighted all over the bush reserve wherever spotlighting walks were carried out.

The spotlighting does have its limitations in that it has only ever been based around the suitable walking trails for guiding groups. Therefore the results do not give an indication of the extent of use by the larger possums in areas of the bush reserve where there are no walking trails.

4.3 Public Survey Providing Fauna Sighting Records

The knowledge about the presence of different fauna species residing in the Bush Reserve from the local residents living in houses adjoining the Mount Clarence and Mount Adelaide Bush Reserve is also invaluable. The public survey provided fauna sighting records that the small animal trapping survey did not record. It provided confirmation of sightings of particular species which had been rumoured to be present in the bush reserve but no official sightings had been recorded. These animals included; the Western Grey Kangaroo, the Echidna, the Yellow Footed Antechinus, bats, a Long Necked Turtle, geckoes and two species of snake. It also provided an extensive list of birds (125 species) that members of the public see and observe living and breeding in the reserve. The birds ranged from very large birds of prey like the Sea Eagle, Wedge Tailed Eagle and Southern Boobook Owls through to very tiny birds like the Pardalotes, Thornbills and Blue Wrens. All of these birds have very different feeding niches and habitat requirements.

Some of the notable results from the public sightings include:

- No Western Pygmy Possum sightings at all
- Two Echidna sightings in 2006
- Possible sightings of Yellow Footed Antechinus in 2005 (stated as 'possible' as these animals are difficult to identify unless up close)

- Possible sighting of the Common Dunnart in 2000 (stated as 'possible' as these animals are also difficult to identify unless up close)
- A few Honey Possum sightings were recorded
- Kangaroo sightings (there is a colony by the old harbour pilot homestead that is increasing in numbers)
- The absence of Carpet Python, Blind Snakes and Crowned Snakes
- Minimal sightings of tiger snakes and dugite snakes
- Long Necked Turtle sightings (these are usually recorded near Lake Seppings)
- The large number of geckoes, Bobtails, King Skinks and goannas recorded by residents
- The large number of Kookaburras sighted for the bird survey (probably due to their loud call)
- The number of Pardalote sightings (some sightings stated that the pardalotes were nesting in mud banks on their properties as well)
- The presence of Western Spinebills and Red-Eared Firetail Finches who are quite shy
- The sightings of Carnaby's Cockatoos (which have not recently been officially been recorded in the MountClarence area and are possibly Baudins Cockatoo)
- The presence of all four local cuckoo species
- The number of Southern Boobook Owls (probably due to their distinctive call at night)

Of course, when using data supplied by the general public there is always the possibility of incorrect identification of particular species so some records are treated with a bit of uncertainty. It has been suggested that the survey forms could have been improved in their layout, design and with the amount of information supplied (possibly the bird survey form was too long and did not provide any information on 'where' the bird was sighted). Possibly, if the survey form had been simpler, there would have given a higher response rate than the 32% achieved.

4.4 Habitat Requirements for the Different Fauna Species

The fauna survey has revealed that there are very healthy and diverse populations of fauna in Mount Clarence and Mount Adelaide Bush Reserve ranging from the soil dwelling invertebrates through to large terrestrial. Each species has very specific habitat requirements so that it achieves a continuous supply of food and enough shelter to carry out breeding. Like all healthy ecosystems many of these species are co-dependent on the presence of the other fauna species to hold everything in balance.

The Mount Clarence and Mount Adelaide Bush Reserve is notable for having very strong populations of the western bush rat in most vegetation associations. Possibly the minimal presence of natural predators like the snakes in the bush reserves has allowed this ground dwelling mammal to expand in population. It is an aggressive territorial species and would make it difficult for other ground dwelling mammals like the common dunnart to live in the same site.

There is also minimal presence of the small possums; the Honey Possum and the Western Pygmy Possum. Both are dependent on having a year long supply of nectar. The Mount Clarence and Mount Adelaide Bush Reserve has poor interconnection to other large blocks of bush in the near vicinity making it very difficult for small animals like the small possums to seek food outside the boundaries of the bush reserves.

The spotlighting survey revealed that Common Brushtail Possums are restricted to areas where there are large trees which contain hollows. There are only a few sites in the Mount Clarence and Mount Adelaide Bush Reserve which contain old enough marri/jarrah woodland for the hollows to be present. The possums are competing with bats and birds that also need these hollows for breeding as well.

Some non-local native species of animals are relatively new residents in the reserve and these include the Galah and the Sulphur Crested Cockatoos. Kookaburra's were also introduced to Western Australia from Victoria around the 1880's. There are also feral animals like the European Rat, House Mouse, Fox, Cats, Rabbit, European Honey Bee and the Argentine Ant. All have all been recorded as living up in the reserve. It is very difficult to carry out any form of feral animal control in this bush reserve as it is inner urban and there is danger and risk to recreational users.

5.0 Conclusions

The Mount Clarence and Mount Adelaide Bush Reserve Fauna Survey 2002 – 2010 presents the results of three different forms of survey to determine which species of native fauna still reside in the Mount Clarence and Mount Adelaide Bush Reserve area. Each component had a priority goal of increasing public awareness about the local native fauna that reside in the Mount Clarence and Mount Adelaide Bush Reserve and provided the opportunity for members of the public to see some of the smaller animas up close. It was revealed that there are definitely more than 165 different species of fauna; 15 mammals, eight frogs, six reptiles, 11 different kinds of insects and over 125 different sorts of birds. Bats were not surveyed in this project and this could be easily done in the future using a sonic recorder. The invertebrates could also be surveyed in much more detail as the number of species will probably be in the hundreds.

It is hoped that the data presented in this report will assist the City of Albany to carry out management of the Mount Clarence and Mount Adelaide Bush Reserve to help protect the special habitat areas in the bush reserve and will also provide some ideas about future fauna surveys to increase the species diversity list and monitor any change in fauna population numbers.

Some of the management practices that could be developed to protect the special habitat components of the bushland to ensure the longevity of the native fauna populations include:

- ensuring there is a mosaic of different aged vegetation,
- the very old marri/jarrah forest areas are protected from fire to preserve the hollows,
- rocks and logs are left on the ground for ground dwelling fauna, leaf litter is left to ensure soil dwelling fauna have food and shelter,
- proteaceous rich vegetation communities are mapped and protected from dieback and short fire intervals,
- recreational activities are managed so that longterm damage is not caused to special habitat areas,
- disturbance of understorey is minimised by infrastructure installations
- ensuring dog owners keep their dogs on a leash whilst using the bush walking trails

The Mount Clarence and Mount Adelaide Bush Reserve is a very beautiful bush reserve and has the potential to remain a healthy, biodverse 'treasure' for future generations of people to enjoy. It is one of Western Australia's easy access habitat areas to view the Threatened Western Ringtail Possum and other Priority fauna species like the Southern Brown Bandicoot. The most rewarding component of this project was being able to share the pleasure that people experience when they 'get up close' to their local native animals out in the natural environment.

Fig. 61: A Brushtail Possum going up its home tree to its hollow

Fig. 62: *Land For Wildlife* Community Night Stalk on the Mount Clarence and Mount Adelaide walk trails in 2003

Bibliography

Albany, City of. (2006). *Council Management Plan, City Mounts Management Plan May 2006*, City of Albany.

Bold Park Botanic Gardens and Parks Authority: http://www.bgpa.wa.gov.au/bold-park July, 2012

Bush B., Maryan B., Browne-Cooper R., Robinson D., 20007: *Reptiles and Frogs in The Bush: Southwestern Australia*, University of Western Australia Press.

Churchill, S. 2008: *Australian Bats*, 2nd Edition, Jacana Books, Allen & Unwin

Cooper, B. (2009): *Biological Survey of Mt. Clarence*, Great Southern Institute of Tecnology, Cert. IV, CLM Unit, Dept. of Primary Industries, Unpublished Report

Department of Indigenous Affairs: http://www.dia.wa.gov.au/, November 3rd, 2009

Kings Park Botanic Gardens and Parks Authority: www.bgpa.wa.gov.au/**kings-park,** July, 2012

Sandiford E.M., Barrett, S.: 2010 *Albany Regional Vegetation Survey, Extent, Type and Status,* Department of Environment and Conservation, WA, Unpublished Report

Storr, G.M., Smith, L.A., Johnstone, R.E., 1999: *Lizards of Western Australia, Skinks,* University of Western Australia Press.

Storr, G.M., Smith, L.A., Johnstone, R.E., 1983: *Lizards of Western Australia, II Dragons and Monitors,* Western Australia Museum.

Storr, G.M., Smith, L.A., Johnstone, R.E., 1986: *Snakes of Western Australia,* Western Australia Museum.

Storr, G.M., Smith, L.A., Johnstone, R.E., 1990: *Lizards of Western Australia, III, Geckos and Pygopods,* Western Australia Museum.

Strahan, R., 2008: *The Mammals of Australia, 3rd Edition,* The Australian Museum Trust/Queensland Museum

Triggs, B., 1996: *Tracks, Scats and Other Traces, A Field Guide to Australian Mammals,* Oxford University Press, Melbourne

Appendix

1 Fauna trapping survey data for Mount Clarence and Mount Adelaide Bush Reserve
2 Media releases related to Mount Clarence and Mount Adelaide Bush Reserve Fauna Survey Project
3 A Spotlighting Nightstalk Recording Sheet
4 Survey sheets delivered to residents who lived adjoining the reserve
5 Volunteers at the trap lines for the Mount Clarence and Mount Adelaide Bush Reserve Fauna Survey

Fauna Surveying Results - Sept. 2009 10/09/2009 – 15/09/2009 (spring session)

Day 1 - Thursday,10th Sept. clear skies
Day 2 - Friday,11th Sept. clear skies, 11 degrees
Day 3 - Saturday,12th Sept. clear still night, (Site 2, 3 traps not opened)
Day 4 – Sunday,13th Sept., cloudy, 17 degrees (half of site 3 traps not opened)
Day 5 – Monday,14th Sept. cloudy, 17 degrees, no wind (Laura in field)

	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 1													
Site 1										*Rattus fuscipes*		*Rattus fuscipes X 2*	*Rattus fuscipes*
Site 2	Amphopoda landhoppers		1 mygalomorph spider 2 millipedes				*Rattus fuscipes*	*Rattus fuscipes*			*Rattus fuscipes*		*Rattus rattus*
Site 3		Wolf spider X 2		millipede		*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*			*Rattus fuscipes*
Site 4			*Crinea insignifera or C.pseudinsignifera*			*Rattus fuscipes*	*Rattus fuscipes*			*Rattus fuscipes*	*Rattus fuscipes*		
Day 2													
Site 1		2 black ground beetles		1 stick insect			*Rattus fuscipes*		*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*		
Site 2			*Rattus fuscipes*		Rattus rattus	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*	Rattus rattus		
Site 3						*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	
Site 4						*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*				
Day 3													
Site 1		Wolf spider	Wolf spider Bull ant	*Hemiergis peronii*	*Rattus fuscipes*								
Site 2													
Site 3	Millipedes g.beetles cricket	Millipedes g. beetles	ground beetles	*Rattus fuscipes*	Millipede g.beetles								
Site 4													

Appendix 1 – Trapping Survey Data Sheets

Fauna Surveying Results - Sept. 2009 10/09/2009 – 15/09/2009 (spring session)

	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 4													
Site 1		Millipede cricket	*Rattus fuscipes*	Skinny legged spider		*Rattus fuscipes*	*Rattus fuscipes*	*Isoodon obesulus* juvenile	*Rattus fuscipes*		*Rattus fuscipes*		
Site 2	Ctenotus skink	Skinny legged spider		*Hemiergis peronii* 2 beetles	millipede								
Site 3	Millipede beetle	millipedes	millipedes			*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*	*Trichosurus vulpecula*	*Rattus fuscipes*
Site 4	millipede	Scarb beetle crickets	Crickets Scarab beetle	*Crinia georgiana* Crickets	*Crinia georgiana*								
Day 5													
Site 1		Wold spider	*Rattus fuscipes*		*Rattus fuscipes X 2*	*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*				
Site 2	Ctenotus skink millipede	millipede	Red dotted spider			*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*		Rattus rattus		
Site 3			Red dotted spider	spider	*millipede*					*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	
Site 4			20 crickets	scorpion		*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*		

Fauna Surveying Results - April 2010 27/04/2010 – 02/05/2010 (autumn session)

Day 1 – Wednesday, 29th April , clear still night, 13 degrees, lots of dew (ring tailed possum sighted at Site 6)
Day 2 - Thursday 30th April. clear night, 14 degrees in morning, lots of dew
Day 3 - Friday, 31 st April clear still night, 13 degrees, no dew
Day 4 – Saturday, 1 st May , a bit of rain during the night, fine in the morning
Day 5 – Sunday, 2 nd May. overcast, 14 degrees in morning, fine in the morning
Site 3 was not opened until Day 2 for this trapping session

	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 1													
Site 5		*Rattus fuscipes*		*Egernia kingii*		*Rattus fuscipes*		*Crinia georgiana*		*Rattus fuscipes*			
Site 6										*Rattus fuscipes*			
Site 7				*Egernia kingii*	*Sminthopsis grisoventer*		*Egernia kingii*	*Rattus fuscipes*	*Rattus fuscipes*			*Rattus fuscipes*	
Day 2													
Site 5							*Rattus fuscipes*	*Rattus fuscipes*					
Site 6		*Acritoscincus trillineatum*				*Rattus fuscipes*						*Isoodon obesulus*	
Site 7						*Rattus fuscipes*		*Rattus fuscipes*		*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*
Day 3													
Site 3			*Limnodynastes dorsalis* Banjo frog										
Site 5			*Egernia kingii*	*Rattus fuscipes*		*Rattus fuscipes*						*Rattus fuscipes*	*Rattus fuscipes*
Site 6						*Rattus fuscipes*					*Rattus fuscipes*	*Rattus fuscipes*	
Site 7						*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*	

Fauna Surveying Results - April 2010 27/04/2010 – 02/05/2010 (autumn session)

	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 4													
Site 3			*Hemiergis peronii*										
Site 5													*Rattus fuscipes*
Site 6	*Crinea pseudinsignifera*					*Rattus fuscipes*	*Rattus fuscipes*						
Site 7		*Hemiergis peronii*			*Rattus fuscipes* *Heileioporous eyreii*		*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*	*Rattus fuscipes*	*Egernia kingii*
Day 5													
Site 3						*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*				*Rattus rattus*
Site 5	scorpion						*Rattus fuscipes*						*Rattus fuscipes*
Site 6	*Rattus fuscipes X 2*					*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*			*Rattus rattus*	*Rattus fuscipes*
Site 7													

Fauna Surveying Results - Sept. 2010 20/09/2010 – 26/09/2010 (spring session)

Day 1 – Tuesday, 21st Sept. , clear still night, 13 – 20 degrees, ¾ moon
Day 2 - Wed., 22nd Sept. clear night, 8 degrees in morning (volunteers present: Jalisa, Megan, Ella)
Day 3 - Thursday, 23rd Sept. clear still night,
Day 4 – Friday, 24th Sept. overcast, warm (ring tailed possum and motorbike frog sighted whilst opening traps in afternoon)
Day 5 – Saturday, 25th Sept. overcast, 12 degrees in morning

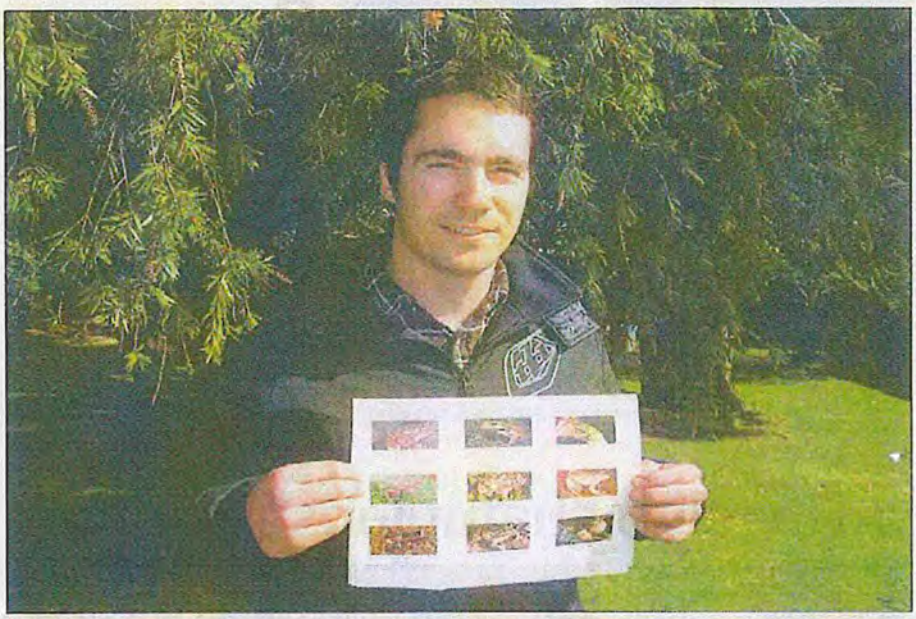
	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 1													
Site 3						*Rattus fuscipes*						*Rattus fuscipes*	
Site 5	*Crinea glauteri*		*Acritoscincus trilineatum*	*Acritoscincus trilineatum*				*Rattus fuscipes*		*Rattus fuscipes*			*Rattus fuscipes*
Site 6		*Egernia kingii X 2*	1 scorpion	*Egernia kingii X 2*				*Rattus fuscipes*		*Rattus fuscipes*			*Rattus fuscipes*
Site 7							*Rattus fuscipes*	*Rattus fuscipes*		*Rattus fuscipes*			OWOB
Day 2													
Site 3							*Rattus fuscipes*						*Trichosurus vulpecula* Brush trail possum
Site 5											*Rattus fuscipes*		*Rattus fuscipes*
Site 6	*Egernia kingii*					*Rattus fuscipes*		*Rattus fuscipes*	*Egernia kingii X 2*			*Rattus fuscipes*	*Rattus fuscipes*
Site 7		*Tarsipes rostratus*											

Fauna Surveying Results - Sept. 2010 20/09/2010 – 26/09/2010 (spring session)

	Pit 1	Pit 2	Pit 3	Pit 4	Pit 5	Elliot 1	Elliot 2	Elliot 3	Elliot 4	Elliot 5	Elliot 6	Cage 1	Cage 2
Day 3													
Site 3					*Hemiergis peronii*							*Rattus fuscipes*	OWOB
Site 5		*Crinea georgiana*					*Rattus fuscipes*	*Egernia kingii*		*Rattus fuscipes*			*Rattus fuscipes*
Site 6		Ctenotus skink *Egernia kingii*		1 weevil *Egernia kingii*			*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*			*Isoodon obesulus*
Site 7				Trapdoor spider						*Rattus fuscipes*		*Rattus fuscipes X 2*	
Day 4													
Site 3					*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*					*Rattus fuscipes*	*Rattus fuscipes*
Site 5			*Acritoscincus trilineatum*			*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*			*OWOB*	Rattus rattus – *Rattus fuscipes*
Site 6				Ctenotus skink			*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*				
Site 7						*Rattus fuscipes*			*Rattus fuscipes*		*Rattus fuscipes*		*Rattus fuscipes*
Day 5													
Site 3			*Crinea georgiana*	1 green beetle 1 centipede		*Rattus fuscipes*						*Isoodon obesulus*	*Rattus fuscipes*
Site 5						*Rattus fuscipes*		*Rattus fuscipes*			*Rattus fuscipes*		*Rattus fuscipes*
Site 6		*Hemiergis initialis initialis x 2*		*Acritoscincus trilineatum*			*Rattus fuscipes*	*Rattus fuscipes*				*Rattus fuscipes*	*Rattus fuscipes*
Site 7				*Hemiergis peronii* millipede	*Heleioporous eyrei*						*Rattus fuscipes*	*Rattus fuscipes*	*Rattus fuscipes*

Appendix 2 – Media Releases

NEWS



If you regularly see some of our special native animals in and around Albany, TAFE student Bobby Cooper wants to hear from you.

Please report animal sightings

NESTLING among large bush reserves and rolling hills, Albany harbours some special native animals, which are quite at home in our gardens and backyards.

Living side by side with the bustling city, they enjoy reserves such as Mt Adelaide and Mt Clarence.

But we do not know enough about them, according to a partnership of Great Southern TAFE, Department of Environment and Conservation's Land for Wildlife program and the City of Albany.

Together, this group is carrying out a fauna survey, about native animals such as the southern brown bandicoot and western ring-tailed possums.

TAFE student Bobby Cooper is appealing to residents for local knowledge and reports of fauna sightings, especially unusual sightings, such as honey possums on the boardwalk trail, or echidnas on Mt Adelaide.

Mr Cooper has distributed a survey to local residents, and hopes to collect data as part of his Diploma of Conservation and Land Management.

The information will also be passed on to the City of Albany, which has recognised the importance of biodiversity throughout Albany's reserves, and the fragile balance required for native animal survival in the face of fire, disease, predation by feral animals and loss of habitat.

The information will help the City to protect fauna habitat as it manages the reserves in the future.

If you have sighted a native animal you would like to be recorded in the survey please contact Sylvia Leighton at the local DEC office on 9842 4522, or Bobby Cooper on 0417 440 869.

Albany Advertiser Newspaper, August, 2009

The Weekender, Aug. 5th, 2010

Early start for fauna survey trappers

STUDENTS from Great Southern Institute of Technology (GSIT) have been up early and checking traps as part of a Land For Wildlife Mt Clarence fauna survey.

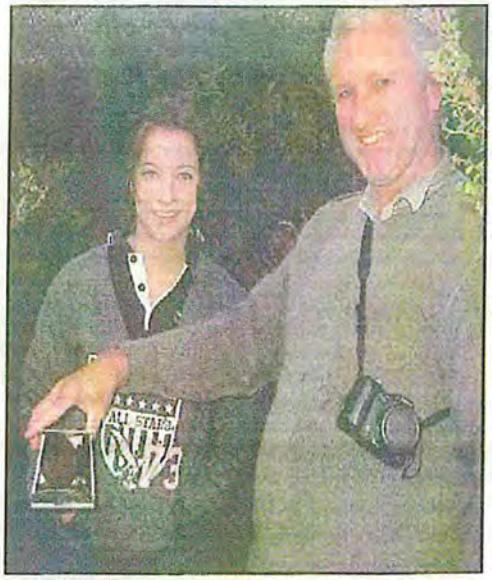
Over five nights the Certificate IV Conservation and Land Management students recorded 49 native western bush rats, one bandicoot, three ring-tailed possums, a sand frog, a banjo frog, a false western froglet, a Nichols toadlet and three species of skink.

During the course they carried out flora and fauna surveys in the local bush under instruction from Albany DEC's Land For Wildlife officer Sylvia Leighton.

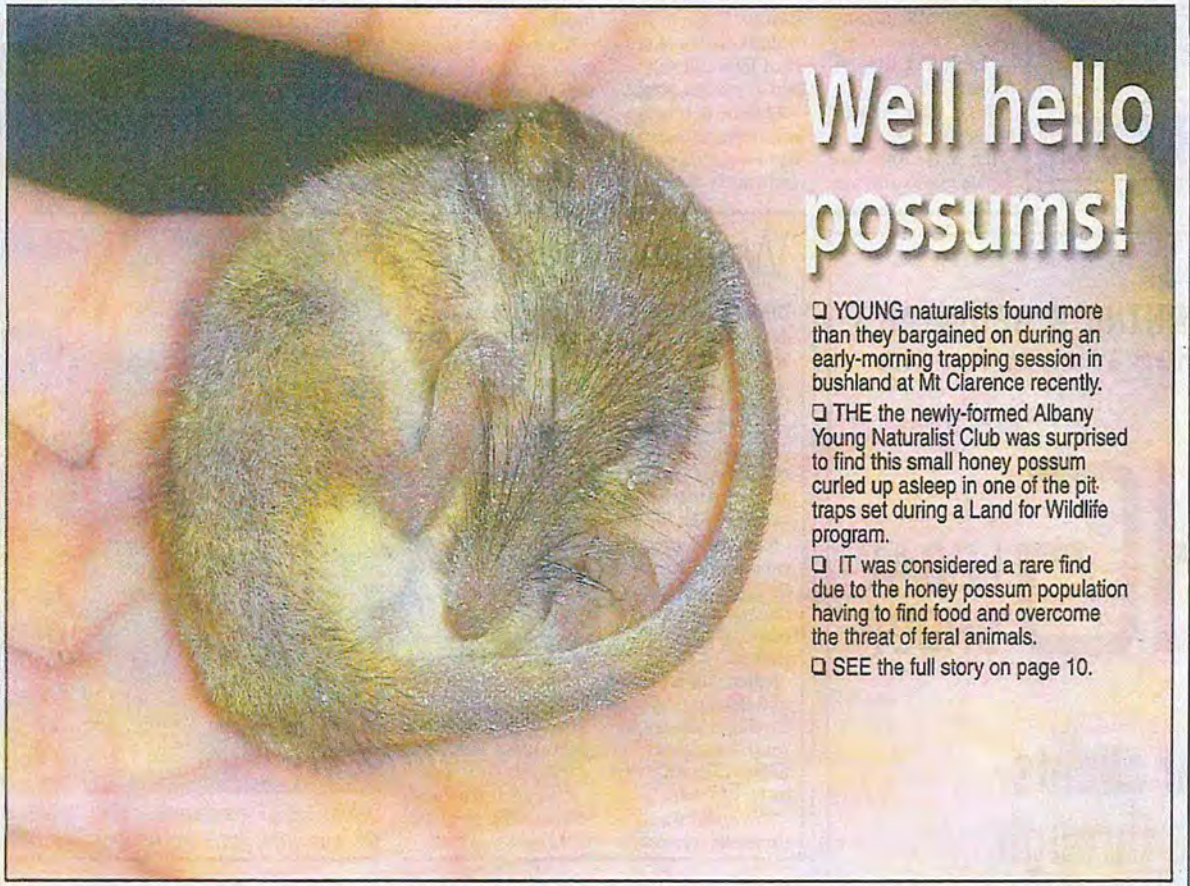
GSIT student Peter Mills said the group was disappointed not to see smaller mammals like honey possums, pygmy possums and dunnarts in the surveys.

"Possibly the impacts of being an inner urban bush reserve is affecting the ecological balance. The native bush rats are tough little animals so possibly resist predation by the feral cats and foxes up in the reserve," he said.

A report will be submitted to the City of Albany at the end of 2010.



RAT TRAP: GSIT students Liana Annos and Peter Mills with a box trap containing a native western bush rat.



Well hello possums!

- YOUNG naturalists found more than they bargained on during an early-morning trapping session in bushland at Mt Clarence recently.
- THE the newly-formed Albany Young Naturalist Club was surprised to find this small honey possum curled up asleep in one of the pit traps set during a Land for Wildlife program.
- IT was considered a rare find due to the honey possum population having to find food and overcome the threat of feral animals.
- SEE the full story on page 10.

Possum find a surprise

A SMALL mammal fauna survey in the inner urban Mt Clarence bush reserve turned up a surprise for young naturalists recently.

During the Land For Wildlife (LFW) program's final trapping session, a small honey possum was found curled up at the bottom of one of the pit traps.

"We found the honey-possum in a site which had a lot of flowering Dryandra formosa," Department of Environment and Conservation LFW Officer Sylvia Leighton said.

"It's really special to know that this little mammal is still able to find enough food and shelter up on Mt Clarence and survive the predation from the feral animals."

Members of the newly-formed Albany Young Naturalist Club got out of bed very early so they could be on site by 5.45am for the survey.

"They had the pleasure of helping to release the different kinds of animals that were caught in the traps," Ms Leighton said.

"It was wonderful to see our young naturalists out in the bush participating in this project.

"It's so important to keep our future generations in touch with nature.

"It helps to give them a sense of place and a connection to the landscape in which they live."

The Albany Young Naturalist Club is coordinated by the local Western Australian Museum for children between the ages of four and 16 years.

The project has been coordinated for the past two years by Ms Leighton, targeting smaller mammals such as possums, dunnarts and antechinus to see if they were surviving in the inner urban bushland reserve.

It has been supported by volunteers from Great Southern Institute of Technology, the local Bushcarer Association and Friends of Mt. Clarence.

Land For Wildlife has also been running spotlighting evenings in the reserve for more than 10 years, monitoring the location of the endangered western ring-tailed possum and brush-tailed possums within the reserve.

A report collating all data will be submitted to the City of Albany by Land For Wildlife at the end of 2010.

Appendix 3 – A sample spotlighting recording sheet

Marsupial Nightstalk

	Luke Coney's Group	Sandra Gilfillan's Group	ASHS Val Davies's Group	Sylvia Leighton's Group	Possum Stranglers (P Wilkins)	Porn Possums (J Davies and A Harvey)	Animal Finders (S Maciejewski)	Night Owls (David Mcnamara)	Aqua Planers (P Bunn)
No. of people	5	5	6	17	5	6	5	7	6
Quenda (*Isoodon obesulus*)					diggings	diggings	diggings		
Western Ringtail Possum (*Pseudocheirus occidentalis*)	4	1		3	2	2			
Brushtail possum (*Trichosuarus vulpecula*)			1	2					
Rodent sp.					1				
King skink (*Egernia kingii*)							10		
Quacking Frog (*Crinia georgiana*)			1 (heard)	2					
Motorbike Frog (*Litoria moorei*)									1
Banjo Frog (*Limnodynastes dorsalis*)									1
Bat sp.									1
Spiders	Yes						5	lots	
Rabbit						2			
Tawny Frogmouth Owl	1	1						1	
Dove sp.		1							
White Striped Mantiff Bat		1 (heard)							

Appendix 4 – The survey form sent to residents adjoining the Mount Clarence and Mount Adelaide Bush Reserve

Dear Resident,

We are currently conducting a survey of the animals inhabiting the Mt Clarence area for our Diploma in Conservation and Land Management at Albany TAFE campus. The data recorded will be used by the City of Albany to incorporate into a management plan for the area, especially in regards to fire regimes and preserving animal habitats. We have conducted a trapping survey but still need more information that hopefully you are able to help us with. This will give us greater understanding of the types of species still located on Mt Clarence and their location.

If you could please take the time to fill in this short survey form by the 14th of September and post it back in the pre paid envelope provided it would be greatly appreciated.

Yours sincerely

Fauna Survey of Mount Clarence & Mount Adelaide Bush Reserve

Your Address:

Please tick the boxes that apply to you. If you haven't seen an animal just leave the space blank.

Have you seen any of these animals on Mt Clarence?	Bush	In Your Yard	Regularly	occasionally	once	Last sighting e.g. 1991
Western Grey Kangaroo						
Short Beaked Echidna						
Yellow Footed Antechinus (Mardo)						
Common Dunnart						
Southern Brown Bandicoot (Quenda)						
Western Pygmy Possum (Mundarda)						
Honey Possum (Noolbenger)						
Ring Tail Possum						
Brush Tail Possum						
Bat						
Western Bush Rat (Mootit)						
Motorbike Frog						
Quacking Frog						
Slender Tree Frog						
Spotted Thigh Frog						
Bleating Frog						
Small Western Froglet						
Glauert's Frog						
Lea's Frog						
Banjo Frog (Pobblebonk)						
Geckoes						
Legless Lizards						
Long Necked Turtle						
King Skink						
Bob Tail Skink						
Skink (other)						
Racehorse Goanna (Rosenberg's Monitor)						
Blind Snakes						
Carpet Python						
Crowned Snake						
Tiger Snake						
Dugite						
Ferals						
Feral Cat						
Fox						
Rat						
Mice						

Thank you!

Honey Possum

Long snout with stripes on its back

Pygmy Possum (Mundarda)

Similar to a house mouse but with a shorter snout and rounder head

Ring Tail Possum

Smaller ears than the Brush Tail Possum with a prehensile short-furred tail

Brush Tail Possum

Large ears and a bushy tail which can be black or white in colour

Western Bush Rat

o the European rat but with a shorter tail

Sothern Brown Bandicoot (Quenda)

Larger than a rat with a long snout and short tail

Yellow Footed Antechinus (Mardo)

In between the size of a rat and a mouse, it has distinctive rings around its eyes. Longish snout. Carnivorous.

Common Dunnart

Similar to the house mouse but with a slender muzzle, bulging eyes and large rounded ears

Note: Frogs species are very hard to identify, if you would like to learn more or hear their calls visit www.frogwatch.museum.wa.gov.au

Moaning Frog

Helioporus eyrei

Ground-dwelling species with robust body and short limbs.Dark brown or grey mottled with creamy colours.

Motorbike Frog

Litoria moorei

Large power powerful frog. Colour can vary from green mottled with gold to almost completely dark brown (colder climates).

Slender Tree frog

Litoria adelaidensis

Has a uniform back colour ranging from a pale brown to bright green.Dark bold lines down the sides of head and body.

Glauert's Frog

Crinia glauerti

mall ground-dwelling frog rarely exceeding 2 cm. The back may be smooth r have a number of ridges. Colour can range from black, brown to grey.

Bleating Frog

Crinia pseudinsignifera

Small ground-dwelling frog with a maximum length of 2.5cm. The back has a number of bumps and ridges. Colour varies with blotches of browns, greys and blacks.

Spotted-thighed Frog

Litoria cyclorhyncha

A close relative to the motorbike frog but more brilliantly coloured. Thighs have distinctive pale yellow patches. Feet are are unwebbed.

Lea's Frog

Geocrinia leai

Small climbing frog growing to a maximum of 2.5cm. the back is dark brown surrounding a central colour of grey or black.

Banjo Frog

Limnodynastes dorsalis

A large ground-dwelling frog up to 7.5cm. Grey or dark green in colour with numerous dark brown blotches and a thin yellow line running from nose to tail.

Quacking Frog

Crinia georgiana

A medium sized ground-dwelling frog with highly variable colour patterns of dark brown, light tan and grey. All have a distinctive red patch in the groin and red, yellow or gold upper eyelids.

BIRDS YOU HAVE OBSERVED IN YOUR GARDEN

For those Bird Watchers amongst you, please place a tick ☑ in the box next to the bird species that you have observed in your garden or in the bush reserve near your property.

- o White-browed Scrubwren
- o Shy Heathwren
- o Rufous Fieldwren
- o Tawny-crowned Honeyeater
- o Brown Honeyeater
- o New Holland Honeyeater
- o White-cheeked Honeyeater
- o Brown-headed Honeyeater
- o White-naped Honeyeater
- o White-browed Babbler
- o Western Whipbird
- o Varied Sittella
- o Black-faced Cuckoo-shrike
- o White-winged Triller
- o Crested Shrike-tit
- o Golden Whistler
- o Rufous Whistler
- o Grey Shrike-thrush
- o Dusky Woodswallow
- o Black-faced Woodswallow
- o Grey Butcherbird
- o Australian Magpie
- o Grey Currawong
- o Grey Fantail
- o Willie Wagtail
- o Australian Raven
- o Restless Flycatcher
- o Magpie-lark
- o Jacky Winter
- o Scarlet Robin
- o Red-capped Robin
- o Hooded Robin
- o Western Yellow Robin
- o White-breasted Robin
- o Southern Scrub-robin
- o Australian Reed-Warbler
- o Little Grassbird
- o Rufous Songlark
- o Brown Songlark
- o Silvereye
- o White-backed Swallow
- o Welcome Swallow
- o Tree Martin
- o Red-eared Firetail
- o Australasian Pipit
- o Weebill
- o Western Gerygone
- o Yellow-rumped Thornbill
- o Western Thornbill
- o Inland Thornbill
- o Spotted Pardalote
- o Striated Pardalote
- o Western Spinebill
- o Singing Honeyeater
- o White-eared Honeyeater
- o Purple-gaped Honeyeater
- o Yellow-plumed Honeyeater
- o Yellow-throated Miner
- o Spiny-cheeked Honeyeater
- o Western Wattlebird
- o Red Wattlebird
- o White-fronted Chat
- o Horsfield's Bronze-Cuckoo
- o Shining Bronze-Cuckoo
- o Pallid Cuckoo
- o Fan-tailed Cuckoo
- o Southern Boobook
- o Eastern Barn Owl
- o Laughing Kookaburra
- o Sacred Kingfisher
- o Rainbow Bee-eater
- o Noisy Scrub-bird
- o Rufous Treecreeper
- o Splendid Fairy-wren
- o Blue-breasted Fairy-wren
- o Red-winged Fairy-wren
- o Southern Emu-wren
- o Western Bristlebird
- o Red-tailed Black-Cockatoo
- o Carnaby's Black-Cockatoo
- o Baudin's Black-Cockatoo
- o Galah
- o Purple-crowned Lorikeet
- o Regent Parrot
- o Western Rosella
- o Australian Ringneck
- o Red-capped Parrot
- o Elegant Parrot
- o Rock Parrot
- o Ground Parrot
- o Eastern Osprey
- o Black-shouldered Kite
- o Square-tailed Kite
- o White-bellied Sea-Eagle
- o Whistling Kite
- o Brown Goshawk
- o Collared Sparrowhawk
- o Spotted Harrier
- o Swamp Harrier
- o Wedge-tailed Eagle
- o Little Eagle
- o Nankeen Kestrel
- o Brown Falcon
- o Australian Hobby
- o Peregrine Falcon

Albany Regional Bird List Prepared by Birds Australia, Western Australia
Web: www.birdsaustralia.com.au/wa

- o Emu
- o Malleefowl
- o Stubble Quail
- o Brown Quail
- o Musk Duck
- o Black Swan
- o Australian Shelduck
- o Australian Wood Duck
- o Pink-eared Duck
- o Australasian Shoveler
- o Grey Teal
- o Chestnut Teal
- o Northern Mallard
- o Pacific Black Duck
- o Hardhead
- o Blue-billed Duck
- o Australasian Grebe
- o Hoary-headed Grebe
- o Great Crested Grebe
- o Rock Dove
- o Laughing Dove
- o Common Bronzewing
- o Brush Bronzewing
- o Crested Pigeon
- o Tawny Frogmouth
- o Spotted Nightjar
- o Australian Owlet-nightjar
- o Fork-tailed Swift
- o Wilson's Storm-Petrel
- o White-faced Storm-Petrel
- o Black-browed Albatross
- o Shy Albatross
- o Yellow-nosed Albatross
- o Southern Giant-Petrel
- o Flesh-footed Shearwater
- o Sooty Shearwater
- o Little Shearwater
- o Great-winged Petrel
- o Little Penguin
- o Australasian Gannet
- o Australasian Darter
- o Little Pied Cormorant
- o Great Cormorant
- o Little Black Cormorant
- o Pied Cormorant
- o Australian Pelican
- o Australasian Bittern
- o Australian Little Bittern
- o White-necked Heron
- o Eastern Great Egret
- o Cattle Egret
- o White-faced Heron
- o Little Egret
- o Eastern Reef Egret
- o Nankeen Night-Heron
- o Australian White Ibis
- o Straw-necked Ibis
- o Yellow-billed Spoonbill
- o Purple Swamphen
- o Buff-banded Rail
- o Baillon's Crake
- o Australian Spotted Crake
- o Spotless Crake
- o Dusky Moorhen
- o Black-tailed Native-hen
- o Eurasian Coot
- o Australian Bustard
- o Australian Pied Oystercatcher
- o Sooty Oystercatcher
- o Black-winged Stilt
- o Banded Stilt
- o Red-necked Avocet
- o Pacific Golden Plover
- o Grey Plover
- o Red-capped Plover
- o Lesser Sand Plover
- o Greater Sand Plover
- o Black-fronted Dotterel
- o Hooded Plover
- o Red-kneed Dotterel
- o Banded Lapwing
- o Masked Lapwing
- o Black-tailed Godwit
- o Bar-tailed Godwit
- o Whimbrel
- o Eastern Curlew
- o Terek Sandpiper
- o Common Sandpiper
- o Grey-tailed Tattler
- o Common Greenshank
- o Marsh Sandpiper
- o Sharp-tailed Sandpiper
- o Curlew Sandpiper
- o Little Button-quail
- o Painted Button-quail
- o Wood Sandpiper
- o Ruddy Turnstone
- o Great Knot
- o Red Knot
- o Sanderling
- o Red-necked Stint
- o Long-toed Stint
- o Pectoral Sandpiper
- o Brown Skua
- o Fairy Tern
- o Caspian Tern
- o Whiskered Tern
- o Crested Tern
- o Pacific Gull
- o Silver Gull

Please list any bird species you have sighted that may have been missed out on this list.

_____

_____

_____

_____

_____

Please note, this list does not include vagrants.

Albany Regional Bird List Prepared by Birds Australia, Western Australia
Web: www.birdsaustralia.com.au/wa

APPENDIX 5: Mount Clarence & Mount Adelaide Fauna Survey 'Vollies'

L-R: Hans Blom (GSIT tutor), Rachel Saa (WA Museum), Megan Lannigan, GSIT student, Jalisa Small, Joyce Blom, Eloise Brown & Leah Goodrem (GSIT tutor)

Bobby Cooper (GSIT) and Graeme Tracey (GSIT) taking a break from digging in pit traps - 2009

Members of the WA Museum Young Naturalists Group Albany and CLM students from the Great Southern Institute of Technology

Sylvia Leighton (DEC) with Michael Baesjou (GSIT)

Clearing traps early in the morning with Sylvia Leighton (DEC), Eloise Brown (GSIT), Brendan Foster (GSIT) & Adrian Chester (GSIT)

Members of the WA Museum Young Naturalists Group Albany with GSIT reps;Leah Goodrem, Graeme Cornish & Jason Aurisch

Sylvia Leighton (DEC) with two members of the Young Naturalists Group Albany opening traps

Three members of the Young Naturalists Group Albany – out helping to open up the traps

The CLM GSIT team in September 2010

Adrian Chester and Brendan Foster – GSIT students

Atlanta Veldt

Jessica Hopkins

Nancy Harrison

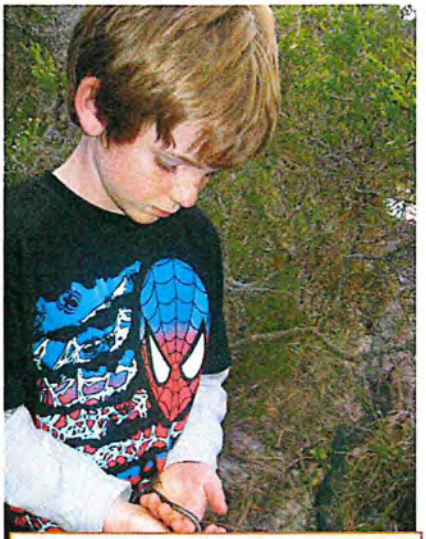
Rowan Smith

The experience of a Honey Possum (in torpor) in the hand – Joyce Blom

Danielle Hopkins

Going into the pit trap in the early morning

Looking at a bush rat in a cage trap



Having a feel of a skink before it is released

Views from Mount Clarence and Mount Adelaide Bush Reserve early in the morning whilst clearing the fauna survey traps