

VicForests Pre-harvest Fauna Surveys



District	Coupe Number	Coupe Name
Upper Murray	676-511-0008	Marginal
Upper Murray	676-529-0003	Herschelle

Report prepared by Wildlife Unlimited for VicForests

Wildlife Unlimited Pty Ltd

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CONTENTS

1	METHODS.....	2
1.1	Walking transects/Riparian search.....	2
1.2	Remote cameras.....	2
1.3	Spotlight survey.....	2
1.4	Owl playback survey.....	2
2	RESULTS	4
2.1	Surveys conducted	4
2.2	Significant species detected	4
2.3	Marginal (676-511-0008).....	5
2.4	Herschelle (676-529-0003).....	7
Appendix 1	Diurnal bird species detected at each coupe during walking transect surveys.....	9
Appendix 2	Weather conditions recorded at the beginning of each survey	10

1 METHODS

1.1 Walking transects/Riparian search

A walking transect of at least 500 m was conducted in each coupe. Transects were conducted during the day simultaneously with camera deployment, and hence covered a range of habitat areas within each coupe. Observers looked for signs of long-footed potoroo (diggings), spot-tailed quoll (scat), koalas (scat/direct observation), large forest owls (whitewash/pellets/direct observation of roosting owls), and creeks with suitable habitat for spiny crayfish species. Any significant observations were recorded with a GPS, photographed, and collected for further analysis where applicable (e.g. scat).

Observers did not identify any creeks suitable for spiny crayfish species (most gullies/creeks were dry), and hence nocturnal riparian surveys for these species were not conducted.

1.2 Remote cameras

Remote cameras were deployed to survey for long-footed potoroo, spot-tailed quoll and smoky mouse. Cameras were placed in areas of preferred habitat for these species if this was present within the coupe. The camera model used was Reconyx HyperFire HC600, and cameras were set to take three photos per trigger, with a 15 second 'quiet period' between trigger events on cameras targeting long-footed potoroo and spot-tailed quoll, and no delay between photos on cameras targeting smoky mouse. Cameras targeting long-footed potoroo were baited with a mixture of peanut butter, rolled oats, golden syrup, and truffle oil; those targeting spot-tailed quoll were baited with sardines; cameras targeting smoky mouse were baited with a mixture of peanut butter, rolled oats and golden syrup. Cameras were mounted on trees and bait holders placed on the ground approximately 1.5 m from the camera. For cameras targeting smoky mouse, bait holders were attached to a post approximately 20 cm above the ground (see front cover); this was to encourage small mammals to climb up to the bait, thereby potentially exposing more identifying features (e.g. colour of underbelly). The number of cameras deployed per coupe was determined by the survey requirements identified by VicForests.

1.3 Spotlight survey

A 1 km spotlight survey was conducted at each coupe along existing roads/tracks. Where the coupe boundary was adjacent to the road for less than 1 km, observers included areas to either side of the coupe where this was appropriate (i.e. habitat had to be similar). At Herchelles much of the coupe had already been logged, hence the 1 km spotlight only included approximately 400 m of the actual coupe boundary. Each spotlight was conducted by two observers, and all observations (including calls) of nocturnal mammals and birds were recorded with a GPS.

1.4 Owl playback survey

A call playback survey was conducted at each coupe targeting large forest owls. Survey locations were pre-determined during the day to ensure they were in suitable habitat and calls would be heard over a long distance. Calls were broadcast using a megaphone in the following sequence:

1. Powerful Owl (hooting calls)
2. Barking Owl (hooting calls)
3. Sooty Owl ('bomb drop')
4. Sooty Owl (trilling calls)

5. Masked Owl (screeching call)
6. Masked Owl (chattering call)

Each call was repeated a number of times over two minutes, followed by two minutes of silence, before the next call was played.

2 RESULTS

2.1 Surveys conducted

District	Coupe Number	Coupe Name	Number of Remote Cameras	Spotlight Survey	Owl Playback Survey	Walking Transect	Riparian Search
Upper Murray	676-511-0008	Marginal	6	Yes	Yes	Yes	No
Upper Murray	676-529-0003	Herschelle	6	Yes	Yes	Yes	No

2.2 Significant species detected

District	Coupe Number	Coupe Name	Long-footed Potoroo	Spot-tailed Quoll	Greater Glider	Yellow-bellied Glider	Spiny Crayfish sp.
Upper Murray	676-511-0008	Marginal	No	No	No	No	n/a
Upper Murray	676-529-0003	Herschelle	No	No	No	No	n/a

2.3 Marginal (676-511-0008)

2.3.1 Walking Transect

Date	Observers	Start time	Start Easting	Start Northing	End time	End Easting	End Northing	Distance
07-Jan-16		13:41	556754	5971572	15:59	557145	5971021	3 km
Significant Observations			Easting	Northing	Comments			
Nil								
Common species observations								
Wombat scat	15	Brushtail Possum scat		Swamp Wallaby scat	3	Macropod scat		
Fox scat		Dog scat		Predator scat		Lyrebird mound		
Termite mound		Wombat burrow	2	Deer scat	9	Swamp Wallaby		1

2.3.2 Spotlight survey

Date	Observers	Start time	Start Easting	Start Northing	End time	End Easting	End Northing
07-Jan-16		21:40	556565	5971594	22:04	557177	5970990
Species	Seen/Heard	Easting	Northing	Distance (m)	Direction (°)	Comments	
Nil							

2.3.3 Owl playback

Date	Observers	Start time	End time	Easting	Northing	
07-Jan-16		21:20	21:39	556565	5971594	
Species	Seen/Heard	Distance (m)	Direction (°)	Comments		
Southern Boobook	Heard	400	20			

2.3.4 Remote camera survey

Site	Easting	Northing	Target species	Observers	Date deployed	Date retrieved	Days operational	# Images
MGP1	557033	5970687	Long-footed Potoroo		07-Jan-16	29-Jan-16	22	549
MGP2	557119	5971000	Long-footed Potoroo		07-Jan-16	29-Jan-16	22	408
MGQ1	556670	5971453	Spot-tailed Quoll		07-Jan-16	29-Jan-16	22	483
MGQ2	556719	5971237	Spot-tailed Quoll		07-Jan-16	29-Jan-16	22	468
MGSM1	556676	5971521	Smoky Mouse		07-Jan-16	29-Jan-16	22	939
MGSM2	556713	5971274	Smoky Mouse		07-Jan-16	29-Jan-16	22	669
Species	MGP1	MGP2	MGQ1	MGQ2	MGSM1	MGSM2		
Antechinus sp.			Y					
Australian Magpie				Y			Y	
Bassian Thrush	Y				Y			
Common Wombat	Y	Y	Y	Y			Y	
Feral Cat	Y							
Grey Currawong							Y	
Grey Shrike-Thrush					Y			
Laughing Kookaburra				Y				
Mountain Brushtail Possum	Y	Y	Y	Y	Y		Y	
Rattus fuscipes			Y					
Rattus sp.		Y	Y	Y				
Red Fox				Y				
Sambar Deer	Y							
Short-beaked Echidna			Y					
Small mammal (rodent or small dasyurid)			Y					
Superb Lyrebird	Y	Y		Y	Y			
Swamp Wallaby	Y	Y	Y	Y	Y		Y	
Wild Dog			Y					

2.4 Herschelle (676-529-0003)

2.4.1 Walking Transect

Date	Observers	Start time	Start Easting	Start Northing	End time	End Easting	End Northing	Distance
08-Jan-16		8:57	561079	5965378	11:26	561841	5965361	2.9 km
Significant observations			Easting	Northing	Comments			
Nil								
Common species observations								
Wombat scat		Brush-tail Possum scat		Swamp Wallaby scat	1	Macropod scat		
Fox scat		Dog scat		Predator scat		Lyrebird mound		
Termite mound		Wombat burrow	3	Deer scat	4			

2.4.2 Spotlight survey

Date	Observers	Start time	Start Easting	Start Northing	End time	End Easting	End Northing
07-Jan-16		23:05	561066	5965371	23:33	560458	5965375
Species	Seen/Heard	Easting	Northing	Distance (m)	Direction (°)	Comments	
Mountain Brushtail Possum	Heard	560849	5965411	20	30		
Mountain Brushtail Possum	Seen	560840	5965493	10	320		
Sooty Owl	Heard	560840	5965493	60	320		
Sooty Owl	Seen	560811	5965555	20	20	Possibly same bird as heard previously	
Wombat	Seen	560546	5965519	0	0		
<i>Sooty Owl</i>	<i>Heard</i>	<i>561032</i>	<i>5965361</i>	<i>150</i>	<i>160</i>	<i>Observed on return to car</i>	

2.4.3 Owl playback

Date	Observers	Start time	End time	Easting	Northing		
07-Jan-16		22:44	23:04	561066	5965371		
Species	Seen/Heard	Distance (m)	Direction (°)	Comments			
Nil							

2.4.4 Remote camera survey

Site	Easting	Northing	Target species	Observers	Date deployed	Date retrieved	Days operational	# Images
HCP1	560886	5965481	Long-footed Potoroo	██████	08-Jan-16	29-Jan-16	21	126
HCP2	562030	5965385	Long-footed Potoroo	██████	08-Jan-16	29-Jan-16	21	159
HCQ1	560985	5965474	Spot-tailed Quoll	██████	08-Jan-16	29-Jan-16	21	63
HCQ2	561822	5965433	Spot-tailed Quoll	██████	08-Jan-16	29-Jan-16	21	201
HCSM1	560939	5965380	Smoky Mouse	██████	08-Jan-16	29-Jan-16	21	225
HCSM2	561918	5965390	Smoky Mouse	██████	08-Jan-16	29-Jan-16	21	375
Species			HCP1	HCP2	HCQ1	HCQ2	HCSM1	HCSM2
Antechinus sp.				Y		Y	Y	
Common Ringtail Possum				Y				
Common Wombat			Y					Y
Small dasyurid sp.			Y					Y
Eastern Pygmy Possum			Y					
Grey Currawong						Y	Y	
Mountain Brushtail Possum			Y		Y	Y	Y	
Pied Currawong							Y	
Rattus fuscipes				Y	Y	Y		Y
Rattus sp.			Y		Y	Y		
Sambar Deer					Y		Y	
Short-beaked Echidna					Y			
Small mammal (rodent or small dasyurid)			Y	Y		Y		
White-footed Dunnart			Y					
Wild Dog				Y				

Appendix 1 Diurnal bird species detected at each coupe during walking transect surveys

Species	Marginal	Herschelle
Brown Thornbill	Y	Y
Crescent Honeyeater	Y	
Crimson Rosella	Y	Y
Eastern Yellow Robin		Y
Fan-tailed Cuckoo	Y	Y
Flame Robin	Y	
Gang-gang Cockatoo	Y	Y
Grey Currawong	Y	
Grey Fantail	Y	Y
Grey Shrike-Thrush	Y	Y
Laughing Kookaburra		Y
Nankeen Kestrel	Y	
Pied Currawong	Y	Y
Pilotbird	Y	Y
Red Wattlebird	Y	Y
Silvereeye	Y	Y
Spotted Pardalote	Y	Y
Striated Pardalote	Y	Y
Striated Thornbill		Y
White-eared Honeyeater	Y	Y
White-throated Treecreeper	Y	Y
Yellow-faced Honeyeater	Y	Y

Appendix 2 Weather conditions recorded at the beginning of each survey

Diurnal: Walking transect and diurnal bird survey; Nocturnal: Owl playback and spotlight survey.

District	Coupe Number	Coupe Name	Date	Survey time	Temperature (°C)	Relative humidity (%)	Cloud cover (%)	Wind	Rain	Moon phase
Upper Murray	676-511-0008	Marginal	07-Jan-16	Diurnal	17	68	70	light/moderate	none	no moon
Upper Murray	676-511-0008	Marginal	07-Jan-16	Nocturnal	16	62	0	light	none	no moon
Upper Murray	676-529-0003	Herschelle	08-Jan-16	Diurnal	17	61	20	light	none	no moon
Upper Murray	676-529-0003	Herschelle	07-Jan-16	Nocturnal	14	72	0	light/moderate	none	no moon