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Anti-predator responses of a group of black lion tamarins (*Leontopithecus chrysopygus*) in reaction to a terrestrial and an aerial predator

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Appendix 1. Classification table of the black lion tamarins in this study.

ID No.	Name	Date of Birth	Sex	Class
1829M	Piñon	09/06/1992	Male	Reproductive Adult
1935M	Telva	12/07/1993	Female	Reproductive Adult
2459M	Elmo	11/08/1998	Male	Adult
2556M	Tavo	16/08/1999	Female	Adult
2771M	Bert	19/08/2002	Female	Adult
2772M	Ernie	19/08/2002	Female	Adult
2802M	Fluffy	02/03/2003	Male	Adult

Appendix 2. Colouration of individuals used for identification.

Elmo



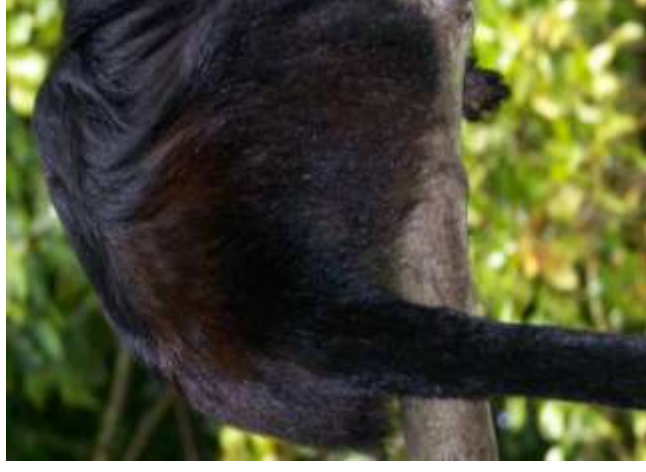
Telva



Pinon



Fluffy



Ernie



Bert



Tavo



Appendix 3. Ethograms constructed to define behaviours and vocalisations.

Behaviour	Symbol	Description
Locomotion	L	Directional movement at any pace, including walking, running, jumping or climbing
Foraging	F	Physically searching through a substrate or staring intently into the substrate
Feeding	E	Physically eating food or forage. Includes items caught or given by keepers
Social	O	Interaction with another tamarin or marmoset, including grooming, playing, begging
Stationary	S	Not moving in any direction, includes resting, sleeping or sitting
Not Visible	NV	Subject is out of sight, either hidden or inside and so it is not possible to detect their behaviour
Vocalisations		
Whine	A 'worried' whining call. Can be quite quiet.	
Trill	A rolling sound, like rolling their tongue, can be shrill. Often made when foraging.	
Chirp	A 'chip' sound, similar to alarm, but not as sharp or loud.	
Alarm	Short, sharp sound. Can be loud, sounds urgent.	
Long Call	An ascending call, starts short and quiet and gets louder and longer. Can be earsplitting. Often made when the tamarins are spread out.	
Direction	Degrees	
Up	0-60	
Horizontal	60-120	
Down	120-180	
Scanning	Constant sideways movement of head. Gaze not fixed in a specific direction	

Scanning behaviour was removed, following the reliability tests as this was where the majority of the differences lay.

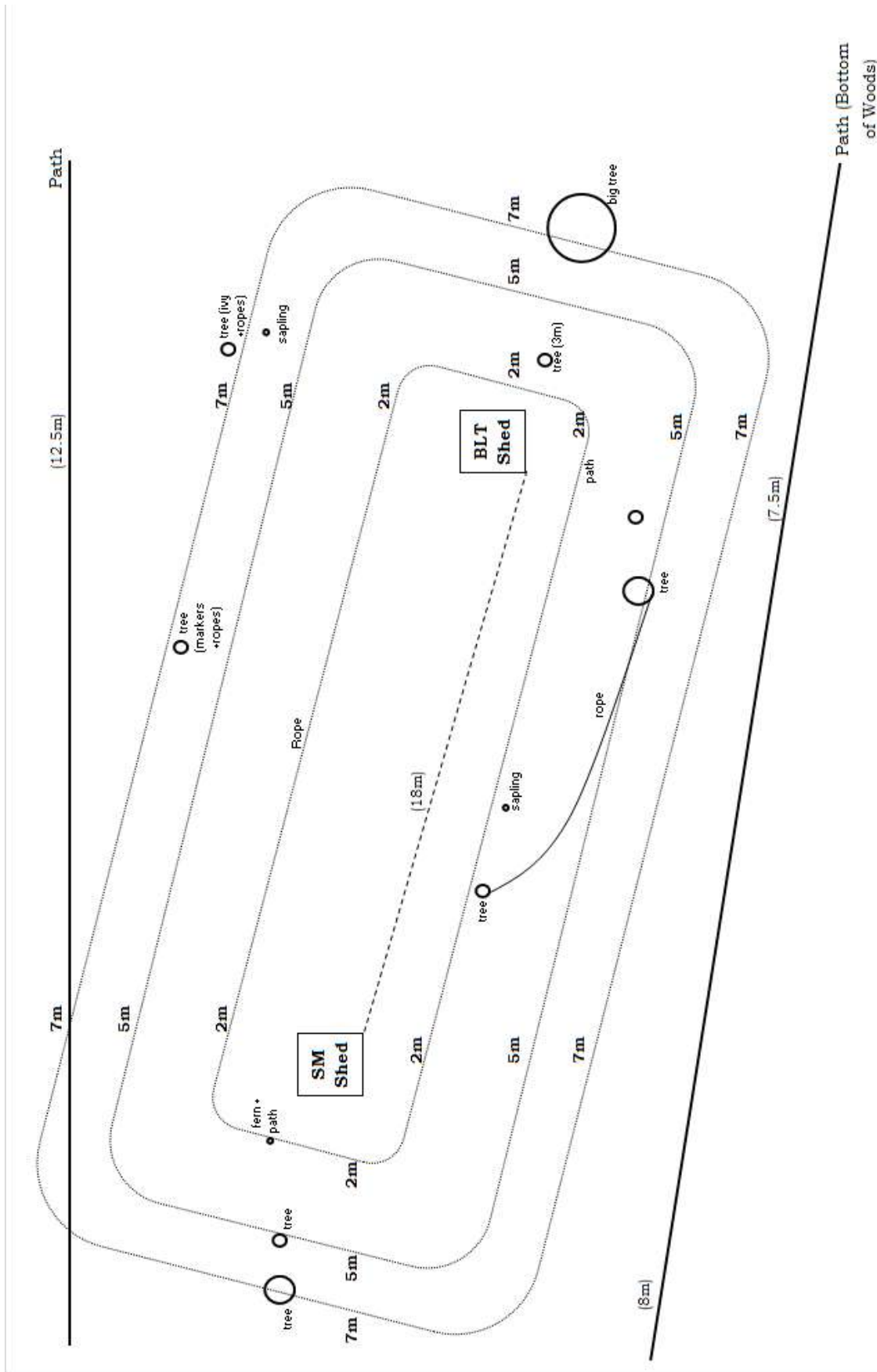
Appendix 4. Final check sheet.

Cohesion was removed from the final observations, as no change in cohesion had been observed in the 2005 study (Bacon 2005). It was also deemed difficult to measure accurately, so could decrease the reliability of results between the two observers.

Date:	Time:	Weather:	Predator:		Behaviour		Vigilance		Height from Ground (m)		Distance from Huts (m)					Comments	Vocalisations	Silvery Marmoset Comments		
			Time:	Weather:	Behaviour	Vigilance	Ground	0-1	1-2	2-3	>3	In	Between	0-2	2-5				5-7	>7
	00:15																			
	00:45																			
	01:15																			
	01:45																			
	02:15																			
	02:45																			
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	09:15																			
	09:45																			

Key:	(E) Feeding	(F) Foraging	(L) Locomotory	(S) Stationary	(N/V) Not in View	(O) Social
Behaviour:	(D) Down	(H) Horizontal	(S) Scanning	(U) Up		
Vigilance:	(A) Alarm Calls	(C) Chirps/Clucks	(L) Long Calls	(T) Trills	(W) Whines	

Appendix 5. Aerial representation of Tamarin Wood, showing distances measured from the huts.



Drawn by Lisa Choma 2007, pers. comm.

Appendix 6. Observation Schedule

Predator:

Pre-scare	0900	(a) Telva	(b) Tavo	(c) Fluffy	(a) Pinon
	0920	(b) Elmo	(c) Ernie	(a) Pinon	(b) Tavo
SCARE	0940	*****SCAN*****			
Post-scare	1000	(a) Telva	(b) Tavo	(c) Fluffy	(c) Ernie
	1020	(b) Elmo	(c) Bert	(a) Pinon	(a) Telva
	1040	(c) Ernie	(a) Pinon	(b) Elmo	(b) Tavo
+3hrs	1330	(c) Fluffy	(a) Telva	(b) Tavo	(c) Ernie
	1345	(a) Pinon	(b) Elmo	(c) Bert	(a) Telva

Predator + Scream:

Pre-scare	0900	(b) Elmo	(c) Bert	(a) Pinon	(b) Tavo
	0920	(a) Telva	(b) Tavo	(c) Fluffy	(c) Ernie
SCARE	0940	*****SCAN*****			
Post-scare	1000	(a) Telva	(b) Tavo	(c) Fluffy	(a) Pinon
	1020	(b) Elmo	(c) Bert	(a) Telva	(b) Tavo
	1040	(c) Ernie	(a) Pinon	(b) Tavo	(c) Fluffy
+3hrs	1330	(a) Pinon	(b) Elmo	(c) Bert	(a) Telva
	1345	(c) Ernie	(a) Telva	(b) Tavo	(b) Elmo

Predator:

Pre-scare	0900	(c) Fluffy	(a) Telva	(b) Elmo	(c) Ernie
	0920	(a) Pinon	(b) Tavo	(c) Bert	(a) Telva
SCARE	0940	*****SCAN*****			
Post-scare	1000	(c) Fluffy	(a) Telva	(b) Tavo	(b) Elmo
	1020	(a) Pinon	(b) Tavo	(c) Bert	(c) Fluffy
	1040	(b) Elmo	(c) Ernie	(a) Pinon	(a) Telva
+3hrs	1330	(a) Telva	(b) Tavo	(c) Fluffy	(b) Elmo
	1345	(b) Elmo	(c) Ernie	(a) Pinon	(c) Bert

Control

Morning	0900	(a) Telva	(b) Elmo	(c) Ernie	(a) Pinon
	0920	(b) Tavo	(a) Pinon	(c) Bert	(b) Elmo
Mid-morning	1020	(c) Fluffy	(b) Tavo	(a) Pinon	(c) Bert
	1040	(a) Pinon	(b) Elmo	(c) Ernie	(a) Telva
Lunch	1330	(b) Tavo	(a) Pinon	(c) Bert	(b) Elmo
	1345	(c) Fluffy	(b) Tavo	(a) Telva	(c) Ernie

Morning	0900	(a) Pinon	(b) Elmo	(c) Ernie	(a) Telva
	0920	(b) Elmo	(a) Telva	(c) Fluffy	(b) Tavo
Mid-morning	1020	(c) Bert	(b) Tavo	(a) Pinon	(c) Fluffy
	1040	(a) Pinon	(b) Tavo	(c) Ernie	(a) Telva
Lunch	1330	(b) Tavo	(a) Telva	(c) Fluffy	(b) Elmo
	1345	(c) Bert	(b) Elmo	(a) Telva	(c) Ernie

