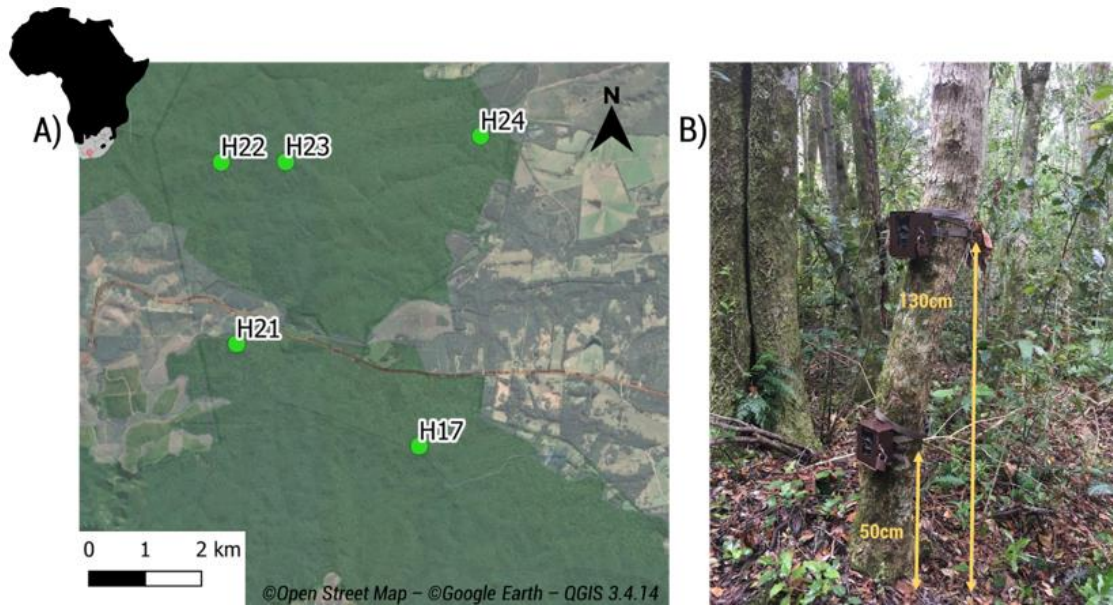
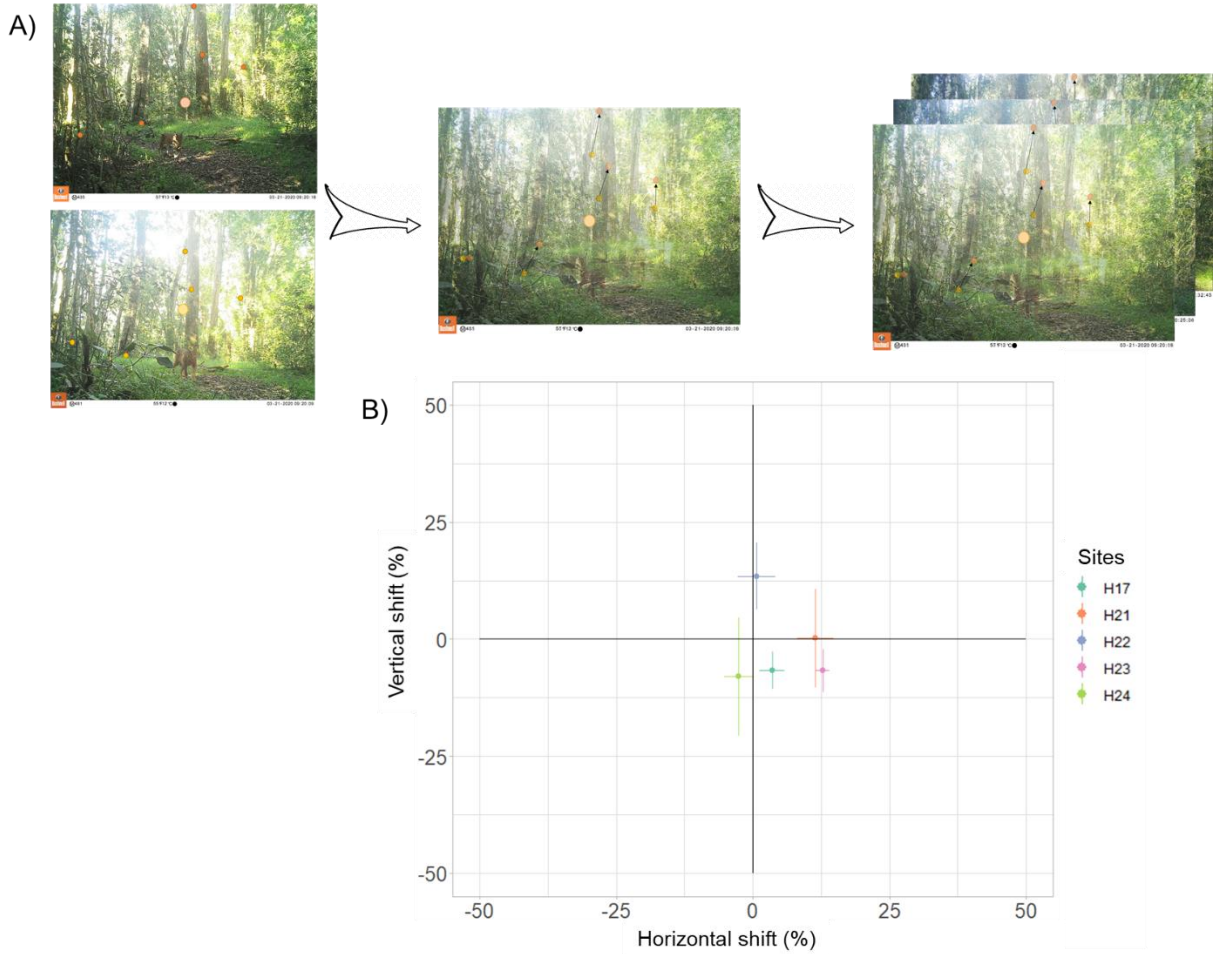


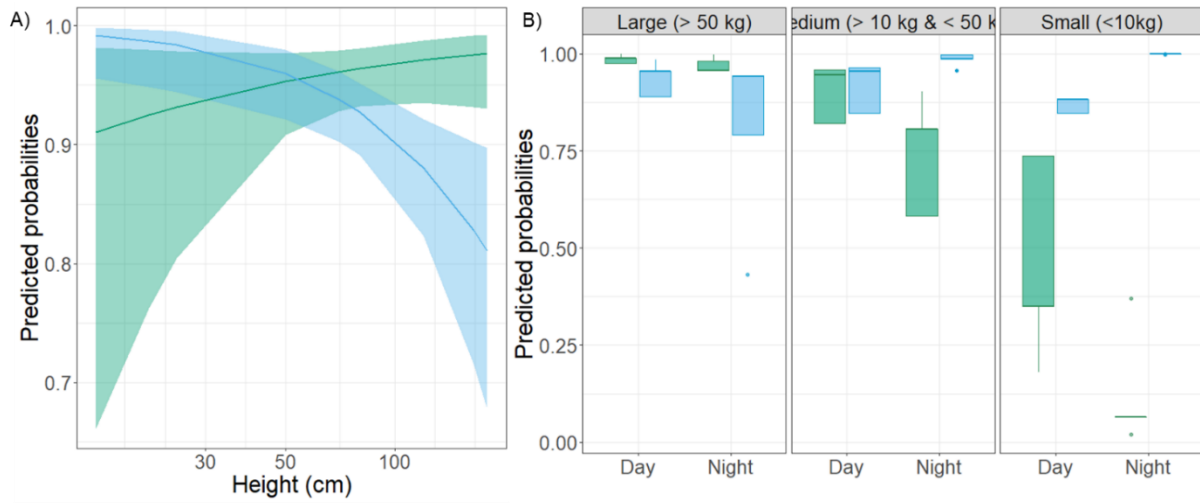
Note: This is Online Appendix 1 of Bernard, A., Moolman, L., De Mornay, M.A., Guerbois, C., Venter, A.J. & Fritz, H., 2023, 'Height related detection biases in camera trap surveys: Insights for combining data from various sources', *Koedoe* 65(1), 1734.  
<https://doi.org/10.4102/koedoe.v65i1.1734>



**FIGURE 1 - A1:** A) Location of the 5 sites in the Harkerville forest, Garden Route National Park, Western Cape, South Africa; B) Position of the high and low cameras on a tree.



**FIGURE 2 -A1:** A) For each site, we compared a photograph of the same event taken by the cameras at 130 cm and one taken by the cameras at 50 cm. We selected 5 similar points on each photo. Then we measured the horizontal and vertical shift from the high camera compared to the low camera. We repeated the methods with 3 different events. We calculated a percentage of shift using the size of the photo as the value of reference. B) We then plotted the percentage of mean and standard deviation for each site, corresponding to the shift in direction between low and high cameras. This shows a small shift between the two heights of the cameras, mostly on the horizontal axis.



**FIGURE 3 – A1:** Predicted probabilities of detection of the best generalised linear model as a function of A) the height of the species by treatment and B) the weight of the species, sorted by treatment and day/night photos.

**TABLE1 - A1:** Species detected on camera traps in the Harkerville Forest, Garden Route National Park, Western Cape, South Africa, and their characteristics.

<b>Mammal species and human related events</b>	<b>Height (cm)</b>	<b>Weight (kg)</b>	<b>Total number of detection</b>	<b>Camera height</b>	<b>Number of detection</b>
Leopard	70	55	9	High	9
				Low	9
Bushbuck	70	54	146	High	140
				Low	136
Bushpig	80	65	31	High	29
				Low	30
Baboon	80	24	26	High	26
				Low	25
Vervet monkey	50	5	6	High	4
				Low	6
Porcupine	70	17	19	High	13
				Low	19
Caracal	50	13	6	High	6
				Low	4
South African large-spotted genet	21	1.6	61	High	6
				Low	60
Cape grey mongoose	15	0.8	2	High	0
				Low	2
Honey badger	25	12	30	High	24
				Low	29
Dogs without human	50	30	10	High	9
				Low	10
Dogs with human	50	30	11	High	11
				Low	11
Human	165	70	147	High	146
				Low	124
Motorcycle	165	250	35	High	35
				Low	35
Vehicle	180	1200	5	High	5
				Low	5

Source: Child, F.M., Roxburgh, L., Do Linh San, E., Raimondo, D. & Davies-Mostert, H.T., 2016, The red list of mammals of South Africa, Swaziland and Lesotho, South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa, viewed from [www.ewt.org.za](http://www.ewt.org.za)

**TABLE 2 - A1:** Results of the A) step AIC procedure and B) statistical model relating species' detection with camera height.

**A) Results of the step AIC procedure (variables and/or interactions removed at each step):**

Step	df	Deviance Residual	df Residual	Deviance	AIC
1	-		1068	436.4	476.4
2	- Height:weight:period photo:treatment	0.24047	1069	436.7	474.7
3	- Height: weight:treatment	0.99029	1070	437.8	473.7
4	- Height:period photo:treatment	1.00914	1071	438.7	472.7
5	- Height:weight:period photo	0.92221	1072	439.6	471.6
6	- Height:weight	0.42018	1073	440.0	470.0
7	- Site	6.55267	1074	446.6	468.6
8	- Height:period photo	1.06879	1078	447.6	467.6

Note: Initial Model: detection ~ Site + (height \* weight \* period photo ) \* treatment.

Final Model: detection ~ height + weight + period photo + treatment + weight:period photo + height:treatment + weight:treatment + period photot:treatment + weight:period photo:treatment.

**B) Results of the glm for the best model:**

	Estimate	Std. Error	P
(Intercept)	-2.8419	1.5272	.
Height	1.3195	1.1725	NS
Weight	2.3369	0.7118	**
Night photo	-2.2510	0.8927	*
Low treatment	8.5848	2.1905	***
Weight:night photo	0.9782	0.6962	NS
Height:low treatment	-4.4112	1.5851	**
Weight:low treatment	-0.6010	0.9768	NS
Night photo:low treatment	10.0768	3.7985	**
Weight:night photo:low treatment	-5.6293	2.1676	**

P: 1 > NS > 0.1 > . > 0.05 > \* > 0.01 > \*\* > 0.001 > \*\*\*.

**TABLE 3 – A1:** Results of the independent McNemar tests.

<b>Species</b>	<b>p-value</b>	<b>P</b>
Human	7,10E-06	***
Bushbuck	0,317	NS
Caracal	0,157	NS
Genet	5,35E-13	***
Ratel	0,059	.
Bushpig	0,564	NS
Baboon	0,317	NS
Vervet monkey	0,157	NS
Dogs with people	NA	
Porcupine	0,014	*
Dogs without people	0,317	NS
Motorcycle	NA	
Vehicle	NA	
Leopard	NA	
Mongoose	0,157	NS