

## Supplementary Online Material 2

Supplementary Table 1. Comparisons of encounter rates (No./km) with middle and large mammal between the 2010 and 2023 surveys.

Scientific name	English name	Types of detection	In 2010 (Vosper 2010)		In 2023 (this study)		Rate of increase
			No.	No./km	No.	No./km	
<i>Loxodonta cyclotis</i>	Elephant	dung	5	0.010	11	0.024	138%
<i>Pan paniscus</i>	Bonobo	nest group	163	0.339	165	0.358	5%
<i>Pan paniscus</i>	Bonobo	individual nest	548	1.138	1646	3.567	213%
<i>Colobus angolensis</i>	Angola Colobus	direct observation, vocalization	10	0.021	46	0.100	375%
<i>Lophocebus aterrimus</i>	Black Crested Mangabey	direct observation, vocalization	102	0.212	198	0.429	102%
<i>Cercopithecus wolffi</i>	Wolf's Monkey	direct observation, vocalization	90	0.187	151	0.327	75%
<i>Cercopithecus ascanius</i>	Red-tailed Monkey	direct observation, vocalization	24	0.050	83	0.180	260%
<i>Potamochoerus porcus</i>	Red River Hog	dung	116	0.241	148	0.321	33%
<i>Hyemoschus aquaticus</i>	Water Chevrotain	dung	8	0.017	5	0.011	-36%
<i>Tragelaphus euryceros</i>	Bongo	dung	2	0.004	2	0.004	8%
<i>Tragelaphus spekii</i>	Sitatunga	dung	13	0.027	39	0.085	213%
<i>Philantomba monticola</i>	Blue Duiker	dung	42	0.087	50	0.108	25%
<i>Cephalophus nigrifrons</i>	Black-fronted Duiker	dung	28	0.058	109	0.236	307%

<i>Cephalophus weynsi</i>	Weyns's Duiker	dung	56	0.116	284	0.615	431%
<i>Cephalophus silvicultor</i>	Yellow-backed Duiker	dung	31	0.064	208	0.451	604%
<i>Cephalophus dorsalis</i>	Bay Duiker	dung	85	0.177	381	0.826	366%

Supplementary Table 2. Comparisons of Bonobo nest variables between the 2010 and 2023 surveys.

	In 2010 (Vosper, 2010)	In 2023 (this study)
Number of transects where Bonobo nests were detected	17 (out of 70 <sup>(a)</sup> )	26 (out of 71)
Number of nest groups	163 (no data on transects; 163 on recces)	213 (48 on transects; 165 on recces)
Encounter rate of nest groups on transects (No./km)	---	0.68
Encounter rate of nest groups on recces (No./km)	0.34	0.36
Number of individual nests	620 (72 on transects <sup>(b)</sup> ; 548 on recces)	2116 (470 on transects; 1646 on recces)
Encounter rate of individual nests on transects (No./km)	1.06	6.68
Encounter rate of individual nests on recces (No./km)	1.14	3.57
Nest group size on transects (mean $\pm$ SD)	---	9.79 $\pm$ 7.18 (range = 1–32)
Nest group size on recces (mean $\pm$ SD)	3.36	9.98 $\pm$ 7.12 (range = 1–35)
Proportion of nest ages in nest groups	Old > Fresh, Recent (description in text)	Fresh, 31%; Recent, 55%; Old, 11%; Very old 2%
Nest density (No./km <sup>2</sup> )	25.53 (95% CI: 13.90–46.80)	133.54 (95% CI: 81.46–218.50)
Coefficient of variation	31.2%	25.2%

NOTE: (a) One transect was not completed (Vosper, 2010). (b) 68 transects were used for the analysis of Bonobo density (Vosper, 2010).

Supplementary Table 3. Comparisons of encounter rates (No./km) with hunting signs between the 2010 and 2023 surveys. The number of detections were not presented in Vosper (2010).

		In 2010 (Vosper, 2010)	In 2023 (this study)		Rate of increase
Hunting signs		No./km	No.	No./km	
Traps	active	0.052	12	0.023	-57%
	non-active	0.171	9	0.017	-90%
	both	0.223	21	0.039	-82%
Hunting camp	active	0.004	4	0.008	88%
	non-active	0.021	4	0.008	-64%
	both	0.025	8	0.015	-40%
Cartridge of shotgun		0.013	6	0.011	-13%
Poisoned arrow		0.002	0	0.000	-100%

Supplementary Table 4. Encounter rates (No./km) of medium and large mammals observed along each recce across five blocks in RFLY. The results of the Kruskal-Wallis test are also presented, with significance set at  $P < 0.05$  ( $P < 0.01$  and  $P < 0.001$  are additionally reported).

Animal (No. of detection)	Detection type	Block (mean $\pm$ SD) (range)					Kruskal-Wallis test
		SW	SE	NW	NM	NE	
Elephant (58)	dung, trace,	0.47 $\pm$ 0.98	0.00 $\pm$ 0.00	0.21 $\pm$ 0.64	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00	P < 0.01
	food marks	(0.00~3.55)	(0.00~0.00)	(0.00~2.31)	(0.00~0.00)	(0.00~0.00)	
Bonobo nest group (165)	nest	0.30 $\pm$ 0.27	0.60 $\pm$ 0.48	0.31 $\pm$ 0.35	0.37 $\pm$ 0.31	0.19 $\pm$ 0.23	ns
		(0.00~0.77)	(0.00~1.46)	(0.00~1.08)	(0.00~0.77)	(0.00~0.62)	
Bonobo individual nest (1646)	nest	4.40 $\pm$ 3.53	5.38 $\pm$ 5.19	4.32 $\pm$ 5.63	2.69 $\pm$ 2.72	1.22 $\pm$ 1.65	P < 0.05
		(0.00~10.65)	(0.00~17.91)	(0.00~16.97)	(0.00~7.98)	(0.00~5.56)	
Angola Colobus (46)	direct observation, vocalization	0.09 $\pm$ 0.10	0.09 $\pm$ 0.07	0.09 $\pm$ 0.12	0.13 $\pm$ 0.15	0.10 $\pm$ 0.07	ns
		(0.00~0.31)	(0.00~0.15)	(0.00~0.31)	(0.00~0.51)	(0.00~ 0.20)	
Black Crested Mangabey (198)	direct observation, vocalization	0.48 $\pm$ 0.27	0.54 $\pm$ 0.22	0.44 $\pm$ 0.40	0.44 $\pm$ 0.26	0.27 $\pm$ 0.22	ns
		(0.00~0.77)	(0.15~0.93)	(0.00~1.08)	(0.00~0.85)	(0.00~0.62)	
Wolf's Monkey (151)	direct observation, vocalization	0.31 $\pm$ 0.15	0.36 $\pm$ 0.23	0.39 $\pm$ 0.42	0.33 $\pm$ 0.21	0.25 $\pm$ 0.18	ns
		(0.15~0.62)	(0.00~0.79)	(0.00~1.23)	(0.13~0.79)	(0.00~0.62)	

Red-tailed Monkey (83)	direct observation, vocalization	0.18±0.11 (0.00~0.31)	0.20±0.17 (0.00~0.56)	0.26±0.31 (0.00~0.93)	0.17±0.13 (0.00~0.32)	0.12±0.15 (0.00~0.46)	ns
Red River Hog (148)	dung	0.18±0.22 (0.00~0.68)	0.32±0.16 (0.11~0.62)	0.16±0.25 (0.00~0.92)	0.55±0.32 (0.15~1.08)	0.35±0.32 (0.00~0.97)	P < 0.001
Sitatunga (39)	dung	0.06±0.10 (0.00~0.31)	0.12±0.11 (0.00~0.30)	0.10±0.13 (0.00~0.31)	0.07±0.11 (0.00~0.36)	0.07±0.09 (0.00~0.24)	ns
Blue Duiker (50)	dung	0.09±0.14 (0.00~0.46)	0.09±0.14 (0.00~0.41)	0.05±0.07 (0.00~0.15)	0.22±0.17 (0.00~0.62)	0.10±0.14 (0.00~0.46)	ns
Black-fronted Duiker (109)	dung	0.18±0.29 (0.00~0.77)	0.15±0.13 (0.00~0.36)	0.21±0.19 (0.00~0.46)	0.36±0.30 (0.00~0.92)	0.30±0.32 (0.00~0.93)	ns
Weyns's Duiker (284)	dung	0.62±0.41 (0.00~1.22)	0.43±0.31 (0.00~0.91)	0.61±0.39 (0.13~1.35)	0.86±0.41 (0.38~1.69)	0.53±0.33 (0.00~1.17)	ns
Yellow-backed Duiker (208)	dung	0.59±0.33 (0.15~1.22)	0.40±0.42 (0.00~ 1.38)	0.24±0.28 (0.00~0.93)	0.51±0.21 (0.15~0.89)	0.53±0.33 (0.00~1.25)	P < 0.05
Bay Duiker (381)	dung	0.93±0.59 (0.00~2.01)	0.78±0.65 (0.00~1.94)	0.64±0.69 (0.00~2.47)	1.03±0.39 (0.52~1.85)	0.74±0.49 (0.00~1.61)	ns
Black-fronted, Weyns's and Bay Duikers (774)	dung	1.73±1.06 (0.00~3.66)	1.37±0.98 (0.15~3.04)	1.45±1.03 (0.39~4.01)	2.26±0.89 (0.90~4.46)	1.57±0.75 (0.00~2.76)	ns