

Additional file 4: Table S4. Dataset used in the analyses.

Family	Species	Male weapon length (cm)	Male body mass (kg)	Total sperm length (µm)*	Head length (µm)	Midpiece length (µm)	Tail length (µm)	Midpiece volume (µm ³)	Testes mass (g)	Mating tactic***	
Bovidae	<i>Addax nasomaculatus</i>	84.5 ^c	117.7 ^c	59.08	6.58 ^b	14.41 ^b	38.09 ^b	5.23 ^b	43.2 ^a	F ^c	
	<i>Aepyceros melampus</i>	68.4 ^c	56.9 ^c	46.15	6.52 ^p	7.63 ^p	32.00 ^p	-	28.9 ^a	T ^c	
	<i>Alcelaphus buselaphus</i>	57.5 ^j	152.1 ^l	58.15	5.77 ^b	10.04 ^b	42.34 ^b	4.16 ^b	107.0 ^a	T ^j	
	<i>Ammotragus lervia</i>	73.6 ^c	111.8 ^c	-	-	-	-	-	18.9 ^a	F ^c	
	<i>Antidorcas marsupialis</i>	26.5 ^c	40.7 ^c	57.84	6.47 ^b	9.99 ^b	41.38 ^b	3.09 ^b	71.0 ^a	T ^c	
	<i>Antilope cervicapra</i>	57.0 ^c	40.2 ^c	62.59	9.01 ^b	13.14 ^b	40.44 ^b	4.66 ^b	26.0 ^c	T ^c	
	<i>Bubalus bubalis</i>	105.0 ^c	1200.0 ^c	60.98	6.71 ^b	11.20 ^b	43.07 ^b	1.93 ^b	652.0 ^p	F ^c	
	<i>Budorcas taxicolor</i>	41.2 ^c	282.7 ^c	71.71	7.23 ^b	15.37 ^b	49.11 ^b	3.69 ^b	93.4 ^a	F ^c	
	<i>Capra falconeri</i>	108.0 ^c	92.7 ^c	62.70	7.95 ^b	14.19 ^b	40.56 ^b	3.23 ^b	20.9 ^a	F ^c	
	<i>Capra hircus</i>	105.0 ^c	53.0 ^c	57.17	7.54 ^b	13.21 ^b	36.42 ^b	2.76 ^b	120.0 ^c	F ^c	
	<i>Capra ibex</i>	90.0 ^c	80.5 ^c	58.47	7.08 ^b	14.38 ^b	37.01 ^b	2.31 ^b	38.3 ^a	F ^c	
	<i>Capra nubiana</i>	100.0 ^c	70.0 ^c	64.44	7.84 ^b	14.68 ^b	41.92 ^b	3.90 ^b	-	F ^c	
	<i>Capra sibirica</i>	115.1 ^c	90.0 ^c	54.78	7.54 ^b	13.15 ^b	34.09 ^b	2.54 ^b	-	F ^c	
	<i>Cephalophus monticola</i>	4.5 ^c	4.4 ^c	77.50	10.43 ^b	20.46 ^b	46.61 ^b	3.34 ^b	-	T ^c	
	<i>Cephalophus silvicultor</i>	14.0 ^b	52.5 ^l	60.41	9.72 ^b	16.33 ^b	34.36 ^b	1.54 ^b	33.3 ^a	T ^b	
	<i>Connochaetes gnou</i>	64.0 ^c	166.7 ^c	62.28	8.04 ⁱ	11.74 ⁱ	42.50 ⁱ	-	137.0 ^b	T ^c	
	<i>Connochaetes taurinus</i>	68.0 ^c	235.3 ^c	46.77	5.01 ^q	7.86 ^q	33.90 ^q	-	306.0 ^b	T ^c	
	<i>Gazella cuvieri</i>	31.0 ^c	29.4 ^c	70.40	9.19 ^b	10.97 ^b	50.24 ^b	1.87 ^b	39.4 ^a	T ^c	
	<i>Gazella dorcas</i>	31.5 ^c	16.3 ^c	62.01	6.09 ^b	11.91 ^b	44.01 ^b	1.76 ^b	31.5 ^a	T ^c	
	<i>Gazella granti</i>	65.0 ^c	72.1 ^c	55.76	8.34 ^b	10.43 ^b	36.99 ^b	0.61 ^b	-	T ^c	
	<i>Gazella leptoceros</i>	36.0 ^c	27.2 ^c	65.31	8.80 ^b	12.61 ^b	43.90 ^b	3.85 ^b	6.7 ^a	T ^c	
	<i>Gazella rufifrons</i>	40.4 ^c	27.0 ^c	64.72	9.02 ^b	12.11 ^b	43.59 ^b	2.93 ^b	7.9 ^a	T ^c	
	<i>Gazella subgutturosa</i>	30.0 ^c	27.4 ^c	66.93	9.74 ^b	18.80 ^b	45.39 ^b	4.78 ^b	8.2 ^a	T ^c	
	<i>Gazella thomsonii</i>	34.0 ^c	22.7 ^c	68.68	9.98 ^b	11.42 ^b	47.28 ^b	6.07 ^b	-	T ^c	
	<i>Hemitragus jemlahicus</i>	29.5 ^c	103.3 ^c	-	-	-	-	-	26.7 ^a	F ^c	
	<i>Kobus ellipsiprymnus</i>	75.0 ^c	236.8 ^c	61.61	6.98 ^b	14.31 ^b	40.32 ^b	2.95 ^b	73.7 ^a	T ^c	
	<i>Kobus kob</i>	54.5 ^c	97.5 ^c	-	-	-	-	-	41.7 ^a	T ^c	
	<i>Kobus leche</i>	70.0 ^c	104.3 ^c	60.04	8.11 ^b	10.99 ^b	40.94 ^b	3.19 ^b	67.9 ^a	T ^c	
	<i>Kobus megaceros</i>	68.7 ^c	105.5 ^c	57.98	7.99 ^b	11.52 ^b	38.47 ^b	4.11 ^b	52.0 ^a	T ^c	
	<i>Madoqua guentheri</i>	7.5 ^c	3.7 ^c	51.66	7.14 ^b	12.81 ^b	31.71 ^b	1.81 ^b	3.2 ^a	T ^c	
	<i>Naemorhedus goral</i>	14.5 ^c	32.0 ^c	-	-	-	-	-	36.5 ^a	T ^c	
	<i>Neotragus moschatus</i>	9.0 ^c	4.8 ^c	70.54	9.68 ^b	15.63 ^b	45.23 ^b	2.58 ^b	58.9 ^a	T ^c	
	<i>Oryx gazella</i>	88.3 ^c	178.0 ^c	60.30	6.10 ^b	12.98 ^b	41.22 ^b	2.08 ^b	37.9 ^a	F ^c	
	<i>Ovis canadensis</i>	90.0 ^c	83.4 ^l	64.68	7.34 ^b	17.50 ^b	39.84 ^b	4.03 ^b	338.0 ^a	F ^f	
	<i>Pelea capreolus</i>	22.5 ^c	24.0 ^c	60.20	4.96 ^b	11.27 ^b	43.97 ^b	1.43 ^b	-	T ^c	
	<i>Sylvicapra grimmia</i>	9.9 ^c	18.3 ^c	66.94	9.74 ^b	17.08 ^b	40.12 ^b	1.55 ^b	21.3 ^a	T ^c	
	<i>Tragelaphus angasii</i>	65.0 ^c	110.2 ^c	63.13	8.55 ^b	13.52 ^b	41.06 ^b	2.49 ^b	38.3 ^a	F ^c	
	<i>Tragelaphus eurycerus</i>	80.0 ^a	300.0 ^q	60.69	7.81 ^b	13.15 ^b	39.73 ^b	2.22 ^b	52.9 ^a	F ^m	
	<i>Tragelaphus spekii</i>	66.0 ^c	102.3 ^c	58.26	7.74 ^b	13.52 ^b	37.00 ^b	5.42 ^b	-	F ^c	
	<i>Tragelaphus strepsiceros</i>	120.0 ^c	248.0 ^c	69.46	7.62 ^b	13.98 ^b	47.86 ^b	4.60 ^b	92.0 ^a	F ^c	
	Cervidae	<i>Alces alces</i>	144.0 ^m	482.5 ^m	62.50 ^d	8.80 ^d	-	54.70 ^d	-	106.0 ^p	F ^m
		<i>Axis axis</i>	84.5 ^m	89.5 ^m	66.30	8.90 ^k	13.80 ^k	43.60 ^k	-	29.8 ^c	F ^m
<i>Axis porcinus</i>		39.9 ^m	41.0 ^m	67.43	8.70 ^b	16.91 ^b	41.82 ^b	2.98 ^b	49.5 ^a	F ^m	
<i>Cervus albostris</i>		115.0 ^m	204.0 ^m	61.06	8.18 ^b	12.93 ^b	39.95 ^b	3.32 ^b	116.4 ^a	F ^m	
<i>Cervus duvaucelii</i>		81.3 ^m	236.0 ^m	63.91	9.35 ^b	13.19 ^b	41.37 ^b	2.39 ^b	-	F ^m	
<i>Cervus elaphus</i>		93.6 ^m	250.0 ^m	61.17	8.35 ^{b***}	13.21 ^{b***}	39.61 ^{b***}	3.01 ^{b***}	97.1 ^{a***}	F ^m	
<i>Cervus eldii</i>		97.2 ^m	105.0 ^m	62.64	8.20 ^b	13.24 ^b	41.20 ^b	1.30 ^b	-	F ^m	
<i>Cervus nippon</i>		48.0 ^m	52.0 ^m	59.82	8.80 ^b	11.20 ^b	39.82 ^b	2.57 ^b	-	T ^m	
<i>Cervus timorensis</i>		67.5 ^m	95.5 ^m	63.76	8.48 ^b	11.03 ^b	44.25 ^b	2.05 ^b	27.4 ^a	F ^m	
<i>Cervus unicolor</i>		104.9 ^m	192.0 ^m	61.67	7.78 ^b	12.17 ^b	41.72 ^b	1.77 ^b	77.5 ^a	T ^m	
<i>Dama dama</i>		61.5 ^m	67.0 ^m	64.49	7.96 ^b	13.64 ^b	42.89 ^b	5.96 ^b	40.0 ^a	T ^m	
<i>Elaphurus davidianus</i>		73.7 ^m	214.0 ^m	58.84	8.58 ^b	10.71 ^b	39.55 ^b	4.87 ^b	57.4 ^a	F ^m	
<i>Mazama americana</i>		11.5 ^m	24.5 ^m	56.09	7.38 ^b	10.37 ^b	38.34 ^b	1.42 ^b	-	F ^m	
<i>Muntiacus muntjak</i>		14.2 ^m	19.0 ^m	58.16	6.37 ^b	15.83 ^b	35.96 ^b	2.59 ^b	6.5 ^a	T ^m	
<i>Muntiacus reevesi</i>		11.4 ^m	13.5 ^m	59.75	6.79 ^b	12.93 ^b	40.03 ^b	1.20 ^b	-	T ^m	
<i>Odocoileus virginianus</i>		65.6 ^m	154.5 ^m	52.00	10.00 ^p	7.00 ^p	35.00 ^p	-	85.5 ^p	F ^m	
<i>Pudu puda</i>		8.5 ^m	13.0 ^m	57.98	8.83 ^b	12.03 ^b	37.12 ^b	3.38 ^b	-	T ^m	
<i>Rangifer tarandus</i>		91.0 ^m	106.5 ^m	56.50	7.64 ^p	10.38 ^p	38.48 ^p	-	47.7 ^a	F ^m	

*until otherwise stated the total sperm length is the sum of the length of the three sperm components, namely : head, midpiece and tail.

** average of the measurements made on the three following *Cervus elaphus* subspecies: *Cervus elaphus bactrianus*, *Cervus elaphus barbarus*, *Cervus elaphus macneillii*.

***F: female defence mating tactic, T: Territory defence mating tactic

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