

# HISTORIC AND CURRENT DISTRIBUTION, ABUNDANCE, AND HABITATS OF ROOSEVELT'S SABLE ANTELOPE *HIPPOTRAGUS NIGER ROOSEVELTI* (HELLER, 1910) (CERARTIODACTYLA: BOVIDAE) IN KENYA

Thomas M. Butynski, Ian Parker & Yvonne A. de Jong

*Journal of East African Natural History* 2015, **104**(1&2): 41–77



## ABSTRACT

Roosevelt's sable *Hippotragus niger roosevelti* is one of Kenya's most distinctive and threatened large mammals. Historically, sable herds occurred in the vicinity of Taveta, and in the miombo and *Diospyros* woodlands of the coastal hinterland from the Tanzania-Kenya border northward for at least 210 km. Most of the historic distribution of sable in Kenya lies 15–35 km inland from the coast at 100–200 m altitude where mean annual rainfall is 800–1200 mm. In terms of numbers, however, most sable occurred in the higher and wetter Shimba Hills (150–460 m; mean annual rainfall 1000–1200 mm). Bachelor males sometimes moved >150 km inland. Much of the decline of the distribution and size of Kenya's sable population occurred during 1950–1980. Sable in Kenya not reported outside of Shimba Hills National Reserve after 1994. Geographic distribution of sable herds in Kenya declined from roughly 5000 km<sup>2</sup> in 1884 to 70 km<sup>2</sup> today (>98% decline in 132 years). The number of sable in Kenya was already small as of 1884, when there were probably <400 individuals. Kenya's sable population declined from >235 individuals in the mid-1970s to ca. 60 individuals in 2015 (>74% decline in 40 years). Given the low number, small distribution, and rapid decline, sable in Kenya qualifies as a nationally 'Critically Endangered' species. Recommendations for the conservation of sable in Kenya are provided.

*Table 1. Summary of records and size of herds for Roosevelt's sable antelope *Hippotragus niger roosevelti* in Kenya (1884–2015). These records were used to generate the map in figure 2. The record numbers correspond to those in figure 2. Not included are records obtained within 70 km of the coast for bachelor males.*

<b>Year</b>	<b>Location</b>	<b>Record number</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Herd size</b>	<b>Source</b>
1884	Lanjora Plains/Bura	22	-3,44209	38,12839	?	Johnston, 1886
1884	Taveta	23	-3,40023	37,68451	“Frequent”	Johnston, 1886
1886	Just west of Maji ya Chumvi	17	-3,79261	39,38289	5	Willoughby, 1889
<1890	Lamu mainland	2	-1,51605	41,35357	Rejected record	Kock & Goss, 1995; Brown, <i>ca.</i> 2010; Estes, 2013
1909	Shimba Hills	18	-4,26024	39,39229	Herds	Roosevelt & Heller, 1914
1949	Goshi	13	-3,45980	39,38996	Herd (1 female killed)	B. Debassa, pers. comm. to I. Parker
1952	Near Sobo Rock, Tsavo East NP	7	-3,06107	38,82167	3 males	D. Watson-Cook, pers. comm.
1952	Mangea Hill/Vitengeni	10	-3,31260	39,71679	23	K. Smith & G. Harvey, pers. comm. in Glover, 1969
1956	Mangea Hill/Vitengeni	10	-3,25000	39,71667	20	K. Smith, pers. comm. in Glover, 1969
1957–1959	Shimba Hills	18	-4,30872	39,38668	15, 15, 20, 20, 30, 40	I. Parker, pers. obs.
1958–1980	Alango Jira	4	-2,82321	39,80993	Herd	A. Gumundi, pers. comm. to T. Archer, R. Glenn & I. Parker
1958	Sobo Rock, Tsavo East NP	8	-3,05000	38,90000	1	D. Sheldrick, pers. comm.
1959	Mangea Hill/Vitengeni	10	-3,25000	39,71667	19	T. Rose, pers. comm.

<b>Year</b>	<b>Location</b>	<b>Record number</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Herd size</b>	<b>Source</b>
1959	Boni Forest	1	-2,00399	40,68538	Rejected record	D. McCabe, pers. comm. in Parker & Bleazard, 2002
1960	Shimba Hills	18	-4,23300	39,42622	Herds	Le Roux, pers. comm. in Glover, 1969
1961	Shimba Hills	18	-4,13395	39,45538	40, 9, 8, 10, 13	E. Risley, in Ross, 1981, 1984
1961	Simba Hills Resettlement Area	19	-4,33409	39,37457	4 herds (total = 51)	E. Risley, in Ross, 1981, 1984
1963	Shimba Hills	18	-4,13395	39,45538	Herds	Risley, 1966b
<1963	South of Garsen	3	-2,39189	40,03980	Questionable record	Stewart & Stewart, 1963
1964	Mangea Hill/Vitengeni	10	-3,20442	39,77013	20	I. Parker, pers. obs.
1964	Kwa Dadu	11	-3,25341	39,62970	10	I. Parker, pers. obs.
1964	Mlimani	12	-3,27479	39,52352	10	I. Parker, pers. obs.
1964	Goshi	13	-3,45980	39,38996	10	I. Parker, pers. obs.
1965	Sala Gate, Tsavo East NP	9	-3,07119	39,21484	1	Kock & Goss, 1995
1965	Mangea Hill/Vitengeni	10	-3,25000	39,71667	5	S. Mwanzia, pers comm. in Glover, 1969
1967	Northeast of Mrima Hill	20	-4,47109	39,28149	21	S. Mwanzia, pers. comm. in Glover, 1969
1967	Mangea Hill/Vitengeni	10	-3,31260	39,71679	Sable tracks	D. McCabe, pers. comm. to K. Smith in Glover, 1969
1968	Mangea Hill/Vitengeni	10	-3,31260	39,71679	30	I. Parker, pers. obs.

Year	Location	Record number	Latitude	Longitude	Herd size	Source
1968	Mangea Hill/Vitengeni	10	-3,20442	39,77013	9	D. Sheldrick & P. Glover, in Glover, 1969
1968	Between Mrima Hill, Jombo Hill, Vanga	20	-4,46247	39,23420	10	K. Smith & D. Sheldrick, pers. comm. in Glover, 1969
1968	Southwest of Mrima Hill	20	-4,51126	39,28000	11	S. Mwanzia, pers. comm. in Glover, 1969
1968	Between Jombo Hill & Ramsi River	20	-4,44753	39,30488	13	C. Barisa, pers. comm. in Glover, 1969
1968	Shimba Hills	18	-4,24233	39,41757	20, 8, 2, 24, 10, 13,7,33,8,5,8	Glover, 1969
1969	Shimba Hills	18	-4,23300	39,42622	48, 8, 10, 7, 24	Estes & Estes, 1969
Early 1970s	Garbete	14	-3,46755	39,25716	1	I. Parker, pers. obs.
1975	Shimba Hills	18	-4,23300	39,42622	72, 15, 19, 23, 32, 15	Sekulic, 1981
1976	Mangea Hill/Vitengeni	10	-3,31260	39,71679	20	I. Parker, pers. obs.
1976	Mangea Hill/Vitengeni	10	-3,25000	39,71667	20	B. Heath, pers. comm.
1976	Shimba Hills	18	-4,23300	39,42622	84	Ross, 1989
1977	Shimba Hills	18	-4,23300	39,42622	78	Ross, 1989
1980	Shimba Hills	18	-4,23300	39,42622	65, 23, 20, 16, 15, 18, 19	Ross, 1984
1981	Shimba Hills	18	-4,23300	39,42622	67, 19, 20, 31, 14	Ross, 1984
1982	Shimba Hills	18	-4,23300	39,42622	45, 16, 16, 14, 19, 16	Ross, 1984
1983	Shimba Hills	18	-4,23300	39,42622	34, 11, 25, 14, 10	Ross, 1984

Year	Location	Record number	Latitude	Longitude	Herd size	Source
1984	Shimba Hills	18	-4,23300	39,42622	52	Ross, 1984
1985	Shimba Hills	18	-4,23300	39,42622	9, 2	Ross, 1989
1988	Shimba Hills	18	-4,23300	39,42622	43, 14	Ross, 1989
Early 1990s	Horo-Horo	21	-4,59552	39.10814	Herd	Baldus, 1998
1990–1999	Alango Jira	4	-2,82242	39,75236	Herd	B. Kiribai, pers. comm. to T. Archer & I. Parker
1992	Lunga-Lunga	21	-4,55398	39,12607	15	O. Macharia, in Davies, 1994
1994	Shimba Hills	18	-4,23300	39,42622	12, 7, 16, 53, 15, 19	Andanje, 1994
1994	Southeast of Voi	15	-3,48045	38,63388	1	R. Brett, pers. comm. in Kock & Goss, 1995
1994	North of Voi	6	-3,28078	38,55928	1	Kock & Goss, 1995
<1995	North of Yatta Plateau	5	-2,29677	38,29294	Questionable record	Kock & Goss, 1995
2009	Shimba Hills	18	-4,23300	39,42622	3 herds	Tamooh, 2009
2012	Shimba Hills	18	-4,27645	39,39637	Herds	KWS, 2012
2015	Shimba Hills	18	-4,27645	39,39637	2, 6, 12, 20	Ogwoka <i>et al.</i> , 2015

**Addendum:** In February 1966, Stan Bleazard (pers. comm.) travelled to Mwena River on the extreme southwest coast of Kenya (near Majoreni, between Mrima and Lunga-Lunga). There he saw 11 sable. The next day he encountered three adult male sable on the edge of the nearby Marenji Forest. These two sites fall on the edge of, but within, the historic distribution for sable in Kenya as presented in figure 2.