

Supplementary Material

Changing Wildlife Populations in Nairobi National Park and Adjoining Athi-Kaputiei Plains: Collapse of the Migratory Wildebeest

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SUPPLEMENTARY MATERIAL A

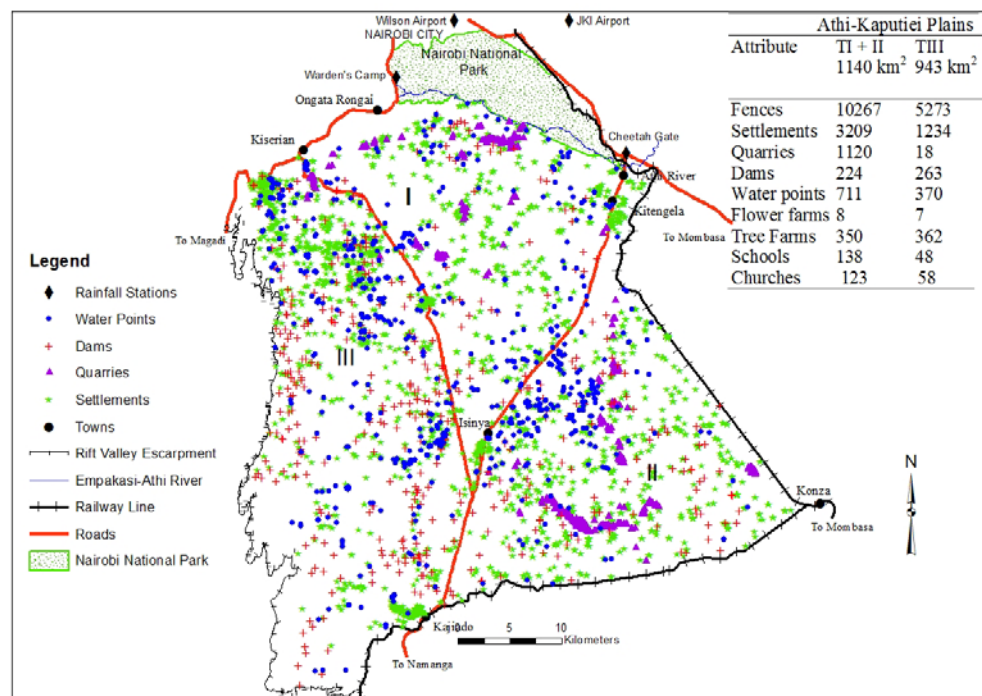


Fig. (A1). Spatial distributions of rainfall stations, water points, dams, quarries, settlements and towns in triangles I, II and III in Athi-Kaputiei Plains in 2010. Numbers of the mapped features plus numbers of fences, tree and flower farms are also provided. A part from a similar map for Triangles I and II produced in 2004; there were no other earlier maps of land use dynamics in the Athi-Kaputiei Plains. The following members of the Kitengela Community carried out the mapping of the fences and other infrastructural features with scientific and technical support from the International Livestock Research Institute (ILRI):

Amos Kinaiya, Beatrice Shankah, Daniel Isa, Daniel Semankur, David Sorimpan, David Toilimo, Elijah Kaloi, Eunince Sankaire, Faith Karaine, Francis Kitende, Jannet Seneyioi, Joseph Kimiti, Joseph Roika, Joseph Tuleto, Kisham Makui, Lennox Kiranto, Mary Moipa, Moses Saitoti Kuyo, Nickson Parmisa, Samuel Roika, Simon Peria, Stephen Lekuik, Wilson Ntaysia, Wilson Suiyanka.

Nairobi National Park counting blocks

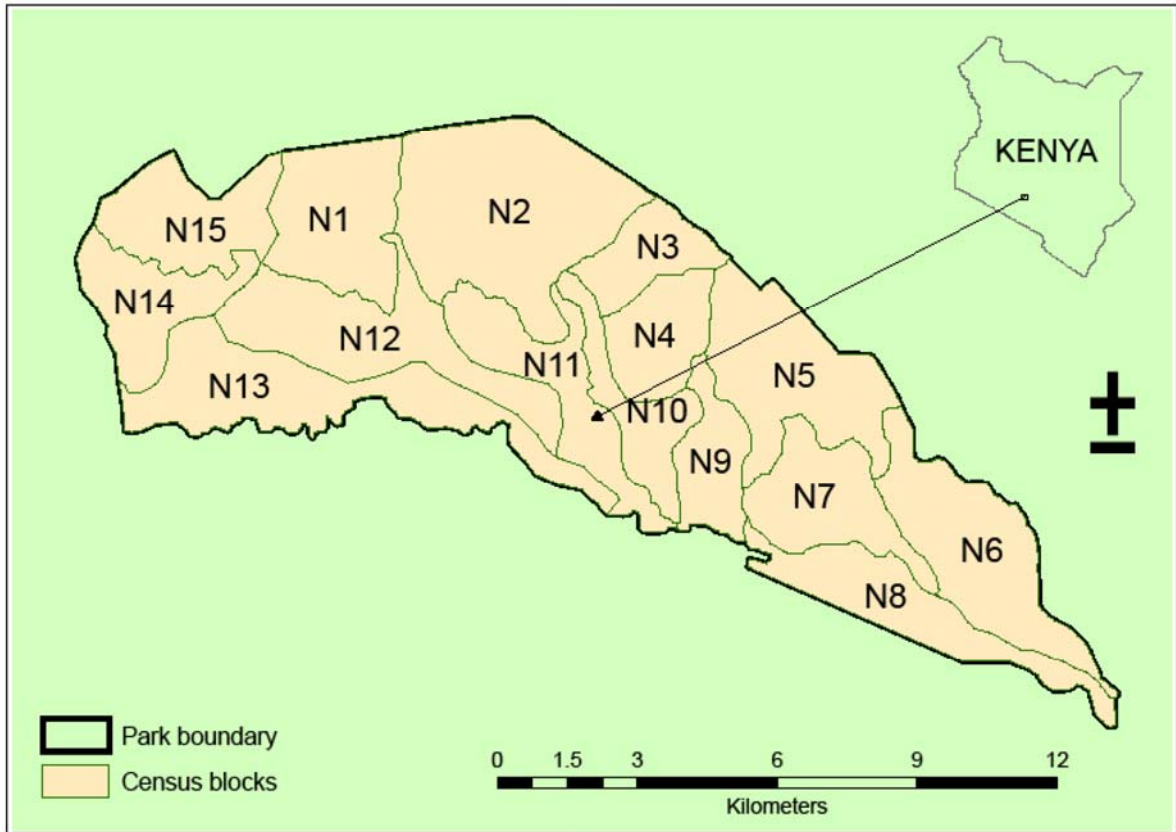
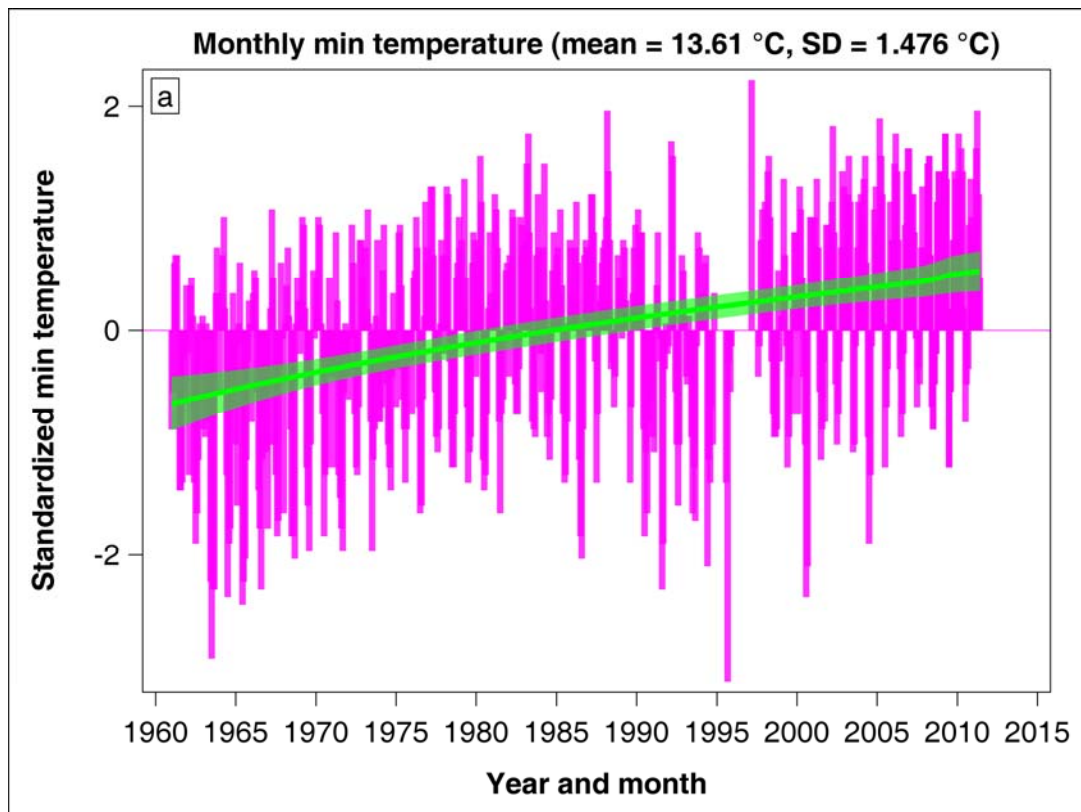


Fig. (A2). Map of Nairobi National Park showing the 15 census blocks.



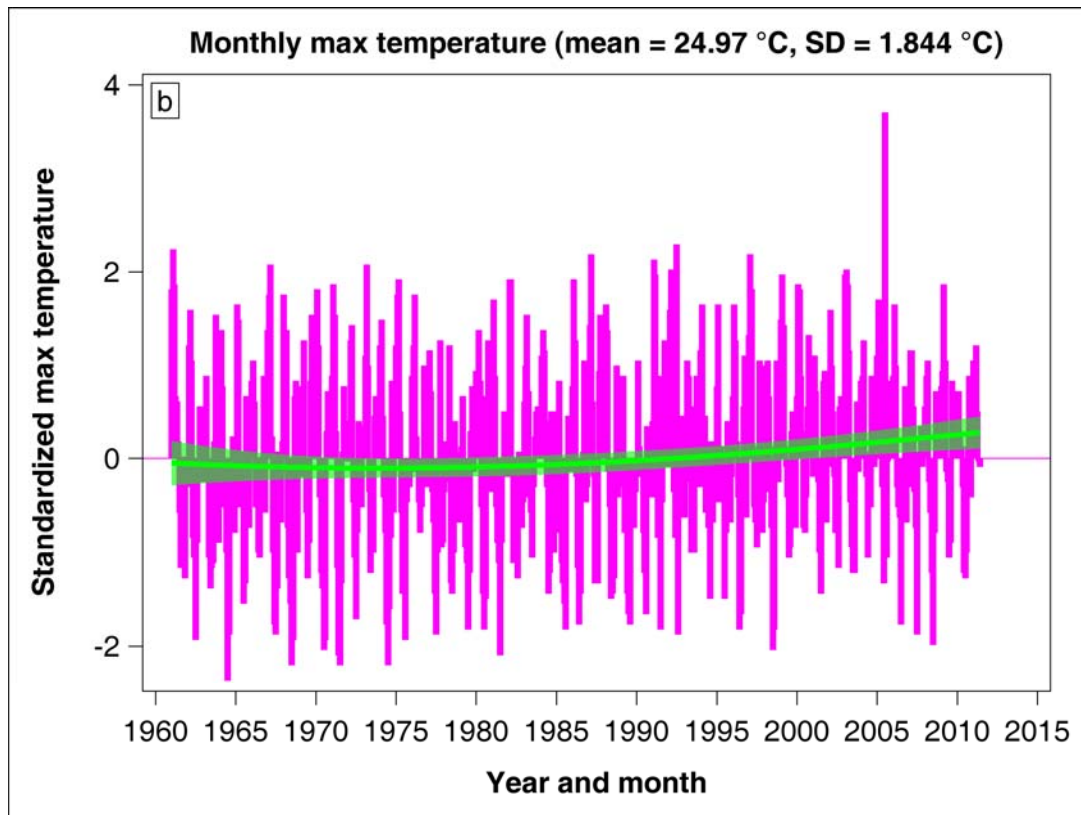


Fig. (A3). Trends in standardized average monthly minimum and maximum temperatures at Wilson Airport on the north western edge of Nairobi National Park during January 1961 to April 2013. The vertical needles are the averages, the solid curve is the fitted trend curve and the shaded band is the 95% pointwise confidence band.

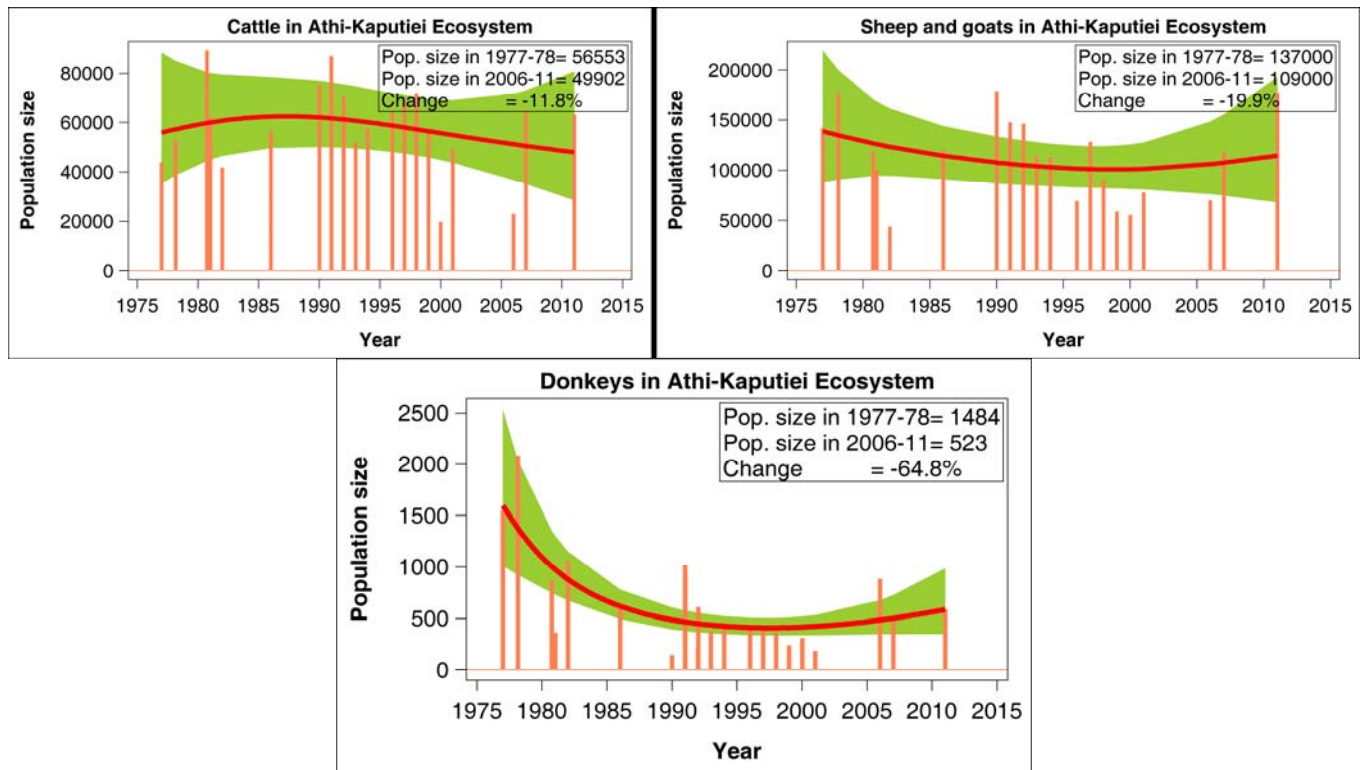


Fig. (A4). Trends in estimated population totals (vertical needles), the fitted trend curves (solid curves) and the 95% pointwise confidence bands (shaded band) for livestock in the Athi-Kaputiei Ecosystem based on 24 aerial surveys conducted by the Department of Resource Surveys and Remote Sensing of Kenya (DRSRS) during 1977-2011.

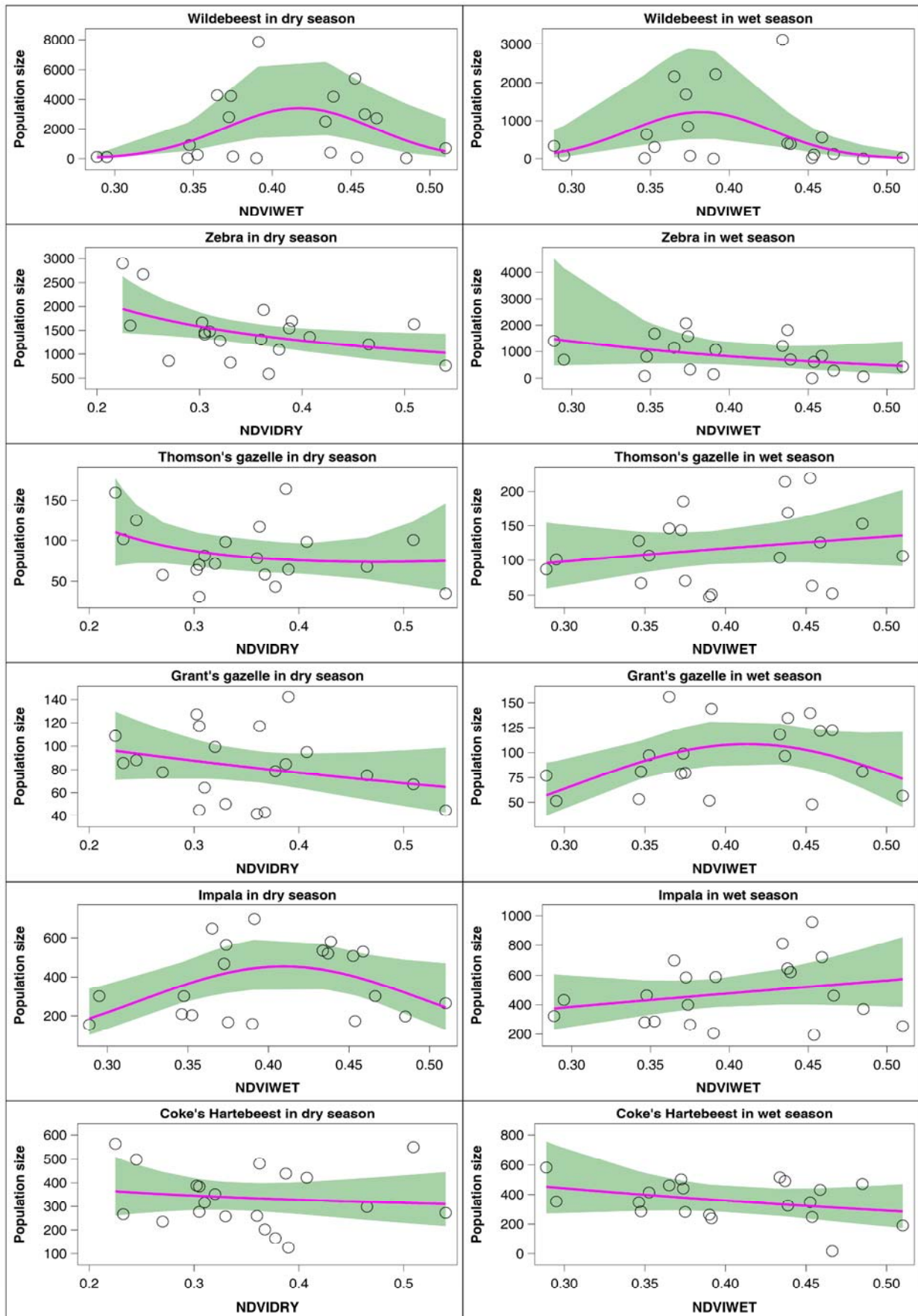


Fig. (A5.1).

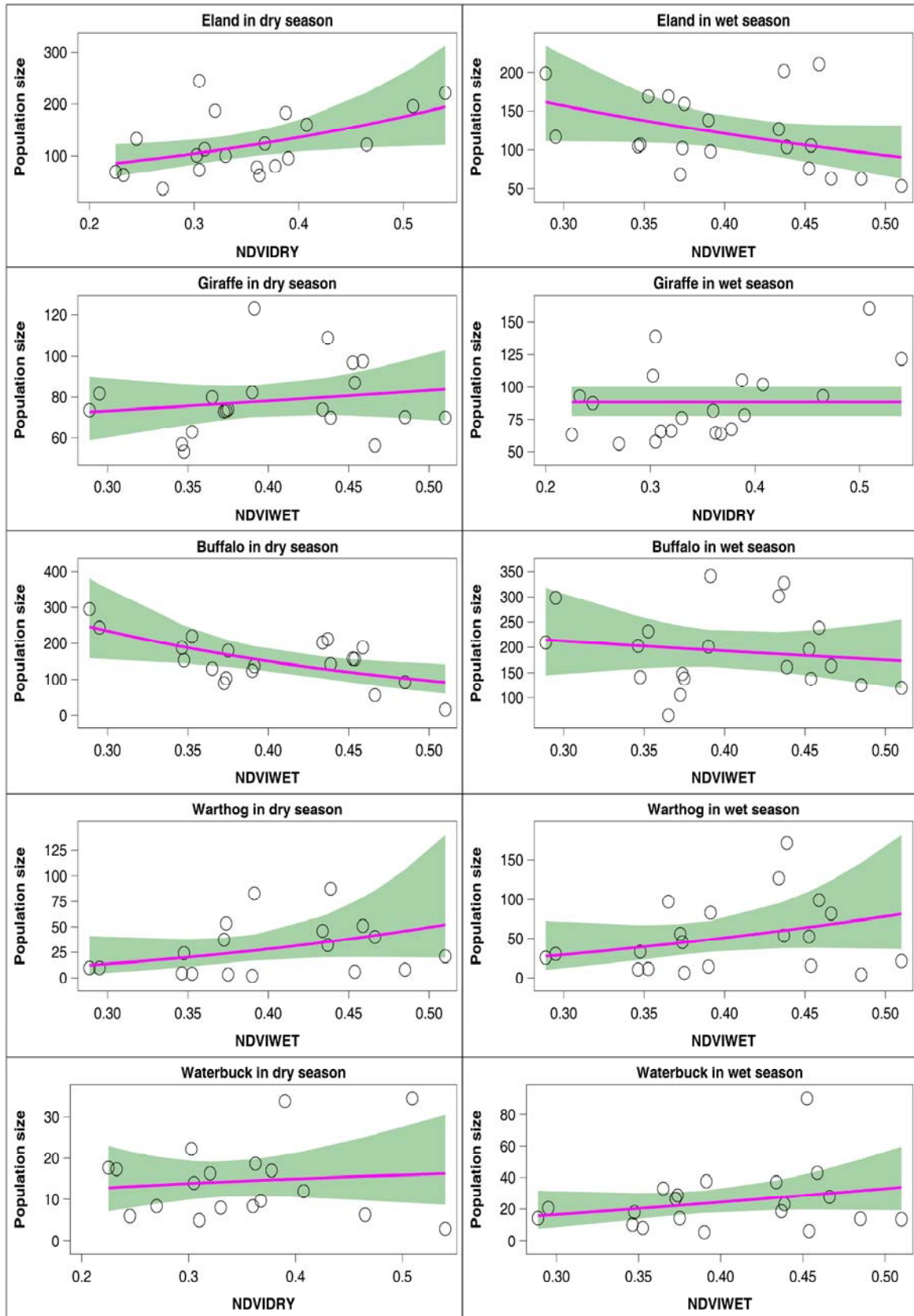
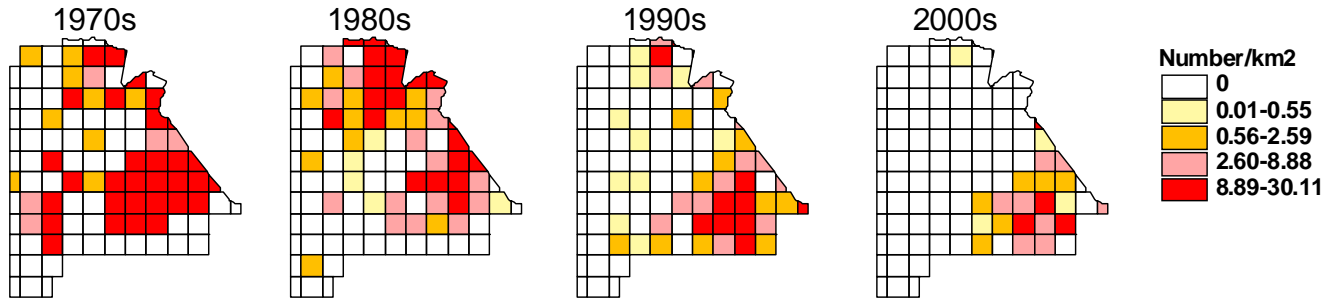
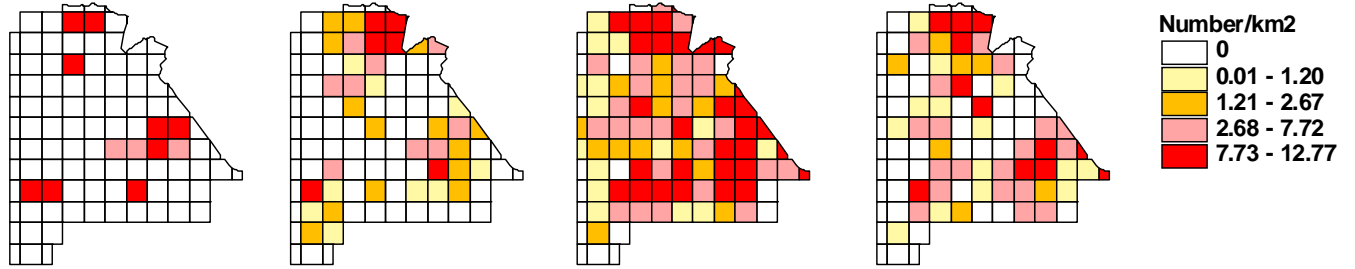


Fig. (A5.2). Regression relationships between seasonal mean abundance of 11 species of ungulates in Nairobi National Park during 1990-2009 and the current wet and current dry season NDVI. The left panels refer to the dry season whereas the right panels to the wet season. Circles denote the seasonal mean abundance; solid curves are the fitted regression curves and the shaded bands are the 95% pointwise confidence bands.

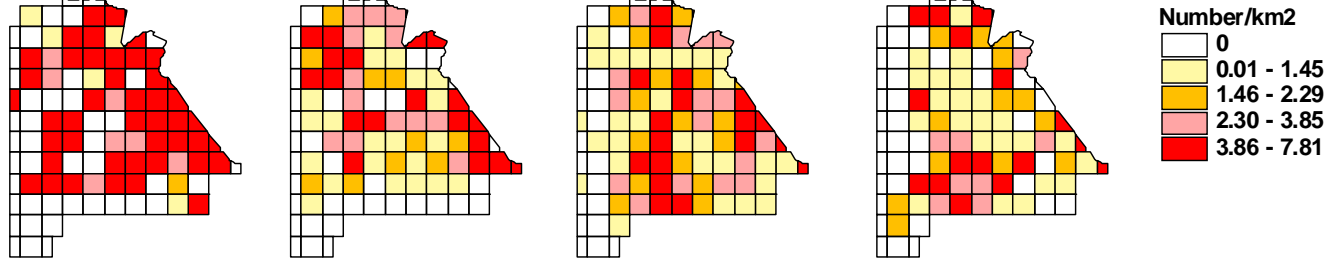
(a) Wildebeest



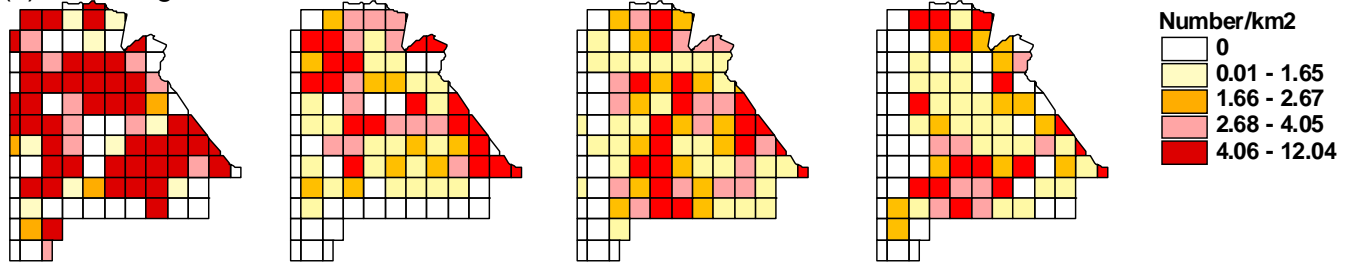
(b) Burchell's zebra



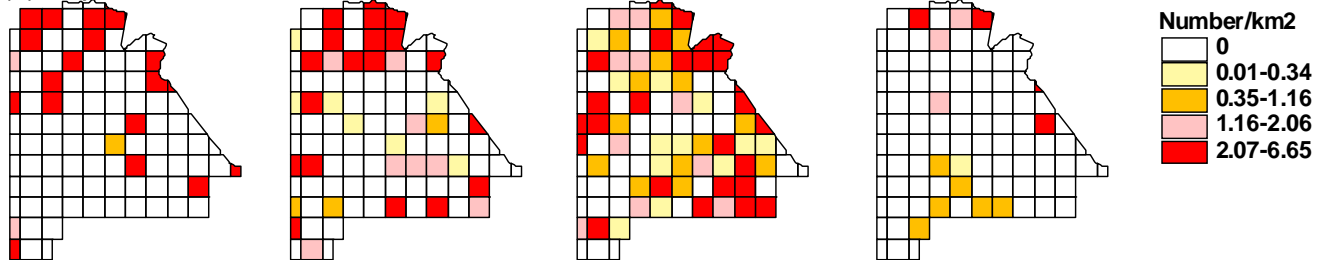
(c) Thomson's gazelle



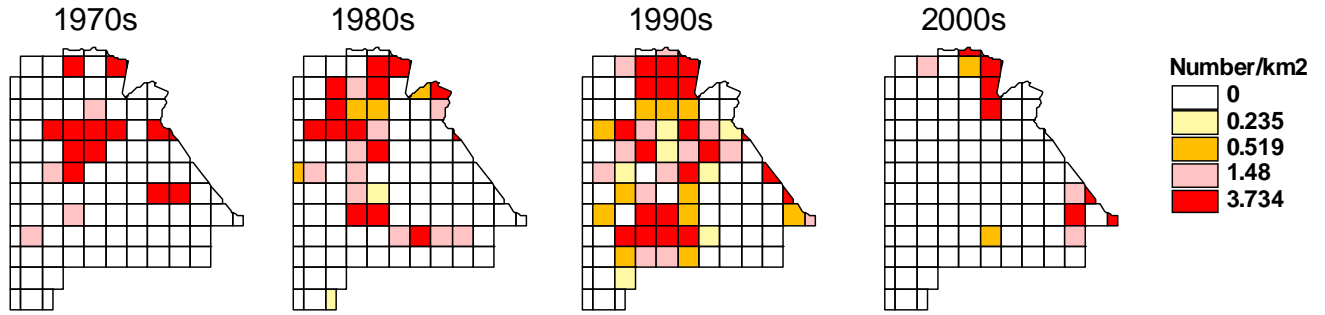
(d) Grant's gazelle



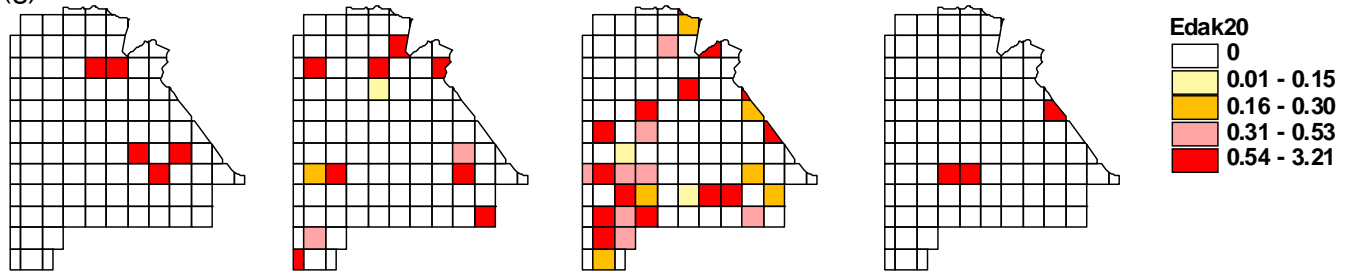
(e) Impala



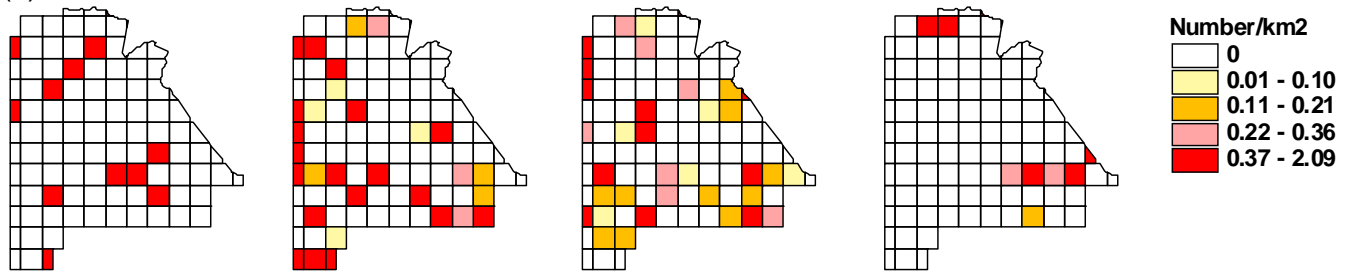
(f) Kongoni



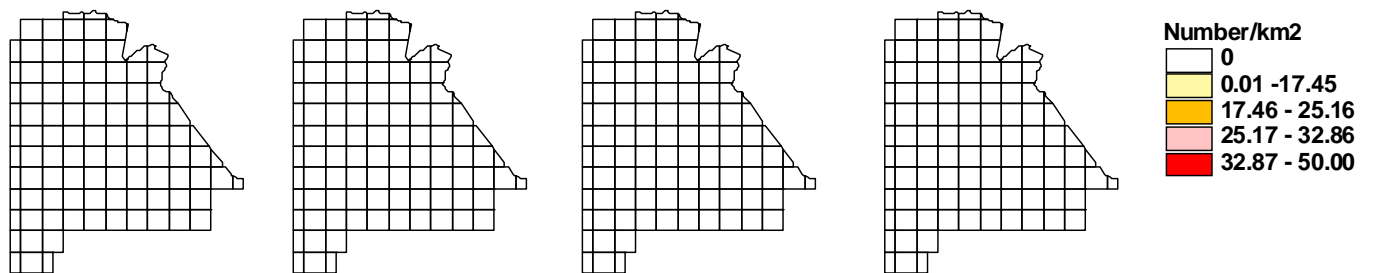
(g) Eland



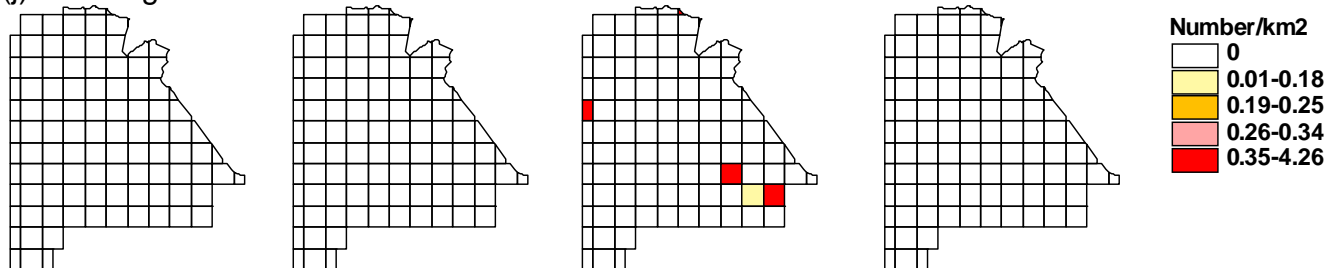
(h) Giraffe



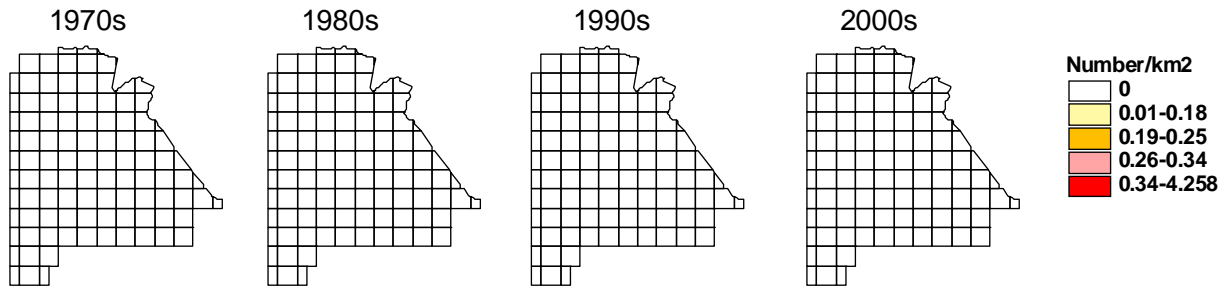
(i) Buffalo



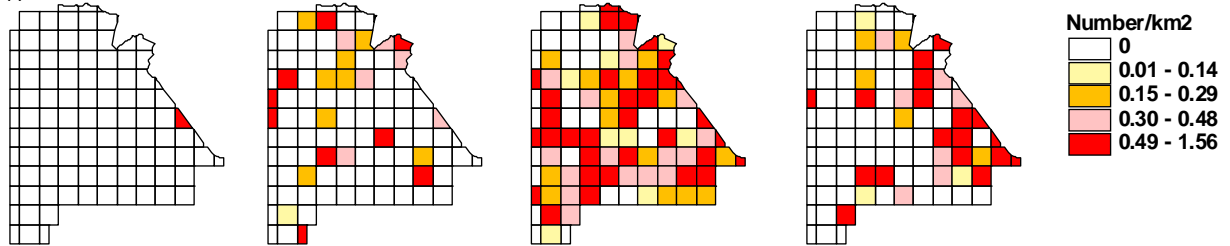
(j) Warthog



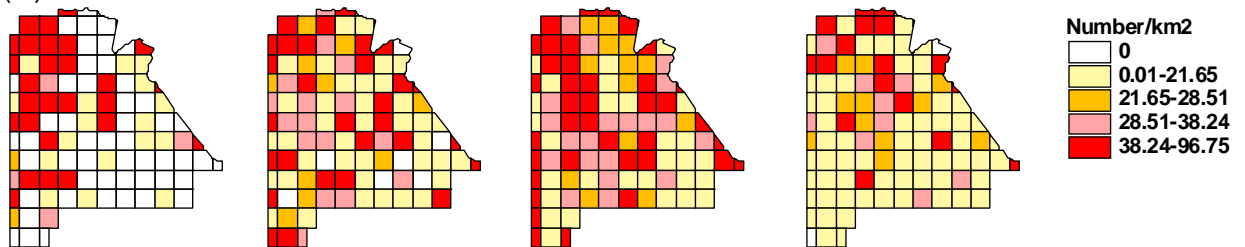
(k) Waterbuck



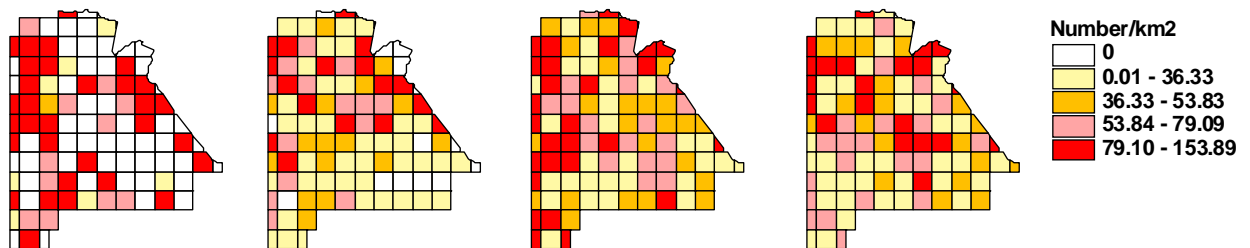
(l) Ostrich



(m) Cattle



(n) Sheep & Goats



(o) Donkey

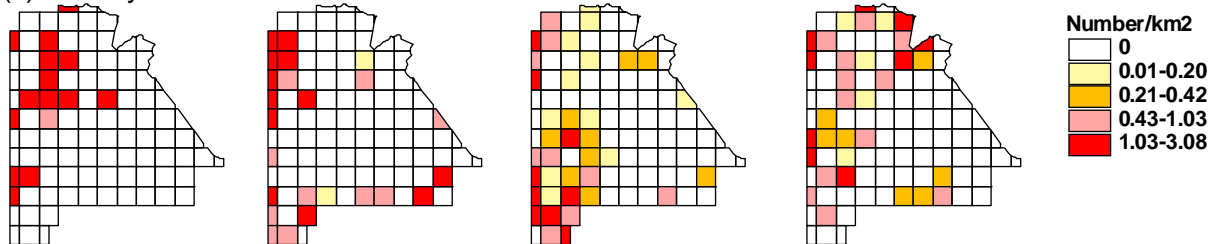


Fig. (A6). Temporal patterns in percentiles of the density (number per km²) of each wildlife and livestock species counted in each spatial counting unit (5 × 5 km²) in the Athi-Kaputiei Ecosystem. The percentiles were computed from averages of densities over all surveys conducted in each unit in each decade (1970s, 1980s, 1990s and 2000s) during 1977-2011 as detailed in the methods section in the text. The white, yellow, orange, pink and red colors, code the 0th, 25th, 50th, 75th and 95th percentiles, respectively. Kongoni is the local name for Coke's hartebeest.

Table A1. Selection of the Current Seasonal Rainfall and NDVI Components Best Correlated with the Seasonal mean of the Count Total for each of the 11 Most Common Ungulate Species Counted in Nairobi National Park During 1990-2009. The Current Dry and Wet Season Rainfall Totals are Denoted by Dry and Wet, Respectively, to Distinguish them from the NDVI Components. An L Prefix in Rainfall or NDVI Component Name Denotes the Logarithm of the Component. $\Delta AICc$ is the Difference between the AICc for the Best Model (Shown in Bold) and Other Competing Models

Dry Season							
Species	Effect	Estimate	SE	DF	T	P> T	$\Delta AICc$
Buffalo	NDVIWET	-4.821	1.639	17	-2.94	0.0091	0.0
	NDVIDRY	2.163	1.358	17	1.59	0.1297	4.8
	Wet	2.732	1.092	17	2.50	0.0229	5.7
	Wet \times Wet	-1.741	0.481	17	-3.62	0.0021	5.7
	Dry	-0.538	0.274	18	-1.97	0.0648	15.4
Eland	NDVIDRY	2.455	1.258	17	1.95	0.0677	0.0
	NDVIWET	-2.314	1.683	17	-1.37	0.1871	1.8
	Wet	-0.340	0.332	18	-1.02	0.3195	14.8
	Dry	-0.220	0.268	18	-0.82	0.4237	15.1
G. gazelle	NDVIDRY	-1.235	1.103	17	-1.12	0.2786	0.0
	NDVIWET	35.203	15.696	16	2.24	0.0394	0.0
	NDVIWET \times NDVIWET	-43.399	19.764	16	-2.20	0.0432	0.0
	Dry	1.667	0.777	17	2.15	0.0466	0.4
	Dry \times Dry	-1.072	0.380	17	-2.82	0.0117	0.4
	Wet	-0.465	0.241	18	-1.93	0.0700	6.4
Giraffe	NDVIWET	0.439	0.766	17	0.57	0.5739	0.0
	NDVIDRY	0.056	0.598	17	0.09	0.9266	0.3
	Lwet	0.056	0.150	18	0.37	0.7127	11.2
	Dry	-0.028	0.118	18	-0.24	0.8157	11.3
Impala	NDVIWET	48.983	20.457	16	2.39	0.0292	0.0
	NDVIWET \times NDVIWET	-59.931	25.689	16	-2.33	0.0330	0.0
	LNDVIDRY	-0.406	0.500	17	-0.81	0.4282	0.9
	Dry	-3.247	0.925	17	-3.51	0.0027	8.8
	Ldry	2.598	0.807	17	3.22	0.0050	8.8
	Wet	-0.575	0.302	18	-1.90	0.0729	11.9
Hartebeest	LNDVIDRY	-0.516	0.342	17	-1.51	0.1499	0.0
	NDVIWET	-1.217	1.420	17	-0.86	0.4035	1.4
	Dry	-0.450	0.185	18	-2.43	0.0260	11.7
	Wet	-0.318	0.243	18	-1.31	0.2074	15.2

Table A1 Contd.....

Wet Season							
Species	Effect	Estimate	SE	DF	T	P> T	ΔAIC_c
Eland	NDVIWET	-3.085	1.306	17	-2.36	0.0304	0.0
	NDVIDRY	1.899	1.071	17	1.77	0.0940	2.0
	Wet	-0.619	0.254	18	-2.44	0.0253	12.4
	Dry	-0.379	0.201	18	-1.89	0.0747	14.0
G. gazelle	NDVIWET	34.684	15.588	16	2.23	0.0408	0.0
	NDVIWET× NDVIWET	-41.924	19.613	16	-2.14	0.0483	0.0
	NDVIDRY	-0.912	1.136	17	-0.80	0.4331	1.0
	Dry	2.028	0.861	17	2.36	0.0307	6.1
	Dry × Dry	-1.149	0.422	17	-2.73	0.0144	6.1
	Wet	-0.451	0.238	18	-1.89	0.0743	7.6
Giraffe	NDVIDRY	1.080	0.712	17	1.52	0.1478	0.0
	NDVIWET	-0.856	0.964	17	-0.89	0.3869	1.4
	Dry	-1.712	0.556	17	-3.08	0.0068	11.7
	Ldry	1.417	0.478	17	2.96	0.0088	11.7
	Wet	-0.338	0.190	18	-1.78	0.0914	13.3
Impala	NDVIWET	1.641	1.767	17	0.93	0.3659	0.0
	NDVIDRY	-0.146	1.362	17	-0.11	0.9158	0.8
	Dry	3.090	0.952	17	3.25	0.0048	4.4
	Dry × Dry	-1.732	0.460	17	-3.76	0.0016	4.4
	Wet	-0.492	0.296	18	-1.66	0.1141	11.4
Hartebeest	NDVIWET	-2.346	1.941	17	-1.21	0.2434	0.0
	NDVIDRY	0.578	1.543	17	0.37	0.7125	1.3
	Dry	-0.485	0.298	18	-1.63	0.1208	12.6
	Wet	-0.399	0.372	18	-1.07	0.2975	14.0
T. gazelle	LNDVIWET	0.447	0.631	17	0.71	0.4886	0.0
	NDVIDRY	-0.569	1.286	17	-0.44	0.6638	0.3
	Dry	-2.384	0.849	17	-2.81	0.0121	9.2
	Ldry	1.873	0.732	17	2.56	0.0204	9.2
	Wet	-0.066	0.303	18	-0.22	0.8288	12.6
Warthog	LNDVIWET	1.950	1.389	17	1.40	0.1783	0.0
	LNDVIDRY	0.548	0.953	17	0.58	0.5724	1.5
	Dry	-5.913	1.893	17	-3.12	0.0062	7.6
	Ldry	5.078	1.651	17	3.08	0.0069	7.6

Table A1 Contd.....

Wet Season							
Species	Effect	Estimate	SE	DF	T	P> T	ΔAICc
	Wet	-1.149	0.548	18	-2.10	0.0505	8.5
Waterbuck	LNDVIWET	1.419	0.971	17	1.46	0.1621	0.0
	NDVIDRY	-1.149	1.970	17	-0.58	0.5674	1.7
	Dry	3.800	1.620	17	2.35	0.0313	4.7
	Dry×Dry	-2.123	0.788	17	-2.69	0.0153	4.7
Wildebeest	NDVIWET	188.381	57.942	16	3.25	0.0050	0.0
	NDVIWET × NDVIWET	-246.451	74.167	16	-3.32	0.0043	0.0
	NDVIDRY	-4.653	5.052	17	-0.92	0.3699	2.6
	Wet	-3.020	1.029	18	-2.94	0.0088	13.5
	Dry	-10.395	3.317	17	-3.13	0.0061	14.3
	Ldry	7.723	2.851	17	2.71	0.0149	14.3
Zebra	NDVIWET	-6.361	4.195	17	-1.52	0.1478	0.0
	NDVIDRY	0.182	2.963	17	0.06	0.9517	2.2
	Lwet	-1.367	0.709	18	-1.93	0.0699	17.4
	Dry	-0.945	0.582	18	-1.62	0.1216	18.1
	LNDVIDRY	-0.296	0.453	16	-0.65	0.5232	0.0

Table A2. Estimated Coefficients (Estimate), their Standard Errors (SE), Coefficient of Determination (r^2) and ΔAICc for Linear Regression of Annual Population Growth ($\ln(N_t/N_{t-1})$) on the Standardized Annual (ANNUAL), wet (WET) or dry (DRY) Season Rainfall, Wet Season (NDVIWET), Dry Season (NDVIDRY) and Annual (NDVIANNUAL) NDVI for the Period 1990-2009. Abundance was Averaged Over the Preceding Year (N_{t-1}) and Over the Dry and Wet Seasons for the Migratory Wildebeest and Zebra. Numeric Suffixes in Rainfall or NDVI Component Names Indicate that the Component was Lagged by One or Two Time Steps. *Refers to Models Incorporating Both the Wet and Dry Season Rainfall (or NDVI) Components

Species	Effect	DF	Estimate	SE	T	P> T	r^2	ΔAICc
Buffalo	ndviwet1	1	3.496	1.181	2.96	0.0087	0.3403	0.0
	ndvidry1*	1	-0.716	1.074	-0.67	0.5144	0.3581	1.5
	ndviwet1*	1	3.406	1.208	2.82	0.0123	0.3581	1.5
	wet_1	1	0.164	0.064	2.58	0.0196	0.2808	1.6
	annual_1	1	0.153	0.060	2.53	0.0214	0.2740	1.8
	dry_1	1	-0.025	0.112	-0.23	0.8241	0.2831	3.6
Eland	ndviwet1	1	4.537	1.717	2.64	0.0171	0.2911	0.0
	ndvidry1*	1	-1.577	1.534	-1.03	0.3192	0.3351	0.8
	ndviwet1*	1	4.338	1.725	2.51	0.0230	0.3351	0.8
	annual_1	1	0.205	0.086	2.39	0.0286	0.2516	1.0
	wet_1	1	0.216	0.091	2.38	0.0295	0.2494	1.1
	dry_1*	1	0.035	0.160	0.22	0.8284	0.2517	3.0
	wet_1*	1	0.200	0.119	1.68	0.1118	0.2517	3.0
G. gazelle	wet_2	1	0.112	0.066	1.71	0.1055	0.1467	0.0

Table A2. Contd.....

Species	Effect	DF	Estimate	SE	T	P> T	r ²	ΔAICc
Buffalo	ndviwet1	1	3.496	1.181	2.96	0.0087	0.3403	0.0
	annual_1	1	0.104	0.062	1.69	0.1101	0.1432	0.1
	annual_2	1	0.105	0.063	1.68	0.1121	0.1417	0.1
	wet_1	1	0.107	0.066	1.64	0.1200	0.1362	0.2
	dry_1	1	0.126	0.090	1.41	0.1777	0.1042	0.9
Giraffe	annual_1	1	0.062	0.036	1.73	0.1008	0.1504	0.0
	wet_1	1	0.064	0.038	1.67	0.1141	0.1403	0.2
	dry_1	1	0.083	0.052	1.59	0.1299	0.1297	0.5
	dry_2	1	-0.084	0.056	-1.49	0.1543	0.1156	0.8
	ndviannual1	1	1.272	1.059	1.20	0.2464	0.0782	1.6
Impala	dry_1	1	0.229	0.090	2.55	0.0208	0.2763	0.0
	ndvidry2	1	2.661	1.191	2.24	0.0391	0.2271	1.2
	dry_1*	1	0.207	0.117	1.77	0.0955	0.2801	1.9
	wet_1*	1	0.025	0.087	0.29	0.7745	0.2801	1.9
	ndviwet1	1	2.626	1.383	1.90	0.0748	0.1749	2.5
	annual_1	1	0.124	0.068	1.83	0.0854	0.1640	2.7
Hartebeest	ndviannual2	1	5.318	3.034	1.75	0.0976	0.1531	0.0
	ndvidry2	1	2.996	1.958	1.53	0.1445	0.1210	0.7
	dry_1	1	0.231	0.153	1.51	0.1482	0.1189	0.8
	ndvidry2*	1	3.362	1.950	1.72	0.1039	0.1987	0.9
	ndviwet2*	1	2.737	2.198	1.25	0.2309	0.1987	0.9
	ndviwet1	1	2.733	2.253	1.21	0.2419	0.0796	1.6
T. gazelle	ndviannual2	1	3.623	2.782	1.30	0.2101	0.0907	0.0
	ndvidry2	1	2.097	1.777	1.18	0.2542	0.0757	0.3
	dry_1	1	0.159	0.139	1.15	0.2669	0.0719	0.4
	annual_2	1	0.101	0.100	1.02	0.3236	0.0573	0.7
	wet_2	1	0.106	0.105	1.01	0.3272	0.0565	0.7
Warthog	wet_2	1	0.303	0.137	2.22	0.0404	0.2246	0.0
	annual_2	1	0.276	0.131	2.11	0.0503	0.2070	0.4
	dry_2*	1	-0.238	0.251	-0.95	0.3556	0.2661	1.0
	wet_2*	1	0.405	0.174	2.33	0.0333	0.2661	1.0
	ndviannual2	1	6.700	3.860	1.74	0.1007	0.1505	1.7
	ndvidry2	1	4.191	2.451	1.71	0.1054	0.1468	1.8
Waterbuck	dry_1	1	0.157	0.115	1.37	0.1887	0.0993	0.0
	wet_2	1	0.092	0.088	1.04	0.3126	0.0599	0.8
	annual_2	1	0.084	0.084	1.00	0.3297	0.0559	0.9
	ndvidry2	1	1.506	1.507	1.00	0.3318	0.0554	0.9
	ndviannual1	1	2.082	2.344	0.89	0.3868	0.0443	1.1

Table A3. Assessment of Improvements in Fits of Models Relating the Annual Average of Animal Abundance and Prior Rainfall Over a 4-6 Year Window in Nairobi National Park During 1990-2009 Due to Adding Delayed Effects of Rainfall on Habitat Conditions Over Simply Using the Immediately Prevailing Rainfall based on $\Delta AICc$.

Species	Effect*	Sign of effect	1 year	4 years	5 years	6 years
Wildebeest	Early wet	-	11.4	4.3	5.5	0
Zebra	Early wet	-	2.0	0	8.1	5.4
T. gazelle	Wet	-	5.4	0	1.1	3.1
G. gazelle	Early wet	-	3.4	4.2	2.9	0
Impala	Early wet	-	17.8	13.1	19.3	0
Hartebeest	Wet	-	0.3	0.8	1.6	0
Eland	Early wet	-	0	5.8	6.2	6.5
Giraffe	Early wet	-	7.9	5.4	0	0.6
Buffalo	Late wet	+	8.7	0	5.7	6.6
Warthog	Early wet	-	8.5	3.4	0	0
Waterbuck	Early wet	-	11.5	8.1	4.1	0

*Rainfall components considered were early wet (October-January), late wet (February-May), wet (October-May) and dry (June-October) season and annual (October-September) components. All models differing by less than five AIC units from the best models were examined alongside the best models for inference. Relative to the best model, the best supported early wet component for buffalo, 4-year moving average of early wet had $\Delta AICc = 8.1$ whereas for T. gazelle the best supported component, 6-year moving average of early wet had $\Delta AICc = 3.3$.

Table A4. The Number of Livestock Killed by Carnivores or Other Wildlife Species on the Athi-Kaputiei Plains from March 2001 to August 2008 and January 2009 to December 2012 the Compensation for the Losses in Kenya Shillings Under the Carnivore Protection Program Funded and Operated by Friends of Nairobi National Park

Carnivore/Other	Sheep Losses	Sheep Cost	Goat Losses	Goat Cost	Cattle Losses	Cattle Cost	Donkey Losses	Donkey Cost	Total Losses	Total Cost
Leopard	1211	3009000	235	587500	101	1515000	1	5000	1548	5116500
Lion	808	2075000	205	512500	354	5292500	35	175000	1402	8055000
Cheetah	300	750000	61	152500	6	90000	1	5000	368	997500
Wild dog	125	312500	17	42500	4	60000	0	0	146	415000
Hyena	27	67500	7	17500	0	0	0	0	34	85000
Crocodile	14	35000	14	35000	2	30000	0	0	30	100000
Hippo	0	0	0	0	2	30000	0	0	2	30000
Wildebeest	1	2500	0	0	0	0	0	0	1	2500
Unknown	97	242500	42	105000	11	165000	0	0	150	512500

†A further 9 sheep and 1 cow valued at Kenya shillings 37500 were killed either by leopard, lion or both. From October to December 2008 some 53 sheep, 12 goats, 31 cows and 1 donkey valued at 132500, 465000, 30000 and 5000 Kenya shillings, respectively, were also killed by wildlife.

Table A5. The Total Number of Acres of Land Owned by Leasers, Unfenced Acres, Leased Acres and Lease Payments in Kenya Shillings from April 2000 to August 2012 for the Kitengela Land Lease Program, Funded and Operated by The Wildlife Foundation, with Financial Support from the Kenya Wildlife Service (from 2007), The World Bank /Global Environmental Fund and The Nature Conservancy

Year	Month	Total Acres Owned by Leasers	Unfenced Acres	Leased Acres	Lease Payment in Ksh
2000	4	1810.00	1708	704	70400.00
2000	9	1810.00	1708	1708	170800.00
2001	1	11831.00		2710	271000.00
2001	4	11831.00		3000	300000.00
2001	9	11831.00		5374	537400.00
2002	1	15610.50	13278	6785	680280.00
2002	4	15610.50	13278	6754	708380.00
2002	9	15610.50	13278	6783	712750.00
2003	1	15867.08	15726	4604	849285.00
2003	4	15867.08	15726	4604	870477.75
2003	9	15867.08	15726	4604	893700.00
2004	1	15865.08	14750	7508	886134.00
2004	4	15865.08	14750	7508	881156.25
2004	9	15865.08	14750	7508	864315.00
2005	1	15867.08	15726	4504	910506.75
2005	4	15867.08	15726	4504	895807.75
2005	9	15867.08	15726	4504	903155.00
2006	1	15867.08	15726	4504	910506.75
2007	1	27213.08	15473	4358	1169993.00
2007	4	27213.08	15473	4358	1168993.00
2007	9	27213.08	15473	4358	1164153.00
2008	1	27311.08	29620	11912	1167408.00
2008	5	27311.08	29620	11912	1166408.00
2012	8	85960.66	82486.66	53292.09	5914486.00
Total					22,287,661.25

Table A6. The Spearman Correlation (r) between the Density of Each Wildlife Species and the Density of Cattle, Sheep and Goats, Donkeys and the Combined Livestock Biomass in Each Grid Cell ($5 \times 5 \text{ km}^2$, $n=2019$) Sampled by the Department of Resource Surveys and Remote Sensing of Kenya in the Athi-Kaputiei Ecosystem Over the 1977 to 2011 Monitoring Period. The Lower (LCL) and the Upper (UCL) 95% Confidence Limits and the Prob $> |r|$ Under the Null Hypothesis $H_0: \text{Rho}=0$ are also Provided

Species	Cattle				Sheep and goats			
	r	LCL	UCL	P	r	LCL	UCL	P
Wildebeest	-0.1121	-0.1549	-0.0688	0.0000	-0.1037	-0.1466	-0.0603	0.0000
Zebra	-0.0150	-0.0585	0.0287	0.5016	-0.0334	-0.0769	0.0103	0.1336
T. Gazelle	0.0055	-0.0382	0.0491	0.8056	-0.0514	-0.0948	-0.0078	0.0208
G. Gazelle	-0.0317	-0.0752	0.0120	0.1548	-0.0685	-0.1118	-0.0250	0.0021
Impala	0.0373	-0.0063	0.0808	0.0937	-0.0294	-0.0730	0.0142	0.1860
Hartebeest	-0.0026	-0.0462	0.0410	0.9068	-0.0971	-0.1401	-0.0537	0.0000
Eland	-0.0490	-0.0924	-0.0053	0.0278	-0.0599	-0.1033	-0.0163	0.0071
Giraffe	-0.0248	-0.0683	0.0189	0.2660	-0.0418	-0.0853	0.0018	0.0601
Buffalo	-0.0470	-0.0904	-0.0034	0.0347	-0.0199	-0.0635	0.0237	0.3710
Warthog	-0.0163	-0.0599	0.0274	0.4649	-0.0088	-0.0524	0.0348	0.6918
Waterbuck	-0.0373	-0.0808	0.0063	0.0934	0.0046	-0.0391	0.0482	0.8373
Ostrich	-0.0085	-0.0521	0.0352	0.7032	-0.0391	-0.0826	0.0045	0.0788

Species	Donkeys				Livestock biomass			
	Corr	LCL	UCL	P	Corr	LCL	UCL	P
Wildebeest	-0.0821	-0.1252	-0.0385	0.0002	-0.1267	-0.1694	-0.0835	0.0000
Zebra	-0.0702	-0.1135	-0.0267	0.0016	-0.0341	-0.0776	0.0095	0.1254
T. gazelle	-0.0567	-0.1001	-0.0131	0.0108	-0.0241	-0.0677	0.0195	0.2789
G. gazelle	-0.0394	-0.0828	0.0043	0.0769	-0.0375	-0.0810	0.0061	0.0917
Impala	-0.0177	-0.0613	0.0260	0.4269	0.0210	-0.0227	0.0645	0.3462
Hartebeest	-0.0366	-0.0801	0.0070	0.0999	-0.0316	-0.0751	0.0121	0.1563
Eland	0.0159	-0.0277	0.0595	0.4739	-0.0555	-0.0988	-0.0118	0.0127
Giraffe	0.0154	-0.0282	0.0590	0.4885	-0.0248	-0.0684	0.0188	0.2650
Buffalo	-0.0168	-0.0604	0.0268	0.4503	-0.0312	-0.0747	0.0125	0.1614
Warthog	-0.0142	-0.0578	0.0294	0.5237	-0.0178	-0.0614	0.0258	0.4229
Waterbuck	-0.0090	-0.0526	0.0347	0.6869	0.0035	-0.0402	0.0471	0.8763
Ostrich	-0.0279	-0.0714	0.0158	0.2108	-0.0195	-0.0630	0.0242	0.3817

Supplementary Material B.

OSTRICH (*STRUTHIO CAMELUS MASSAICUS*) POPULATION TRENDS IN ATHI-KAPUTIEI ECOSYSTEM AND NAIROBI NATIONAL PARK AND THEIR RELATIONSHIPS WITH RAINFALL AND THE NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI)

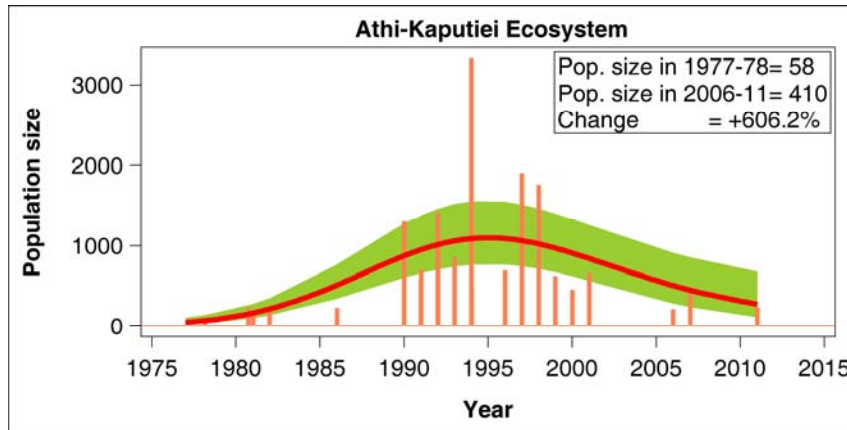


Fig. (B1). Ostrich population trend in the Athi-Kaputiei Ecosystem from 1977 to 2011 based on aerial surveys conducted by the Department of Resource Surveys and Remote Sensing of Kenya. Ostrich population size increased from 1977 to a peak of over 3000 birds in the mid 1990s and then declined consistently thereafter to less than 500 birds by 2011. Vertical needles are the population size, solid curve is the fitted trend curve and shaded band is the 95% pointwise confidence band.

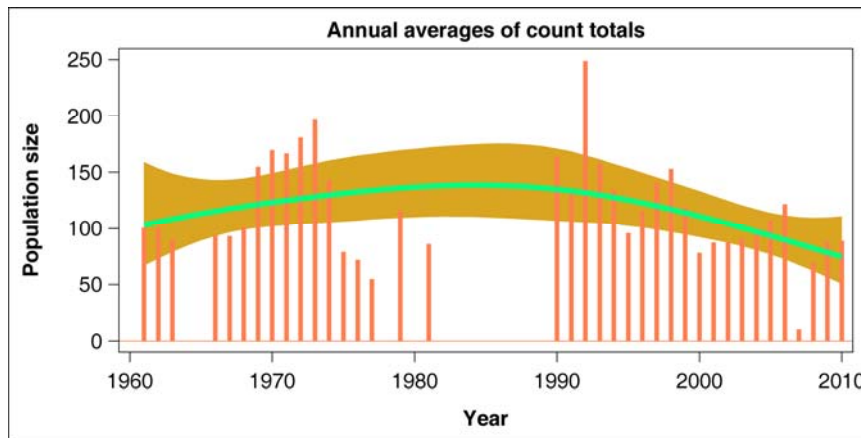


Fig. (B2). Ostrich population trend in Nairobi National Park during 1961-2010 based on annual averages of bimonthly ground total counts. Vertical needles are the population size, solid curve is the fitted trend curve and shaded band is the 95% pointwise confidence band.

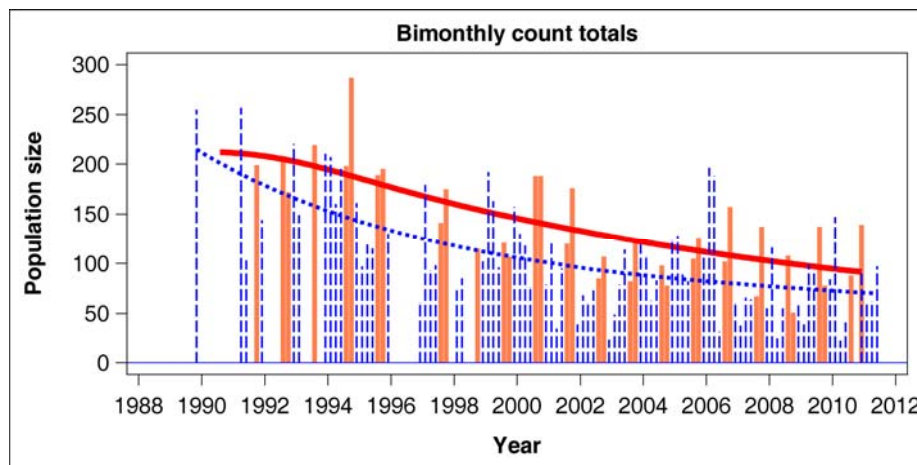


Fig. (B3). Ostrich population trend in Nairobi National Park during 1961-2011 based on annual averages of bimonthly total counts during the wet season (solid needles and solid trend curve) and the dry season (dashed needles and dashed trend curve).

Ostrich numbers counted in Nairobi National Park showed significant variation between months ($F_{5, 99.3} = 3.993, P = 0.0024$), indicating movements between the park and the Athi-Kaputiei Plains. Movements beyond the park boundaries were clearly evident during the very wet years (e.g. in 1998).

Table B1. Selection of the Current Seasonal Rainfall and NDVI Components Best Correlated with the Seasonal mean Number of Ostriches Counted in Nairobi National Park During 1990-2009. The Current Dry and Wet Season Rainfall Totals are Denoted by Dry and Wet, Respectively. An L Prefix in Rainfall or NDVI Component Name Denotes the Logarithm of the Component. $\Delta AICc$ is the Difference between the Corrected Akaike Information Criterion (AICc) for the best Model (Shown in Bold) and Other Competing Models

Season	Effect	Estimate	SE	DF	T	P> T	$\Delta AICc$
Dry Season	NDVIWET	30.391	12.364	14	2.46	0.0276	0.0
	NDVIWET × NDVIWET	-34.995	15.533	14	-2.25	0.0408	0.0
	Dry	-1.471	0.706	15	-2.08	0.0548	13.7
	Dry × Dry	1.263	0.614	15	2.06	0.0575	13.7
	Wet	-0.134	0.235	16	-0.57	0.5759	13.8
Wet Season	LNDVIWET	0.275	0.689	16	0.40	0.6946	0.3
	Dry	-0.503	0.231	17	-2.18	0.0438	6.1
	LWet	-0.441	0.301	17	-1.47	0.1609	8.2

Table B2. Estimated Coefficients (Estimate), their Standard Errors (SE), Coefficient of Determination (r^2) and $\Delta AICc$ for Linear Regression of Annual Ostrich Population Growth ($\ln(N_t/N_{t-1})$) on the Standardized Annual (ANNUAL), wet (WET) or Dry (DRY) Season Rainfall, Wet Season (NDVIWET), Dry Season (NDVIDRY) and annual (NDVIANNUAL) NDVI. Abundance was Averaged Over the Bimonthly Counts in the Preceding Year (N_{t-1}). Numeric Suffixes in Rainfall or NDVI Component Names Indicate that the Component was Lagged by One or Two Years. Relationships between Annual Population Change with NDVI were Stronger than those with Rainfall. Annual Ostrich Population Growth was Best Correlated with NDVI Averaged Over the Current and the Preceding Year

Effect	DF	Estimate	SE	T	P> T	r^2	$\Delta AICc$
ndviannual2	1	3.011	2.218	1.36	0.1946	0.1095	0.0
ndviwet2	1	1.848	1.614	1.14	0.2702	0.0804	0.5
annual_2	1	0.087	0.079	1.11	0.2855	0.0756	0.6
wet_2	1	0.089	0.083	1.08	0.2988	0.0717	0.7
dry_2	1	0.117	0.121	0.96	0.3512	0.0581	1.0

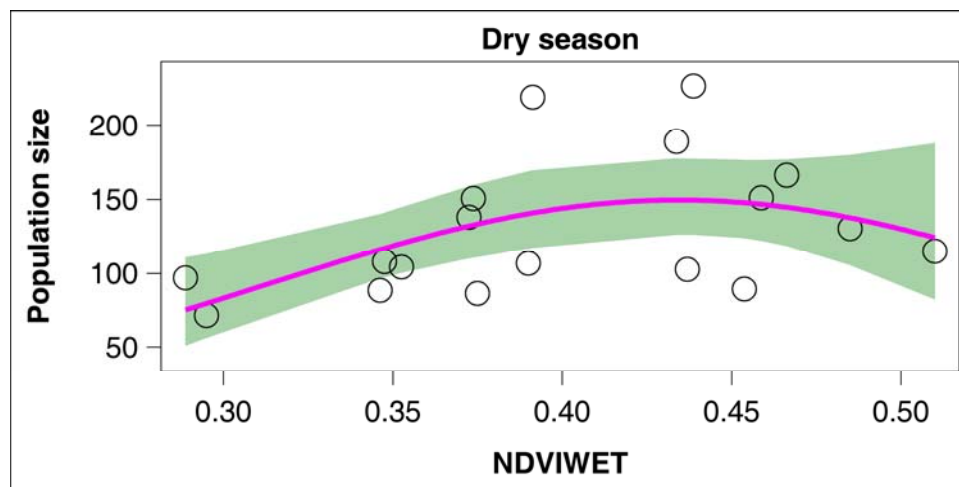


Fig. (B4). The relationship between ostrich numbers within Nairobi National Park in the dry season and NDVI in the current wet season. Circles are the population size, solid curve is the fitted regression curve and shaded band is the 95% pointwise confidence band.

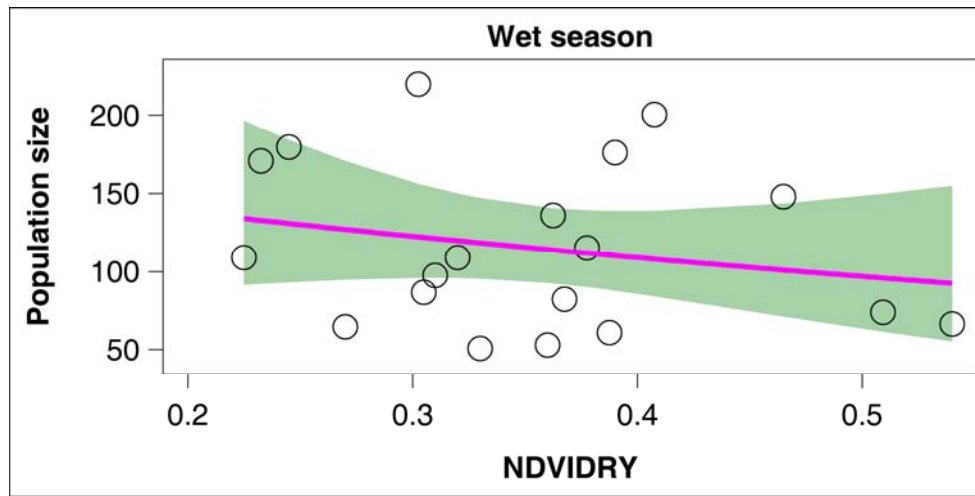


Fig. (B5). The relationship between ostrich numbers within Nairobi National Park in the wet season and NDVI in the same wet season. Circles are the population size, solid curve is the fitted regression curve and shaded band is the 95% pointwise confidence band.

Table B3. Assessment of Improvements in Fits of Models Relating the Annual Average of Ostrich Population Size and Prior Annual Rainfall Over a 4-6 Year Window in Nairobi National Park During 1990-2010 Due to Adding Delayed Effects of Rainfall on Habitat Conditions Over Simply Using the Immediately Prevailing Rainfall Based on $\Delta AICc$ Identified the Relationship with the 6-moving Average of Annual Rainfall as the Best Approximating Model

Species	Effect [†]	1 year	4 years	5 years	6 years
Ostrich	Mannual	1.9	1.7	0.4	0

[†]Rainfall components considered were early wet (October-January), late wet (February-May), wet (October-May) and dry (June-October) season and annual (October-September). All models differing by less than five AIC units from the best models were examined alongside the best models for inference.

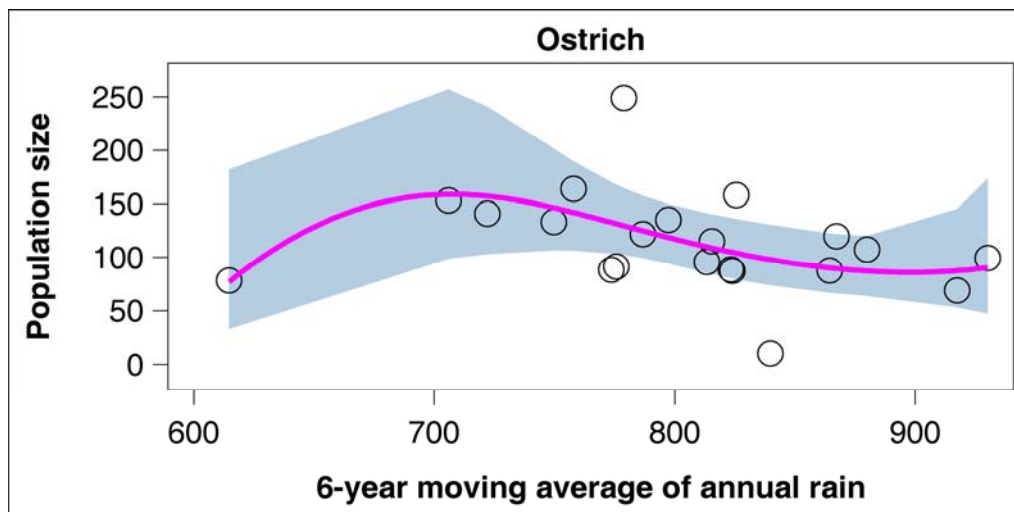


Fig. (B6). Relationship between count totals of ostriches within the Nairobi National Park and the 6-year moving average of annual rainfall. Circles are the population size, solid curve is the fitted regression curve and shaded band is the 95% pointwise confidence band.

SupplementaryMaterial C.

WILDLIFE AND LIVESTOCK POPULATION SIZE ESTIMATES IN THE ATHI-KAPUTIEI ECOSYSTEM BASED ON THE AERIAL SURVEYS CONDUCTED BY THE KENYA DEPARTMENT OF RESOURCE SURVEYS AND REMOTE SENSING (DRSRS) FROM 1977 TO 2011. THE SURVEYS COVERED A TOTAL AREA OF 2198 KM². KONGONI IS THE LOCAL NAME FOR COKE'S HARTEBEEST

Year	Month	Species	Population Size	Standard Error
1977	January	Buffalo	0	0
1978	March	Buffalo	0	0
1980	October	Buffalo	0	0
1981	September	Buffalo	0	0
1982	April	Buffalo	0	0
1986	April	Buffalo	0	0
1990	May	Buffalo	0	0
1991	March	Buffalo	0	0
1991	September	Buffalo	0	0
1992	April	Buffalo	34	35
1992	June	Buffalo	0	0
1992	October	Buffalo	17	17
1993	January	Buffalo	0	0
1994	April	Buffalo	0	0
1994	October	Buffalo	0	0
1996	June	Buffalo	26	26
1997	July	Buffalo	85	58
1998	March	Buffalo	0	0
1999	February	Buffalo	0	0
2000	June	Buffalo	0	0
2001	April	Buffalo	17	17
2006	March	Buffalo	0	0
2007	December	Buffalo	0	0
2011	June	Buffalo	0	0
1977	January	Cattle	43871	7196
1978	March	Cattle	52802	12901
1980	October	Cattle	89435	13775
1981	September	Cattle	61881	8609
1982	April	Cattle	41733	7220
1986	April	Cattle	56481	11125
1990	May	Cattle	75416	9994
1991	March	Cattle	87140	16975
1991	September	Cattle	67075	12046
1992	April	Cattle	54626	8939
1992	June	Cattle	70538	11191
1992	October	Cattle	51509	5590

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1993	January	Cattle	52068	7126
1994	April	Cattle	57689	8724
1994	October	Cattle	55126	7738
1996	June	Cattle	64340	11082
1997	July	Cattle	68120	7363
1998	March	Cattle	71727	8202
1999	February	Cattle	57186	8978
2000	June	Cattle	19832	3683
2001	April	Cattle	49330	6396
2006	March	Cattle	23019	2967
2007	December	Cattle	64590	12729
2011	June	Cattle	63107	10485
1977	January	Donkey	1548	830
1978	March	Donkey	2081	698
1980	October	Donkey	872	339
1981	September	Donkey	363	167
1982	April	Donkey	1062	444
1986	April	Donkey	606	350
1990	May	Donkey	145	93
1991	March	Donkey	1015	461
1991	September	Donkey	968	287
1992	April	Donkey	192	89
1992	June	Donkey	609	243
1992	October	Donkey	154	99
1993	January	Donkey	377	185
1994	April	Donkey	462	165
1994	October	Donkey	353	103
1996	June	Donkey	428	397
1997	July	Donkey	426	238
1998	March	Donkey	365	276
1999	February	Donkey	241	168
2000	June	Donkey	310	103
2001	April	Donkey	187	76
2006	March	Donkey	882	305
2007	December	Donkey	501	213
2011	June	Donkey	588	239
1977	January	Eland	774	775
1978	March	Eland	1804	1648
1980	October	Eland	213	191
1981	September	Eland	63	54

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1982	April	Eland	156	96
1986	April	Eland	229	102
1990	May	Eland	1308	527
1991	March	Eland	268	170
1991	September	Eland	557	325
1992	April	Eland	209	155
1992	June	Eland	1201	444
1992	October	Eland	239	152
1993	January	Eland	359	294
1994	April	Eland	30	28
1994	October	Eland	151	101
1996	June	Eland	468	262
1997	July	Eland	119	110
1998	March	Eland	190	119
1999	February	Eland	837	707
2000	June	Eland	163	155
2001	April	Eland	0	0
2006	March	Eland	98	97
2007	December	Eland	0	0
2011	June	Eland	257	245
1977	January	Ggazelle	10838	1829
1978	March	Ggazelle	10945	2436
1980	October	Ggazelle	9415	2029
1981	September	Ggazelle	5772	1087
1982	April	Ggazelle	4329	1210
1986	April	Ggazelle	4937	1423
1990	May	Ggazelle	8173	1581
1991	March	Ggazelle	5196	1912
1991	September	Ggazelle	5048	1243
1992	April	Ggazelle	5309	966
1992	June	Ggazelle	9662	1193
1992	October	Ggazelle	3425	708
1993	January	Ggazelle	6341	1169
1994	April	Ggazelle	2356	535
1994	October	Ggazelle	1768	504
1996	June	Ggazelle	5484	1142
1997	July	Ggazelle	4431	1121
1998	March	Ggazelle	6946	1380
1999	February	Ggazelle	4811	752
2000	June	Ggazelle	4659	1081

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
2001	April	Ggazelle	5664	1001
2006	March	Ggazelle	1045	282
2007	December	Ggazelle	2868	380
2011	June	Ggazelle	3754	769
1977	January	Giraffe	172	161
1978	March	Giraffe	1130	396
1980	October	Giraffe	516	268
1981	September	Giraffe	308	96
1982	April	Giraffe	346	142
1986	April	Giraffe	672	200
1990	May	Giraffe	226	139
1991	March	Giraffe	149	104
1991	September	Giraffe	616	298
1992	April	Giraffe	174	94
1992	June	Giraffe	394	116
1992	October	Giraffe	239	122
1993	January	Giraffe	445	282
1994	April	Giraffe	508	283
1994	October	Giraffe	471	280
1996	June	Giraffe	0	0
1997	July	Giraffe	0	0
1998	March	Giraffe	63	47
1999	February	Giraffe	156	107
2000	June	Giraffe	32	32
2001	April	Giraffe	238	219
2006	March	Giraffe	0	0
2007	December	Giraffe	17	16
2011	June	Giraffe	220	111
1977	January	Impala	4688	2032
1978	March	Impala	3926	1306
1980	October	Impala	3257	1362
1981	September	Impala	1806	749
1982	April	Impala	1365	536
1986	April	Impala	3051	1094
1990	May	Impala	4474	1531
1991	March	Impala	1134	534
1991	September	Impala	3287	930
1992	April	Impala	1886	751
1992	June	Impala	6345	1504
1992	October	Impala	1747	456

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1993	January	Impala	3307	798
1994	April	Impala	3466	1157
1994	October	Impala	1296	313
1996	June	Impala	1083	381
1997	July	Impala	1329	639
1998	March	Impala	2495	884
1999	February	Impala	1419	652
2000	June	Impala	392	205
2001	April	Impala	1394	1021
2006	March	Impala	130	124
2007	December	Impala	0	0
2011	June	Impala	662	369
1977	January	Kongoni	1591	1396
1978	March	Kongoni	2756	1778
1980	October	Kongoni	1192	532
1981	September	Kongoni	1660	507
1982	April	Kongoni	1208	419
1986	April	Kongoni	492	318
1990	May	Kongoni	1453	580
1991	March	Kongoni	686	490
1991	September	Kongoni	1056	586
1992	April	Kongoni	2532	909
1992	June	Kongoni	3728	1486
1992	October	Kongoni	2089	759
1993	January	Kongoni	1988	707
1994	April	Kongoni	1863	775
1994	October	Kongoni	825	356
1996	June	Kongoni	4240	1206
1997	July	Kongoni	1329	527
1998	March	Kongoni	429	176
1999	February	Kongoni	3165	1546
2000	June	Kongoni	0	0
2001	April	Kongoni	1292	820
2006	March	Kongoni	0	0
2007	December	Kongoni	656	401
2011	June	Kongoni	165	120
1977	January	Ostrich	0	0
1978	March	Ostrich	79	75
1980	October	Ostrich	231	93
1981	September	Ostrich	181	92

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1982	April	Ostrich	212	62
1986	April	Ostrich	229	83
1990	May	Ostrich	1308	631
1991	March	Ostrich	567	235
1991	September	Ostrich	704	181
1992	April	Ostrich	1414	447
1992	June	Ostrich	1147	313
1992	October	Ostrich	787	179
1993	January	Ostrich	856	319
1994	April	Ostrich	3327	2387
1994	October	Ostrich	488	142
1996	June	Ostrich	695	113
1997	July	Ostrich	1908	1259
1998	March	Ostrich	1764	1234
1999	February	Ostrich	624	275
2000	June	Ostrich	457	190
2001	April	Ostrich	663	255
2006	March	Ostrich	212	90
2007	December	Ostrich	449	214
2011	June	Ostrich	239	136
1977	January	Shoats	142067	46430
1978	March	Shoats	177226	42802
1980	October	Shoats	119015	22277
1981	September	Shoats	100401	17610
1982	April	Shoats	43848	9365
1986	April	Shoats	120360	20499
1990	May	Shoats	178647	25569
1991	March	Shoats	147762	41032
1991	September	Shoats	140843	26044
1992	April	Shoats	105516	15007
1992	June	Shoats	146382	19506
1992	October	Shoats	84415	11856
1993	January	Shoats	114352	25052
1994	April	Shoats	68781	6130
1994	October	Shoats	112846	13959
1996	June	Shoats	69436	9920
1997	July	Shoats	128316	14893
1998	March	Shoats	91598	11738
1999	February	Shoats	58889	12043
2000	June	Shoats	55474	11132

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
2001	April	Shoats	78095	9047
2006	March	Shoats	69972	12437
2007	December	Shoats	118502	11349
2011	June	Shoats	177268	22388
1977	January	Tgazelle	12903	2976
1978	March	Tgazelle	9616	2259
1980	October	Tgazelle	1299	633
1981	September	Tgazelle	2949	930
1982	April	Tgazelle	4531	1428
1986	April	Tgazelle	7972	1797
1990	May	Tgazelle	8367	2062
1991	March	Tgazelle	776	460
1991	September	Tgazelle	3317	1363
1992	April	Tgazelle	2113	787
1992	June	Tgazelle	7349	1533
1992	October	Tgazelle	2449	1106
1993	January	Tgazelle	5570	1499
1994	April	Tgazelle	2156	984
1994	October	Tgazelle	589	220
1996	June	Tgazelle	4708	830
1997	July	Tgazelle	5146	1467
1998	March	Tgazelle	7471	2093
1999	February	Tgazelle	766	309
2000	June	Tgazelle	3449	1545
2001	April	Tgazelle	3810	1300
2006	March	Tgazelle	1666	444
2007	December	Tgazelle	3939	1451
2011	June	Tgazelle	5962	1227
1977	January	Warthog	0	0
1978	March	Warthog	0	0
1980	October	Warthog	0	0
1981	September	Warthog	0	0
1982	April	Warthog	0	0
1986	April	Warthog	0	0
1990	May	Warthog	0	0
1991	March	Warthog	89	55
1991	September	Warthog	0	0
1992	April	Warthog	104	104
1992	June	Warthog	0	0
1992	October	Warthog	137	130

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1993	January	Warthog	0	0
1994	April	Warthog	15	15
1994	October	Warthog	0	0
1996	June	Warthog	0	0
1997	July	Warthog	0	0
1998	March	Warthog	0	0
1999	February	Warthog	184	186
2000	June	Warthog	0	0
2001	April	Warthog	0	0
2006	March	Warthog	0	0
2007	December	Warthog	0	0
2011	June	Warthog	0	0
1977	January	Waterbuck	0	0
1978	March	Waterbuck	0	0
1980	October	Waterbuck	0	0
1981	September	Waterbuck	0	0
1982	April	Waterbuck	0	0
1986	April	Waterbuck	0	0
1990	May	Waterbuck	0	0
1991	March	Waterbuck	0	0
1991	September	Waterbuck	0	0
1992	April	Waterbuck	52	53
1992	June	Waterbuck	0	0
1992	October	Waterbuck	0	0
1993	January	Waterbuck	0	0
1994	April	Waterbuck	0	0
1994	October	Waterbuck	0	0
1996	June	Waterbuck	0	0
1997	July	Waterbuck	17	17
1998	March	Waterbuck	0	0
1999	February	Waterbuck	0	0
2000	June	Waterbuck	0	0
2001	April	Waterbuck	0	0
2006	March	Waterbuck	0	0
2007	December	Waterbuck	0	0
2011	June	Waterbuck	0	0
1977	January	Wildebeest	23613	10067
1978	March	Wildebeest	28949	11291
1980	October	Wildebeest	33727	16256
1981	September	Wildebeest	13133	6763

SupplementaryMaterial C Contd.....

Year	Month	Species	Population Size	Standard Error
1982	April	Wildebeest	7362	2727
1986	April	Wildebeest	10498	3918
1990	May	Wildebeest	16378	6619
1991	March	Wildebeest	358	259
1991	September	Wildebeest	2025	2014
1992	April	Wildebeest	17132	10400
1992	June	Wildebeest	8927	5715
1992	October	Wildebeest	753	647
1993	January	Wildebeest	7609	4415
1994	April	Wildebeest	6100	4726
1994	October	Wildebeest	0	0
1996	June	Wildebeest	5404	2501
1997	July	Wildebeest	5010	3033
1998	March	Wildebeest	4435	2497
1999	February	Wildebeest	1504	1012
2000	June	Wildebeest	1929	1592
2001	April	Wildebeest	4031	2285
2006	March	Wildebeest	457	384
2007	December	Wildebeest	1866	983
2011	June	Wildebeest	2318	1580
1977	January	Zebra	5462	3767
1978	March	Zebra	4144	2018
1980	October	Zebra	1566	876
1981	September	Zebra	4011	1661
1982	April	Zebra	1711	626
1986	April	Zebra	6135	1739
1990	May	Zebra	8447	2805
1991	March	Zebra	8540	3436
1991	September	Zebra	10949	4008
1992	April	Zebra	12975	3388
1992	June	Zebra	18750	4017
1992	October	Zebra	8616	1918
1993	January	Zebra	13694	5545
1994	April	Zebra	8118	4044
1994	October	Zebra	8758	1484
1996	June	Zebra	10179	4296
1997	July	Zebra	10634	5124
1998	March	Zebra	4928	1838
1999	February	Zebra	5975	1590
2000	June	Zebra	2256	950

Supplementary Material C Contd.....

Year	Month	Species	Population Size	Standard Error
2001	April	Zebra	9730	3755
2006	March	Zebra	1012	247
2007	December	Zebra	3369	1003
2011	June	Zebra	11833	2604

Supplementary Material D.

ANNUAL AVERAGES OF MONTHLY (1961-1981) OR BIMONTHLY (1989-2010) TOTAL-AREA COUNTS IN NAIROBI NATIONAL PARK (117 KM²) AND THE AVERAGE RAINFALL OVER THE CHEETAH GATE, WARDEN'S CAMP, WILSON AND JOMO KENYATTA INTERNATIONAL AIRPORT RAINFALL RECORDING STATIONS. THE ANNUAL RAINFALL COMPONENT CO

VERS OCTOBER-SEPTEMBER. THE WET SEASON RAINFALL COMPONENT COVERS OCTOBER-MAY. THE EARLY WET SEASON RAINFALL COMPONENT COVERS OCTOBER-JANUARY. THE LATE WET SEASON RAINFALL COMPONENT COVERS FEBRUARY-MAY. THE DRY SEASON RAINFALL COMPONENT COVERS JUNE-SEPTEMBER. KONGONI IS THE LOCAL NAME FOR COKE'S HARTEBEE

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Buffalo	1961		168.1	274.6	442.7	74.6	517.2
Buffalo	1962		1087.5	326.7	1414.2	97.1	1511.2
Buffalo	1963		361.3	650.1	1011.3	68.0	1079.3
Buffalo	1964		530.0	417.3	947.2	97.3	1044.5
Buffalo	1965		207.4	330.3	537.7	74.9	612.6
Buffalo	1966	35.0	254.5	404.9	659.3	128.9	788.2
Buffalo	1967	43.0	153.5	782.9	936.4	94.9	1031.3
Buffalo	1968	51.0	213.7	653.6	867.3	30.9	898.1
Buffalo	1969	59.0	437.1	261.2	698.3	25.8	724.0
Buffalo	1970	67.0	288.1	497.3	785.4	29.1	814.5
Buffalo	1971	75.0	170.4	539.3	709.7	65.9	775.6
Buffalo	1972	83.0	194.2	200.3	394.4	217.1	611.5
Buffalo	1973	91.0	454.8	287.8	742.6	98.4	841.0
Buffalo	1974	99.0	125.4	473.3	598.7	158.9	757.6
Buffalo	1975	107.0	165.0	252.0	417.0	118.2	535.1
Buffalo	1976	115.0	184.1	236.0	420.1	105.6	525.7
Buffalo	1977	123.0	225.8	544.4	770.2	178.1	948.3
Buffalo	1978		419.8	462.7	882.5	55.5	938.0
Buffalo	1979	139.0	327.4	531.4	858.8	67.3	926.0
Buffalo	1980		272.9	559.4	832.3	40.1	872.4
Buffalo	1981	155.0	197.5	518.2	715.7	83.6	799.3

SupplementaryMaterial D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Buffalo	1982		111.1	299.7	410.8	46.0	456.8
Buffalo	1983		494.6	365.0	859.5	77.4	936.9
Buffalo	1984		257.5	102.3	359.8	63.7	423.5
Buffalo	1985		341.5	488.5	830.0	77.2	907.2
Buffalo	1986		177.5	462.1	639.7	10.4	650.1
Buffalo	1987		264.8	301.1	565.9	117.7	683.5
Buffalo	1988		176.1	582.7	758.8	88.5	847.3
Buffalo	1989		341.4	523.5	864.9	81.8	946.6
Buffalo	1990	200.5	378.0	539.6	917.6	68.7	986.3
Buffalo	1991	213.0	223.8	377.2	601.0	37.5	638.5
Buffalo	1992	223.8	391.6	380.8	772.4	67.1	839.5
Buffalo	1993	219.5	463.8	164.7	628.4	53.7	682.1
Buffalo	1994	177.8	197.7	350.7	548.4	73.5	621.9
Buffalo	1995	136.7	374.0	308.1	682.1	117.2	799.2
Buffalo	1996	91.0	196.0	267.8	463.8	100.3	564.2
Buffalo	1997	91.5	151.7	465.8	617.5	36.5	654.0
Buffalo	1998	72.3	874.1	688.3	1562.4	134.2	1696.6
Buffalo	1999	142.3	62.7	256.5	319.2	47.1	366.2
Buffalo	2000	132.7	404.7	141.4	546.1	61.5	607.5
Buffalo	2001	109.8	606.4	407.6	1013.9	92.7	1106.6
Buffalo	2002	176.3	329.2	389.5	718.7	47.2	765.8
Buffalo	2003	176.8	521.8	505.3	1027.1	123.1	1150.2
Buffalo	2004	135.0	267.5	445.8	713.3	23.6	736.9
Buffalo	2005	235.2	265.2	425.4	690.5	34.0	724.5
Buffalo	2006	276.2	96.8	503.6	600.3	71.5	671.8
Buffalo	2007	119.0	559.9	332.7	892.6	128.3	1020.9
Buffalo	2008	271.0	194.8	307.3	502.1	90.2	592.3
Buffalo	2009	269.3	339.0	241.4	580.4	56.0	636.4
Buffalo	2010	316.0	294.3	490.7	785.0	73.6	858.6
Eland	1961	55.2	168.1	274.6	442.7	74.6	517.2
Eland	1962	21.9	1087.5	326.7	1414.2	97.1	1511.2
Eland	1963	19.9	361.3	650.1	1011.3	68.0	1079.3
Eland	1964		530.0	417.3	947.2	97.3	1044.5

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Eland	1965		207.4	330.3	537.7	74.9	612.6
Eland	1966	58.2	254.5	404.9	659.3	128.9	788.2
Eland	1967	75.0	153.5	782.9	936.4	94.9	1031.3
Eland	1968	28.0	213.7	653.6	867.3	30.9	898.1
Eland	1969	106.0	437.1	261.2	698.3	25.8	724.0
Eland	1970	74.0	288.1	497.3	785.4	29.1	814.5
Eland	1971	120.0	170.4	539.3	709.7	65.9	775.6
Eland	1972	132.0	194.2	200.3	394.4	217.1	611.5
Eland	1973	284.0	454.8	287.8	742.6	98.4	841.0
Eland	1974	15.0	125.4	473.3	598.7	158.9	757.6
Eland	1975	27.0	165.0	252.0	417.0	118.2	535.1
Eland	1976	103.0	184.1	236.0	420.1	105.6	525.7
Eland	1977	22.0	225.8	544.4	770.2	178.1	948.3
Eland	1978		419.8	462.7	882.5	55.5	938.0
Eland	1979	110.0	327.4	531.4	858.8	67.3	926.0
Eland	1980		272.9	559.4	832.3	40.1	872.4
Eland	1981	302.0	197.5	518.2	715.7	83.6	799.3
Eland	1982		111.1	299.7	410.8	46.0	456.8
Eland	1983		494.6	365.0	859.5	77.4	936.9
Eland	1984		257.5	102.3	359.8	63.7	423.5
Eland	1985		341.5	488.5	830.0	77.2	907.2
Eland	1986		177.5	462.1	639.7	10.4	650.1
Eland	1987		264.8	301.1	565.9	117.7	683.5
Eland	1988		176.1	582.7	758.8	88.5	847.3
Eland	1989		341.4	523.5	864.9	81.8	946.6
Eland	1990	129.5	378.0	539.6	917.6	68.7	986.3
Eland	1991	206.3	223.8	377.2	601.0	37.5	638.5
Eland	1992	166.3	391.6	380.8	772.4	67.1	839.5
Eland	1993	80.0	463.8	164.7	628.4	53.7	682.1
Eland	1994	107.5	197.7	350.7	548.4	73.5	621.9
Eland	1995	88.8	374.0	308.1	682.1	117.2	799.2
Eland	1996	162.0	196.0	267.8	463.8	100.3	564.2
Eland	1997	69.5	151.7	465.8	617.5	36.5	654.0

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Eland	1998	54.8	874.1	688.3	1562.4	134.2	1696.6
Eland	1999	65.3	62.7	256.5	319.2	47.1	366.2
Eland	2000	84.0	404.7	141.4	546.1	61.5	607.5
Eland	2001	57.8	606.4	407.6	1013.9	92.7	1106.6
Eland	2002	96.3	329.2	389.5	718.7	47.2	765.8
Eland	2003	109.2	521.8	505.3	1027.1	123.1	1150.2
Eland	2004	139.5	267.5	445.8	713.3	23.6	736.9
Eland	2005	179.0	265.2	425.4	690.5	34.0	724.5
Eland	2006	155.2	96.8	503.6	600.3	71.5	671.8
Eland	2007	84.0	559.9	332.7	892.6	128.3	1020.9
Eland	2008	169.0	194.8	307.3	502.1	90.2	592.3
Eland	2009	198.8	339.0	241.4	580.4	56.0	636.4
Eland	2010	169.2	294.3	490.7	785.0	73.6	858.6
Ggazelle	1961	373.4	168.1	274.6	442.7	74.6	517.2
Ggazelle	1962	363.0	1087.5	326.7	1414.2	97.1	1511.2
Ggazelle	1963	400.6	361.3	650.1	1011.3	68.0	1079.3
Ggazelle	1964		530.0	417.3	947.2	97.3	1044.5
Ggazelle	1965		207.4	330.3	537.7	74.9	612.6
Ggazelle	1966	500.9	254.5	404.9	659.3	128.9	788.2
Ggazelle	1967	493.0	153.5	782.9	936.4	94.9	1031.3
Ggazelle	1968	415.0	213.7	653.6	867.3	30.9	898.1
Ggazelle	1969	429.0	437.1	261.2	698.3	25.8	724.0
Ggazelle	1970	345.0	288.1	497.3	785.4	29.1	814.5
Ggazelle	1971	350.0	170.4	539.3	709.7	65.9	775.6
Ggazelle	1972	458.0	194.2	200.3	394.4	217.1	611.5
Ggazelle	1973	425.0	454.8	287.8	742.6	98.4	841.0
Ggazelle	1974	341.0	125.4	473.3	598.7	158.9	757.6
Ggazelle	1975	204.0	165.0	252.0	417.0	118.2	535.1
Ggazelle	1976	141.0	184.1	236.0	420.1	105.6	525.7
Ggazelle	1977	262.0	225.8	544.4	770.2	178.1	948.3
Ggazelle	1978		419.8	462.7	882.5	55.5	938.0
Ggazelle	1979	284.0	327.4	531.4	858.8	67.3	926.0
Ggazelle	1980		272.9	559.4	832.3	40.1	872.4

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Ggazelle	1981	208.0	197.5	518.2	715.7	83.6	799.3
Ggazelle	1982		111.1	299.7	410.8	46.0	456.8
Ggazelle	1983		494.6	365.0	859.5	77.4	936.9
Ggazelle	1984		257.5	102.3	359.8	63.7	423.5
Ggazelle	1985		341.5	488.5	830.0	77.2	907.2
Ggazelle	1986		177.5	462.1	639.7	10.4	650.1
Ggazelle	1987		264.8	301.1	565.9	117.7	683.5
Ggazelle	1988		176.1	582.7	758.8	88.5	847.3
Ggazelle	1989		341.4	523.5	864.9	81.8	946.6
Ggazelle	1990	104.2	378.0	539.6	917.6	68.7	986.3
Ggazelle	1991	104.0	223.8	377.2	601.0	37.5	638.5
Ggazelle	1992	140.7	391.6	380.8	772.4	67.1	839.5
Ggazelle	1993	102.0	463.8	164.7	628.4	53.7	682.1
Ggazelle	1994	148.0	197.7	350.7	548.4	73.5	621.9
Ggazelle	1995	108.3	374.0	308.1	682.1	117.2	799.2
Ggazelle	1996	106.7	196.0	267.8	463.8	100.3	564.2
Ggazelle	1997	106.0	151.7	465.8	617.5	36.5	654.0
Ggazelle	1998	46.3	874.1	688.3	1562.4	134.2	1696.6
Ggazelle	1999	68.7	62.7	256.5	319.2	47.1	366.2
Ggazelle	2000	96.7	404.7	141.4	546.1	61.5	607.5
Ggazelle	2001	83.0	606.4	407.6	1013.9	92.7	1106.6
Ggazelle	2002	54.5	329.2	389.5	718.7	47.2	765.8
Ggazelle	2003	46.7	521.8	505.3	1027.1	123.1	1150.2
Ggazelle	2004	66.3	267.5	445.8	713.3	23.6	736.9
Ggazelle	2005	93.8	265.2	425.4	690.5	34.0	724.5
Ggazelle	2006	98.5	96.8	503.6	600.3	71.5	671.8
Ggazelle	2007	51.2	559.9	332.7	892.6	128.3	1020.9
Ggazelle	2008	48.0	194.8	307.3	502.1	90.2	592.3
Ggazelle	2009	82.0	339.0	241.4	580.4	56.0	636.4
Ggazelle	2010	87.0	294.3	490.7	785.0	73.6	858.6
Giraffe	1961	94.1	168.1	274.6	442.7	74.6	517.2
Giraffe	1962	80.1	1087.5	326.7	1414.2	97.1	1511.2
Giraffe	1963	91.3	361.3	650.1	1011.3	68.0	1079.3

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Giraffe	1964		530.0	417.3	947.2	97.3	1044.5
Giraffe	1965		207.4	330.3	537.7	74.9	612.6
Giraffe	1966	75.9	254.5	404.9	659.3	128.9	788.2
Giraffe	1967	87.0	153.5	782.9	936.4	94.9	1031.3
Giraffe	1968	88.0	213.7	653.6	867.3	30.9	898.1
Giraffe	1969	110.0	437.1	261.2	698.3	25.8	724.0
Giraffe	1970	91.0	288.1	497.3	785.4	29.1	814.5
Giraffe	1971	96.0	170.4	539.3	709.7	65.9	775.6
Giraffe	1972	86.0	194.2	200.3	394.4	217.1	611.5
Giraffe	1973	103.0	454.8	287.8	742.6	98.4	841.0
Giraffe	1974	84.0	125.4	473.3	598.7	158.9	757.6
Giraffe	1975	57.0	165.0	252.0	417.0	118.2	535.1
Giraffe	1976	48.0	184.1	236.0	420.1	105.6	525.7
Giraffe	1977	61.0	225.8	544.4	770.2	178.1	948.3
Giraffe	1978		419.8	462.7	882.5	55.5	938.0
Giraffe	1979	95.0	327.4	531.4	858.8	67.3	926.0
Giraffe	1980		272.9	559.4	832.3	40.1	872.4
Giraffe	1981	58.0	197.5	518.2	715.7	83.6	799.3
Giraffe	1982		111.1	299.7	410.8	46.0	456.8
Giraffe	1983		494.6	365.0	859.5	77.4	936.9
Giraffe	1984		257.5	102.3	359.8	63.7	423.5
Giraffe	1985		341.5	488.5	830.0	77.2	907.2
Giraffe	1986		177.5	462.1	639.7	10.4	650.1
Giraffe	1987		264.8	301.1	565.9	117.7	683.5
Giraffe	1988		176.1	582.7	758.8	88.5	847.3
Giraffe	1989		341.4	523.5	864.9	81.8	946.6
Giraffe	1990	100.2	378.0	539.6	917.6	68.7	986.3
Giraffe	1991	100.2	223.8	377.2	601.0	37.5	638.5
Giraffe	1992	96.5	391.6	380.8	772.4	67.1	839.5
Giraffe	1993	104.3	463.8	164.7	628.4	53.7	682.1
Giraffe	1994	82.8	197.7	350.7	548.4	73.5	621.9
Giraffe	1995	68.2	374.0	308.1	682.1	117.2	799.2
Giraffe	1996	81.7	196.0	267.8	463.8	100.3	564.2

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Giraffe	1997	69.8	151.7	465.8	617.5	36.5	654.0
Giraffe	1998	63.3	874.1	688.3	1562.4	134.2	1696.6
Giraffe	1999	58.3	62.7	256.5	319.2	47.1	366.2
Giraffe	2000	65.7	404.7	141.4	546.1	61.5	607.5
Giraffe	2001	64.2	606.4	407.6	1013.9	92.7	1106.6
Giraffe	2002	66.8	329.2	389.5	718.7	47.2	765.8
Giraffe	2003	78.2	521.8	505.3	1027.1	123.1	1150.2
Giraffe	2004	69.3	267.5	445.8	713.3	23.6	736.9
Giraffe	2005	61.7	265.2	425.4	690.5	34.0	724.5
Giraffe	2006	80.3	96.8	503.6	600.3	71.5	671.8
Giraffe	2007	76.2	559.9	332.7	892.6	128.3	1020.9
Giraffe	2008	102.0	194.8	307.3	502.1	90.2	592.3
Giraffe	2009	134.5	339.0	241.4	580.4	56.0	636.4
Giraffe	2010	108.3	294.3	490.7	785.0	73.6	858.6
Impala	1961	730.6	168.1	274.6	442.7	74.6	517.2
Impala	1962	637.6	1087.5	326.7	1414.2	97.1	1511.2
Impala	1963	735.3	361.3	650.1	1011.3	68.0	1079.3
Impala	1964		530.0	417.3	947.2	97.3	1044.5
Impala	1965		207.4	330.3	537.7	74.9	612.6
Impala	1966	633.1	254.5	404.9	659.3	128.9	788.2
Impala	1967	529.0	153.5	782.9	936.4	94.9	1031.3
Impala	1968	454.0	213.7	653.6	867.3	30.9	898.1
Impala	1969	478.0	437.1	261.2	698.3	25.8	724.0
Impala	1970	524.0	288.1	497.3	785.4	29.1	814.5
Impala	1971	574.0	170.4	539.3	709.7	65.9	775.6
Impala	1972	565.0	194.2	200.3	394.4	217.1	611.5
Impala	1973	815.0	454.8	287.8	742.6	98.4	841.0
Impala	1974	533.0	125.4	473.3	598.7	158.9	757.6
Impala	1975	487.0	165.0	252.0	417.0	118.2	535.1
Impala	1976	278.0	184.1	236.0	420.1	105.6	525.7
Impala	1977	391.0	225.8	544.4	770.2	178.1	948.3
Impala	1978		419.8	462.7	882.5	55.5	938.0
Impala	1979	696.0	327.4	531.4	858.8	67.3	926.0

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Impala	1980		272.9	559.4	832.3	40.1	872.4
Impala	1981	1354.0	197.5	518.2	715.7	83.6	799.3
Impala	1982		111.1	299.7	410.8	46.0	456.8
Impala	1983		494.6	365.0	859.5	77.4	936.9
Impala	1984		257.5	102.3	359.8	63.7	423.5
Impala	1985		341.5	488.5	830.0	77.2	907.2
Impala	1986		177.5	462.1	639.7	10.4	650.1
Impala	1987		264.8	301.1	565.9	117.7	683.5
Impala	1988		176.1	582.7	758.8	88.5	847.3
Impala	1989		341.4	523.5	864.9	81.8	946.6
Impala	1990	654.5	378.0	539.6	917.6	68.7	986.3
Impala	1991	654.0	223.8	377.2	601.0	37.5	638.5
Impala	1992	604.3	391.6	380.8	772.4	67.1	839.5
Impala	1993	636.0	463.8	164.7	628.4	53.7	682.1
Impala	1994	640.0	197.7	350.7	548.4	73.5	621.9
Impala	1995	404.5	374.0	308.1	682.1	117.2	799.2
Impala	1996	642.5	196.0	267.8	463.8	100.3	564.2
Impala	1997	524.2	151.7	465.8	617.5	36.5	654.0
Impala	1998	260.0	874.1	688.3	1562.4	134.2	1696.6
Impala	1999	329.3	62.7	256.5	319.2	47.1	366.2
Impala	2000	423.2	404.7	141.4	546.1	61.5	607.5
Impala	2001	269.8	606.4	407.6	1013.9	92.7	1106.6
Impala	2002	275.8	329.2	389.5	718.7	47.2	765.8
Impala	2003	212.3	521.8	505.3	1027.1	123.1	1150.2
Impala	2004	215.7	267.5	445.8	713.3	23.6	736.9
Impala	2005	216.2	265.2	425.4	690.5	34.0	724.5
Impala	2006	250.7	96.8	503.6	600.3	71.5	671.8
Impala	2007	210.3	559.9	332.7	892.6	128.3	1020.9
Impala	2008	367.0	194.8	307.3	502.1	90.2	592.3
Impala	2009	581.8	339.0	241.4	580.4	56.0	636.4
Impala	2010	519.5	294.3	490.7	785.0	73.6	858.6
Kongoni	1961	1023.0	168.1	274.6	442.7	74.6	517.2
Kongoni	1962	678.2	1087.5	326.7	1414.2	97.1	1511.2

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Kongoni	1963	763.6	361.3	650.1	1011.3	68.0	1079.3
Kongoni	1964		530.0	417.3	947.2	97.3	1044.5
Kongoni	1965		207.4	330.3	537.7	74.9	612.6
Kongoni	1966	1095.2	254.5	404.9	659.3	128.9	788.2
Kongoni	1967	1299.0	153.5	782.9	936.4	94.9	1031.3
Kongoni	1968	1400.0	213.7	653.6	867.3	30.9	898.1
Kongoni	1969	1564.0	437.1	261.2	698.3	25.8	724.0
Kongoni	1970	1397.0	288.1	497.3	785.4	29.1	814.5
Kongoni	1971	1683.0	170.4	539.3	709.7	65.9	775.6
Kongoni	1972	2004.0	194.2	200.3	394.4	217.1	611.5
Kongoni	1973	3329.0	454.8	287.8	742.6	98.4	841.0
Kongoni	1974	179.0	125.4	473.3	598.7	158.9	757.6
Kongoni	1975	149.0	165.0	252.0	417.0	118.2	535.1
Kongoni	1976	212.0	184.1	236.0	420.1	105.6	525.7
Kongoni	1977	131.0	225.8	544.4	770.2	178.1	948.3
Kongoni	1978		419.8	462.7	882.5	55.5	938.0
Kongoni	1979	217.0	327.4	531.4	858.8	67.3	926.0
Kongoni	1980		272.9	559.4	832.3	40.1	872.4
Kongoni	1981	530.0	197.5	518.2	715.7	83.6	799.3
Kongoni	1982		111.1	299.7	410.8	46.0	456.8
Kongoni	1983		494.6	365.0	859.5	77.4	936.9
Kongoni	1984		257.5	102.3	359.8	63.7	423.5
Kongoni	1985		341.5	488.5	830.0	77.2	907.2
Kongoni	1986		177.5	462.1	639.7	10.4	650.1
Kongoni	1987		264.8	301.1	565.9	117.7	683.5
Kongoni	1988		176.1	582.7	758.8	88.5	847.3
Kongoni	1989		341.4	523.5	864.9	81.8	946.6
Kongoni	1990	325.2	378.0	539.6	917.6	68.7	986.3
Kongoni	1991	433.5	223.8	377.2	601.0	37.5	638.5
Kongoni	1992	411.3	391.6	380.8	772.4	67.1	839.5
Kongoni	1993	343.8	463.8	164.7	628.4	53.7	682.1
Kongoni	1994	258.3	197.7	350.7	548.4	73.5	621.9
Kongoni	1995	165.3	374.0	308.1	682.1	117.2	799.2

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Kongoni	1996	487.8	196.0	267.8	463.8	100.3	564.2
Kongoni	1997	412.8	151.7	465.8	617.5	36.5	654.0
Kongoni	1998	173.5	874.1	688.3	1562.4	134.2	1696.6
Kongoni	1999	275.7	62.7	256.5	319.2	47.1	366.2
Kongoni	2000	516.7	404.7	141.4	546.1	61.5	607.5
Kongoni	2001	286.8	606.4	407.6	1013.9	92.7	1106.6
Kongoni	2002	307.5	329.2	389.5	718.7	47.2	765.8
Kongoni	2003	242.2	521.8	505.3	1027.1	123.1	1150.2
Kongoni	2004	306.3	267.5	445.8	713.3	23.6	736.9
Kongoni	2005	360.8	265.2	425.4	690.5	34.0	724.5
Kongoni	2006	440.8	96.8	503.6	600.3	71.5	671.8
Kongoni	2007	284.2	559.9	332.7	892.6	128.3	1020.9
Kongoni	2008	313.0	194.8	307.3	502.1	90.2	592.3
Kongoni	2009	520.3	339.0	241.4	580.4	56.0	636.4
Kongoni	2010	472.0	294.3	490.7	785.0	73.6	858.6
Ostrich	1961	100.4	168.1	274.6	442.7	74.6	517.2
Ostrich	1962	100.8	1087.5	326.7	1414.2	97.1	1511.2
Ostrich	1963	89.9	361.3	650.1	1011.3	68.0	1079.3
Ostrich	1964		530.0	417.3	947.2	97.3	1044.5
Ostrich	1965		207.4	330.3	537.7	74.9	612.6
Ostrich	1966	93.5	254.5	404.9	659.3	128.9	788.2
Ostrich	1967	93.0	153.5	782.9	936.4	94.9	1031.3
Ostrich	1968	101.0	213.7	653.6	867.3	30.9	898.1
Ostrich	1969	155.0	437.1	261.2	698.3	25.8	724.0
Ostrich	1970	170.0	288.1	497.3	785.4	29.1	814.5
Ostrich	1971	167.0	170.4	539.3	709.7	65.9	775.6
Ostrich	1972	181.0	194.2	200.3	394.4	217.1	611.5
Ostrich	1973	197.0	454.8	287.8	742.6	98.4	841.0
Ostrich	1974	143.0	125.4	473.3	598.7	158.9	757.6
Ostrich	1975	79.0	165.0	252.0	417.0	118.2	535.1
Ostrich	1976	72.0	184.1	236.0	420.1	105.6	525.7
Ostrich	1977	55.0	225.8	544.4	770.2	178.1	948.3
Ostrich	1978		419.8	462.7	882.5	55.5	938.0

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Ostrich	1979	116.0	327.4	531.4	858.8	67.3	926.0
Ostrich	1980		272.9	559.4	832.3	40.1	872.4
Ostrich	1981	86.0	197.5	518.2	715.7	83.6	799.3
Ostrich	1982		111.1	299.7	410.8	46.0	456.8
Ostrich	1983		494.6	365.0	859.5	77.4	936.9
Ostrich	1984		257.5	102.3	359.8	63.7	423.5
Ostrich	1985		341.5	488.5	830.0	77.2	907.2
Ostrich	1986		177.5	462.1	639.7	10.4	650.1
Ostrich	1987		264.8	301.1	565.9	117.7	683.5
Ostrich	1988		176.1	582.7	758.8	88.5	847.3
Ostrich	1989		341.4	523.5	864.9	81.8	946.6
Ostrich	1990	163.8	378.0	539.6	917.6	68.7	986.3
Ostrich	1991	133.0	223.8	377.2	601.0	37.5	638.5
Ostrich	1992	249.0	391.6	380.8	772.4	67.1	839.5
Ostrich	1993	158.2	463.8	164.7	628.4	53.7	682.1
Ostrich	1994	135.0	197.7	350.7	548.4	73.5	621.9
Ostrich	1995	95.8	374.0	308.1	682.1	117.2	799.2
Ostrich	1996	115.0	196.0	267.8	463.8	100.3	564.2
Ostrich	1997	140.8	151.7	465.8	617.5	36.5	654.0
Ostrich	1998	153.2	874.1	688.3	1562.4	134.2	1696.6
Ostrich	1999	119.7	62.7	256.5	319.2	47.1	366.2
Ostrich	2000	78.2	404.7	141.4	546.1	61.5	607.5
Ostrich	2001	87.3	606.4	407.6	1013.9	92.7	1106.6
Ostrich	2002	87.5	329.2	389.5	718.7	47.2	765.8
Ostrich	2003	91.3	521.8	505.3	1027.1	123.1	1150.2
Ostrich	2004	99.5	267.5	445.8	713.3	23.6	736.9
Ostrich	2005	107.3	265.2	425.4	690.5	34.0	724.5
Ostrich	2006	121.7	96.8	503.6	600.3	71.5	671.8
Ostrich	2007	10.5	559.9	332.7	892.6	128.3	1020.9
Ostrich	2008	69.0	194.8	307.3	502.1	90.2	592.3
Ostrich	2009	88.3	339.0	241.4	580.4	56.0	636.4
Ostrich	2010	88.7	294.3	490.7	785.0	73.6	858.6
Tgazelle	1961	323.7	168.1	274.6	442.7	74.6	517.2

SupplementaryMaterial D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Tgazelle	1962	312.3	1087.5	326.7	1414.2	97.1	1511.2
Tgazelle	1963	335.5	361.3	650.1	1011.3	68.0	1079.3
Tgazelle	1964		530.0	417.3	947.2	97.3	1044.5
Tgazelle	1965		207.4	330.3	537.7	74.9	612.6
Tgazelle	1966	344.1	254.5	404.9	659.3	128.9	788.2
Tgazelle	1967	308.0	153.5	782.9	936.4	94.9	1031.3
Tgazelle	1968	277.0	213.7	653.6	867.3	30.9	898.1
Tgazelle	1969	238.0	437.1	261.2	698.3	25.8	724.0
Tgazelle	1970	247.0	288.1	497.3	785.4	29.1	814.5
Tgazelle	1971	118.0	170.4	539.3	709.7	65.9	775.6
Tgazelle	1972	191.0	194.2	200.3	394.4	217.1	611.5
Tgazelle	1973	243.0	454.8	287.8	742.6	98.4	841.0
Tgazelle	1974	141.0	125.4	473.3	598.7	158.9	757.6
Tgazelle	1975	116.0	165.0	252.0	417.0	118.2	535.1
Tgazelle	1976	65.0	184.1	236.0	420.1	105.6	525.7
Tgazelle	1977	177.0	225.8	544.4	770.2	178.1	948.3
Tgazelle	1978		419.8	462.7	882.5	55.5	938.0
Tgazelle	1979	202.0	327.4	531.4	858.8	67.3	926.0
Tgazelle	1980		272.9	559.4	832.3	40.1	872.4
Tgazelle	1981	39.0	197.5	518.2	715.7	83.6	799.3
Tgazelle	1982		111.1	299.7	410.8	46.0	456.8
Tgazelle	1983		494.6	365.0	859.5	77.4	936.9
Tgazelle	1984		257.5	102.3	359.8	63.7	423.5
Tgazelle	1985		341.5	488.5	830.0	77.2	907.2
Tgazelle	1986		177.5	462.1	639.7	10.4	650.1
Tgazelle	1987		264.8	301.1	565.9	117.7	683.5
Tgazelle	1988		176.1	582.7	758.8	88.5	847.3
Tgazelle	1989		341.4	523.5	864.9	81.8	946.6
Tgazelle	1990	130.8	378.0	539.6	917.6	68.7	986.3
Tgazelle	1991	133.5	223.8	377.2	601.0	37.5	638.5
Tgazelle	1992	105.3	391.6	380.8	772.4	67.1	839.5
Tgazelle	1993	79.8	463.8	164.7	628.4	53.7	682.1
Tgazelle	1994	113.2	197.7	350.7	548.4	73.5	621.9

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Tgazelle	1995	50.7	374.0	308.1	682.1	117.2	799.2
Tgazelle	1996	142.0	196.0	267.8	463.8	100.3	564.2
Tgazelle	1997	120.0	151.7	465.8	617.5	36.5	654.0
Tgazelle	1998	72.0	874.1	688.3	1562.4	134.2	1696.6
Tgazelle	1999	75.7	62.7	256.5	319.2	47.1	366.2
Tgazelle	2000	168.0	404.7	141.4	546.1	61.5	607.5
Tgazelle	2001	91.8	606.4	407.6	1013.9	92.7	1106.6
Tgazelle	2002	104.2	329.2	389.5	718.7	47.2	765.8
Tgazelle	2003	73.5	521.8	505.3	1027.1	123.1	1150.2
Tgazelle	2004	95.0	267.5	445.8	713.3	23.6	736.9
Tgazelle	2005	82.5	265.2	425.4	690.5	34.0	724.5
Tgazelle	2006	86.8	96.8	503.6	600.3	71.5	671.8
Tgazelle	2007	62.5	559.9	332.7	892.6	128.3	1020.9
Tgazelle	2008	68.0	194.8	307.3	502.1	90.2	592.3
Tgazelle	2009	157.5	339.0	241.4	580.4	56.0	636.4
Tgazelle	2010	148.0	294.3	490.7	785.0	73.6	858.6
Warthog	1961	227.2	168.1	274.6	442.7	74.6	517.2
Warthog	1962	197.3	1087.5	326.7	1414.2	97.1	1511.2
Warthog	1963	225.0	361.3	650.1	1011.3	68.0	1079.3
Warthog	1964		530.0	417.3	947.2	97.3	1044.5
Warthog	1965		207.4	330.3	537.7	74.9	612.6
Warthog	1966	153.8	254.5	404.9	659.3	128.9	788.2
Warthog	1967	110.0	153.5	782.9	936.4	94.9	1031.3
Warthog	1968		213.7	653.6	867.3	30.9	898.1
Warthog	1969		437.1	261.2	698.3	25.8	724.0
Warthog	1970		288.1	497.3	785.4	29.1	814.5
Warthog	1971		170.4	539.3	709.7	65.9	775.6
Warthog	1972		194.2	200.3	394.4	217.1	611.5
Warthog	1973		454.8	287.8	742.6	98.4	841.0
Warthog	1974		125.4	473.3	598.7	158.9	757.6
Warthog	1975		165.0	252.0	417.0	118.2	535.1
Warthog	1976		184.1	236.0	420.1	105.6	525.7
Warthog	1977		225.8	544.4	770.2	178.1	948.3

SupplementaryMaterial D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Warthog	1978		419.8	462.7	882.5	55.5	938.0
Warthog	1979		327.4	531.4	858.8	67.3	926.0
Warthog	1980		272.9	559.4	832.3	40.1	872.4
Warthog	1981		197.5	518.2	715.7	83.6	799.3
Warthog	1982		111.1	299.7	410.8	46.0	456.8
Warthog	1983		494.6	365.0	859.5	77.4	936.9
Warthog	1984		257.5	102.3	359.8	63.7	423.5
Warthog	1985		341.5	488.5	830.0	77.2	907.2
Warthog	1986		177.5	462.1	639.7	10.4	650.1
Warthog	1987		264.8	301.1	565.9	117.7	683.5
Warthog	1988		176.1	582.7	758.8	88.5	847.3
Warthog	1989		341.4	523.5	864.9	81.8	946.6
Warthog	1990		378.0	539.6	917.6	68.7	986.3
Warthog	1991	38.8	223.8	377.2	601.0	37.5	638.5
Warthog	1992	86.5	391.6	380.8	772.4	67.1	839.5
Warthog	1993	74.3	463.8	164.7	628.4	53.7	682.1
Warthog	1994	117.7	197.7	350.7	548.4	73.5	621.9
Warthog	1995	77.8	374.0	308.1	682.1	117.2	799.2
Warthog	1996	71.0	196.0	267.8	463.8	100.3	564.2
Warthog	1997	42.7	151.7	465.8	617.5	36.5	654.0
Warthog	1998	19.3	874.1	688.3	1562.4	134.2	1696.6
Warthog	1999	26.3	62.7	256.5	319.2	47.1	366.2
Warthog	2000	45.8	404.7	141.4	546.1	61.5	607.5
Warthog	2001	6.8	606.4	407.6	1013.9	92.7	1106.6
Warthog	2002	13.2	329.2	389.5	718.7	47.2	765.8
Warthog	2003	5.0	521.8	505.3	1027.1	123.1	1150.2
Warthog	2004	7.0	267.5	445.8	713.3	23.6	736.9
Warthog	2005	11.2	265.2	425.4	690.5	34.0	724.5
Warthog	2006	17.5	96.8	503.6	600.3	71.5	671.8
Warthog	2007	9.0	559.9	332.7	892.6	128.3	1020.9
Warthog	2008	20.0	194.8	307.3	502.1	90.2	592.3
Warthog	2009	43.0	339.0	241.4	580.4	56.0	636.4
Warthog	2010	25.2	294.3	490.7	785.0	73.6	858.6

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Waterbuck	1961	129.3	168.1	274.6	442.7	74.6	517.2
Waterbuck	1962	49.8	1087.5	326.7	1414.2	97.1	1511.2
Waterbuck	1963	67.0	361.3	650.1	1011.3	68.0	1079.3
Waterbuck	1964		530.0	417.3	947.2	97.3	1044.5
Waterbuck	1965		207.4	330.3	537.7	74.9	612.6
Waterbuck	1966	89.9	254.5	404.9	659.3	128.9	788.2
Waterbuck	1967	57.0	153.5	782.9	936.4	94.9	1031.3
Waterbuck	1968		213.7	653.6	867.3	30.9	898.1
Waterbuck	1969		437.1	261.2	698.3	25.8	724.0
Waterbuck	1970		288.1	497.3	785.4	29.1	814.5
Waterbuck	1971		170.4	539.3	709.7	65.9	775.6
Waterbuck	1972		194.2	200.3	394.4	217.1	611.5
Waterbuck	1973		454.8	287.8	742.6	98.4	841.0
Waterbuck	1974		125.4	473.3	598.7	158.9	757.6
Waterbuck	1975		165.0	252.0	417.0	118.2	535.1
Waterbuck	1976		184.1	236.0	420.1	105.6	525.7
Waterbuck	1977		225.8	544.4	770.2	178.1	948.3
Waterbuck	1978		419.8	462.7	882.5	55.5	938.0
Waterbuck	1979		327.4	531.4	858.8	67.3	926.0
Waterbuck	1980		272.9	559.4	832.3	40.1	872.4
Waterbuck	1981		197.5	518.2	715.7	83.6	799.3
Waterbuck	1982		111.1	299.7	410.8	46.0	456.8
Waterbuck	1983		494.6	365.0	859.5	77.4	936.9
Waterbuck	1984		257.5	102.3	359.8	63.7	423.5
Waterbuck	1985		341.5	488.5	830.0	77.2	907.2
Waterbuck	1986		177.5	462.1	639.7	10.4	650.1
Waterbuck	1987		264.8	301.1	565.9	117.7	683.5
Waterbuck	1988		176.1	582.7	758.8	88.5	847.3
Waterbuck	1989		341.4	523.5	864.9	81.8	946.6
Waterbuck	1990		378.0	539.6	917.6	68.7	986.3
Waterbuck	1991	28.8	223.8	377.2	601.0	37.5	638.5
Waterbuck	1992	42.7	391.6	380.8	772.4	67.1	839.5
Waterbuck	1993	25.3	463.8	164.7	628.4	53.7	682.1

SupplementaryMaterial D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Waterbuck	1994	28.0	197.7	350.7	548.4	73.5	621.9
Waterbuck	1995	21.2	374.0	308.1	682.1	117.2	799.2
Waterbuck	1996	14.0	196.0	267.8	463.8	100.3	564.2
Waterbuck	1997	24.2	151.7	465.8	617.5	36.5	654.0
Waterbuck	1998	15.3	874.1	688.3	1562.4	134.2	1696.6
Waterbuck	1999	15.2	62.7	256.5	319.2	47.1	366.2
Waterbuck	2000	19.7	404.7	141.4	546.1	61.5	607.5
Waterbuck	2001	10.8	606.4	407.6	1013.9	92.7	1106.6
Waterbuck	2002	12.8	329.2	389.5	718.7	47.2	765.8
Waterbuck	2003	8.3	521.8	505.3	1027.1	123.1	1150.2
Waterbuck	2004	7.2	267.5	445.8	713.3	23.6	736.9
Waterbuck	2005	13.2	265.2	425.4	690.5	34.0	724.5
Waterbuck	2006	13.0	96.8	503.6	600.3	71.5	671.8
Waterbuck	2007	7.0	559.9	332.7	892.6	128.3	1020.9
Waterbuck	2008	12.0	194.8	307.3	502.1	90.2	592.3
Waterbuck	2009	26.7	339.0	241.4	580.4	56.0	636.4
Waterbuck	2010	11.7	294.3	490.7	785.0	73.6	858.6
Wildebeest	1961	1980.4	168.1	274.6	442.7	74.6	517.2
Wildebeest	1962	955.7	1087.5	326.7	1414.2	97.1	1511.2
Wildebeest	1963	691.1	361.3	650.1	1011.3	68.0	1079.3
Wildebeest	1964		530.0	417.3	947.2	97.3	1044.5
Wildebeest	1965		207.4	330.3	537.7	74.9	612.6
Wildebeest	1966	252.6	254.5	404.9	659.3	128.9	788.2
Wildebeest	1967	270.0	153.5	782.9	936.4	94.9	1031.3
Wildebeest	1968	175.0	213.7	653.6	867.3	30.9	898.1
Wildebeest	1969	341.0	437.1	261.2	698.3	25.8	724.0
Wildebeest	1970	234.0	288.1	497.3	785.4	29.1	814.5
Wildebeest	1971	311.0	170.4	539.3	709.7	65.9	775.6
Wildebeest	1972	623.0	194.2	200.3	394.4	217.1	611.5
Wildebeest	1973	3252.0	454.8	287.8	742.6	98.4	841.0
Wildebeest	1974	40.0	125.4	473.3	598.7	158.9	757.6
Wildebeest	1975	34.0	165.0	252.0	417.0	118.2	535.1
Wildebeest	1976	3618.0	184.1	236.0	420.1	105.6	525.7

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Wildebeest	1977	6.0	225.8	544.4	770.2	178.1	948.3
Wildebeest	1978		419.8	462.7	882.5	55.5	938.0
Wildebeest	1979	96.0	327.4	531.4	858.8	67.3	926.0
Wildebeest	1980		272.9	559.4	832.3	40.1	872.4
Wildebeest	1981	4636.0	197.5	518.2	715.7	83.6	799.3
Wildebeest	1982		111.1	299.7	410.8	46.0	456.8
Wildebeest	1983		494.6	365.0	859.5	77.4	936.9
Wildebeest	1984		257.5	102.3	359.8	63.7	423.5
Wildebeest	1985		341.5	488.5	830.0	77.2	907.2
Wildebeest	1986		177.5	462.1	639.7	10.4	650.1
Wildebeest	1987		264.8	301.1	565.9	117.7	683.5
Wildebeest	1988		176.1	582.7	758.8	88.5	847.3
Wildebeest	1989		341.4	523.5	864.9	81.8	946.6
Wildebeest	1990	2712.2	378.0	539.6	917.6	68.7	986.3
Wildebeest	1991	1783.5	223.8	377.2	601.0	37.5	638.5
Wildebeest	1992	2282.0	391.6	380.8	772.4	67.1	839.5
Wildebeest	1993	1317.5	463.8	164.7	628.4	53.7	682.1
Wildebeest	1994	2308.2	197.7	350.7	548.4	73.5	621.9
Wildebeest	1995	2101.8	374.0	308.1	682.1	117.2	799.2
Wildebeest	1996	3185.0	196.0	267.8	463.8	100.3	564.2
Wildebeest	1997	2031.8	151.7	465.8	617.5	36.5	654.0
Wildebeest	1998	161.3	874.1	688.3	1562.4	134.2	1696.6
Wildebeest	1999	773.5	62.7	256.5	319.2	47.1	366.2
Wildebeest	2000	2377.3	404.7	141.4	546.1	61.5	607.5
Wildebeest	2001	20.5	606.4	407.6	1013.9	92.7	1106.6
Wildebeest	2002	186.3	329.2	389.5	718.7	47.2	765.8
Wildebeest	2003	16.7	521.8	505.3	1027.1	123.1	1150.2
Wildebeest	2004	97.2	267.5	445.8	713.3	23.6	736.9
Wildebeest	2005	151.8	265.2	425.4	690.5	34.0	724.5
Wildebeest	2006	243.0	96.8	503.6	600.3	71.5	671.8
Wildebeest	2007	204.8	559.9	332.7	892.6	128.3	1020.9
Wildebeest	2008	91.0	194.8	307.3	502.1	90.2	592.3
Wildebeest	2009	394.0	339.0	241.4	580.4	56.0	636.4

SupplementaryMaterial D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Wildebeest	2009	404.8	339.0	241.4	580.4	56.0	636.4
Wildebeest	2010	114.0	294.3	490.7	785.0	73.6	858.6
Zebra	1961	1332.3	168.1	274.6	442.7	74.6	517.2
Zebra	1962	496.9	1087.5	326.7	1414.2	97.1	1511.2
Zebra	1963	488.9	361.3	650.1	1011.3	68.0	1079.3
Zebra	1964		530.0	417.3	947.2	97.3	1044.5
Zebra	1965		207.4	330.3	537.7	74.9	612.6
Zebra	1966	488.1	254.5	404.9	659.3	128.9	788.2
Zebra	1967	579.0	153.5	782.9	936.4	94.9	1031.3
Zebra	1968	413.0	213.7	653.6	867.3	30.9	898.1
Zebra	1969	712.0	437.1	261.2	698.3	25.8	724.0
Zebra	1970	568.0	288.1	497.3	785.4	29.1	814.5
Zebra	1971	1073.0	170.4	539.3	709.7	65.9	775.6
Zebra	1972	1051.0	194.2	200.3	394.4	217.1	611.5
Zebra	1973	1971.0	454.8	287.8	742.6	98.4	841.0
Zebra	1974	93.0	125.4	473.3	598.7	158.9	757.6
Zebra	1975	167.0	165.0	252.0	417.0	118.2	535.1
Zebra	1976	927.0	184.1	236.0	420.1	105.6	525.7
Zebra	1977	32.0	225.8	544.4	770.2	178.1	948.3
Zebra	1978		419.8	462.7	882.5	55.5	938.0
Zebra	1979	141.0	327.4	531.4	858.8	67.3	926.0
Zebra	1980		272.9	559.4	832.3	40.1	872.4
Zebra	1981	1351.0	197.5	518.2	715.7	83.6	799.3
Zebra	1982		111.1	299.7	410.8	46.0	456.8
Zebra	1983		494.6	365.0	859.5	77.4	936.9
Zebra	1984		257.5	102.3	359.8	63.7	423.5
Zebra	1985		341.5	488.5	830.0	77.2	907.2
Zebra	1986		177.5	462.1	639.7	10.4	650.1
Zebra	1987		264.8	301.1	565.9	117.7	683.5
Zebra	1988		176.1	582.7	758.8	88.5	847.3
Zebra	1989		341.4	523.5	864.9	81.8	946.6
Zebra	1990	705.2	378.0	539.6	917.6	68.7	986.3
Zebra	1991	1141.8	223.8	377.2	601.0	37.5	638.5

Supplementary Material D. Contd.....

Species	Year	Average of Annual Counts	Early Wet Season Rain	Late Wet Season Rain	Wet Season Rain	Dry Season Rain	Annual Rain
Zebra	1992	1233.0	391.6	380.8	772.4	67.1	839.5
Zebra	1993	467.2	463.8	164.7	628.4	53.7	682.1
Zebra	1994	1193.2	197.7	350.7	548.4	73.5	621.9
Zebra	1995	925.3	374.0	308.1	682.1	117.2	799.2
Zebra	1996	1261.0	196.0	267.8	463.8	100.3	564.2
Zebra	1997	1770.0	151.7	465.8	617.5	36.5	654.0
Zebra	1998	332.3	874.1	688.3	1562.4	134.2	1696.6
Zebra	1999	1200.2	62.7	256.5	319.2	47.1	366.2
Zebra	2000	2231.2	404.7	141.4	546.1	61.5	607.5
Zebra	2001	461.5	606.4	407.6	1013.9	92.7	1106.6
Zebra	2002	654.2	329.2	389.5	718.7	47.2	765.8
Zebra	2003	376.7	521.8	505.3	1027.1	123.1	1150.2
Zebra	2004	884.3	267.5	445.8	713.3	23.6	736.9
Zebra	2005	1144.2	265.2	425.4	690.5	34.0	724.5
Zebra	2006	1274.5	96.8	503.6	600.3	71.5	671.8
Zebra	2007	1111.3	559.9	332.7	892.6	128.3	1020.9
Zebra	2008	728.0	194.8	307.3	502.1	90.2	592.3
Zebra	2009	1722.3	339.0	241.4	580.4	56.0	636.4
Zebra	2010	1057.7	294.3	490.7	785.0	73.6	858.6

Supplementary Material E.

BIMONTHLY TOTAL-AREA COUNTS OF WILDLIFE WITHIN NAIROBI NATIONAL PARK, KENYA, DURING 1989-2011. THE PARK COVERS A TOTAL AREA OF 117 KM². KONGONI IS THE LOCAL NAME FOR COKE'S HARTEBEEST.

Survey	Year	Month	Species	Number
1	1989	November	Buffalo	270
2	1990	January	Buffalo	234
3	1990	February	Buffalo	234
4	1990	March	Buffalo	126
5	1990	April	Buffalo	227
6	1990	June	Buffalo	126
7	1990	August	Buffalo	295
8	1990	October	Buffalo	51
9	1990	December	Buffalo	156
10	1991	February	Buffalo	185
11	1991	April	Buffalo	372
12	1991	June	Buffalo	221
13	1991	August	Buffalo	233
14	1991	October	Buffalo	111
15	1991	December	Buffalo	158
16	1992	April	Buffalo	333
17	1992	June	Buffalo	338
18	1992	August	Buffalo	163
19	1992	October	Buffalo	105
20	1992	December	Buffalo	270
21	1993	February	Buffalo	334
22	1993	August	Buffalo	137
23	1993	December	Buffalo	350
24	1994	February	Buffalo	121
25	1994	April	Buffalo	169
26	1994	June	Buffalo	170
27	1994	August	Buffalo	154
28	1994	October	Buffalo	103
29	1994	December	Buffalo	192
30	1995	February	Buffalo	267
31	1995	April	Buffalo	193
32	1995	June	Buffalo	66
33	1995	August	Buffalo	89
34	1995	October	Buffalo	13

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
35	1995	December	Buffalo	30
36	1996	February	Buffalo	36
37	1996	April	Buffalo	91
38	1996	June	Buffalo	201
39	1996	August	Buffalo	70
40	1996	October	Buffalo	118
41	1996	December	Buffalo	70
42	1997	February	Buffalo	68
43	1997	April	Buffalo	143
44	1997	June	Buffalo	74
45	1997	August	Buffalo	106
46	1997	October	Buffalo	88
47	1998	February	Buffalo	78
48	1998	April	Buffalo	179
49	1998	October	Buffalo	16
50	1998	December	Buffalo	102
51	1999	February	Buffalo	111
52	1999	April	Buffalo	182
53	1999	June	Buffalo	189
54	1999	August	Buffalo	61
55	1999	October	Buffalo	209
56	1999	December	Buffalo	131
57	2000	February	Buffalo	180
58	2000	April	Buffalo	175
59	2000	June	Buffalo	9
60	2000	August	Buffalo	70
61	2000	October	Buffalo	231
62	2000	December	Buffalo	88
63	2001	February	Buffalo	113
64	2001	April	Buffalo	181
65	2001	June	Buffalo	178
66	2001	August	Buffalo	80
67	2001	October	Buffalo	19
68	2001	December	Buffalo	82
69	2002	February	Buffalo	80
70	2002	April	Buffalo	334
71	2002	June	Buffalo	53

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
72	2002	August	Buffalo	292
73	2002	October	Buffalo	217
74	2002	December	Buffalo	194
75	2003	February	Buffalo	162
76	2003	April	Buffalo	334
77	2003	June	Buffalo	210
78	2003	August	Buffalo	56
79	2003	October	Buffalo	105
80	2003	December	Buffalo	107
81	2004	February	Buffalo	124
82	2004	April	Buffalo	40
83	2004	June	Buffalo	154
84	2004	August	Buffalo	267
85	2004	October	Buffalo	118
86	2004	December	Buffalo	252
87	2005	February	Buffalo	417
88	2005	April	Buffalo	85
89	2005	June	Buffalo	173
90	2005	August	Buffalo	318
91	2005	October	Buffalo	166
92	2005	December	Buffalo	192
93	2006	February	Buffalo	229
94	2006	April	Buffalo	351
95	2006	June	Buffalo	449
96	2006	August	Buffalo	260
97	2006	October	Buffalo	176
98	2006	December	Buffalo	48
99	2007	February	Buffalo	120
100	2007	April	Buffalo	77
101	2007	June	Buffalo	59
102	2007	August	Buffalo	144
103	2007	October	Buffalo	266
104	2007	December	Buffalo	216
105	2008	February	Buffalo	492
106	2008	April	Buffalo	369
107	2008	June	Buffalo	310
108	2008	August	Buffalo	207

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
109	2008	October	Buffalo	213
110	2008	December	Buffalo	34
111	2009	February	Buffalo	358
112	2009	April	Buffalo	122
113	2009	June	Buffalo	205
114	2009	August	Buffalo	178
115	2009	October	Buffalo	250
116	2009	December	Buffalo	503
117	2010	February	Buffalo	280
118	2010	April	Buffalo	390
119	2010	June	Buffalo	269
120	2010	August	Buffalo	309
121	2010	October	Buffalo	472
122	2010	December	Buffalo	176
123	2011	February	Buffalo	247
124	2011	April	Buffalo	248
125	2011	June	Buffalo	331
1	1989	November	Eland	183
2	1990	January	Eland	21
3	1990	February	Eland	21
4	1990	March	Eland	0
5	1990	April	Eland	21
6	1990	June	Eland	0
7	1990	August	Eland	354
8	1990	October	Eland	381
9	1990	December	Eland	318
10	1991	February	Eland	294
11	1991	April	Eland	282
12	1991	June	Eland	5
13	1991	August	Eland	225
14	1991	October	Eland	249
15	1991	December	Eland	56
16	1992	April	Eland	145
17	1992	June	Eland	12
18	1992	August	Eland	127
19	1992	October	Eland	164
20	1992	December	Eland	108

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
21	1993	February	Eland	0
22	1993	August	Eland	132
23	1993	December	Eland	196
24	1994	February	Eland	133
25	1994	April	Eland	118
26	1994	June	Eland	80
27	1994	August	Eland	92
28	1994	October	Eland	114
29	1994	December	Eland	60
30	1995	February	Eland	80
31	1995	April	Eland	16
32	1995	June	Eland	35
33	1995	August	Eland	158
34	1995	October	Eland	48
35	1995	December	Eland	93
36	1996	February	Eland	223
37	1996	April	Eland	141
38	1996	June	Eland	199
39	1996	August	Eland	137
40	1996	October	Eland	212
41	1996	December	Eland	142
42	1997	February	Eland	82
43	1997	April	Eland	55
44	1997	June	Eland	16
45	1997	August	Eland	84
46	1997	October	Eland	87
47	1998	February	Eland	43
48	1998	April	Eland	30
49	1998	October	Eland	73
50	1998	December	Eland	87
51	1999	February	Eland	134
52	1999	April	Eland	69
53	1999	June	Eland	62
54	1999	August	Eland	94
55	1999	October	Eland	33
56	1999	December	Eland	117
57	2000	February	Eland	75

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
58	2000	April	Eland	134
59	2000	June	Eland	4
60	2000	August	Eland	110
61	2000	October	Eland	94
62	2000	December	Eland	98
63	2001	February	Eland	78
64	2001	April	Eland	43
65	2001	June	Eland	17
66	2001	August	Eland	40
67	2001	October	Eland	52
68	2001	December	Eland	67
69	2002	February	Eland	41
70	2002	April	Eland	139
71	2002	June	Eland	119
72	2002	August	Eland	86
73	2002	October	Eland	95
74	2002	December	Eland	134
75	2003	February	Eland	15
76	2003	April	Eland	204
77	2003	June	Eland	172
78	2003	August	Eland	37
79	2003	October	Eland	160
80	2003	December	Eland	195
81	2004	February	Eland	206
82	2004	April	Eland	159
83	2004	June	Eland	73
84	2004	August	Eland	102
85	2004	October	Eland	163
86	2004	December	Eland	112
87	2005	February	Eland	118
88	2005	April	Eland	200
89	2005	June	Eland	247
90	2005	August	Eland	176
91	2005	October	Eland	138
92	2005	December	Eland	188
93	2006	February	Eland	221
94	2006	April	Eland	234

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
95	2006	June	Eland	134
96	2006	August	Eland	119
97	2006	October	Eland	111
98	2006	December	Eland	142
99	2007	February	Eland	42
100	2007	April	Eland	41
101	2007	June	Eland	67
102	2007	August	Eland	65
103	2007	October	Eland	101
104	2007	December	Eland	233
105	2008	February	Eland	232
106	2008	April	Eland	62
107	2008	June	Eland	295
108	2008	August	Eland	151
109	2008	October	Eland	218
110	2008	December	Eland	55
111	2009	February	Eland	209
112	2009	April	Eland	181
113	2009	June	Eland	374
114	2009	August	Eland	166
115	2009	October	Eland	48
116	2009	December	Eland	215
117	2010	February	Eland	96
118	2010	April	Eland	187
119	2010	June	Eland	115
120	2010	August	Eland	181
121	2010	October	Eland	311
122	2010	December	Eland	125
123	2011	February	Eland	112
124	2011	April	Eland	195
125	2011	June	Eland	191
1	1989	November	Ggazelle	92
2	1990	January	Ggazelle	132
3	1990	February	Ggazelle	132
4	1990	March	Ggazelle	102
5	1990	April	Ggazelle	142
6	1990	June	Ggazelle	102

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
7	1990	August	Ggazelle	154
8	1990	October	Ggazelle	95
9	1990	December	Ggazelle	190
10	1991	February	Ggazelle	108
11	1991	April	Ggazelle	139
12	1991	June	Ggazelle	106
13	1991	August	Ggazelle	84
14	1991	October	Ggazelle	95
15	1991	December	Ggazelle	118
16	1992	April	Ggazelle	118
17	1992	June	Ggazelle	137
18	1992	August	Ggazelle	149
19	1992	October	Ggazelle	96
20	1992	December	Ggazelle	118
21	1993	February	Ggazelle	114
22	1993	August	Ggazelle	88
23	1993	December	Ggazelle	174
24	1994	February	Ggazelle	203
25	1994	April	Ggazelle	140
26	1994	June	Ggazelle	142
27	1994	August	Ggazelle	118
28	1994	October	Ggazelle	167
29	1994	December	Ggazelle	61
30	1995	February	Ggazelle	97
31	1995	April	Ggazelle	143
32	1995	June	Ggazelle	60
33	1995	August	Ggazelle	113
34	1995	October	Ggazelle	63
35	1995	December	Ggazelle	127
36	1996	February	Ggazelle	131
37	1996	April	Ggazelle	194
38	1996	June	Ggazelle	99
39	1996	August	Ggazelle	49
40	1996	October	Ggazelle	106
41	1996	December	Ggazelle	143
42	1997	February	Ggazelle	62
43	1997	April	Ggazelle	96

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
44	1997	June	Ggazelle	143
45	1997	August	Ggazelle	105
46	1997	October	Ggazelle	103
47	1998	February	Ggazelle	67
48	1998	April	Ggazelle	28
49	1998	October	Ggazelle	45
50	1998	December	Ggazelle	75
51	1999	February	Ggazelle	67
52	1999	April	Ggazelle	88
53	1999	June	Ggazelle	149
54	1999	August	Ggazelle	44
55	1999	October	Ggazelle	64
56	1999	December	Ggazelle	88
57	2000	February	Ggazelle	143
58	2000	April	Ggazelle	36
59	2000	June	Ggazelle	91
60	2000	August	Ggazelle	78
61	2000	October	Ggazelle	157
62	2000	December	Ggazelle	118
63	2001	February	Ggazelle	121
64	2001	April	Ggazelle	56
65	2001	June	Ggazelle	167
66	2001	August	Ggazelle	33
67	2001	October	Ggazelle	33
68	2001	December	Ggazelle	66
69	2002	February	Ggazelle	19
70	2002	April	Ggazelle	39
71	2002	June	Ggazelle	100
72	2002	August	Ggazelle	25
73	2002	October	Ggazelle	26
74	2002	December	Ggazelle	102
75	2003	February	Ggazelle	21
76	2003	April	Ggazelle	64
77	2003	June	Ggazelle	67
78	2003	August	Ggazelle	13
79	2003	October	Ggazelle	49
80	2003	December	Ggazelle	70

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
81	2004	February	Ggazelle	34
82	2004	April	Ggazelle	69
83	2004	June	Ggazelle	54
84	2004	August	Ggazelle	110
85	2004	October	Ggazelle	29
86	2004	December	Ggazelle	136
87	2005	February	Ggazelle	73
88	2005	April	Ggazelle	122
89	2005	June	Ggazelle	123
90	2005	August	Ggazelle	103
91	2005	October	Ggazelle	72
92	2005	December	Ggazelle	97
93	2006	February	Ggazelle	107
94	2006	April	Ggazelle	123
95	2006	June	Ggazelle	150
96	2006	August	Ggazelle	49
97	2006	October	Ggazelle	26
98	2006	December	Ggazelle	1
99	2007	February	Ggazelle	56
100	2007	April	Ggazelle	29
101	2007	June	Ggazelle	45
102	2007	August	Ggazelle	48
103	2007	October	Ggazelle	32
104	2007	December	Ggazelle	59
105	2008	February	Ggazelle	55
106	2008	April	Ggazelle	65
107	2008	June	Ggazelle	51
108	2008	August	Ggazelle	73
109	2008	October	Ggazelle	10
110	2008	December	Ggazelle	34
111	2009	February	Ggazelle	94
112	2009	April	Ggazelle	118
113	2009	June	Ggazelle	58
114	2009	August	Ggazelle	90
115	2009	October	Ggazelle	54
116	2010	February	Ggazelle	101
116	2009	December	Ggazelle	78

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
118	2010	April	Ggazelle	107
119	2010	June	Ggazelle	64
120	2010	August	Ggazelle	56
121	2010	October	Ggazelle	102
122	2010	December	Ggazelle	92
123	2011	February	Ggazelle	74
124	2011	April	Ggazelle	97
125	2011	June	Ggazelle	118
1	1989	November	Giraffe	107
2	1990	January	Giraffe	183
3	1990	February	Giraffe	183
4	1990	March	Giraffe	71
5	1990	April	Giraffe	127
6	1990	June	Giraffe	71
7	1990	August	Giraffe	108
8	1990	October	Giraffe	112
9	1990	December	Giraffe	131
10	1991	February	Giraffe	99
11	1991	April	Giraffe	102
12	1991	June	Giraffe	105
13	1991	August	Giraffe	85
14	1991	October	Giraffe	103
15	1991	December	Giraffe	105
16	1992	April	Giraffe	107
17	1992	June	Giraffe	71
18	1992	August	Giraffe	49
19	1992	October	Giraffe	102
20	1992	December	Giraffe	111
21	1993	February	Giraffe	66
22	1993	August	Giraffe	123
23	1993	December	Giraffe	109
24	1994	February	Giraffe	85
25	1994	April	Giraffe	91
26	1994	June	Giraffe	47
27	1994	August	Giraffe	57
28	1994	October	Giraffe	106
29	1994	December	Giraffe	59

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
30	1995	February	Giraffe	58
31	1995	April	Giraffe	73
32	1995	June	Giraffe	40
33	1995	August	Giraffe	98
34	1995	October	Giraffe	31
35	1995	December	Giraffe	71
36	1996	February	Giraffe	95
37	1996	April	Giraffe	96
38	1996	June	Giraffe	74
39	1996	August	Giraffe	73
40	1996	October	Giraffe	93
41	1996	December	Giraffe	125
42	1997	February	Giraffe	80
43	1997	April	Giraffe	49
44	1997	June	Giraffe	68
45	1997	August	Giraffe	58
46	1997	October	Giraffe	93
47	1998	February	Giraffe	37
48	1998	April	Giraffe	76
49	1998	October	Giraffe	70
50	1998	December	Giraffe	60
51	1999	February	Giraffe	120
52	1999	April	Giraffe	70
53	1999	June	Giraffe	44
54	1999	August	Giraffe	68
55	1999	October	Giraffe	48
56	1999	December	Giraffe	88
57	2000	February	Giraffe	34
58	2000	April	Giraffe	80
59	2000	June	Giraffe	50
60	2000	August	Giraffe	91
61	2000	October	Giraffe	79
62	2000	December	Giraffe	75
63	2001	February	Giraffe	66
64	2001	April	Giraffe	20
65	2001	June	Giraffe	56
66	2001	August	Giraffe	79

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
67	2001	October	Giraffe	76
68	2001	December	Giraffe	82
69	2002	February	Giraffe	76
70	2002	April	Giraffe	79
71	2002	June	Giraffe	63
72	2002	August	Giraffe	54
73	2002	October	Giraffe	54
74	2002	December	Giraffe	73
75	2003	February	Giraffe	57
76	2003	April	Giraffe	83
77	2003	June	Giraffe	67
78	2003	August	Giraffe	81
79	2003	October	Giraffe	99
80	2003	December	Giraffe	51
81	2004	February	Giraffe	55
82	2004	April	Giraffe	66
83	2004	June	Giraffe	60
84	2004	August	Giraffe	57
85	2004	October	Giraffe	105
86	2004	December	Giraffe	76
87	2005	February	Giraffe	59
88	2005	April	Giraffe	71
89	2005	June	Giraffe	57
90	2005	August	Giraffe	59
91	2005	October	Giraffe	73
92	2005	December	Giraffe	68
93	2006	February	Giraffe	102
94	2006	April	Giraffe	83
95	2006	June	Giraffe	69
96	2006	August	Giraffe	55
97	2006	October	Giraffe	97
98	2006	December	Giraffe	94
99	2007	February	Giraffe	73
100	2007	April	Giraffe	55
101	2007	June	Giraffe	71
102	2007	August	Giraffe	42
103	2007	October	Giraffe	148

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
104	2007	December	Giraffe	117
105	2008	February	Giraffe	132
106	2008	April	Giraffe	140
107	2008	June	Giraffe	120
108	2008	August	Giraffe	74
109	2008	October	Giraffe	51
110	2008	December	Giraffe	93
111	2009	February	Giraffe	157
112	2009	April	Giraffe	137
113	2009	June	Giraffe	121
114	2009	August	Giraffe	86
115	2009	October	Giraffe	120
116	2009	December	Giraffe	186
117	2010	February	Giraffe	127
118	2010	April	Giraffe	103
119	2010	June	Giraffe	92
120	2010	August	Giraffe	102
121	2010	October	Giraffe	146
122	2010	December	Giraffe	80
123	2011	February	Giraffe	68
124	2011	April	Giraffe	105
125	2011	June	Giraffe	91
1	1989	November	Impala	870
2	1990	January	Impala	1298
3	1990	February	Impala	1298
4	1990	March	Impala	467
5	1990	April	Impala	1111
6	1990	June	Impala	467
7	1990	August	Impala	464
8	1990	October	Impala	587
9	1990	December	Impala	618
10	1991	February	Impala	541
11	1991	April	Impala	928
12	1991	June	Impala	535
13	1991	August	Impala	587
14	1991	October	Impala	463
15	1991	December	Impala	688

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
16	1992	April	Impala	733
17	1992	June	Impala	539
18	1992	August	Impala	442
19	1992	October	Impala	618
20	1992	December	Impala	890
21	1993	February	Impala	462
22	1993	August	Impala	697
23	1993	December	Impala	714
24	1994	February	Impala	562
25	1994	April	Impala	649
26	1994	June	Impala	620
27	1994	August	Impala	625
28	1994	October	Impala	494
29	1994	December	Impala	652
30	1995	February	Impala	409
31	1995	April	Impala	399
32	1995	June	Impala	238
33	1995	August	Impala	543
34	1995	October	Impala	124
35	1995	December	Impala	575
36	1996	February	Impala	728
37	1996	April	Impala	531
38	1996	June	Impala	746
39	1996	August	Impala	437
40	1996	October	Impala	761
41	1996	December	Impala	831
42	1997	February	Impala	742
43	1997	April	Impala	428
44	1997	June	Impala	627
45	1997	August	Impala	297
46	1997	October	Impala	476
47	1998	February	Impala	186
48	1998	April	Impala	324
49	1998	October	Impala	265
50	1998	December	Impala	248
51	1999	February	Impala	434
52	1999	April	Impala	635

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
53	1999	June	Impala	273
54	1999	August	Impala	333
55	1999	October	Impala	301
56	1999	December	Impala	322
57	2000	February	Impala	294
58	2000	April	Impala	307
59	2000	June	Impala	526
60	2000	August	Impala	584
61	2000	October	Impala	580
62	2000	December	Impala	596
63	2001	February	Impala	503
64	2001	April	Impala	203
65	2001	June	Impala	163
66	2001	August	Impala	142
67	2001	October	Impala	286
68	2001	December	Impala	405
69	2002	February	Impala	218
70	2002	April	Impala	213
71	2002	June	Impala	306
72	2002	August	Impala	133
73	2002	October	Impala	189
74	2002	December	Impala	409
75	2003	February	Impala	219
76	2003	April	Impala	176
77	2003	June	Impala	193
78	2003	August	Impala	105
79	2003	October	Impala	176
80	2003	December	Impala	222
81	2004	February	Impala	229
82	2004	April	Impala	155
83	2004	June	Impala	122
84	2004	August	Impala	133
85	2004	October	Impala	246
86	2004	December	Impala	407
87	2005	February	Impala	176
88	2005	April	Impala	289
89	2005	June	Impala	308

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
90	2005	August	Impala	215
91	2005	October	Impala	87
92	2005	December	Impala	390
93	2006	February	Impala	296
94	2006	April	Impala	339
95	2006	June	Impala	161
96	2006	August	Impala	127
97	2006	October	Impala	174
98	2006	December	Impala	331
99	2007	February	Impala	212
100	2007	April	Impala	140
101	2007	June	Impala	266
102	2007	August	Impala	117
103	2007	October	Impala	137
104	2007	December	Impala	230
105	2008	February	Impala	263
106	2008	April	Impala	569
107	2008	June	Impala	375
108	2008	August	Impala	422
109	2008	October	Impala	110
110	2008	December	Impala	463
111	2009	February	Impala	634
112	2009	April	Impala	489
113	2009	June	Impala	620
114	2009	August	Impala	718
115	2009	October	Impala	219
116	2009	December	Impala	811
117	2010	February	Impala	510
118	2010	April	Impala	625
119	2010	June	Impala	396
120	2010	August	Impala	409
121	2010	October	Impala	571
122	2010	December	Impala	606
123	2011	February	Impala	551
124	2011	April	Impala	579
125	2011	June	Impala	713
1	1989	November	Kongoni	420

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
2	1990	January	Kongoni	408
3	1990	February	Kongoni	408
4	1990	March	Kongoni	187
5	1990	April	Kongoni	390
6	1990	June	Kongoni	187
7	1990	August	Kongoni	377
8	1990	October	Kongoni	589
9	1990	December	Kongoni	347
10	1991	February	Kongoni	501
11	1991	April	Kongoni	416
12	1991	June	Kongoni	432
13	1991	August	Kongoni	295
14	1991	October	Kongoni	537
15	1991	December	Kongoni	378
16	1992	April	Kongoni	522
17	1992	June	Kongoni	341
18	1992	August	Kongoni	458
19	1992	October	Kongoni	365
20	1992	December	Kongoni	510
21	1993	February	Kongoni	1
22	1993	August	Kongoni	498
23	1993	December	Kongoni	476
24	1994	February	Kongoni	218
25	1994	April	Kongoni	446
26	1994	June	Kongoni	376
27	1994	August	Kongoni	0
28	1994	October	Kongoni	0
29	1994	December	Kongoni	310
30	1995	February	Kongoni	0
31	1995	April	Kongoni	21
32	1995	June	Kongoni	18
33	1995	August	Kongoni	326
34	1995	October	Kongoni	151
35	1995	December	Kongoni	29
36	1996	February	Kongoni	694
37	1996	April	Kongoni	607
38	1996	June	Kongoni	498

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
39	1996	August	Kongoni	308
40	1996	October	Kongoni	510
41	1996	December	Kongoni	85
42	1997	February	Kongoni	585
43	1997	April	Kongoni	421
44	1997	June	Kongoni	508
45	1997	August	Kongoni	458
46	1997	October	Kongoni	476
47	1998	February	Kongoni	142
48	1998	April	Kongoni	0
49	1998	October	Kongoni	276
50	1998	December	Kongoni	430
51	1999	February	Kongoni	501
52	1999	April	Kongoni	354
53	1999	June	Kongoni	510
54	1999	August	Kongoni	0
55	1999	October	Kongoni	289
56	1999	December	Kongoni	0
57	2000	February	Kongoni	474
58	2000	April	Kongoni	506
59	2000	June	Kongoni	239
60	2000	August	Kongoni	669
61	2000	October	Kongoni	782
62	2000	December	Kongoni	342
63	2001	February	Kongoni	620
64	2001	April	Kongoni	394
65	2001	June	Kongoni	286
66	2001	August	Kongoni	160
67	2001	October	Kongoni	261
68	2001	December	Kongoni	399
69	2002	February	Kongoni	383
70	2002	April	Kongoni	347
71	2002	June	Kongoni	257
72	2002	August	Kongoni	207
73	2002	October	Kongoni	309
74	2002	December	Kongoni	312
75	2003	February	Kongoni	171

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
76	2003	April	Kongoni	276
77	2003	June	Kongoni	242
78	2003	August	Kongoni	114
79	2003	October	Kongoni	251
80	2003	December	Kongoni	344
81	2004	February	Kongoni	282
82	2004	April	Kongoni	296
83	2004	June	Kongoni	263
84	2004	August	Kongoni	246
85	2004	October	Kongoni	439
86	2004	December	Kongoni	267
87	2005	February	Kongoni	351
88	2005	April	Kongoni	415
89	2005	June	Kongoni	340
90	2005	August	Kongoni	324
91	2005	October	Kongoni	391
92	2005	December	Kongoni	476
93	2006	February	Kongoni	784
94	2006	April	Kongoni	700
95	2006	June	Kongoni	209
96	2006	August	Kongoni	208
97	2006	October	Kongoni	477
98	2006	December	Kongoni	264
99	2007	February	Kongoni	206
100	2007	April	Kongoni	244
101	2007	June	Kongoni	229
102	2007	August	Kongoni	249
103	2007	October	Kongoni	301
104	2007	December	Kongoni	293
105	2008	February	Kongoni	362
106	2008	April	Kongoni	308
107	2008	June	Kongoni	270
108	2008	August	Kongoni	357
109	2008	October	Kongoni	191
110	2008	December	Kongoni	387
111	2009	February	Kongoni	319
112	2009	April	Kongoni	736

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
113	2009	June	Kongoni	584
114	2009	August	Kongoni	690
115	2009	October	Kongoni	376
116	2009	December	Kongoni	417
117	2010	February	Kongoni	600
118	2010	April	Kongoni	454
119	2010	June	Kongoni	307
120	2010	August	Kongoni	287
121	2010	October	Kongoni	581
122	2010	December	Kongoni	603
123	2011	February	Kongoni	622
124	2011	April	Kongoni	489
125	2011	June	Kongoni	599
1	1989	November	Ostrich	255
2	1990	January	Ostrich	
3	1990	February	Ostrich	
4	1990	March	Ostrich	
5	1990	April	Ostrich	
6	1990	June	Ostrich	
7	1990	August	Ostrich	
8	1990	October	Ostrich	
9	1990	December	Ostrich	
10	1991	February	Ostrich	
11	1991	April	Ostrich	257
12	1991	June	Ostrich	103
13	1991	August	Ostrich	
14	1991	October	Ostrich	199
15	1991	December	Ostrich	144
16	1992	April	Ostrich	
17	1992	June	Ostrich	
18	1992	August	Ostrich	206
19	1992	October	Ostrich	172
20	1992	December	Ostrich	220
21	1993	February	Ostrich	149
22	1993	August	Ostrich	219
23	1993	December	Ostrich	210
24	1994	February	Ostrich	207

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
25	1994	April	Ostrich	160
26	1994	June	Ostrich	195
27	1994	August	Ostrich	198
28	1994	October	Ostrich	287
29	1994	December	Ostrich	161
30	1995	February	Ostrich	97
31	1995	April	Ostrich	119
32	1995	June	Ostrich	115
33	1995	August	Ostrich	189
34	1995	October	Ostrich	195
35	1995	December	Ostrich	130
41	1996	December	Ostrich	61
42	1997	February	Ostrich	179
43	1997	April	Ostrich	93
44	1997	June	Ostrich	98
45	1997	August	Ostrich	141
46	1997	October	Ostrich	175
47	1998	February	Ostrich	73
48	1998	April	Ostrich	85
49	1998	October	Ostrich	115
50	1998	December	Ostrich	102
51	1999	February	Ostrich	192
52	1999	April	Ostrich	163
53	1999	June	Ostrich	96
54	1999	August	Ostrich	121
55	1999	October	Ostrich	107
56	1999	December	Ostrich	157
57	2000	February	Ostrich	130
58	2000	April	Ostrich	118
59	2000	June	Ostrich	76
60	2000	August	Ostrich	188
61	2000	October	Ostrich	188
62	2000	December	Ostrich	79
63	2001	February	Ostrich	120
64	2001	April	Ostrich	35
65	2001	June	Ostrich	95
66	2001	August	Ostrich	120

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
67	2001	October	Ostrich	176
68	2001	December	Ostrich	39
69	2002	February	Ostrich	68
70	2002	April	Ostrich	60
71	2002	June	Ostrich	73
72	2002	August	Ostrich	85
73	2002	October	Ostrich	107
74	2002	December	Ostrich	24
75	2003	February	Ostrich	49
76	2003	April	Ostrich	79
77	2003	June	Ostrich	114
78	2003	August	Ostrich	82
79	2003	October	Ostrich	124
80	2003	December	Ostrich	119
81	2004	February	Ostrich	107
82	2004	April	Ostrich	63
83	2004	June	Ostrich	83
84	2004	August	Ostrich	98
85	2004	October	Ostrich	78
86	2004	December	Ostrich	123
87	2005	February	Ostrich	128
88	2005	April	Ostrich	89
89	2005	June	Ostrich	82
90	2005	August	Ostrich	105
91	2005	October	Ostrich	126
92	2005	December	Ostrich	110
93	2006	February	Ostrich	196
94	2006	April	Ostrich	188
95	2006	June	Ostrich	32
96	2006	August	Ostrich	102
97	2006	October	Ostrich	157
98	2006	December	Ostrich	60
99	2007	February	Ostrich	38
100	2007	April	Ostrich	66
101	2007	June	Ostrich	64
102	2007	August	Ostrich	67
103	2007	October	Ostrich	137

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Survey	Year	Month	Species	Number
104	2007	December	Ostrich	55
105	2008	February	Ostrich	116
106	2008	April	Ostrich	25
107	2008	June	Ostrich	55
108	2008	August	Ostrich	108
109	2008	October	Ostrich	51
110	2008	December	Ostrich	58
111	2009	February	Ostrich	39
112	2009	April	Ostrich	99
113	2009	June	Ostrich	93
114	2009	August	Ostrich	137
115	2009	October	Ostrich	78
116	2009	December	Ostrich	84
117	2010	February	Ostrich	147
118	2010	April	Ostrich	23
119	2010	June	Ostrich	41
120	2010	August	Ostrich	88
121	2010	October	Ostrich	139
122	2010	December	Ostrich	94
123	2011	February	Ostrich	59
124	2011	April	Ostrich	62
125	2011	June	Ostrich	97
1	1989	November	Tgazelle	195
2	1990	January	Tgazelle	292
3	1990	February	Tgazelle	292
4	1990	March	Tgazelle	100
5	1990	April	Tgazelle	283
6	1990	June	Tgazelle	100
7	1990	August	Tgazelle	55
8	1990	October	Tgazelle	55
9	1990	December	Tgazelle	130
10	1991	February	Tgazelle	88
11	1991	April	Tgazelle	223
12	1991	June	Tgazelle	84
13	1991	August	Tgazelle	78
14	1991	October	Tgazelle	133
15	1991	December	Tgazelle	66

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
16	1992	April	Tgazelle	163
17	1992	June	Tgazelle	36
18	1992	August	Tgazelle	50
19	1992	October	Tgazelle	106
20	1992	December	Tgazelle	44
21	1993	February	Tgazelle	3
22	1993	August	Tgazelle	125
23	1993	December	Tgazelle	99
24	1994	February	Tgazelle	209
25	1994	April	Tgazelle	233
26	1994	June	Tgazelle	31
27	1994	August	Tgazelle	54
28	1994	October	Tgazelle	108
29	1994	December	Tgazelle	65
30	1995	February	Tgazelle	51
31	1995	April	Tgazelle	24
32	1995	June	Tgazelle	39
33	1995	August	Tgazelle	63
34	1995	October	Tgazelle	28
35	1995	December	Tgazelle	82
36	1996	February	Tgazelle	146
37	1996	April	Tgazelle	149
38	1996	June	Tgazelle	169
39	1996	August	Tgazelle	133
40	1996	October	Tgazelle	190
41	1996	December	Tgazelle	143
42	1997	February	Tgazelle	191
43	1997	April	Tgazelle	96
44	1997	June	Tgazelle	139
45	1997	August	Tgazelle	110
46	1997	October	Tgazelle	102
47	1998	February	Tgazelle	173
48	1998	April	Tgazelle	53
49	1998	October	Tgazelle	31
50	1998	December	Tgazelle	92
51	1999	February	Tgazelle	52
52	1999	April	Tgazelle	97

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
53	1999	June	Tgazelle	72
54	1999	August	Tgazelle	57
55	1999	October	Tgazelle	176
56	1999	December	Tgazelle	52
57	2000	February	Tgazelle	271
58	2000	April	Tgazelle	167
59	2000	June	Tgazelle	90
60	2000	August	Tgazelle	277
61	2000	October	Tgazelle	111
62	2000	December	Tgazelle	119
63	2001	February	Tgazelle	245
64	2001	April	Tgazelle	81
65	2001	June	Tgazelle	91
66	2001	August	Tgazelle	30
67	2001	October	Tgazelle	52
68	2001	December	Tgazelle	133
69	2002	February	Tgazelle	17
70	2002	April	Tgazelle	194
71	2002	June	Tgazelle	167
72	2002	August	Tgazelle	42
73	2002	October	Tgazelle	86
74	2002	December	Tgazelle	173
75	2003	February	Tgazelle	2
76	2003	April	Tgazelle	131
77	2003	June	Tgazelle	119
78	2003	August	Tgazelle	0
79	2003	October	Tgazelle	56
80	2003	December	Tgazelle	9
81	2004	February	Tgazelle	64
82	2004	April	Tgazelle	89
83	2004	June	Tgazelle	84
84	2004	August	Tgazelle	111
85	2004	October	Tgazelle	49
86	2004	December	Tgazelle	58
87	2005	February	Tgazelle	146
88	2005	April	Tgazelle	126
89	2005	June	Tgazelle	94

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
90	2005	August	Tgazelle	74
91	2005	October	Tgazelle	46
92	2005	December	Tgazelle	47
93	2006	February	Tgazelle	130
94	2006	April	Tgazelle	130
95	2006	June	Tgazelle	68
96	2006	August	Tgazelle	51
97	2006	October	Tgazelle	84
98	2006	December	Tgazelle	1
99	2007	February	Tgazelle	40
100	2007	April	Tgazelle	54
101	2007	June	Tgazelle	106
102	2007	August	Tgazelle	84
103	2007	October	Tgazelle	44
104	2007	December	Tgazelle	96
105	2008	February	Tgazelle	42
106	2008	April	Tgazelle	170
107	2008	June	Tgazelle	35
108	2008	August	Tgazelle	58
109	2008	October	Tgazelle	13
110	2008	December	Tgazelle	91
111	2009	February	Tgazelle	98
112	2009	April	Tgazelle	277
113	2009	June	Tgazelle	74
114	2009	August	Tgazelle	108
115	2009	October	Tgazelle	120
116	2009	December	Tgazelle	268
117	2010	February	Tgazelle	134
118	2010	April	Tgazelle	89
119	2010	June	Tgazelle	154
120	2010	August	Tgazelle	115
121	2010	October	Tgazelle	214
122	2010	December	Tgazelle	182
123	2011	February	Tgazelle	170
124	2011	April	Tgazelle	264
125	2011	June	Tgazelle	170
1	1989	November	Warthog	53

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
2	1990	January	Warthog	65
3	1990	February	Warthog	
4	1990	March	Warthog	40
5	1990	April	Warthog	
6	1990	June	Warthog	
7	1990	August	Warthog	
8	1990	October	Warthog	
9	1990	December	Warthog	
10	1991	February	Warthog	
11	1991	April	Warthog	
12	1991	June	Warthog	
13	1991	August	Warthog	
14	1991	October	Warthog	51
15	1991	December	Warthog	99
16	1992	April	Warthog	127
17	1992	June	Warthog	46
18	1992	August	Warthog	41
19	1992	October	Warthog	51
20	1992	December	Warthog	
21	1993	February	Warthog	32
22	1993	August	Warthog	83
23	1993	December	Warthog	134
24	1994	February	Warthog	220
25	1994	April	Warthog	223
26	1994	June	Warthog	79
27	1994	August	Warthog	97
28	1994	October	Warthog	87
29	1994	December	Warthog	71
30	1995	February	Warthog	133
31	1995	April	Warthog	80
32	1995	June	Warthog	10
33	1995	August	Warthog	81
34	1995	October	Warthog	29
35	1995	December	Warthog	32
41	1996	December	Warthog	97
42	1997	February	Warthog	73
43	1997	April	Warthog	39

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
44	1997	June	Warthog	39
45	1997	August	Warthog	37
46	1997	October	Warthog	36
47	1998	February	Warthog	22
48	1998	April	Warthog	13
49	1998	October	Warthog	21
50	1998	December	Warthog	29
51	1999	February	Warthog	45
52	1999	April	Warthog	41
53	1999	June	Warthog	18
54	1999	August	Warthog	23
55	1999	October	Warthog	31
56	1999	December	Warthog	13
57	2000	February	Warthog	67
58	2000	April	Warthog	19
59	2000	June	Warthog	49
60	2000	August	Warthog	52
61	2000	October	Warthog	59
62	2000	December	Warthog	50
63	2001	February	Warthog	4
64	2001	April	Warthog	0
65	2001	June	Warthog	11
66	2001	August	Warthog	4
67	2001	October	Warthog	9
68	2001	December	Warthog	9
69	2002	February	Warthog	3
70	2002	April	Warthog	13
71	2002	June	Warthog	0
72	2002	August	Warthog	0
73	2002	October	Warthog	13
74	2002	December	Warthog	16
75	2003	February	Warthog	3
76	2003	April	Warthog	12
77	2003	June	Warthog	0
78	2003	August	Warthog	2
79	2003	October	Warthog	4
80	2003	December	Warthog	28

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
81	2004	February	Warthog	11
82	2004	April	Warthog	5
83	2004	June	Warthog	5
84	2004	August	Warthog	2
85	2004	October	Warthog	3
86	2004	December	Warthog	3
87	2005	February	Warthog	7
88	2005	April	Warthog	20
89	2005	June	Warthog	1
90	2005	August	Warthog	0
91	2005	October	Warthog	11
92	2005	December	Warthog	7
93	2006	February	Warthog	37
94	2006	April	Warthog	36
95	2006	June	Warthog	15
96	2006	August	Warthog	3
97	2006	October	Warthog	11
98	2006	December	Warthog	4
99	2007	February	Warthog	12
100	2007	April	Warthog	17
101	2007	June	Warthog	10
102	2007	August	Warthog	4
103	2007	October	Warthog	4
104	2007	December	Warthog	17
105	2008	February	Warthog	17
106	2008	April	Warthog	37
107	2008	June	Warthog	7
108	2008	August	Warthog	10
109	2008	October	Warthog	12
110	2008	December	Warthog	37
111	2009	February	Warthog	38
112	2009	April	Warthog	91
113	2009	June	Warthog	29
114	2009	August	Warthog	37
115	2009	October	Warthog	30
116	2009	December	Warthog	33
117	2010	February	Warthog	46

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
118	2010	April	Warthog	17
119	2010	June	Warthog	21
120	2010	August	Warthog	12
121	2010	October	Warthog	27
122	2010	December	Warthog	28
123	2011	February	Warthog	37
124	2011	April	Warthog	21
125	2011	June	Warthog	19
1	1989	November	Waterbuck	91
2	1990	January	Waterbuck	125
3	1990	February	Waterbuck	
4	1990	March	Waterbuck	56
5	1990	April	Waterbuck	
6	1990	June	Waterbuck	
7	1990	August	Waterbuck	
8	1990	October	Waterbuck	
9	1990	December	Waterbuck	
10	1991	February	Waterbuck	
11	1991	April	Waterbuck	
12	1991	June	Waterbuck	
13	1991	August	Waterbuck	
14	1991	October	Waterbuck	12
15	1991	December	Waterbuck	43
16	1992	April	Waterbuck	63
17	1992	June	Waterbuck	11
18	1992	August	Waterbuck	24
19	1992	October	Waterbuck	32
20	1992	December	Waterbuck	11
21	1993	February	Waterbuck	46
22	1993	August	Waterbuck	6
23	1993	December	Waterbuck	29
24	1994	February	Waterbuck	27
25	1994	April	Waterbuck	28
26	1994	June	Waterbuck	25
27	1994	August	Waterbuck	19
28	1994	October	Waterbuck	58
29	1994	December	Waterbuck	14

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
30	1995	February	Waterbuck	18
31	1995	April	Waterbuck	29
32	1995	June	Waterbuck	16
33	1995	August	Waterbuck	31
34	1995	October	Waterbuck	4
35	1995	December	Waterbuck	36
41	1996	December	Waterbuck	33
42	1997	February	Waterbuck	29
43	1997	April	Waterbuck	24
44	1997	June	Waterbuck	15
45	1997	August	Waterbuck	31
46	1997	October	Waterbuck	10
47	1998	February	Waterbuck	10
48	1998	April	Waterbuck	23
49	1998	October	Waterbuck	14
50	1998	December	Waterbuck	8
51	1999	February	Waterbuck	22
52	1999	April	Waterbuck	17
53	1999	June	Waterbuck	7
54	1999	August	Waterbuck	26
55	1999	October	Waterbuck	19
56	1999	December	Waterbuck	15
57	2000	February	Waterbuck	31
58	2000	April	Waterbuck	26
59	2000	June	Waterbuck	23
60	2000	August	Waterbuck	22
61	2000	October	Waterbuck	8
62	2000	December	Waterbuck	29
63	2001	February	Waterbuck	19
64	2001	April	Waterbuck	6
65	2001	June	Waterbuck	10
66	2001	August	Waterbuck	14
67	2001	October	Waterbuck	1
68	2001	December	Waterbuck	17
69	2002	February	Waterbuck	6
70	2002	April	Waterbuck	18
71	2002	June	Waterbuck	8

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
72	2002	August	Waterbuck	14
73	2002	October	Waterbuck	2
74	2002	December	Waterbuck	7
75	2003	February	Waterbuck	3
76	2003	April	Waterbuck	1
77	2003	June	Waterbuck	11
78	2003	August	Waterbuck	12
79	2003	October	Waterbuck	6
80	2003	December	Waterbuck	13
81	2004	February	Waterbuck	20
82	2004	April	Waterbuck	1
83	2004	June	Waterbuck	2
84	2004	August	Waterbuck	2
85	2004	October	Waterbuck	11
86	2004	December	Waterbuck	22
87	2005	February	Waterbuck	9
88	2005	April	Waterbuck	8
89	2005	June	Waterbuck	24
90	2005	August	Waterbuck	15
91	2005	October	Waterbuck	10
92	2005	December	Waterbuck	8
93	2006	February	Waterbuck	18
94	2006	April	Waterbuck	19
95	2006	June	Waterbuck	3
96	2006	August	Waterbuck	10
97	2006	October	Waterbuck	6
98	2006	December	Waterbuck	6
99	2007	February	Waterbuck	8
100	2007	April	Waterbuck	1
101	2007	June	Waterbuck	11
102	2007	August	Waterbuck	11
103	2007	October	Waterbuck	3
104	2007	December	Waterbuck	10
105	2008	February	Waterbuck	7
106	2008	April	Waterbuck	17
107	2008	June	Waterbuck	3
108	2008	August	Waterbuck	6

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
109	2008	October	Waterbuck	0
110	2008	December	Waterbuck	38
111	2009	February	Waterbuck	10
112	2009	April	Waterbuck	22
113	2009	June	Waterbuck	57
114	2009	August	Waterbuck	38
115	2009	October	Waterbuck	9
116	2009	December	Waterbuck	24
117	2010	February	Waterbuck	32
118	2010	April	Waterbuck	9
119	2010	June	Waterbuck	1
120	2010	August	Waterbuck	13
121	2010	October	Waterbuck	7
122	2010	December	Waterbuck	8
123	2011	February	Waterbuck	15
124	2011	April	Waterbuck	11
125	2011	June	Waterbuck	6
1	1989	November	Wildebeest	28
2	1990	January	Wildebeest	19
3	1990	February	Wildebeest	19
4	1990	March	Wildebeest	0
5	1990	April	Wildebeest	19
6	1990	June	Wildebeest	0
7	1990	August	Wildebeest	6493
8	1990	October	Wildebeest	9742
9	1990	December	Wildebeest	31
10	1991	February	Wildebeest	624
11	1991	April	Wildebeest	1031
12	1991	June	Wildebeest	24
13	1991	August	Wildebeest	747
14	1991	October	Wildebeest	8247
15	1991	December	Wildebeest	10
16	1992	April	Wildebeest	6115
17	1992	June	Wildebeest	49
18	1992	August	Wildebeest	3310
19	1992	October	Wildebeest	4187
20	1992	December	Wildebeest	121

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Survey	Year	Month	Species	Number
21	1993	February	Wildebeest	39
22	1993	August	Wildebeest	7856
23	1993	December	Wildebeest	4404
24	1994	February	Wildebeest	1122
25	1994	April	Wildebeest	28
26	1994	June	Wildebeest	0
27	1994	August	Wildebeest	5804
28	1994	October	Wildebeest	6774
29	1994	December	Wildebeest	0
30	1995	February	Wildebeest	3
31	1995	April	Wildebeest	0
32	1995	June	Wildebeest	7
33	1995	August	Wildebeest	5735
34	1995	October	Wildebeest	2462
35	1995	December	Wildebeest	370
36	1996	February	Wildebeest	6235
37	1996	April	Wildebeest	8
38	1996	June	Wildebeest	21
39	1996	August	Wildebeest	5170
40	1996	October	Wildebeest	7676
41	1996	December	Wildebeest	254
42	1997	February	Wildebeest	2373
43	1997	April	Wildebeest	1007
44	1997	June	Wildebeest	89
45	1997	August	Wildebeest	1413
46	1997	October	Wildebeest	6939
47	1998	February	Wildebeest	2
48	1998	April	Wildebeest	9
49	1998	October	Wildebeest	703
50	1998	December	Wildebeest	66
51	1999	February	Wildebeest	1815
52	1999	April	Wildebeest	91
53	1999	June	Wildebeest	21
54	1999	August	Wildebeest	1569
55	1999	October	Wildebeest	1145
56	1999	December	Wildebeest	7
57	2000	February	Wildebeest	0

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
58	2000	April	Wildebeest	1509
59	2000	June	Wildebeest	2527
60	2000	August	Wildebeest	4733
61	2000	October	Wildebeest	5429
62	2000	December	Wildebeest	1022
63	2001	February	Wildebeest	7
64	2001	April	Wildebeest	0
65	2001	June	Wildebeest	7
66	2001	August	Wildebeest	73
67	2001	October	Wildebeest	29
68	2001	December	Wildebeest	2
69	2002	February	Wildebeest	0
70	2002	April	Wildebeest	8
71	2002	June	Wildebeest	0
72	2002	August	Wildebeest	24
73	2002	October	Wildebeest	64
74	2002	December	Wildebeest	33
75	2003	February	Wildebeest	0
76	2003	April	Wildebeest	1
77	2003	June	Wildebeest	0
78	2003	August	Wildebeest	0
79	2003	October	Wildebeest	97
80	2003	December	Wildebeest	0
81	2004	February	Wildebeest	16
82	2004	April	Wildebeest	102
83	2004	June	Wildebeest	73
84	2004	August	Wildebeest	110
85	2004	October	Wildebeest	249
86	2004	December	Wildebeest	101
87	2005	February	Wildebeest	26
88	2005	April	Wildebeest	93
89	2005	June	Wildebeest	23
90	2005	August	Wildebeest	179
91	2005	October	Wildebeest	590
92	2005	December	Wildebeest	799
93	2006	February	Wildebeest	707
94	2006	April	Wildebeest	285

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Survey	Year	Month	Species	Number
95	2006	June	Wildebeest	71
96	2006	August	Wildebeest	116
97	2006	October	Wildebeest	178
98	2006	December	Wildebeest	10
99	2007	February	Wildebeest	88
100	2007	April	Wildebeest	97
101	2007	June	Wildebeest	41
102	2007	August	Wildebeest	35
103	2007	October	Wildebeest	169
104	2007	December	Wildebeest	134
105	2008	February	Wildebeest	76
106	2008	April	Wildebeest	101
107	2008	June	Wildebeest	148
108	2008	August	Wildebeest	160
109	2008	October	Wildebeest	0
110	2008	December	Wildebeest	59
111	2009	February	Wildebeest	251
112	2009	April	Wildebeest	500
113	2009	June	Wildebeest	383
114	2009	August	Wildebeest	321
115	2009	October	Wildebeest	517
116	2009	December	Wildebeest	457
117	2010	February	Wildebeest	184
118	2010	April	Wildebeest	36
119	2010	June	Wildebeest	130
120	2010	August	Wildebeest	85
121	2010	October	Wildebeest	237
122	2010	December	Wildebeest	12
123	2011	February	Wildebeest	243
124	2011	April	Wildebeest	188
125	2011	June	Wildebeest	108
1	1989	November	Zebra	394
2	1990	January	Zebra	1
3	1990	February	Zebra	0
4	1990	March	Zebra	0
5	1990	April	Zebra	0
6	1990	June	Zebra	0

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Survey	Year	Month	Species	Number
7	1990	August	Zebra	2566
8	1990	October	Zebra	1665
9	1990	December	Zebra	0
10	1991	February	Zebra	1341
11	1991	April	Zebra	1041
12	1991	June	Zebra	0
13	1991	August	Zebra	1189
14	1991	October	Zebra	2886
15	1991	December	Zebra	122
16	1992	April	Zebra	2408
17	1992	June	Zebra	0
18	1992	August	Zebra	2957
19	1992	October	Zebra	2033
20	1992	December	Zebra	20
21	1993	February	Zebra	10
22	1993	August	Zebra	2671
23	1993	December	Zebra	2126
24	1994	February	Zebra	1951
25	1994	April	Zebra	112
26	1994	June	Zebra	15
27	1994	August	Zebra	2583
28	1994	October	Zebra	2478
29	1994	December	Zebra	38
30	1995	February	Zebra	148
31	1995	April	Zebra	5
32	1995	June	Zebra	23
33	1995	August	Zebra	2248
34	1995	October	Zebra	1002
35	1995	December	Zebra	689
36	1996	February	Zebra	2775
37	1996	April	Zebra	131
38	1996	June	Zebra	260
39	1996	August	Zebra	1873
40	1996	October	Zebra	2489
41	1996	December	Zebra	526
42	1997	February	Zebra	2412
42	1997	June	Zebra	175

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Survey	Year	Month	Species	Number
43	1997	April	Zebra	1740
45	1997	August	Zebra	1563
46	1997	October	Zebra	4041
47	1998	February	Zebra	12
48	1998	April	Zebra	2
49	1998	October	Zebra	1454
50	1998	December	Zebra	1270
51	1999	February	Zebra	2140
52	1999	April	Zebra	257
53	1999	June	Zebra	391
54	1999	August	Zebra	1622
55	1999	October	Zebra	2791
56	1999	December	Zebra	44
57	2000	February	Zebra	889
58	2000	April	Zebra	2530
59	2000	June	Zebra	2641
60	2000	August	Zebra	3415
61	2000	October	Zebra	2642
62	2000	December	Zebra	1327
63	2001	February	Zebra	83
64	2001	April	Zebra	63
65	2001	June	Zebra	58
66	2001	August	Zebra	353
67	2001	October	Zebra	2168
68	2001	December	Zebra	59
69	2002	February	Zebra	9
70	2002	April	Zebra	114
71	2002	June	Zebra	157
72	2002	August	Zebra	915
73	2002	October	Zebra	1403
74	2002	December	Zebra	126
75	2003	February	Zebra	4
76	2003	April	Zebra	423
77	2003	June	Zebra	105
78	2003	August	Zebra	30
79	2003	October	Zebra	1639
80	2003	December	Zebra	26

Supplementary Material E. Contd.....

Survey	Year	Month	Species	Number
81	2004	February	Zebra	293
82	2004	April	Zebra	462
83	2004	June	Zebra	93
84	2004	August	Zebra	1235
85	2004	October	Zebra	3097
86	2004	December	Zebra	234
87	2005	February	Zebra	1194
88	2005	April	Zebra	1817
89	2005	June	Zebra	160
90	2005	August	Zebra	1462
91	2005	October	Zebra	2206
92	2005	December	Zebra	2035
93	2006	February	Zebra	3154
94	2006	April	Zebra	650
95	2006	June	Zebra	45
96	2006	August	Zebra	1217
97	2006	October	Zebra	2347
98	2006	December	Zebra	388
99	2007	February	Zebra	519
100	2007	April	Zebra	195
101	2007	June	Zebra	522
102	2007	August	Zebra	1251
103	2007	October	Zebra	2146
104	2007	December	Zebra	1131
105	2008	February	Zebra	1294
106	2008	April	Zebra	722
107	2008	June	Zebra	741
108	2008	August	Zebra	935
109	2008	October	Zebra	608
110	2008	December	Zebra	70
111	2009	February	Zebra	1676
112	2009	April	Zebra	2385
113	2009	June	Zebra	1192
114	2009	August	Zebra	1686
115	2009	October	Zebra	2004
116	2009	December	Zebra	1391
117	2010	February	Zebra	1071

SupplementaryMaterial E. Contd.....

Survey	Year	Month	Species	Number
118	2010	April	Zebra	212
119	2010	June	Zebra	959
120	2010	August	Zebra	587
121	2010	October	Zebra	1982
122	2010	December	Zebra	1535
123	2011	February	Zebra	959
124	2011	April	Zebra	685
125	2011	June	Zebra	772