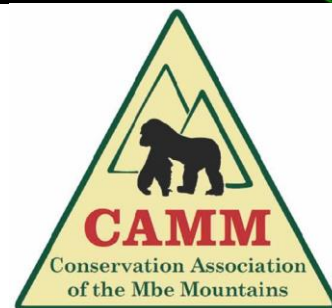


**WILDLIFE CONSERVATION SOCIETY
MBE MOUNTAINS COMMUNITY WILDLIFE SANCTUARY
QUARTERLY REPORT: JANUARY – MARCH 2020**



Prepared by:
Jonathan Eban
WCS Nigeria Program

Summary

This report presents results of anti-poaching patrols of the Mbe Mountains conducted by Mbe eco-guards from January to March 2020 and supported by Wildlife Conservation Society (WCS). It includes results of joint patrols of the corridor between Mbe and the Okwangwo Division of Cross River National Park (CRNP) by Mbe eco-guards and CRNP rangers. Thirty-three anti-poaching and gorilla monitoring patrols were completed this quarter covering a total distance of 1,379 kilometres over 209 patrol days (916 person-days). Ten people were arrested, four for hunting and six for unsustainable harvesting of non-timber forest products (NTFPs) and reported to the Conservation Association of Mbe Mountains (CAMM) for sanctions. Other signs of hunting encountered during the patrols were 838 wire snares, 154 empty cartridges, 10 hunting camps, and 2 gunshots heard. All wire snares and hunting camps found were destroyed. Thirteen logging sites were also discovered. Great ape evidence recorded include 5 sightings and 29 nest sites. Gorillas were sighted on 3 occasions (14, 11, & 16 individuals respectively) and chimpanzee twice (9 & 10 individuals respectively). Of the 29 ape nest sites, 21 were gorilla and 8 chimpanzee. Other primates sighted were drill (sighted on 19 occasions), red-eared monkey (sighted 14 times), Mona monkey (sighted 72 times), and putty-nosed monkey (sighted 33 times).

Methods

Patrols carried out by 16 eco-guards with support from CRNP rangers within January and March 2020 (Appendix III). Rangers and eco-guards arranged in teams between 6 to 8 members based at different camps to carried out patrols each team patrolling different sectors of Mbe Mountains and along the wildlife corridor linking Mbe and Okwangwo range, CRNP running concurrently. Data collected using CyberTracker-software running on handheld computer devices and analyzed using SMART software (<http://smartconservationtools.org/>)

Results

Patrol effort

Thirty-three patrols were completed this quarter covering a total distance of 1,379 kilometres in 209 patrol days or 916 person-days (Table1; Figure1; Appendix I).

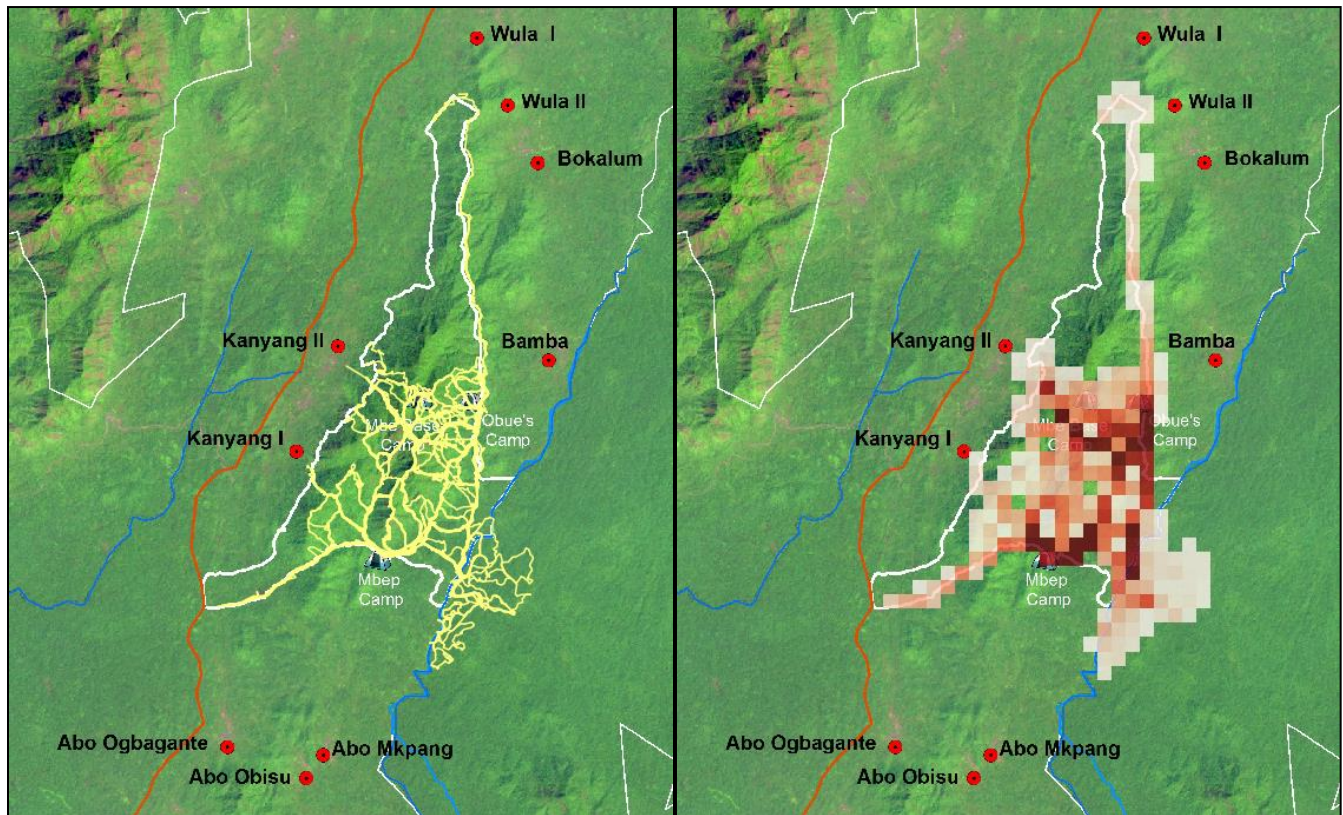


Figure 1. Patrol track-logs and patrol effort in grid cell recorded from January to March 2020. (NOTE: Darker red color indicates areas of more intense patrol coverage).

Table 1. Summary of patrol effort from January to March 2020.

Patrol id	Number of patrols	Number of days	Distance (km)	Person - days
mbe_mts_000279	1	8	62.3	24
mbe_mts_000280	1	8	58.0	24
mbe_mts_000281	1	9	56.8	23
mbe_mts_000282	1	8	50.5	24
mbe_mts_000283	1	6	42.1	12
mbe_mts_000284	1	6	46.1	12
mbe_mts_000285	1	6	41.0	18
mbe_mts_000286	1	6	53.2	18
mbe_mts_000287	1	9	28.7	27
mbe_mts_000288	1	6	44.0	18
mbe_mts_000289	1	6	43.2	18
mbe_mts_000290	1	5	19.0	20
mbe_mts_000291	1	6	50.5	24
mbe_mts_000292	1	6	43.5	30
mbe_mts_000293	1	7	13.4	21
mbe_mts_000294	1	6	34.0	42
mbe_mts_000295	1	5	39.8	35
mbe_mts_000296	1	6	47.8	48
mbe_mts_000297	1	5	43.7	40
mbe_mts_000298	1	2	5.6	26
mbe_mts_000299	1	6	35.5	18
mbe_mts_000300	1	5	32.0	15
mbe_mts_000301	1	6	38.6	18
mbe_mts_000302	1	6	33.6	18
mbe_mts_000303	1	6	48.7	24
mbe_mts_000304	1	8	74.2	61
mbe_mts_000305	1	5	7.8	10
mbe_mts_000306	1	8	59.4	64
mbe_mts_000307	1	8	49.3	32
mbe_mts_000308	1	7	59.2	98
mbe_mts_000309	1	6	30.2	18
mbe_mts_000310	1	6	50.6	18
mbe_mts_000311	1	6	37.0	18
Total	33	209	1379.4	916

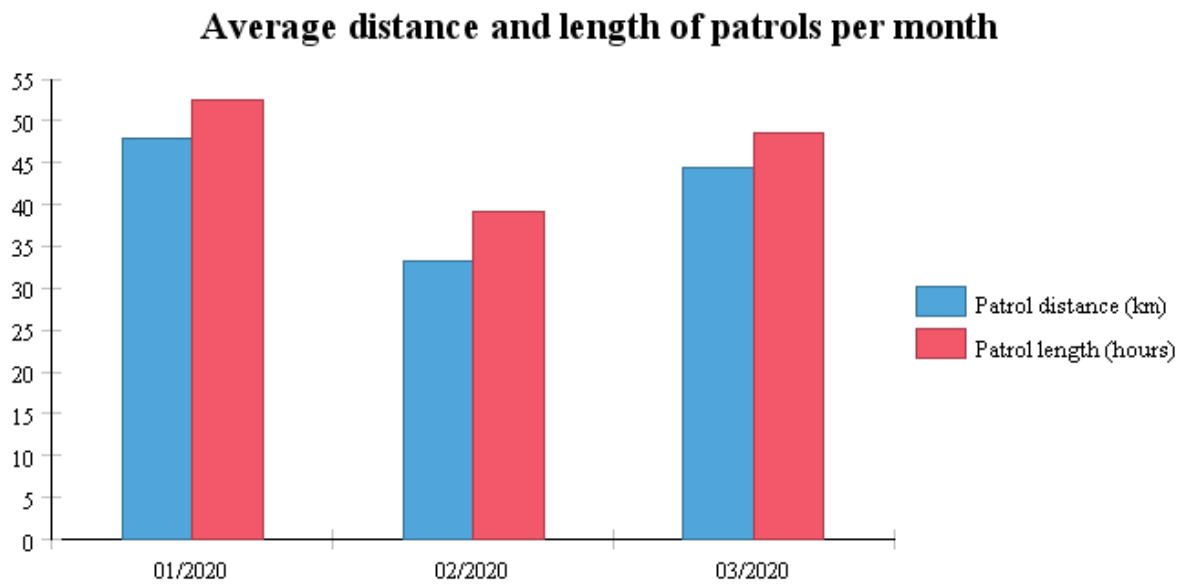


Figure 2. Average distance covered and time taken per patrol per month from January to March 2020.

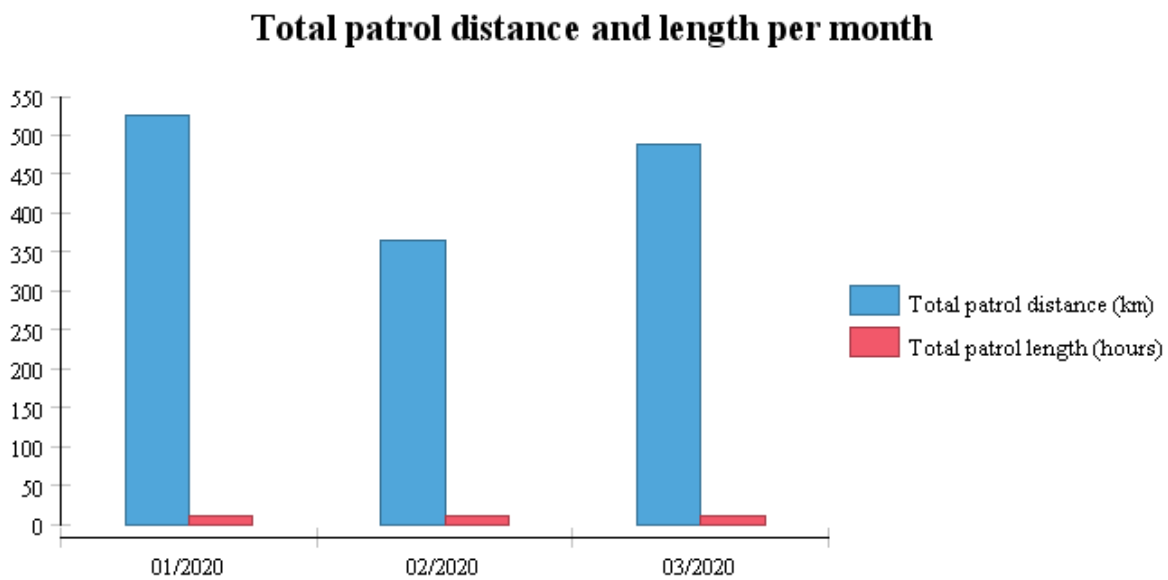


Figure 3. Total patrol distance and time per month from January to March 2020.

Law Enforcement

Ten persons were arrested including four hunters six people arrested for unsustainable harvesting of NTFPs. All offenders apprehended were reported to CAMM for sanctions. Other signs of human activity encountered during patrols include 838 wire snares, 154 empty cartridges, 10 illegal camps, 2 gunshots heard and 13 illegal logging incidents.

Table 2. Summary of people seen and other law enforcement from January to March 2020.

Leader	Date	Action taken	Home village	Name	Threat
Jacob Osang	Feb 19, 2020	Apprehended and reported	Bokalum	Osang Macprince	Farming
Jonas Attah	Feb 19, 2020	Apprehended and reported	Abo Ogbagante	Ojong Ogar Otuokwa	Gun hunting
Jonas Attah	Feb 21, 2020	Apprehended and reported	Abo Mkpang	Ekpang Patrick	Gun hunting
Jonas Attah	Mar 17, 2020	Apprehended and reported	Abo Mkpang	Obi Michael	Trapping
Jonas Attah	Mar 17, 2020	Apprehended and reported	Abo Mkpang	Benedict Ushi	Trapping
Mathias Mbua	Mar 27, 2020	Apprehended and reported	Fulani based in Abo Ogbagante	Alu Abdullahi	NTFP Collection
Mathias Mbua	Mar 27, 2020	Apprehended and reported	Fulani based in Abo Ogbagante	Halilu Musa	NTFP Collection
Mathias Mbua	Mar 27, 2020	Apprehended and reported	Fulani based in Abo Ogbagante	Usman Sani	NTFP Collection
Mathias Mbua	Mar 27, 2020	Apprehended and reported	Fulani based in Abo Ogbagante	Sani Shehu Mohamed	NTFP Collection
Mathias Mbua	Mar 27, 2020	Apprehended and reported	Fulani based in Abo Ogbagante	Belo Inusa	NTFP Collection

Table 3. Summary of number of people seen by threat from January to March 2020.

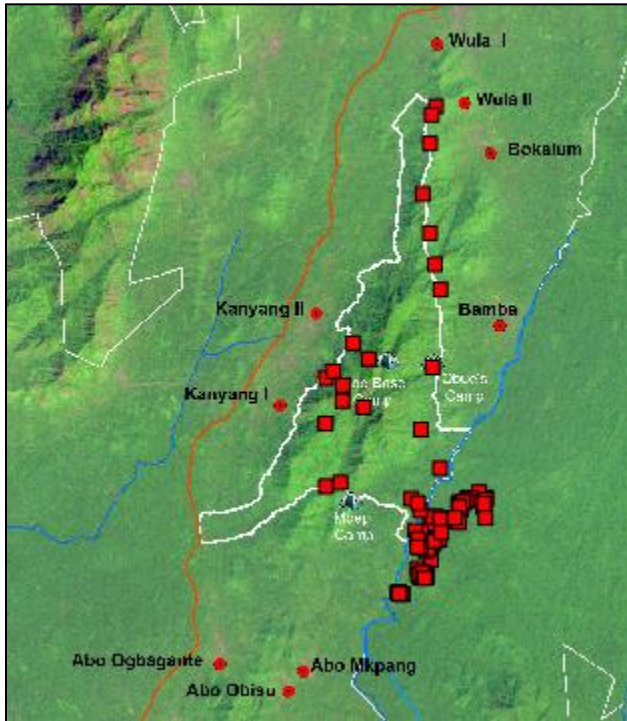
Threat	Number of people seen	Encounter rate per km
Farming	1	0.001
Hunting	4	0.003
NTFP Collection	5	0.004

Table 4. Total encounter rates of signs of human activity from January to March 2020.

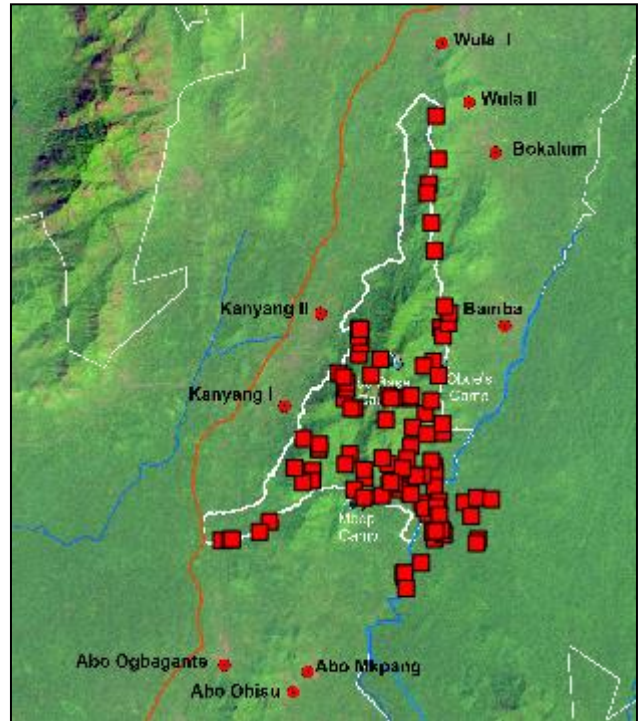
Activity	# of incidents	Encounter rate/km
Farming and land clearing	23	0.017
Gunshot heard	2	0.001
Human sign	141	0.102
Logging and tree cutting	13	0.009
NTFPs	3	0.002
People seen	5	0.004
Shed or camp	10	0.007
Traps, weapons & equipment	232	0.168

Table 5. Details of logging activity recorded from January to March 2020.

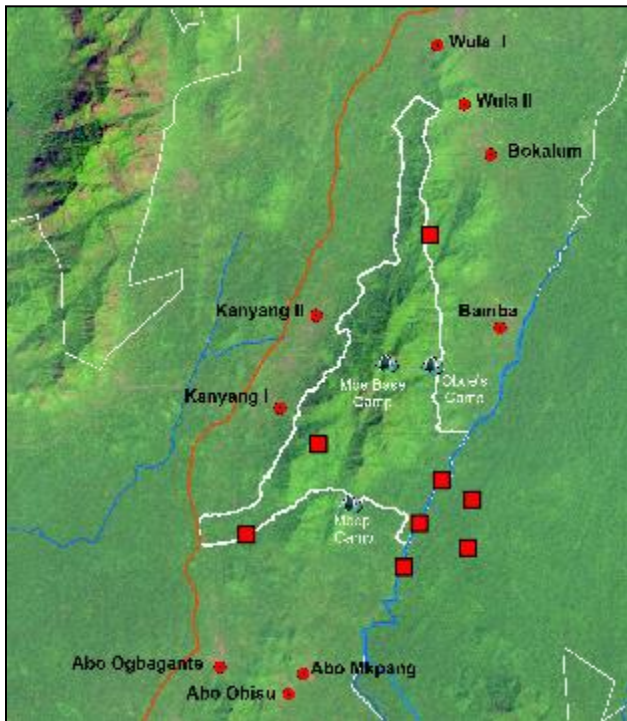
Type of logging evidence	Action taken - items	Age of sign	Number of cut pieces	Number of logs	Tree species
Stump	Seen Only	Old	---	---	Ebony
Stump	Seen Only	Old	---	---	Ebony
Stump	Seen Only	Old	---	---	Ebony
Stump	Seen Only	Very old	---	---	Ebony
Stump	Seen Only	Fresh	---	---	Ebony
Stump	Seen Only	Recent	---	---	Ebony
Stump	Seen Only	Fresh	---	---	Ebony
Stump	Seen Only	Fresh	---	---	Unknown
Stump	Seen Only	Fresh	---	---	Unknown
Logs	Seen Only	Recent	---	1	Other
Cut Pieces	Seen Only	Fresh	1	---	Unknown
Stump	Seen Only	Recent	---	---	Other
Stump	Seen Only	Recent	---	---	Other



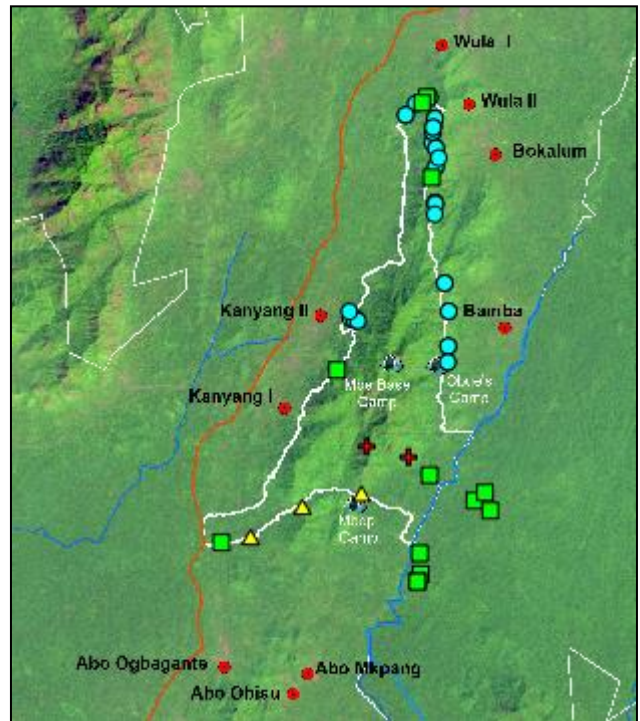
a) Wire snares



b) Empty cartridges



c) Sheds and camps



d) Farms (circles), gunshots heard (crosses), logging in (squares), and NTFPs collection (triangles)

Figure 4. Distribution of all signs of human activity recorded from January to March 2020.

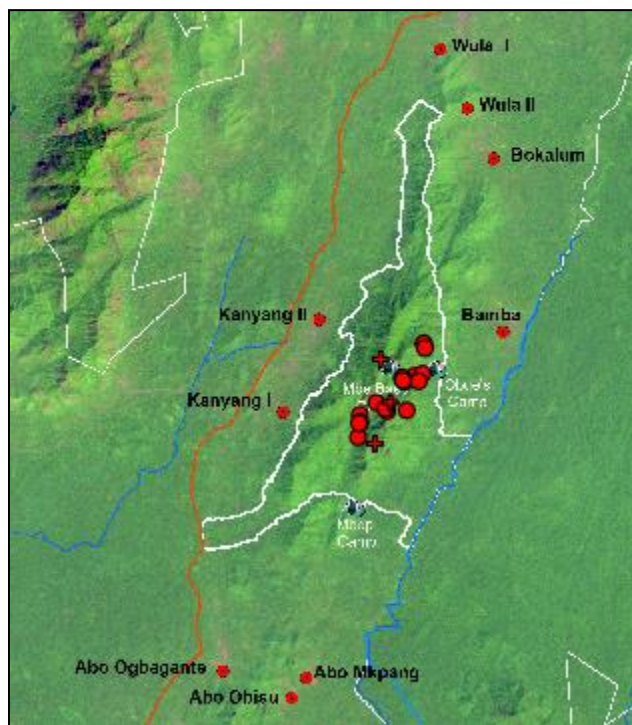
Table 6. Hunting signs recorded from January to March 2020.

Sign	# of observations	Encounter rate/km
Gunshots heard	2	0.001
Set wire snares	806	0.584
Unset wire snares	32	0.023
Empty cartridges	154	0.112
Hunting camps	8	0.006

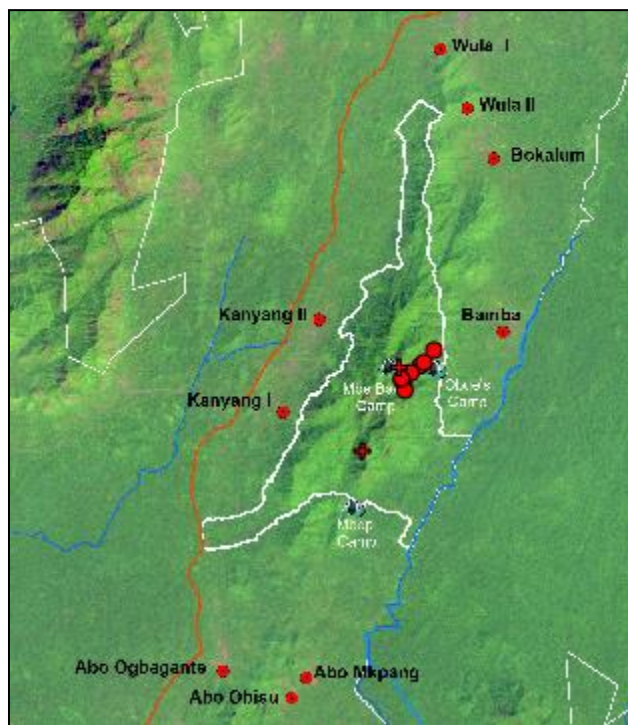
Wildlife Observations

Great apes

Great ape evidence recorded include 5 sightings and 29 nest sites. Gorillas were sighted on 3 occasions (14, 11, & 16 individuals respectively) and chimpanzee twice (9 & 10 individuals respectively). Of the 29 ape nest sites, 21 were gorilla and 8 chimpanzee.



a) Gorillas



b) Chimpanzees

Figure 5. Ape sightings and nest sites recorded from January to March 2020. (NOTE: Nest sites shown as circles, sightings shown as crosses).

Table 7. Ape sightings recorded from January to March 2020.

Date	Species	Number of adult males	Number of adult females	Number age/sex unknown	Total
Jan 8, 2020	Gorilla	2	8	4	14
Jan 28, 2020	Gorilla	1		8	11
Mar 4, 2020	Gorilla	2	5	9	16
Feb 21, 2020	Chimpanzee	0	0	7	10
Mar 4, 2020	Chimpanzee	---	---	7	9

Table 8. Number and encounter rate of nest sites recorded from January to March 2020.

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	8	0.006
Gorilla	20	0.014

Table 9. Nest sites recorded from January to March 2020.

Species	Nest site type	Dung present	Age of sign	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	false	Very old	0	7
Chimpanzee	Night nest(s)	false	Old	0	7
Chimpanzee	Night nest(s)	false	Recent	0	2
Chimpanzee	Night nest(s)	false	Fresh	0	4
Chimpanzee	Night nest(s)	false	Fresh	0	9
Chimpanzee	Night nest(s)	false	Fresh	0	5
Chimpanzee	Night nest(s)	false	Old	0	3
Chimpanzee	Night nest(s)	false	Fresh	1	1
Gorilla	Night nest(s)	false	Fresh	0	1
Gorilla	Day nest(s)	false	Fresh	4	4
Gorilla	Night nest(s)	true	Fresh	4	4
Gorilla	Night nest(s)	false	Recent	1	1
Gorilla	Day nest(s)	false	Recent	1	1
Gorilla	Night nest(s)	false	Fresh	1	1
Gorilla	Night nest(s)	true	Fresh	3	3
Gorilla	Night nest(s)	false	Recent	1	1
Gorilla	Night nest(s)	false	Recent	1	1
Gorilla	Night nest(s)	true	Fresh	3	5
Gorilla	Night nest(s)	true	Fresh	5	5
Gorilla	Night nest(s)	true	Fresh	0	13
Gorilla	Night nest(s)	false	Recent	2	2
Gorilla	Night nest(s)	true	Fresh	6	8
Gorilla	Night nest(s)	false	Fresh	0	11
Gorilla	Night nest(s)	false	Fresh	2	2
Gorilla	Night nest(s)	true	Fresh	0	1
Gorilla	Night nest(s)	false	Fresh	1	1
Gorilla	Night nest(s)	true	Recent	4	11
Gorilla	Night nest(s)	false	Recent	0	1

Other Wildlife

Monkey sightings

Monkeys were sighted a total of 138 times this quarter (Table 10; Figure 6) including drill *Mandrillus leucophaeus* (sighted on 19 occasions), red-eared monkey *Cercopithecus erythrotis* (sighted 14 times), Mona monkey *Cercopithecus mona* (sighted 72 times), and putty-nosed monkey *Cercopithecus nictitans* (sighted 33 times).

Table 10. Number and encounter rate of monkey species sighted from January to March 2020.

Species	Number of observations	Encounter rate
Drill	19	0.014
Mona monkey	72	0.052
Red-eared monkey	14	0.010
Putty-nosed monkey	33	0.024
Total	138	0.100

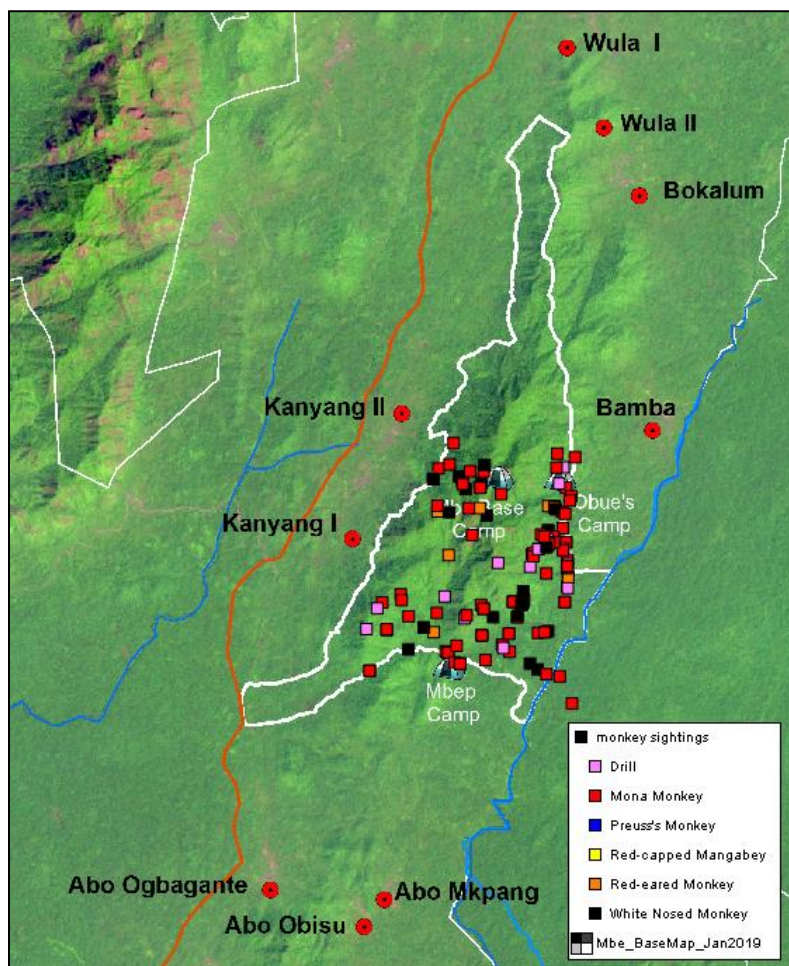


Figure 6. Monkey sightings recorded from January to March 2020.

Other large mammals

Other large mammals recorded this quarter include forest elephant *Loxodonta cyclotis*, forest buffalo *Syncerus caffer*, bushbuck *Tragelophus scriptus*, water chevrotain *Hyemoschus aquaticus*, red river hog *Potamochoerus porcus*, yellow-backed duiker *Cephalophus silvicultor*, (see Appendix II for full list of species recorded). Animals sighted include duikers, red river hog, hyrax, cusimanse, squirrels and bats.

Conservation Education and Awareness

From January to March 2020, WCS facilitated a number of education activities in Mbe aimed at creating awareness and changing local attitudes and behaviors. Activities implemented this quarter include great apes film show in local communities, exchange visits between school conservation clubs for both primary and secondary schools, and guided field trips to different sites including Cross River National Park, Mbe Mountains and Drill Ranch for students to learn conservation methods and challenges. Branded t-shirts and notebooks were distributed during these visits. WCS also joined the rest of the world to celebrate this year's World Pangolin Day and World Wildlife Day.

Support to CAMM and communities

WCS continued to support CAMM in the process to gazette the Mbe Mountains as a community wildlife sanctuary. WCS also supported a joint meeting of the General Assembly, BoT and Management Committee of CAMM to discuss conservation issues including illegal activities reported by eco-guards with more emphasis on strengthening law enforcement to reduce poaching and farmland encroachment. WCS continued to support farmers with training and farm inputs including improved seedlings, tarpaulins for drying cocoa beans, wheelbarrows and boots, as well as construction of small stores for cocoa.

Acknowledgements

WCS is formally registered in Nigeria through an agreement with the Ministry of Budget and National Planning of the Federal Republic of Nigeria. We are grateful to the Great Ape Conservation Fund of the United States Fish and Wildlife Service. We are also grateful to all other donors who support our work in the Mbe Mountains including Darwin Initiative, Critical Ecosystem Partnership Fund (CEPF), Rainforest Trust, Whitley Fund for Nature, Cleveland Metroparks Zoo, and Palmyre Zoo. We thank Dr Richard Bergl of North Carolina Zoo for technical assistance for SMART implementation. WCS is also grateful for the long-term collaboration and support of the Conservation Association of the Mbe Mountains (CAMM). WCS acknowledges the key role played by the Ministry of Climate Change and Forestry and the Cross River State Forestry Commission who is the legal custodian of all forests and wildlife in Cross River State.

Appendix I. Patrol effort statistics recorded from January to March 2020.

Date	Number of patrols	Distance (km)	Number of hours	Number of rangers
2020-01-04	1	4.5	4.4	1
2020-01-05	4	16.3	16.5	12
2020-01-06	4	32.4	33.2	12
2020-01-07	4	30.7	33.9	12
2020-01-08	4	40.0	36.7	12
2020-01-09	4	25.8	34.2	12
2020-01-10	4	24.6	31.8	12
2020-01-11	4	26.4	34.0	12
2020-01-12	4	27.0	27.0	10
2020-01-18	3	12.7	11.5	8
2020-01-19	4	28.7	30.0	11
2020-01-20	4	26.7	18.9	11
2020-01-21	4	24.4	30.7	11
2020-01-22	4	22.0	28.0	11
2020-01-23	4	22.2	31.6	11
2020-01-24	4	25.9	33.0	11
2020-01-25	4	35.0	32.0	11
2020-01-26	4	29.4	34.3	11
2020-01-27	4	33.5	28.7	11
2020-01-28	3	18.3	24.0	8
2020-01-29	3	19.3	23.0	8
2020-02-02	1	1.7	3.3	12
2020-02-04	1	3.8	2.9	14
2020-02-07	2	16.6	13.1	9
2020-02-08	3	15.6	19.5	13
2020-02-09	3	18.9	25.0	13
2020-02-10	3	20.2	25.2	13
2020-02-11	3	19.4	25.0	13
2020-02-12	3	22.2	21.0	13
2020-02-17	3	16.6	16.8	18
2020-02-18	4	20.1	29.3	21
2020-02-19	4	24.2	27.0	21
2020-02-20	4	25.5	29.7	21
2020-02-21	4	15.1	28.5	21
2020-02-22	3	20.3	24.0	18
2020-02-23	4	20.1	29.3	21
2020-02-24	4	18.3	26.8	21
2020-02-25	3	26.2	25.5	18
2020-02-26	3	29.7	27.2	18
2020-02-27	3	23.3	22.6	18

Date	Number of Patrols	Distance (km)	Number of Hours	Number of Rangers
2020-02-28	1	6.9	7.6	3
2020-03-02	3	13.5	12.9	10
2020-03-03	3	22.4	25.2	10
2020-03-04	3	19.2	24.9	10
2020-03-05	3	21.0	25.3	10
2020-03-06	3	25.5	25.0	10
2020-03-07	3	19.3	21.9	10
2020-03-11	3	20.5	18.1	19
2020-03-12	3	20.7	23.4	19
2020-03-13	3	21.6	32.2	19
2020-03-14	4	25.3	36.8	21
2020-03-15	4	19.7	23.3	21
2020-03-16	4	28.0	25.7	21
2020-03-17	4	24.8	26.1	21
2020-03-18	4	30.1	25.8	21
2020-03-21	1	8.9	5.6	14
2020-03-22	1	6.1	6.9	14
2020-03-23	4	22.3	24.2	21
2020-03-24	4	34.3	31.9	21
2020-03-25	4	27.4	34.4	21
2020-03-26	4	30.2	32.2	21
2020-03-27	4	30.0	34.0	21
2020-03-28	3	17.7	19.2	9

Appendix II. Encounter rate of wildlife species observed during patrols from January to March 2020. (NOTE: Species not encountered during patrols not shown).

Species common name	Scientific name	# of observations	Encounter rate/km
Brush-tailed porcupine	<i>Atherurus africanus</i>	928	0.673
Red river hog	<i>Potamochoerus porcus</i>	800	0.580
Cusimanses	<i>Crossarchus sp</i>	558	0.405
Mona monkey	<i>Cercopithecus mona</i>	310	0.225
Crested guinea fowl	<i>Guttera pucherani</i>	209	0.152
Blue duiker	<i>Cephalophus monticola</i>	205	0.149
Putty-nosed monkey	<i>Cercopithecus nictitans</i>	192	0.139
Tree pangolin	<i>Phataginus tricuspis</i>	188	0.136
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	125	0.091
Drill	<i>Mandrillus leucophaeus</i>	95	0.069
Palm civet	<i>Nandinia binotata</i>	92	0.067
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	80	0.058
Cross River gorilla	<i>Gorilla gorilla diehli</i>	64	0.046
Red-eared monkey	<i>Cercopithecus erythrotis</i>	27	0.020
Grey-necked picathartes	<i>Picathartes oreas</i>	23	0.017
African grey parrot	<i>Psittacus erithacus</i>	22	0.016
Cane rat	<i>Thryonomys swinderianus</i>	19	0.014
Ogilby's duiker	<i>Cephalophus ogilbyi</i>	11	0.008
Water chevrotain	<i>Hyemoschus aquaticus</i>	5	0.004
African forest elephant	<i>Loxodonta cyclotis</i>	5	0.004
Forest buffalo	<i>Syncerus caffer</i>	4	0.003
Bushbuck	<i>Tragelaphus scriptus</i>	4	0.003
African civet	<i>Civettictis civetta</i>	2	0.001
Bay duiker	<i>Cephalophus dorsalis</i>	2	0.001

Appendix III. Ranger work time recorded from January to March 2020.

Name	Number of patrols	Number of patrol days	Number of patrol hours	Total patrol distance (km)
Abel Bessong	8	59	398.4	362.1
Benedict Osong	9	57	404.3	388.9
CRNP 1	4	26	217.5	225.0
CRNP 2	4	26	217.5	225.0
CRNP 3	4	26	217.5	225.0
CRNP 4	4	26	217.5	225.0
CRNP 5	5	31	239.9	242.3
CRNP 6	4	26	199.5	192.5
CRNP 7	4	26	199.5	192.5
CRNP 8	4	26	199.5	192.5
Jacob Osang	7	43	233.6	161.5
Jonas Attah	10	59	452.7	409.6
Jonathan Eban	6	43	238.7	238.3
Jude Tawo	10	57	399.3	390.8
Justin Bebiem	8	51	346.6	295.4
Kenneth Obi	9	53	423.7	394.5
Peter Abraham	9	53	423.7	394.5
Peter Ocha	7	38	287.6	246.3
Philip Enyiam	10	59	449.5	410.1
Stanley Abang	9	54	401.4	372.8
Terry Takeh	7	41	314.5	277.5
Vincent Aganyi	10	59	446.8	409.2