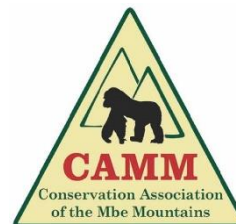


**WILDLIFE CONSERVATION SOCIETY
MBE MOUNTAINS COMMUNITY WILDLIFE SANCTUARY
QUARTERLY REPORT: APRIL – JUNE 2020**



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WCS Nigeria Program

Summary

This report presents results of anti-poaching patrols of the Mbe Mountains conducted by Mbe eco-guards from April to June 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. Twenty-five anti-poaching and gorilla monitoring patrols were completed this quarter covering a total distance of 1,023 kilometres over 157 patrol days (1,020 person-days). Sixteen people were arrested, four for hunting, six for illegal logging, and six for unsustainable harvesting of non-timber forest products (NTFPs). Those arrested in Mbe were reported to the Conservation Association of Mbe Mountains (Camm) for sanctions and those arrested in the national park reported to the park authority for prosecution. Other signs of hunting encountered during the patrols were 764 wire snares, 116 empty cartridges, 7 hunting camps, and 2 gunshots heard. All wire snares and hunting camps found were destroyed. Seventeen logging sites were also encountered. Great ape evidence recorded include 11 sightings and 12 nest sites. Gorillas were sighted on 5 occasions and chimpanzee on six occasions. Of the 11 ape nest sites, 8 were gorilla and 4 chimpanzee. In addition to sightings and nest sites, the first ever images of a Cross River group with multiple infants were captured by camera traps in the Mbe Mountains. The images are an indication that the population is reproducing successfully and growing after past decades of intense hunting. Other primates sighted were drill (sighted on 11 occasions), red-eared monkey (sighted 12 times), Mona monkey (sighted 46 times), and putty-nosed monkey (sighted 36 times).

Methods

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

Results

Patrol effort

Twenty-five patrols were completed this quarter covering a total distance of 1,023 kilometres over 157 patrol days (1,020 person-days) (Table1; Figure1; Appendix I).

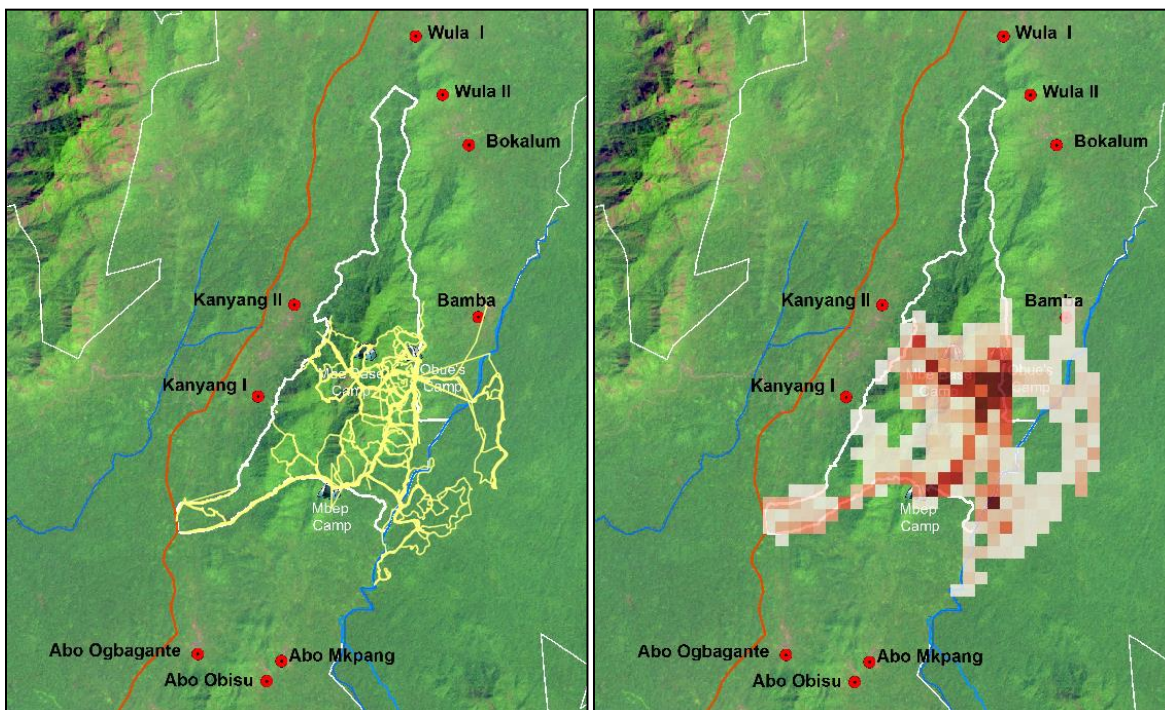


Figure 1. Patrol tracked-logs and patrol effort in grid cell for the period April to June 2020.
(NOTE: Darker red color indicates areas of more intense patrol coverage).

Table 1. Summary of patrol effort for the period April to June 2020.

Patrol id	Number of patrols	Number of days	Distance (km)	Person - days
mbe_mts_000312	1	7	50.1	21
mbe_mts_000313	1	6	38.2	60
mbe_mts_000314	1	7	29.2	28
mbe_mts_000315	1	5	38.5	32
mbe_mts_000316	1	5	45.9	50
mbe_mts_000318	1	7	80.4	69
mbe_mts_000319	1	8	53.6	24
mbe_mts_000320	1	3	3.9	15
mbe_mts_000321	1	4	9.1	16
mbe_mts_000322	1	5	5.5	25
mbe_mts_000323	1	3	9.7	12
mbe_mts_000324	1	8	71.0	88
mbe_mts_000325	1	8	53.2	32
mbe_mts_000326	1	8	48.0	32
mbe_mts_000327	1	7	51.5	21
mbe_mts_000328	1	8	39.8	24
mbe_mts_000329	1	7	79.3	84
mbe_mts_000330	1	7	53.2	35
mbe_mts_000337	1	8	39.8	40
mbe_mts_000338	1	6	53.1	102
mbe_mts_000339	1	1	7.3	5
mbe_mts_000340	1	5	37.5	85
mbe_mts_000341	1	8	41.2	40
mbe_mts_000342	1	8	25.4	40
mbe_mts_000343	1	8	58.2	40
Total	25	157	1022.8	1020

Average distance and length of patrols per month

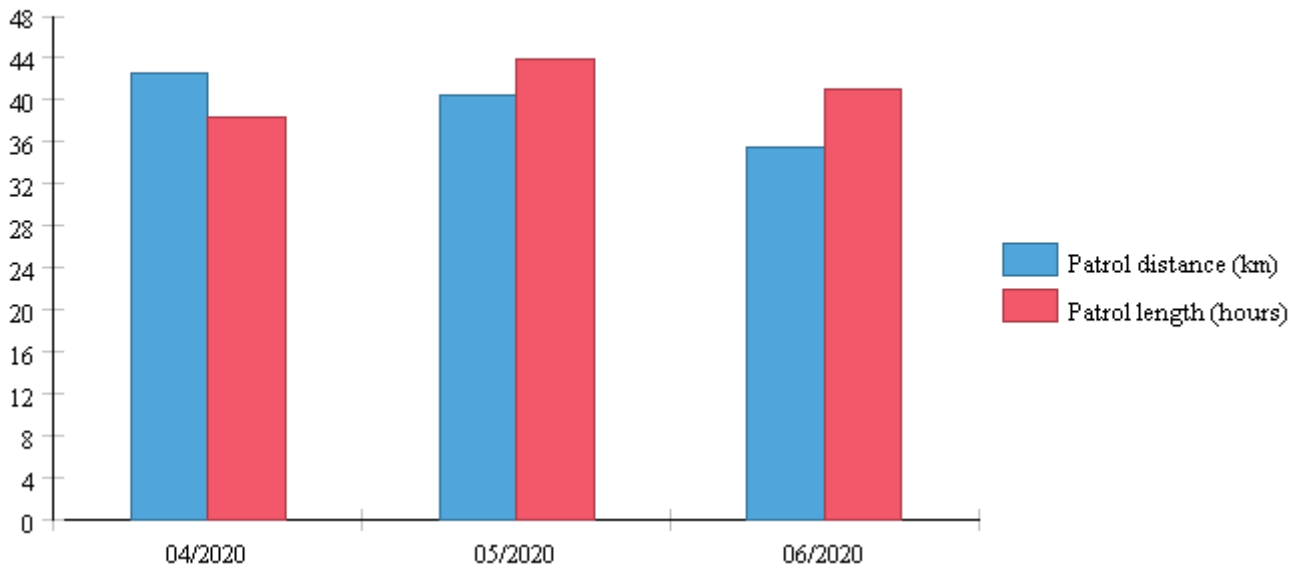


Figure 2. Average distance covered and time taken per patrol per month for the period April to June 2020.

Total patrol distance and length per month

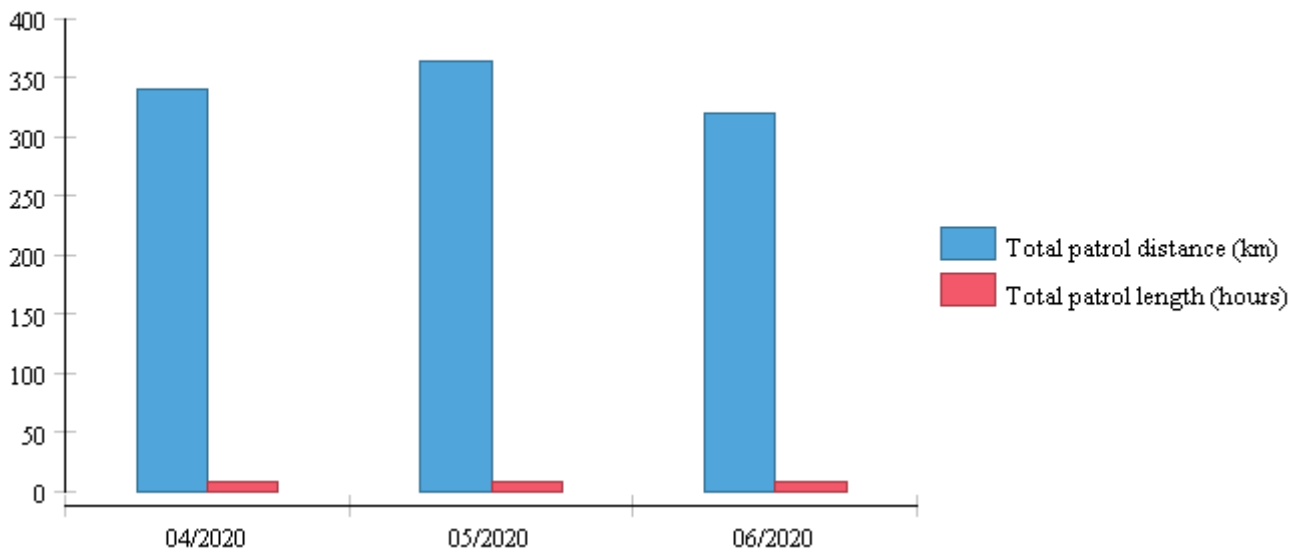


Figure 3. Total patrol distance and time per month for the period April to June 2020.

Law Enforcement

Sixteen offenders were apprehended this quarter (Table 2). Offenders apprehended in Mbe reported to the Conservation Association of Mbe Mountains (Camm) for sanctions, and those apprehended in Okwangwo reported to park authority for prosecution. Other signs of human activity encountered during patrols include 764 wire snares, 116 expended cartridges shells, 7 illegal camps, 2 gunshots heard and 17 illegal logging sites.

Table 2. Summary of arrests and other law enforcement for the period April to June 2020.

Leader	Date	Action taken	Home village	Name	Threat
Mathias Mbua	May 18, 2020	Apprehended and reported to Camm	Abo Mkpang (from Obudu)	John Aginya	NTFP collection
Mathias Mbua	May 18, 2020	Apprehended and reported to Camm	Abo Mkpang (from Akwa Ibom State)	Augustine Iyibio Ekandem	NTFP collection
Mathias Mbua	May 18, 2020	Apprehended and reported to Camm	Abo Mkpang (from Akwa Ibom State)	Martins Aneffio	NTFP collection
Mathias Mbua	May 28, 2020	Apprehended and reported to Camm	Bamba	Lansing Kenneth Tambe	Hunting
Mathias Mbua	May 28, 2020	Unsuccessful pursuit	Bamba	Cosmas Ava Attah	Gun hunting
Peter Abraham	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante (from Benue State)	David Moses	Logging
Peter Abraham	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante (from Benue State)	Madman Chion	Logging
Peter Abraham	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante (from Taraba State)	Ernest Aaron	Logging
Peter Abraham	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante (from Taraba State)	Desmond Peter	Logging
Peter Abraham	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante (from Taraba State)	Felix Solomon	Logging
Jude Tawo	Apr 9, 2020	Apprehended and reported to Camm	Abo Ogbagante	Effiong	Logging
Jude Tawo	Apr 15, 2020	Apprehended and reported to Camm	Abo Mkpang (from Bamba)	Ushi Igbo	Gun hunting
Jude Tawo	Apr 15, 2020	Apprehended and reported to Camm	Abo Mkpang (from Bamba)	Joe Abang Obi	Gun hunting
Jude Tawo	Apr 11, 2020	Apprehended and reported to Camm	Abo Ogbagante	Success Obi Abang	Gun hunting
Jude Tawo	Apr 11, 2020	Apprehended and reported to Camm	Abo Ogbagante	Obi Abang	Gun hunting
Peter Abraham	Apr 28, 2020	Apprehended and reported to Camm	Bamba	Afor Fredaline and 7 others	NTFP collection

Table 3. Summary of number of people seen by threat for the period April to June 2020.

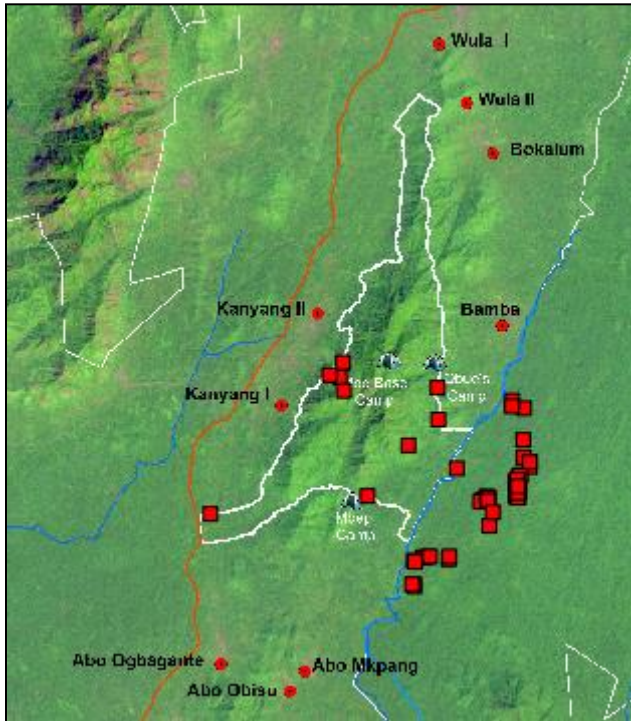
Threat	Number of people seen	Encounter rate per km
Hunting	6	0.006
Logging	6	0.006
NTFP collection	4	0.004

Table 4. Total encounter rates of signs of human activity for the period April to June 2020.

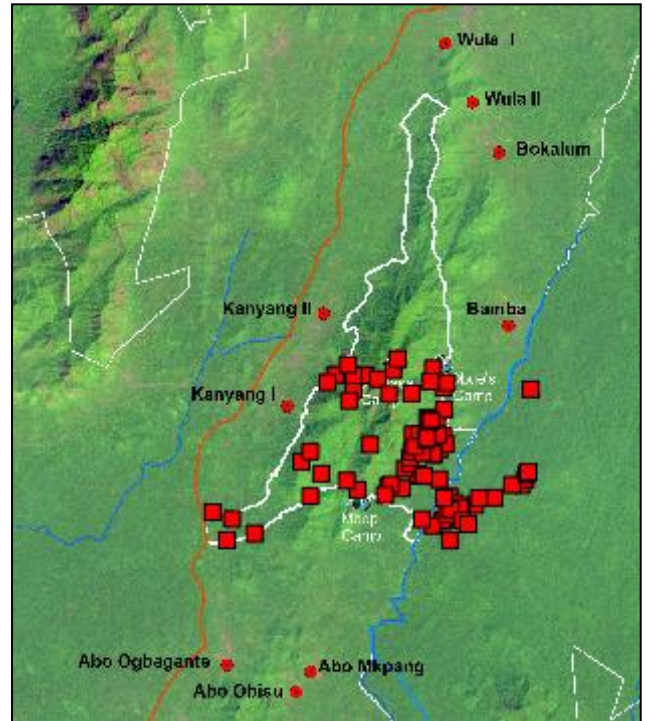
Activity	# of incidents	Encounter rate/km
Domestic animals	1	0.001
Farming and land clearing	9	0.009
Gunshot heard	2	0.002
Human sign	68	0.066
Logging and tree cutting	17	0.017
NTFPs	3	0.003
People seen	10	0.010
Shed or camp	10	0.010
Traps, weapons & equipment	157	0.153

Table 5. Details of logging activity for the period April to June 2020.

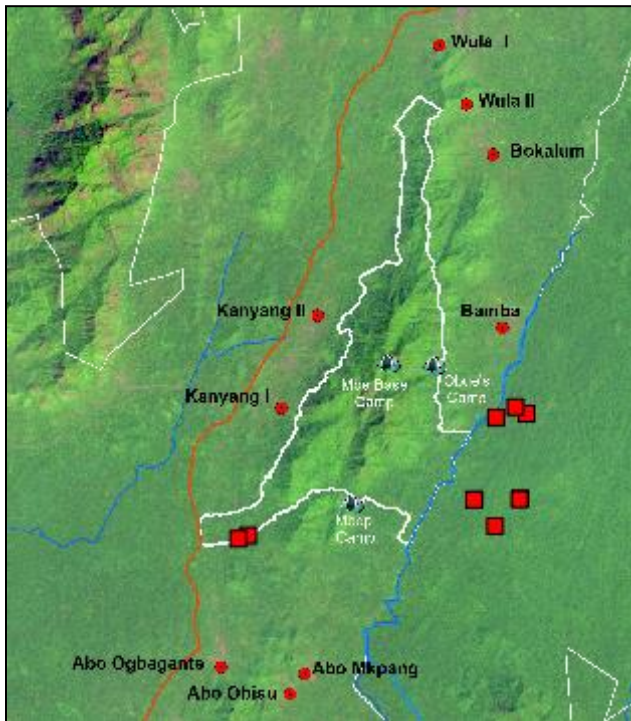
Type of logging evidence	Action taken - items	Age of sign	Number of planks	Tree species
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Very old	---	Ebony
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Fresh	---	Other
Planks	Seen Only	Fresh	570	Other
Logs	Seen Only	Fresh	---	Other
Stump	Seen Only	Very old	---	Ebony
Planks	Seen Only	Old	2	Ebony
Logs	Destroyed	Old	---	Mahogany
Planks	Seen Only	Fresh	400	Other
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Old	---	Ebony
Stump	Seen Only	Fresh	---	Unknown



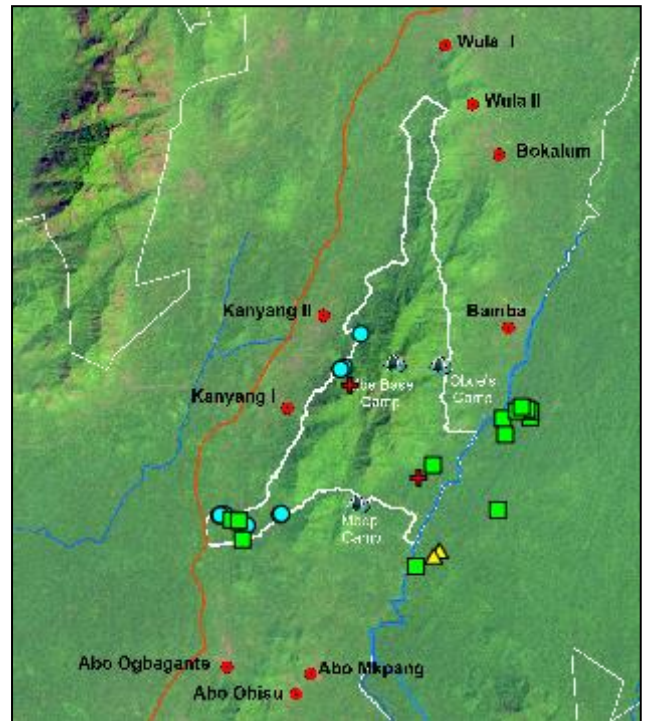
a) Wire snares



b) Empty cartridges



c) Sheds and camps



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

Figure 4. Distribution of all signs of human activity recorded from April to June 2020.

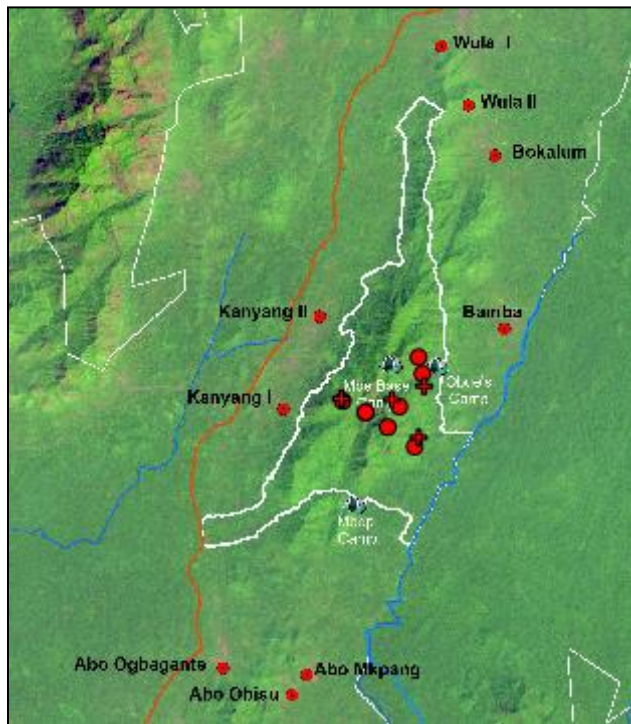
Table 6. Hunting signs recorded for the period April to June 2020.

Sign	# of observations	Encounter rate/km
Gunshots heard	2	0.002
Set wire snares	642	0.628
Unset wire snares	122	0.119
Empty cartridges	118	0.115
Hunting camps	7	0.007

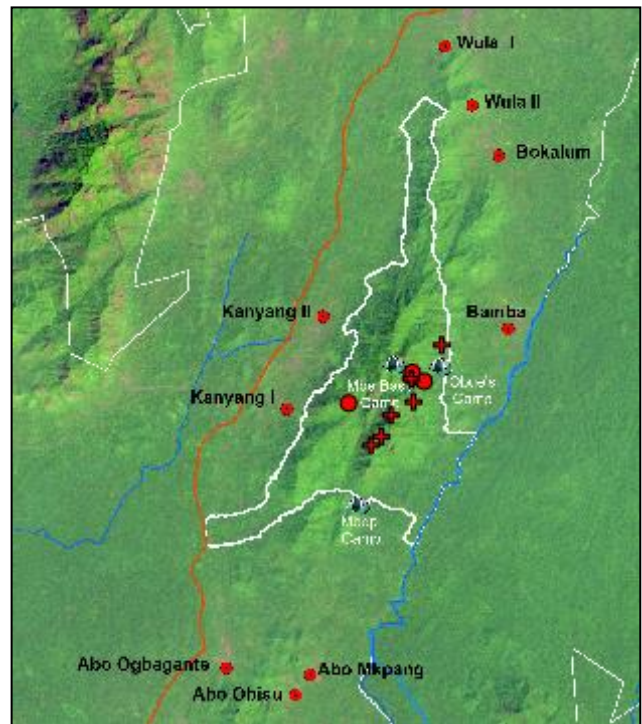
Wildlife Observations

Great Apes

Great ape evidence recorded include 11 sightings and 12 nest sites. Other signs recorded include fresh dung, calls, trails and feeding remains. Gorillas were sighted on 5 occasions and chimpanzee on six occasions. Of the 11 ape nest sites, 8 were gorilla and 4 chimpanzee. In addition to sightings and nest sites, the first ever images of a Cross River group with multiple infants were captured by camera traps in the Mbe Mountains. The images are an indication that the population is reproducing successfully and growing after past decades of intense hunting.



a) Gorillas



b) Chimpanzees

Figure 5. Ape sightings and nest sites recorded for the period April to June 2020. (NOTE: Nest sites shown as circles, sightings shown as crosses).

Table 7. Ape sightings recorded for the period April to June 2020.

Date	Species	Number of adult males	Number of adult females	Number age/sex unknown	Total
May 31, 2020	Gorilla	---	---	9	9
May 15, 2020	Gorilla	---	---	5	5
Jun 28, 2020	Gorilla	---	---	12	12
Apr 23, 2020	Chimpanzee	---	---	11	11
May 26, 2020	Chimpanzee	---	---	9	9
Jun 13, 2020	Chimpanzee	---	---	7	7
Jun 28, 2020	Gorilla	---	---	2	2
Jun 15, 2020	Chimpanzee	---	---	7	12
Jun 16, 2020	Chimpanzee	---	---	9	9
Jun 12, 2020	Chimpanzee	---	---	6	6
Jun 12, 2020	Gorilla	5	---	14	22

Table 8. Number and encounter rate of nest sites recorded for the period April to June 2020.

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	4	0.004
Gorilla	8	0.008

Table 9. Nest sites recorded for the period April to June 2020.

Species	Nest site type	Dung present	Age of sign	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	false	Fresh	0	3
Chimpanzee	Night nest(s)	false	Old	0	4
Chimpanzee	Night nest(s)	true	Fresh	0	6
Chimpanzee	Unknown	false	Old	0	1
Gorilla	Night nest(s)	false	Fresh	2	3
Gorilla	Day nest(s)	true	Fresh	1	1
Gorilla	Day nest(s)	true	Fresh	6	6
Gorilla	Night nest(s)	true	Fresh	3	3
Gorilla	Night nest(s)	true	Fresh	1	1
Gorilla	Night nest(s)	true	Fresh	3	3
Gorilla	Night nest(s)	false	Old	0	2
Gorilla	Night nest(s)	false	Fresh	0	1

Monkey sightings

Monkeys were sighted a total of 105 times during patrols this quarter. Species sighted include drill (sighted on 11 occasions), red-eared monkey (sighted 12 times), Mona monkey (sighted 46 times), and putty-nosed monkey (sighted 36 times). Mona monkey and putty-nosed monkey were the most frequently sighted species (Table 10).

Table 10. Number and encounter rate of monkey species observed for the period April to June 2020.

Species	Number of observations	Encounter rate
Drill	11	0.011
Mona monkey	46	0.045
Red-eared monkey	12	0.012
Putty-nosed monkey	36	0.035
Total	105	0.105

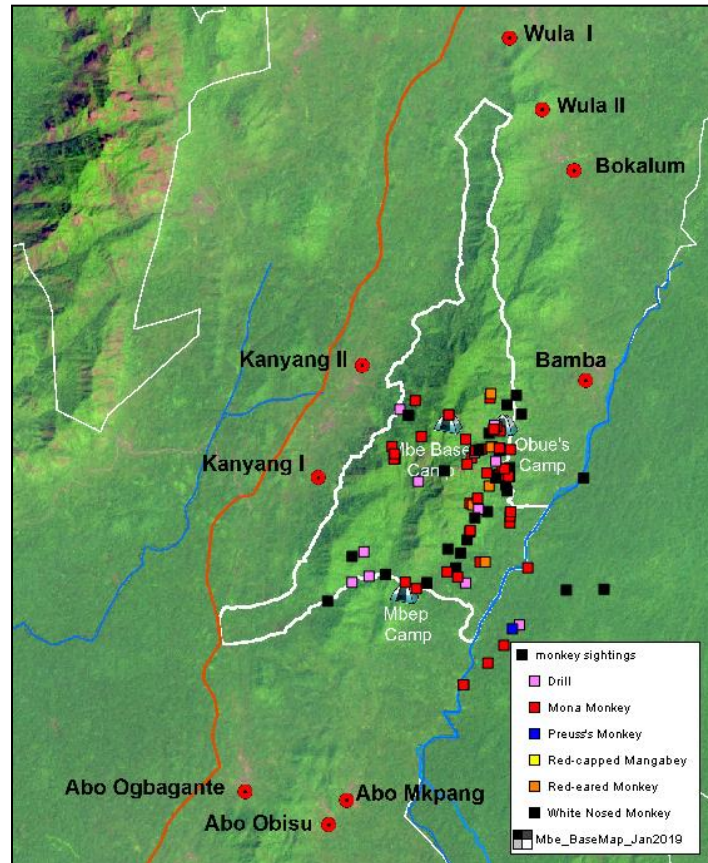


Figure 6. Monkey sightings recorded for the period April to June 2020.

Other Wildlife

Large mammals recorded this quarter include forest elephant *Loxodonta cyclotis*, forest buffalo *Syncerus caffer*, bushbuck *Tragelaphus 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 and Mbe Mountains 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 Environment Day with the theme "Time for Nature".

Support to CAMM

WCS continued to support CAMM's efforts towards official endorsement of Mbe Mountains as a community wildlife sanctuary by the Cross River State government. Such endorsement will boost law enforcement and improve the conservation status of the area while strengthening community ownership. WCS also supported a joint meeting of the General Assembly, Board of Trustees and Management Committee of CAMM to discuss conservation issues and deal with reported offenders. WCS continued to support farmers to improve productivity and sustainability of cocoa production in Mbe.

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 April to June 2020.

Date	Number of patrols	Distance (km)	Number of hours	Number of rangers
2020-04-09	2	10.6	6.2	14
2020-04-10	2	26.3	8.6	12
2020-04-11	4	28.8	19.8	18
2020-04-12	4	26.4	26.9	18
2020-04-13	4	37.6	31.2	18
2020-04-14	4	38.2	28.7	18
2020-04-15	4	32.0	36.4	18
2020-04-16	3	18.4	18.4	16
2020-04-17	2	5.9	9.9	7
2020-04-21	3	9.0	8.1	12
2020-04-22	3	16.3	20.1	12
2020-04-23	3	19.4	18.6	12
2020-04-24	2	20.6	14.3	13
2020-04-25	2	15.4	13.3	13
2020-04-26	2	11.7	12.8	13
2020-04-27	2	12.9	13.0	13
2020-04-28	2	18.3	16.2	13
2020-04-29	1	9.6	7.1	10
2020-04-30	1	8.7	6.3	10
2020-05-05	2	4.8	5.8	9
2020-05-06	3	5.6	7.9	13
2020-05-07	3	3.8	4.2	13
2020-05-08	3	1.9	2.7	13
2020-05-09	3	8.3	14.9	13
2020-05-14	3	17.6	20.2	19
2020-05-15	3	18.4	24.3	19
2020-05-16	3	24.7	24.4	19
2020-05-17	3	17.2	23.9	19
2020-05-18	3	23.5	24.3	19
2020-05-19	3	26.4	24.6	19
2020-05-20	3	23.4	21.9	19
2020-05-21	3	21.1	22.6	19
2020-05-25	3	16.6	16.7	17
2020-05-26	3	22.4	24.7	17
2020-05-27	3	31.5	20.8	17
2020-05-28	3	31.8	31.6	17
2020-05-29	3	19.8	30.7	17
2020-05-30	3	21.3	24.2	17
2020-05-31	3	24.2	24.1	17
2020-06-01	1	3.1	5.5	3

Date	Number of patrols	Distance (km)	Number of hours	Number of rangers
2020-06-10	2	14.7	11.8	22
2020-06-11	3	20.4	23.8	27
2020-06-12	3	25.2	25.2	27
2020-06-13	3	20.1	22.4	27
2020-06-14	3	25.3	22.9	27
2020-06-15	3	23.0	25.9	27
2020-06-16	3	19.0	24.6	13
2020-06-17	3	10.6	15.0	26
2020-06-18	1	8.4	8.5	17
2020-06-19	1	6.1	8.0	17
2020-06-20	1	9.6	8.0	17
2020-06-21	1	8.4	7.9	17
2020-06-22	3	14.3	12.6	13
2020-06-23	3	12.5	23.7	13
2020-06-24	3	13.7	22.1	13
2020-06-25	3	18.3	18.0	13
2020-06-26	3	15.4	22.0	13
2020-06-27	3	18.5	22.1	13
2020-06-28	3	15.3	21.2	13
2020-06-29	3	16.7	17.8	13

Appendix II. Encounter rate of wildlife species observed during patrols April to June 2020.

(NOTE: Species not encountered during patrols not shown).

Species common name	Scientific name	# of observations	Encounter rate/km
Red river hog	<i>Potamochoerus porcus</i>	640	0.626
African brush-tailed porcupine	<i>Atherurus africanus</i>	568	0.555
Unidentified monkey	---	407	0.398
Cusimanses	<i>Crossarchus sp</i>	351	0.343
Unidentified medium duiker	---	278	0.272
Unidentified large duiker	---	264	0.258
Mona monkey	<i>Cercopithecus mona</i>	215	0.210
White-crested hornbill	<i>Tropicranus albocristatus</i>	206	0.201
Turaco	---	194	0.190
Unidentified small duiker	---	153	0.150
Putty-nosed monkey	<i>Cercopithecus nictitans</i>	130	0.127
Blue duiker	<i>Philantomba monticola</i>	122	0.119
Crested-guinea fowl	<i>Guttera pucherani</i>	118	0.115
Tree pangolin	<i>Phataginus tricuspis</i>	113	0.110
Drill	<i>Mandrillus leucophaeus</i>	92	0.090
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	83	0.081
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	78	0.076
Palm civet	<i>Nandinia binotata</i>	61	0.060
Cross River gorilla	<i>Gorilla gorilla diehli</i>	45	0.044
Unidentified great ape	---	38	0.037
African forest elephant	<i>Loxodonta cyclotis</i>	35	0.034
Milne-Edwards's potto	<i>Perodicticus edwardsi</i>	18	0.018
Red-eared monkey	<i>Cercopithecus erythrotis</i>	18	0.018
Crested-servaline genet	<i>Genetta cristata</i>	17	0.017
Grey-necked picathartes	<i>Picathartes oreas</i>	13	0.013
Water chevrotain	<i>Hyemoschus aquaticus</i>	7	0.007
Cane rat	<i>Thrynomys swinderianus</i>	6	0.006
African grey parrot	<i>Psittacus erithacus</i>	5	0.005
Bushbuck	<i>Tragelaphus scriptus</i>	4	0.004
Bay duiker	<i>Cephalophus dorsalis</i>	2	0.002
African civet	<i>Civettictis civetta</i>	1	0.001
Ogilby's duiker	<i>Cephalophus ogilbyi</i>	1	0.001

Appendix III. Ranger work time for the period April to June 2020.

Name	Number of patrols	Number of patrol days	Number of patrol hours	Total patrol distance (km)
Abel Bessong	7	48	332.4	286.5
Benedict Osong	5	30	181.5	174.0
CRNP 1	8	46	360.0	422.9
CRNP 10	2	11	86.0	90.6
CRNP 11	2	11	86.0	90.6
CRNP 12	2	11	86.0	90.6
CRNP 2	8	46	360.0	422.9
CRNP 3	8	46	360.0	422.9
CRNP 4	8	46	360.0	422.9
CRNP 5	8	46	360.0	422.9
CRNP 6	8	45	356.6	417.5
CRNP 7	4	26	220.7	240.9
CRNP 8	4	26	220.7	240.9
CRNP 9	2	11	86.0	90.6
Jacob Osang	7	46	273.6	221.7
Jonas Attah	5	32	250.8	233.6
Jude Tawo	7	48	325.0	294.0
Justin Bebiem	7	39	266.9	260.4
Kenneth Obi	8	45	307.2	308.0
Peter Abraham	10	57	381.1	390.1
Peter Ocha	10	57	379.2	347.7
Philip Enyiam	9	49	310.1	303.9
Raymond Ochang	2	14	108.0	111.3
Robinson Afor	3	21	130.4	102.6
Roland Bessong	3	16	124.9	101.7
Stanley Abang	7	46	313.2	303.1
Terry Takeh	8	53	372.0	366.4
Vincent Aganyi	7	48	341.1	345.0