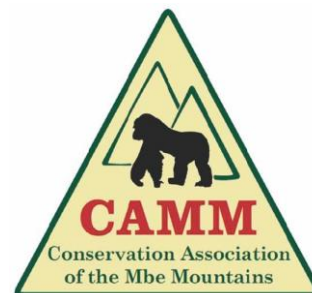


**WILDLIFE CONSERVATION SOCIETY
MBE MOUNTAINS COMMUNITY WILDLIFE SANCTUARY**

QUARTERLY REPORT: JANUARY – MARCH 2022



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Summary

This report presents results of law enforcement patrols of the Mbe Mountains conducted by 16 eco-guards from January to March 2022 supported by the Wildlife Conservation Society (WCS). The report also outlines activities implemented to raise levels of conservation awareness and improve local livelihoods. Eleven patrols were completed this quarter, covering a total distance of 471 kilometers over 73 patrol days (405 person-days). The patrols apprehended one offender who was reported to the Conservation Association of Mbe Mountains for sanctions. Other signs of hunting observed include 70 empty shotgun cartridges and one gunshot heard. Four illegal logging sites were also observed. Great apes were sighted on three occasions – gorillas once, chimpanzees twice. In addition to sightings, 21 ape nest sites were observed: 11 gorilla, 10 chimpanzee. Monkeys were sighted 58 times by ecoguards during these patrols: drill (14 sightings), red-eared monkey (5 sightings), Mona monkey (31 sightings), and putty-nosed monkey (8 sightings). Activities implemented to create awareness include film shows in four villages reaching 716 people, 6 exchange visits between conservation clubs involving 93 students, 6 guided field trips, 4 community meetings and 9 school visits. A total of 60 pens and 195 customized notebooks were distributed to conservation club members and teachers during school visits to raise awareness about endangered species. Farm supplies including wheelbarrows, rainboots and tarpaulins were distributed to farmers around Mbe who were previously trained in agricultural best practices to reduce deforestation. WCS supported and facilitated six meetings of CAMM to help resolve lingering issues and enhance the conservation management of the Mbe Mountains.

Methods

Three teams of four eco-guards each based at different camps in the sanctuary completed two 7 to 10-days patrols per month, patrolling different sectors of the sanctuary simultaneously. Each month additional 1-2 short (3 to 5 days) patrols are also organized. Patrols followed existing trails but targeted known and suspected hotspots of human activities based on intelligence gathered from the surrounding villages and data from previous patrols. Data were collected using CyberTracker software on handheld computer devices and analyzed in SMART (<http://smartconservationtools.org/>). All offenders encountered apprehended, all wire snares, and hunting camps found destroyed.

Results

Patrol effort

Eleven patrols were completed this quarter (Table 1; Figure 1; Appendix I) covering a total distance of 470.8 kilometers over 73 patrol days (405 person-days).

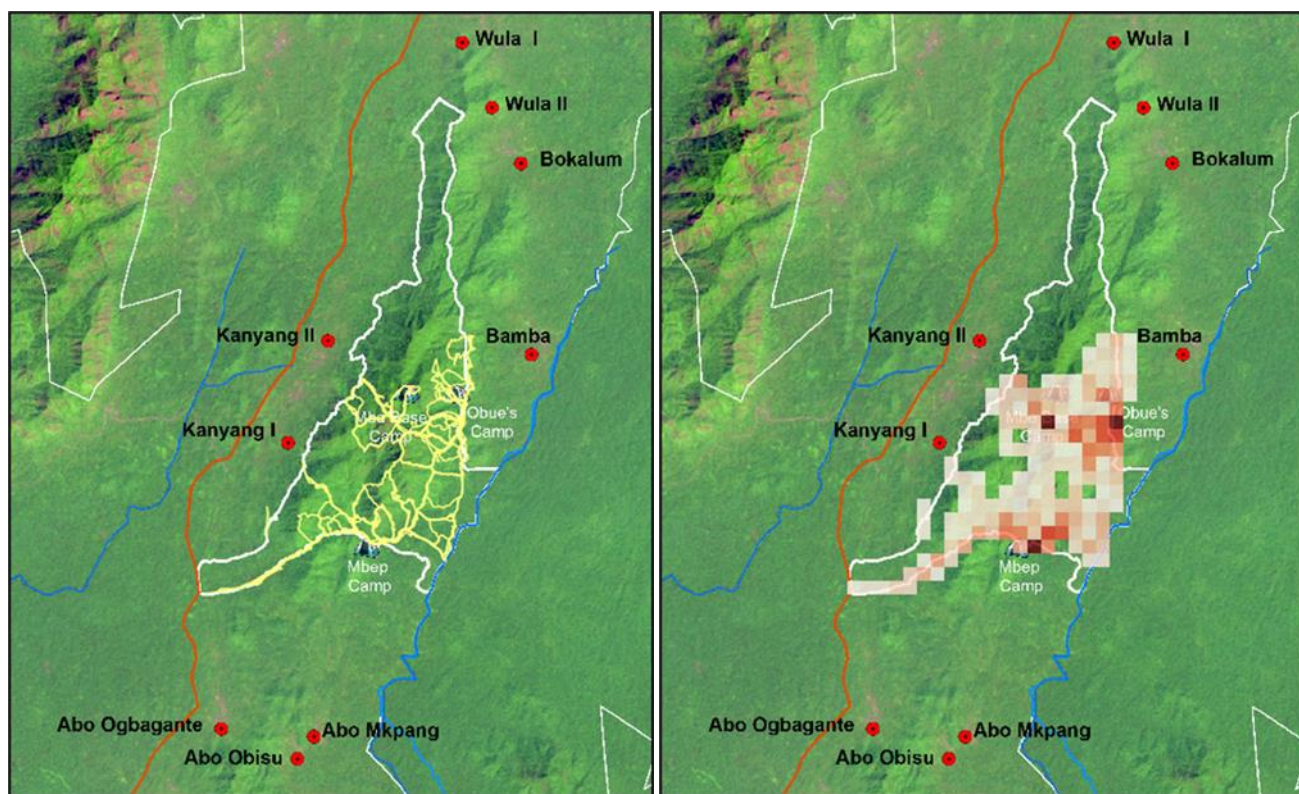


Figure 1. Patrol track-logs and patrol effort in grid cell for the period January to March 2022.
(NOTE: Darker red color indicates areas of more intense patrol coverage).

Table 1. Summary of patrol effort for the period January to March 2022.

Patrol ID	Number of patrols	Number of days	Distance (km)	Person - days
mbe_mts_000508	1	8	48.5	56
mbe_mts_000509	1	8	44.5	48
mbe_mts_000510	1	5	24.7	30
mbe_mts_000511	1	5	26.4	35
mbe_mts_000512	1	5	39.5	15
mbe_mts_000513	1	1	1.4	4
mbe_mts_000514	1	8	45.3	32
mbe_mts_000515	1	11	89.3	44
mbe_mts_000516	1	8	52.8	57
mbe_mts_000517	1	8	61.4	48
mbe_mts_000518	1	6	37.0	36
Total	11	73	470.8	405

Average distance and length of patrols per month

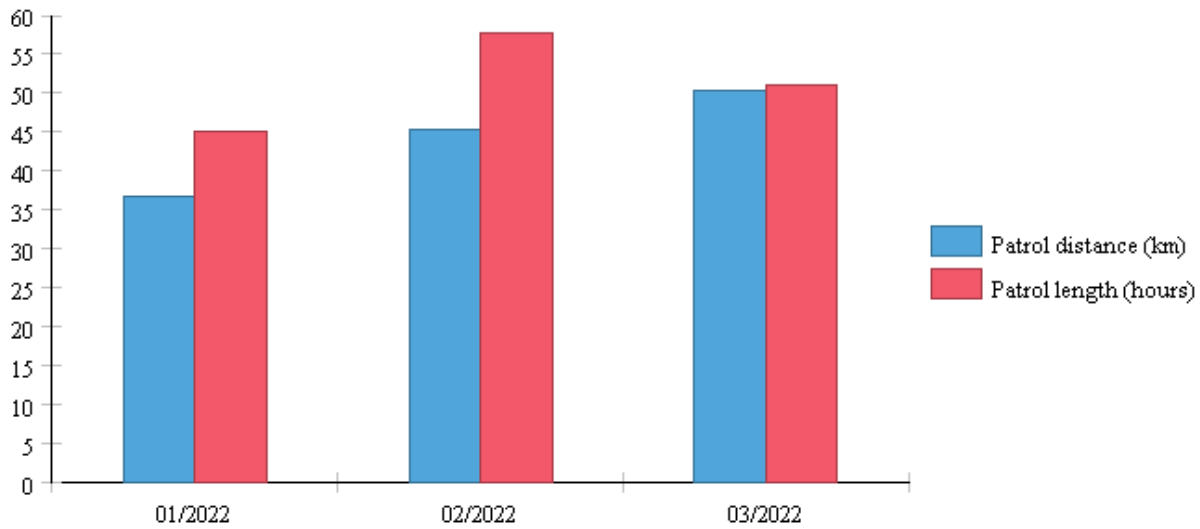


Figure 2. Average distance covered and time taken per patrol per month for the period January to March 2022.

Total patrol distance and length per month

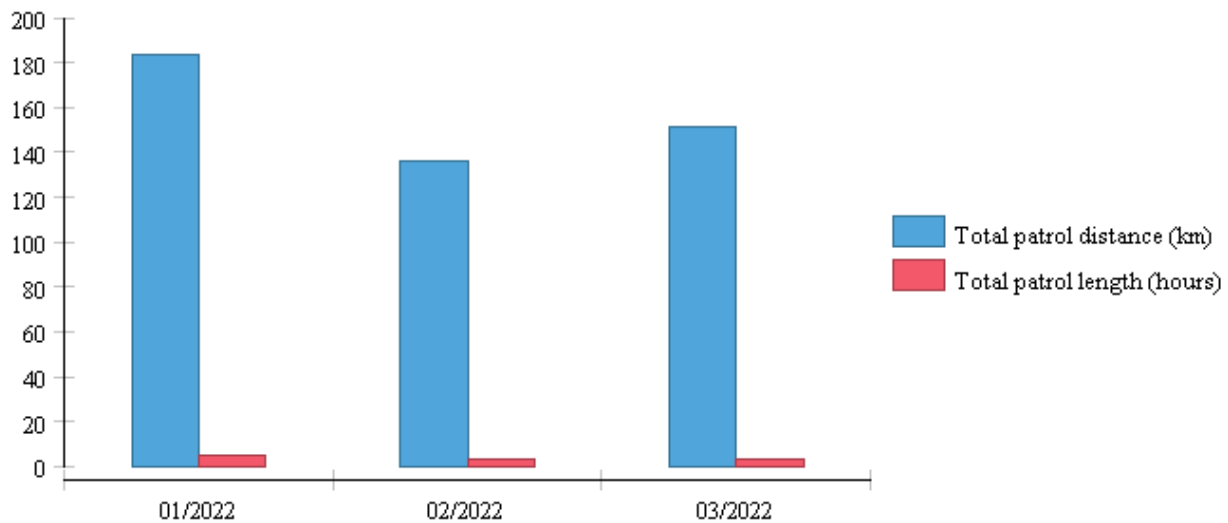


Figure 3. Total patrol distance and time per month for the period January to March 202

Law Enforcement

Patrols within this reporting period apprehended one person for illegal harvesting of “chewing stick” (*Massularia acuminata*). Other signs of illegal activities observed include one gunshot heard, 70 empty cartridge and four illegal logging sites (Tables 2-5; Figure 4). The arrested offender was reported to CAMM for appropriate sanctions. Other illegal activities observed were also reported to CAMM.

Table 2. Summary of arrests and other law enforcement for the period January to March 2022.

Leader	Date	Action taken	Home village	Name	Threat	Action taken
Jonas Attah	Mar 22, 2022	Arrested	Resident in Abo Ogbagante	Muhammad	NTFPs	Reported to CAMM

Table 3. Summary of number of people seen by threat for the period January to March 2022.

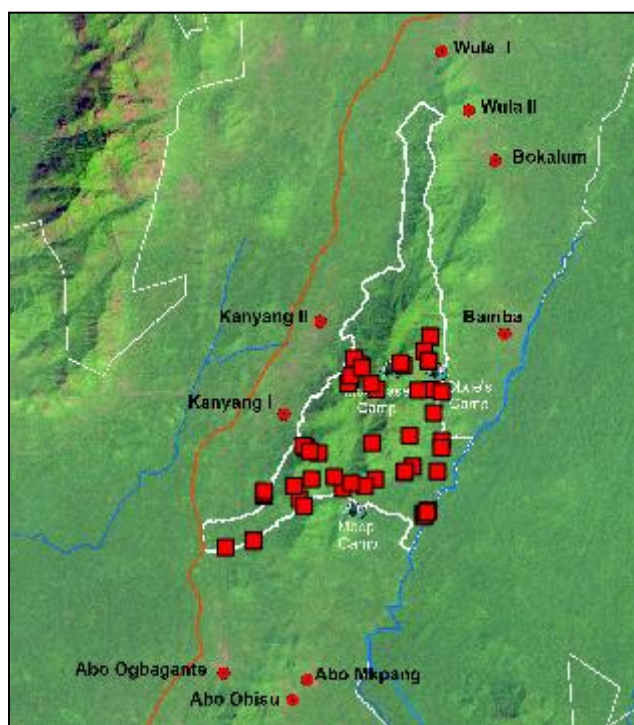
Threat	Number of people seen	Encounter rate per km
Farming	0	0.000
Hunting	0	0.000
Logging	0	0.000
NTFP Collection	1	0.002

Table 4. Total encounter rates of signs of human activity for the period January to March 2022.

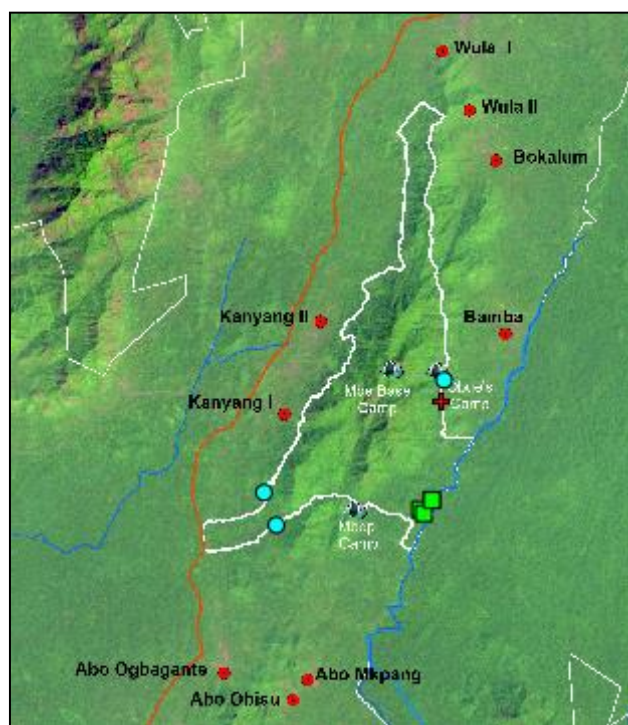
Activity	# of Incidents	Encounter rate/km
Gunshot heard	1	0.002
Human sign	33	0.070
Logging and tree cutting	4	0.008
NTFPs	1	0.002
People seen	1	0.002
Traps, weapons & equipment	51	0.108

Table 5. Details of logging activity for the period January to March 2022.

Type of logging evidence	Action taken - items	Age of sign	Number of logs	Tree species
Stump	Seen only	Fresh	---	Ebony
Logs	Seen only	Fresh	1	Ebony
Logs	Seen only	Fresh	1	Ebony
Logs	Seen only	Fresh	5	Ebony



a) Empty cartridges



b) 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 during patrol for the period January to March 2022.

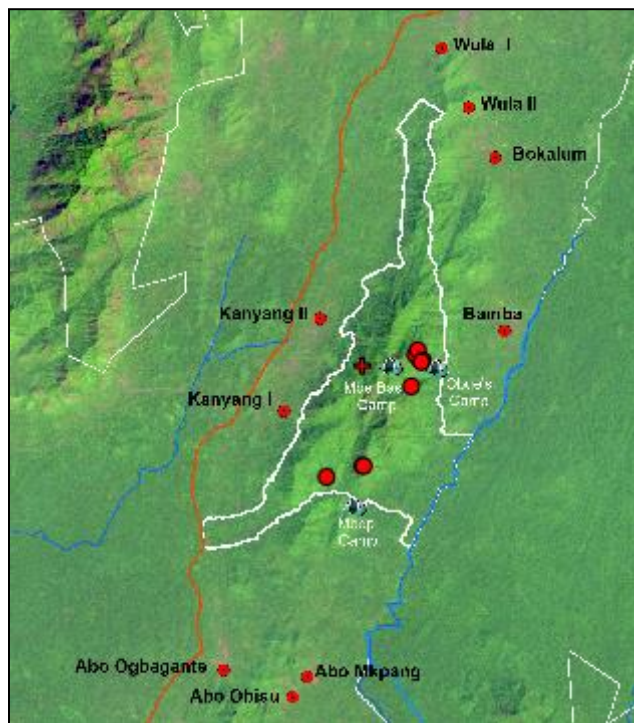
Table 6. Hunting signs recorded for the period January to March 2022.

Sign	# of observations	Encounter rate/km
Gunshots heard	1	0.002
Set wire snares	0	0.000
Unset wire snares	0	0.000
Empty cartridges	70	0.149
Hunting camps	0	0.000

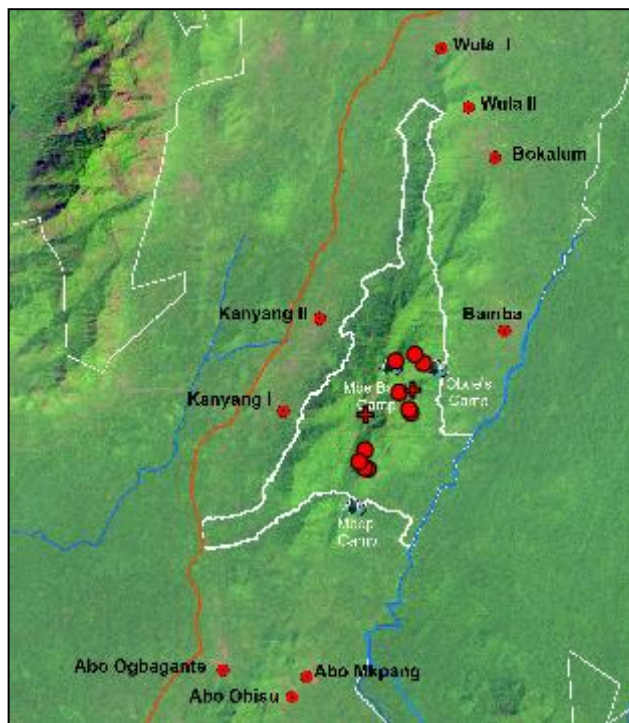
Wildlife Observations

Great Apes

This quarter ecoguards sighted gorillas once (18 individuals counted) and chimpanzees twice (six individuals counted on each occasion). Twenty-one ape nest sites were also observed: 11 gorilla 10 chimpanzee. The maximum number of nests counted at a single nest site was 10 for gorilla and 13 for chimpanzee (Tables 7-9).



a) Gorillas



b) Chimpanzees

Figure 5. Ape sightings and nest sites recorded for the period January to March 2022.
(NOTE: Nest sites shown as circles, sightings shown as crosses).

Table 7. Ape sightings recorded for the period January to March 2022.

Date	Species	Number of adult males	Number of adult females	Number age/Sex unknown	Total
Mar 29, 2022	Gorilla	2	5	11	18
Mar 18, 2022	Chimpanzee	---	---	6	6
Jan 8, 2022	Chimpanzee	---	---	6	6

Table 8. Number and encounter rate of nest sites recorded for the period January to March 2022.

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	10	0.021
Gorilla	11	0.023

Table 9. Nest sites recorded for the period January to March 2022.

Species	Nest site type	Dung present	Age of sign	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	false	Fresh	0	8
Chimpanzee	Night nest(s)	true	Fresh	0	11
Chimpanzee	Night nest(s)	false	Recent	0	7
Chimpanzee	Night nest(s)	false	Recent	0	6
Chimpanzee	Night nest(s)	false	Fresh	0	8
Chimpanzee	Night nest(s)	false	Recent	0	13
Chimpanzee	Night nest(s)	true	Fresh	0	13
Chimpanzee	Night nest(s)	true	Fresh	4	5
Chimpanzee	Night nest(s)	false	Fresh	0	10
Chimpanzee	Night nest(s)	false	Recent	0	6
Gorilla	Night nest(s)	false	Fresh	5	5
Gorilla	Night nest(s)	false	Recent	3	3
Gorilla	Night nest(s)	true	Fresh	6	6
Gorilla	Night nest(s)	false	Recent	4	4
Gorilla	Night nest(s)	false	Recent	1	1
Gorilla	Night nest(s)	true	Fresh	4	5
Gorilla	Night nest(s)	true	Fresh	2	4
Gorilla	Night nest(s)	true	Recent	8	8
Gorilla	Night nest(s)	true	Fresh	2	2
Gorilla	Night nest(s)	true	Fresh	8	10
Gorilla	Night nest(s)	false	Recent	7	7

Monkey sightings

Monkey species were sighted 58 times during patrols this quarter mostly in the southern and eastern axes of the sanctuary (Table 10; Figure 6).

Table 10. Encounter rate of monkey sightings during patrols from January to March 2022.

Species	Number of observations	Encounter rate
Drill	14	0.030
Mona monkey	31	0.066
Red-eared monkey	5	0.011
Putty-nosed monkey	8	0.017
Total	58	0.105

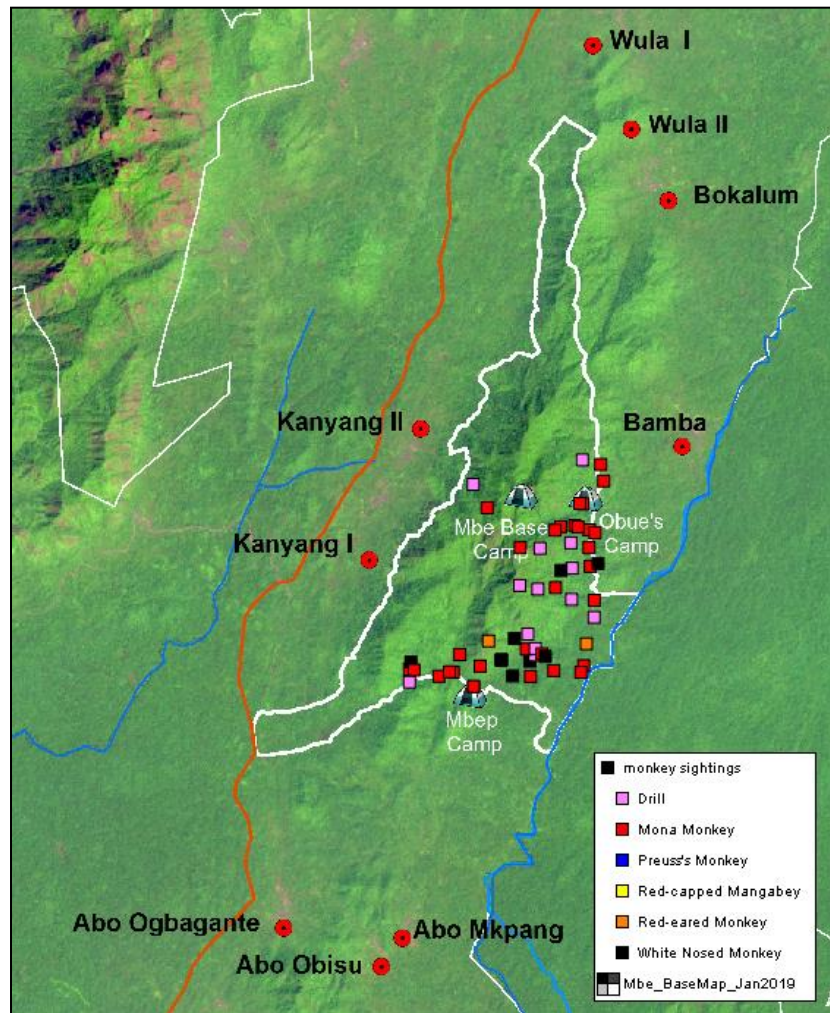


Figure 6. Monkey sightings during patrols of the Mbe Mountains from January to March 2022.

Other Wildlife

Other large mammals recorded this quarter include red river hog (*Potamochoerus porcus*), water chevrotain (*Hyemoschus aquaticus*), and yellow-backed duiker (*Cephalophus silvicultor*). See Appendix II for full list of species recorded. Duikers, red river hog, hyrax, cusimanse, squirrels and bats were sighted.

Conservation Education and Awareness

Conservation education activities implemented this quarter include film shows in four villages, four community meetings, six exchange visits between school conservation clubs, nine guided field trips, and nine school visits by WCS education staff. Through these activities the WCS education and awareness program reached a total of 1,449 people in schools and communities around Mbe. A total of 260 pens and 195 customized notebooks bearing conservation messages were distributed to conservation club members and teachers during school visits to motivate them to participate actively in conservation club activities.

Exchange Visits

WCS supported six exchange visits involving 14 schools around Mbe during this quarter. A total of 587 students participated in the exchange visits (Table 8). Exchange visits aim to facilitate exchange of conservation knowledge and experience among students in different schools. Activities carried out during the exchange visits include conservation games, quiz competition and drama. These activities were performed in a competitive manner to generate interest in students.

Table 8. Schools exchange visits in Mbe between January and March 2022

Date	School(s)	Site	No of students
21/1/2022	Winners International School Kanyang I and Christ Total Child Academy Kanyang II	Mbe	93
25/1/2022	Government Primary School Wula I and Government Primary School Wula II	Mbe	90
11/2/2022	Destine Achi Memorial Primary School Abo Obisu and Government Primary School Abo Obisu	Mbe	94
11/2/2022	Government Primary School Abo Ogbagante and Dominion International Nursery/Primary School Abo Ogbagante	Mbe	100
26/3/2022	Government Primary School Kanyang and St. John Primary School Wula I	Mbe	110
26/3/2022	JAFOR Memorial Academy Wula and Eastern Academy Primary School Wula	Mbe	100

Field trips

Field trips are an effective way to connect young people to nature, often offering experiences that inspire people to value nature and support wildlife conservation. During this reporting period, WCS organized six guided field trips for 146 students and 9 teachers from different schools in Mbe (Table 9). The field trips provided the students and pupils the opportunity to learn about the rainforest, threats to wildlife, and ongoing efforts to save endangered species from extinction. WCS field staff shared their knowledge and experiences with the students during the field trips.

Table 9. Field trips organized for students in Mbe between January and March 2022

Date	School(s)	Site	# of pupils/ students
24/1/2022	Winners International Nursery and Primary School Kanyang I	Mbe	23
25/1/2022	Government Secondary School Kanyang	Mbe	28
8/2/2022	Destine Achi Memorial School Abo Obisu	Mbe	24
8/2/2022	Government Primary School Abo Obisu	Mbe	26
24/3/2022	Christ The King Comprehensive Secondary School Abo Mkpang	Mbe	20
25/3/2022	RCM Primary School Abo Mkpang	Mbe	25
	Total		146



Field trip with Christ the King Comprehensive Secondary School Abo Mkpang (left) and Government Primary School Abo Obisu to Mbe Mountains

School visits

WCS education team visited nine schools in Mbe this quarter (Table 10). Activities implemented include lessons, quiz, and conservation games. Puppets were also used to illustrate different animal behaviors in a dramatic manner. A total of 260 pens and 195 wildlife branded notebooks were distributed to conservation club members and teachers during these visits.

Table 10. Schools visited in Mbe between January and March 2022

Dates	Name of school visited	Site	# of items distributed
24/1/2022	Winners International Primary School Kanyang	Mbe	20
24/1/2022	Government Primary School Abo Ogbagante	Mbe	20
24/1/2022	Government Primary School Kanyang	Mbe	20
8/2/2022	Destine Achi Memorial School Abo Obisu	Mbe	40
8/2/2022	Government Primary School Abo Obisu	Mbe	40
12/3/2022	Government Primary School Wula II	Mbe	30
24/3/2022	Government Primary School Abo Mkpang	Mbe	30
25/3/2022	Christ the King Comprehensive Secondary School Abo Mkpang	Mbe	30
26/3/2022	St. John Primary School Wula	Mbe	30
Total			260

**Figure 9: Photos of school visits to Dominion Primary School Abo Ogbagante**

Film Shows

Conservation-focused films were presented in six Mbe villages to raise awareness and inspire community members to support conservation efforts. The films were viewed by a total of 716 people (Table 11). The films highlighted threats to wildlife from human activities such as hunting, unsustainable farm practices, illegal logging, indiscriminate bush burning, and use of poisoning for fishing in rivers.

Table 11. Villages visited in Mbe for film presentation between January and March 2022

Date	Community	Site	Attendance
12/11/2021	Kanyang II	Mbe	320
13/11/2021	Wula II	Mbe	200
21/11/2021	Abo Obisu	Mbe	75
23/11/2021	Abo Mkpang	Mbe	121
Total			716



Wildlife film presentation at Abo Ogbagante

Community Meetings

Eight community meetings involving elders, women and youths were organized to discuss conservation challenges faces the Mbe Mountains including hunting, farm encroachment, illegal logging and unsustainable harvesting of non-timber forest products. In all the meetings the negative effects of fires which spread from nearby farms into the forest at the start of the farming season were highlighted and measures to prevent future occurrence were discussed. Some communities reported having existing by-laws against indiscriminate bush burning with heavy fines imposed on defaulters. Such communities were encouraged to enforce the by-laws. A total of 155 people attended the meetings (Table 12) including village heads and other opinion leaders, women, and youth groups.

Table 12. Community meetings organised in Mbe from January to March 2022

Date	Community	Attendance
21/1/2022	Kanyang II	160
21/1/2022	Kanyang I	94
21/1/2022	Abo Ogbagante	130
21/1/2022	Abo Obisu	125
21/1/2022	Abo Mkpang	150
22/1/2022	Bamba	64
22/1/2022	Bokalum	76
22/1/2022	Wula I	29
22/1/2022	Wula II	48
Total		876



Village meeting in Kanyang II

Livelihood Support

This quarter WCS provided farm supplies including tarpaulins (for drying cocoa beans and bush mango seeds) wheelbarrows (for conveying farm produce), and rainboots to 50 farmers around Mbe who were previously trained in agricultural best practices and provide improved cocoa and bush mango seedlings to improve the productivity of existing farms and reduce deforestation from expansion. Ten tarpaulins, 15 wheelbarrows, and 25 rainboots were distributed to the beneficiaries selected jointly with the communities.

WCS support to CAMM

WCS continued to support and facilitate quarterly meetings of CAMM ensuring that members from all the nine Mbe communities can meet and take decisions on the management of the Mbe Mountains together. A new CAMM exco was inaugurated this quarter to lead the association.

Acknowledgements

WCS is formally registered in Nigeria with the Ministry of Budget and National Planning of the Federal Republic of Nigeria. Funding support for the conservation of the Mbe Mountains has come from several donors including the Great Ape Conservation Fund of the United States Fish and Wildlife Service, USAID, Darwin Initiative, Rainforest Trust, Critical Ecosystem Partnership Fund (CEPF), Palmyre Zoo, Cleveland Metroparks Zoo, JRS Biodiversity Foundation, and Berggorilla and Regenwald Direkthilfe. WCS is also grateful for the long-term collaboration and support from 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 January to March 2022.

Date	Number of patrols	Distance (km)	Number of hours	Number of rangers
2022-01-06	2	4.9	7.4	13
2022-01-07	2	10.5	16.6	13
2022-01-08	2	11.2	16.2	13
2022-01-09	2	10.2	14.5	13
2022-01-10	2	10.6	13.8	13
2022-01-11	2	15.7	16.9	13
2022-01-12	2	16.3	17.2	13
2022-01-13	2	13.5	14.2	13
2022-01-18	2	4.5	8.0	13
2022-01-19	2	10.1	14.1	13
2022-01-20	2	11.7	16.5	13
2022-01-21	2	15.1	16.6	13
2022-01-22	2	9.7	13.7	13
2022-01-25	1	11.1	5.8	3
2022-01-26	1	4.8	8.3	3
2022-01-27	1	10.0	9.1	3
2022-01-28	1	7.7	8.6	3
2022-01-29	1	6.0	7.5	3
2022-02-01	1	1.4	1.5	4
2022-02-03	1	4.2	5.8	4
2022-02-04	1	7.8	7.0	4
2022-02-05	1	6.3	7.4	4
2022-02-06	1	5.8	9.3	4
2022-02-07	1	5.6	8.4	4
2022-02-08	1	4.6	8.5	4
2022-02-09	1	8.0	8.3	4
2022-02-10	1	3.0	5.4	4
2022-02-15	1	5.1	24.0	4
2022-02-16	1	9.8	8.5	4
2022-02-17	1	9.2	8.6	4
2022-02-18	1	10.2	9.3	4
2022-02-19	1	7.5	7.8	4
2022-02-20	1	10.1	8.2	4
2022-02-21	1	6.9	8.5	4
2022-02-22	1	7.0	9.0	4
2022-02-23	1	7.4	11.5	4
2022-02-24	1	7.3	8.3	4
2022-02-25	1	8.7	8.0	4
2022-03-04	1	6.9	5.8	7
2022-03-05	1	11.2	7.6	7
2022-03-06	1	5.0	5.8	7
2022-03-07	1	9.7	8.9	7
2022-03-08	1	5.6	7.5	7
2022-03-09	1	5.5	7.8	8
2022-03-10	1	5.9	5.3	7
2022-03-11	1	3.0	6.8	7
2022-03-15	1	4.4	5.0	6
2022-03-16	1	5.0	6.3	6
2022-03-17	1	6.8	8.1	6
2022-03-18	1	5.5	8.1	6
2022-03-19	1	10.8	7.7	6

Date	Number of patrols	Distance (km)	Number of hours	Number of rangers
2022-03-20	1	13.6	8.0	6
2022-03-21	1	8.5	7.1	6
2022-03-22	1	6.8	6.3	6
2022-03-26	1	2.8	3.5	6
2022-03-27	1	5.2	7.6	6
2022-03-28	1	7.0	7.7	6
2022-03-29	1	7.5	6.9	6
2022-03-30	1	9.1	7.4	6
2022-03-31	1	5.5	7.6	6

Appendix II. Encounter rate of wildlife species observed during patrols January to March 2022.
(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>	419	0.890
Red river hog	<i>Potamochoerus porcus</i>	327	0.694
Mongoose	<i>Crossarchus sp</i>	221	0.469
Mona monkey	<i>Cercopithecus mona</i>	131	0.278
White-crested hornbill	<i>Tropicranus albocristatus</i>	108	0.229
Tree pangolin	<i>Phataginus tricuspis</i>	96	0.204
Blue duiker	<i>Philantomba monticola</i>	95	0.202
Putty-nosed monkey	<i>Cercopithecus nictitans</i>	83	0.176
Turaco	---	79	0.168
Crested guinea fowl	<i>Guttera pucherani</i>	70	0.149
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	64	0.136
Drill	<i>Mandrillus leucophaeus</i>	59	0.125
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	52	0.110
Cross River gorilla	<i>Gorilla gorilla diehli</i>	38	0.081
Grey-necked picathartes	<i>Picathartes oreas</i>	13	0.028
Bay duiker	<i>Cephalophus dorsalis</i>	11	0.023
Red-eared monkey	<i>Cercopithecus erythrotis</i>	7	0.015
Palm civet	<i>Nandinia binotata</i>	6	0.013
Crested servaline genet	<i>Genetta cristata</i>	3	0.006
Cane rat	<i>Thryonomys swinderianus</i>	2	0.004
Water chevrotain	<i>Hyemoschus aquaticus</i>	2	0.004
African civet	<i>Civettictis civetta</i>	1	0.002

Appendix III. Ranger work time for the period January to March 2022.

Name	Number of patrols	Number of patrol days	Number of patrol hours	Total patrol distance (km)
Benedict Osong	7	43	301.0	267.0
Jacob Osang	2	13	90.4	73.2
Jonas Attah	9	60	460.9	397.7
Jude Tawo	4	29	204.8	183.5
Justin Bebiem	7	47	361.5	312.9
Kenneth Obi	5	21	143.4	112.2
Hope Jafung	1	1	8.5	4.6
Peter Abraham	5	33	239.0	202.3
Peter Ocha	8	51	400.8	348.3
Philip Enyiam	2	13	93.1	74.8
Raymond Ochang	6	45	348.3	300.1
Godstime Tah	1	1	6.7	5.8
Robinson Afor	3	14	102.1	84.5
Roland Bessong	2	13	93.1	74.8
Terry Takeh	3	21	145.9	126.0