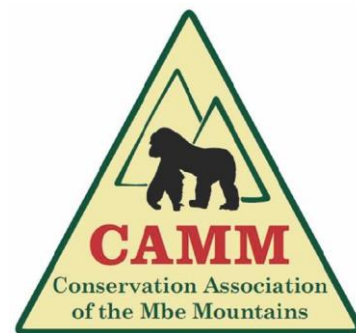


**WILDLIFE CONSERVATION SOCIETY  
MBE MOUNTAINS COMMUNITY WILDLIFE SANCTUARY  
QUARTERLY REPORT: OCTOBER – DECEMBER 2021**



Prepared by:  
Jonathan Obi Eban  
WCS Nigeria Program

## **Summary**

This report presents results of law enforcement patrols of the Mbe Mountains conducted by 14 eco-guards from October to December 2021 and supported by the Wildlife Conservation Society (WCS). The report also describes activities implemented to raise conservation awareness and improve local livelihoods. Twelve anti-poaching and gorilla monitoring patrols were completed this quarter, covering a total distance of 406 kilometres over 66 patrol days (426 person-days). The patrols removed 134 wire snares from the forest. Gorillas and chimpanzees were sighted on two separate occasions and 15 nest sites were observed. Monkeys were sighted 60 times including drill *Mandrillus leocophaeus* (12 sightings), red-eared monkey *Cercopithecus erythrotis* (2 sightings), Mona monkey *Cercopithecus mona* (27 sightings), and putty-nosed monkey *Cercopithecus nictitans* (19 sightings). Conservation education activities implemented to raise awareness include film shows in eight villages, nine community meetings, seven school clubs exchange visits, 6 guided field trips for schoolchildren, and seven school visits by WCS education staff. WCS continued to provide support to the Conservation Association of the Mbe Mountains (CAMM) to strengthen forest governance.

## **Methods**

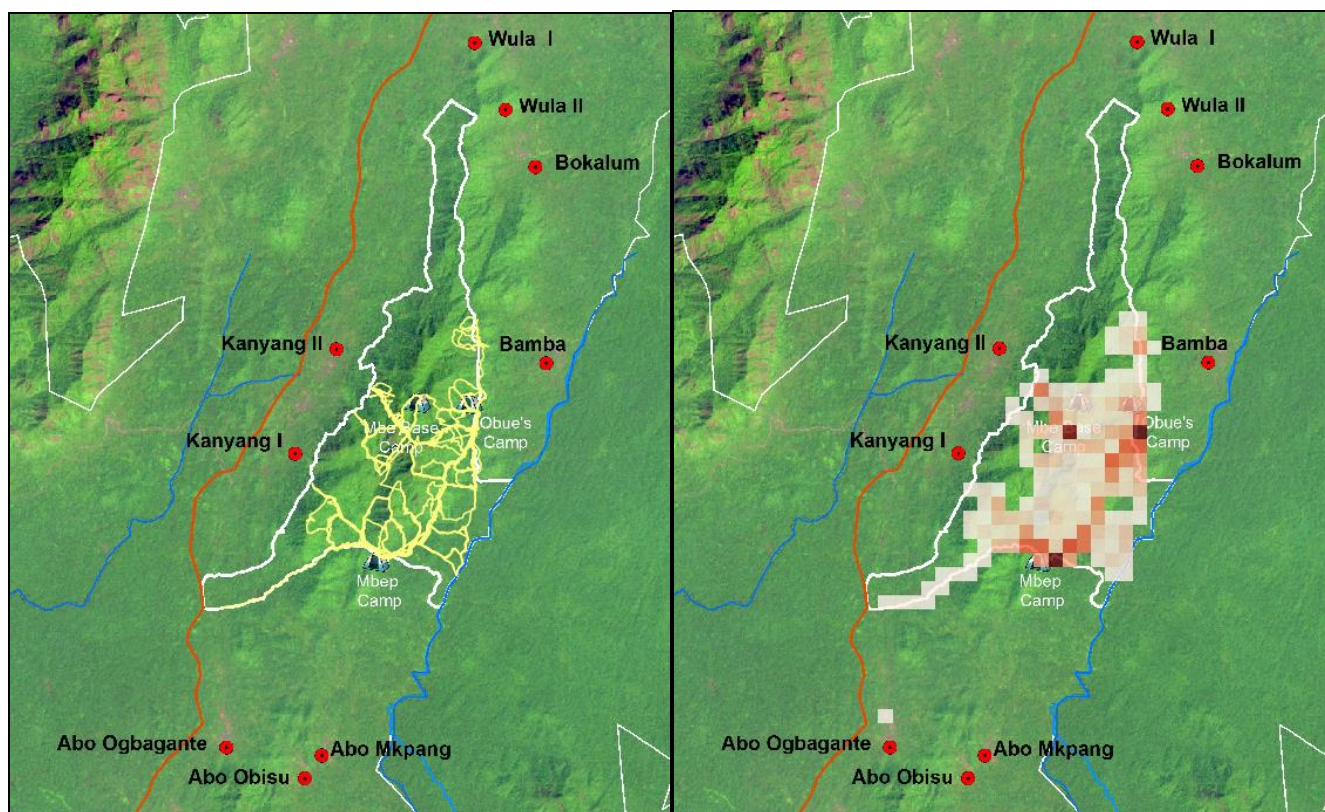
Two teams of four eco-guards each completed two 7-10 days patrols per month, patrolling different sectors of the sanctuary simultaneously. Each month additional 1-2 short (3 to 5 days) patrols were also organized between the end start of the long patrols. Patrols followed existing trails, but targeted 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 wire snares found were removed, hunting camps found were dismantled and offenders encountered were apprehended.

## **Results**

### **Patrol effort**

Twelve patrols were completed this quarter covering a total distance of 406 kilometres over 66 patrol days (426 person-days). See details in Table 1, Figure 1, and Appendix I.

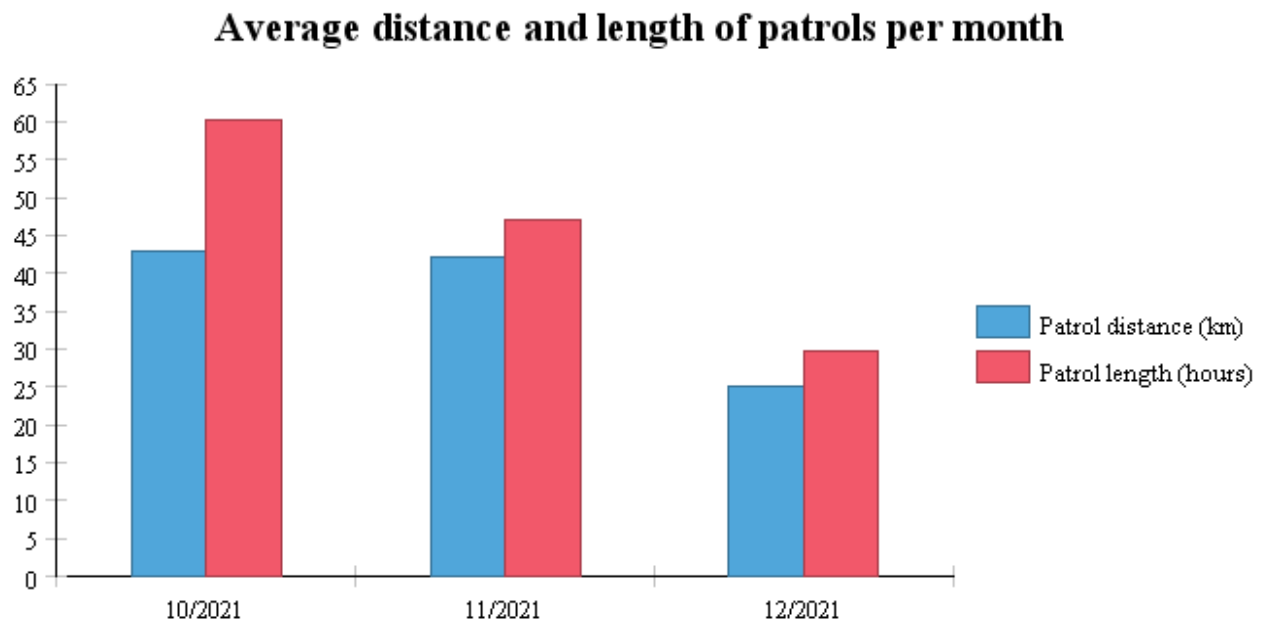




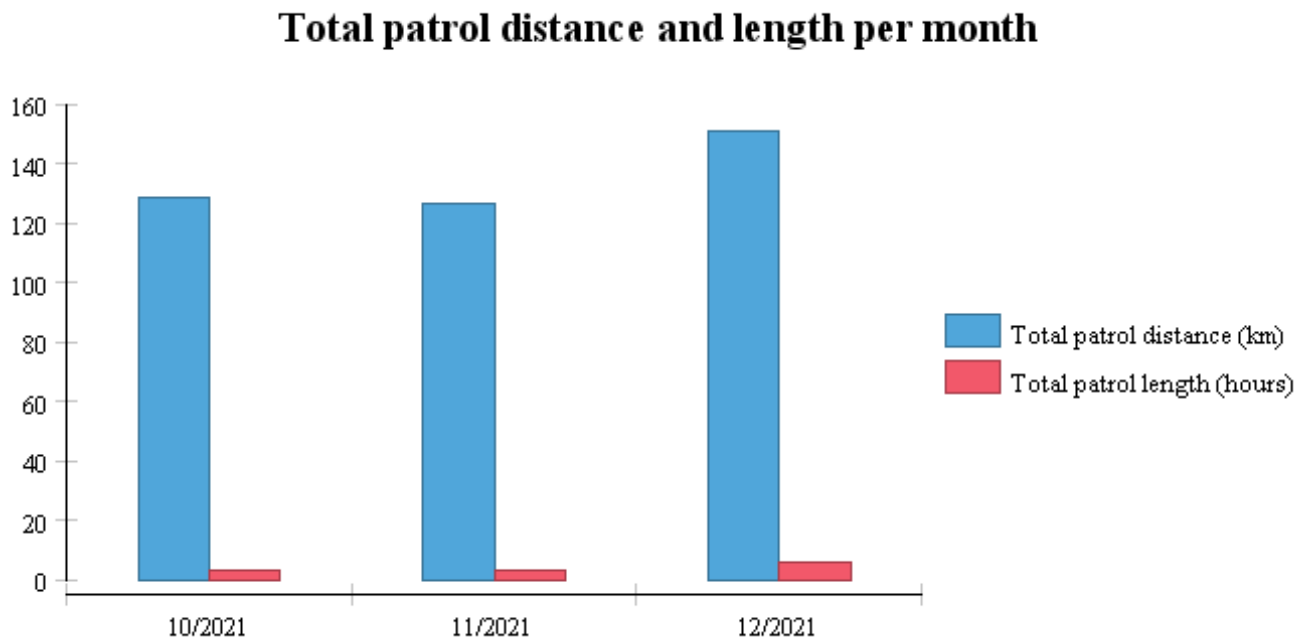
**Figure 1. Patrol track-logs and effort in km walked per grid cell for the period October to December 2021. (NOTE: Darker red color indicates areas of more intense patrol coverage).**

**Table 1. Summary of patrol effort for the period October to December 2021.**

Patrol ID	Number of patrols	Number of days	Distance (km)	Person - days
mbe_mts_000496	1	8	23.6	56
mbe_mts_000497	1	8	54.7	48
mbe_mts_000498	1	8	50.3	55
mbe_mts_000499	1	8	54.2	40
mbe_mts_000500	1	5	37.1	25
mbe_mts_000501	1	5	21.7	30
mbe_mts_000502	1	3	20.4	21
mbe_mts_000503	1	5	34.9	40
mbe_mts_000504	1	3	25.0	24
mbe_mts_000505	1	4	30.5	28
mbe_mts_000506	1	6	39.5	41
mbe_mts_000507	1	3	13.8	18
Total	12	66	405.8	426



**Figure 2. Average distance covered and time taken per patrol per month for the period October to December 2021.**



**Figure 3. Total patrol distance and time per month for the period October to December 2021.**

### **Law Enforcement**

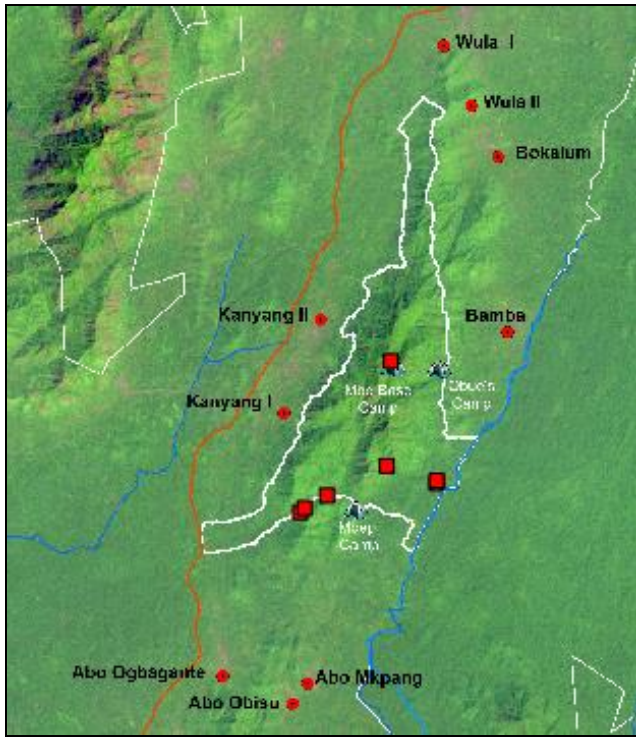
No arrests were made this quarter. However, patrol teams removed a total of 134 wire snares from the forest. Other signs of hunting observed include 81 used shotgun cartridges and two gunshots heard (Tables 2 & 3).

**Table 2. Total encounter rates of signs of human activity for the period October to December 2021.**

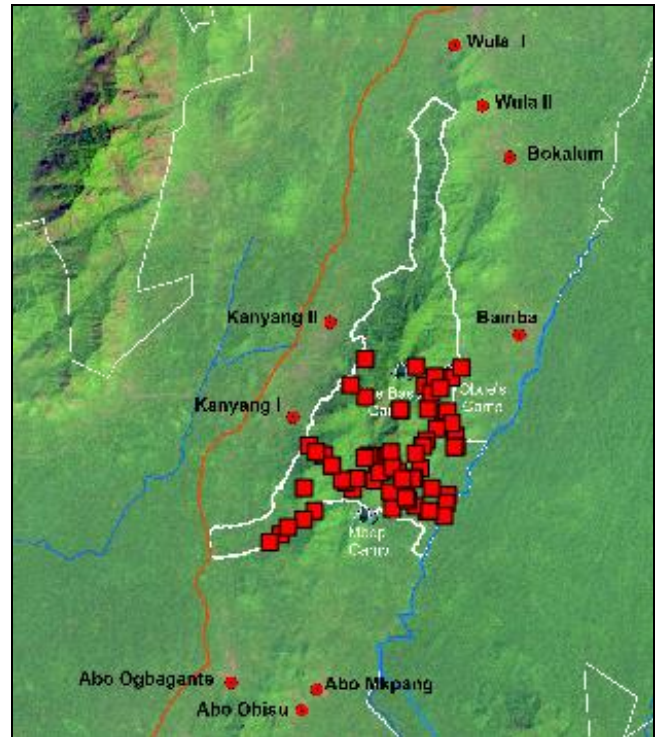
<b>Activity</b>	<b># of incidents</b>	<b>Encounter rate/km</b>
Gunshots heard	2	0.005
Human sign	38	0.094
Traps, weapons & equipment	76	0.187
Total	116	0.286

**Table 3. Hunting signs recorded for the period October to December 2021.**

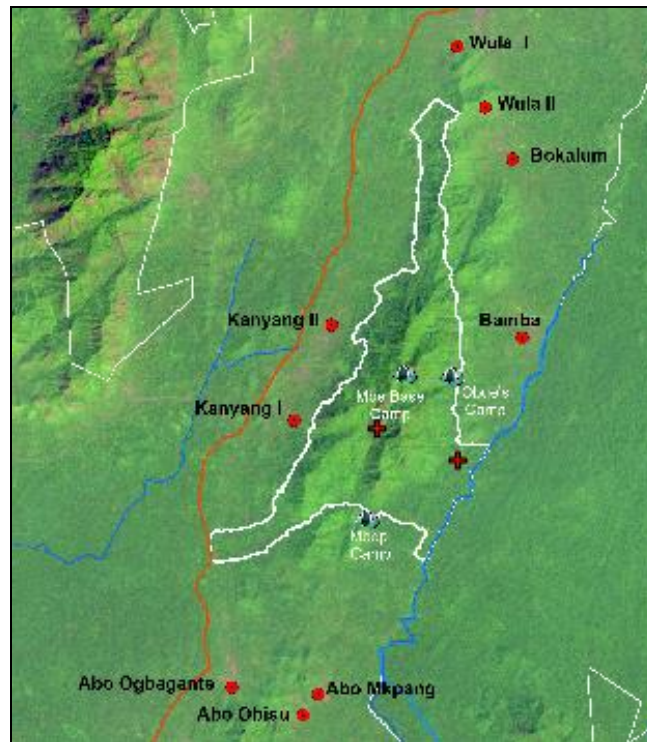
<b>Sign</b>	<b># of observations</b>	<b>Encounter rate/km</b>
Gunshots heard	2	0.005
Wire snares	134	0.330
Empty cartridges	81	0.200
Total	217	0.534



a) Wire snares



b) Empty cartridges



c) Gunshots heard

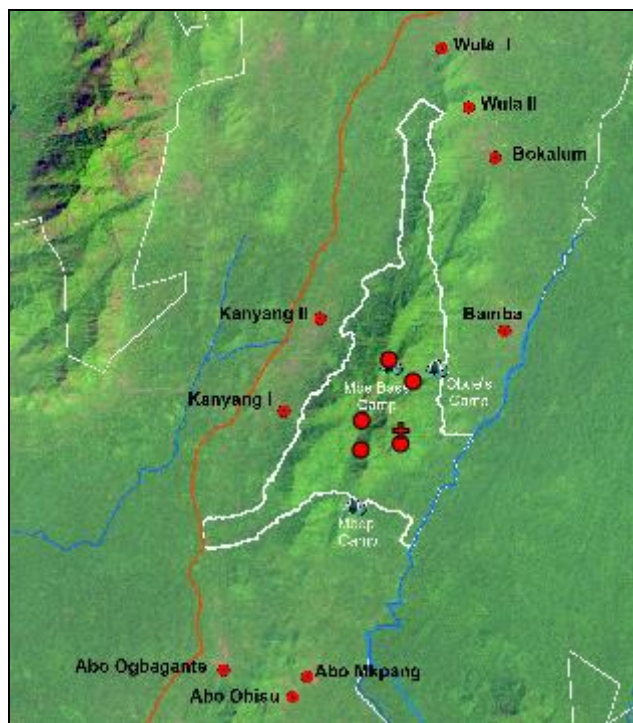
**Figure 4. Distribution of all signs of human activity recorded during the period October to December 2021.**



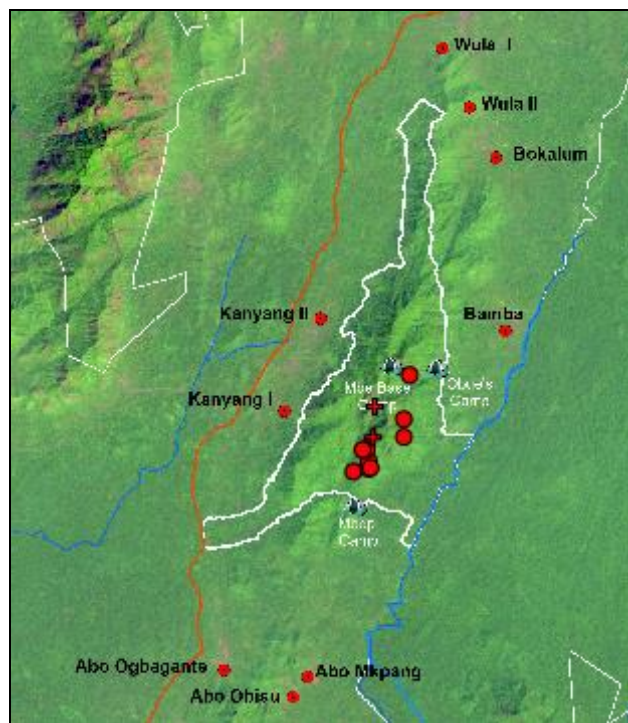
## Wildlife Observations

### Great Apes

Great apes were sighted on three occasions by eco-guards this quarter: gorillas once and chimpanzees twice (Table 4). In addition to sightings, 15 nest sites were observed (5 gorilla, 10 chimpanzee). Other indirect signs were also recorded including vocalizations, feeding remains, dung, and trails.



a) Gorillas



b) Chimpanzees

**Figure 4. Ape sightings and nest sites recorded for the period October to December 2021.**  
(NOTE: Nest sites shown as circles, sightings shown as crosses).

**Table 4. Ape sightings recorded for the period October to December 2021.**

Date	Species	Number of adult males	Number of adult females	Number age/sex unknown	Total
27/11/ 2021	Chimpanzee	---	---	16	16
28/11/2021	Gorilla	---	1	1	2
22/12/2021	Chimpanzee	1	2	9	12

**Table 5. Number and encounter rate of nest sites recorded for the period October to December 2021.**

<b>Species</b>	<b>Number of nest sites</b>	<b>Encounter rate of nest sites per km</b>
Chimpanzee	10	0.025
Gorilla	5	0.012
Total	15	0.037

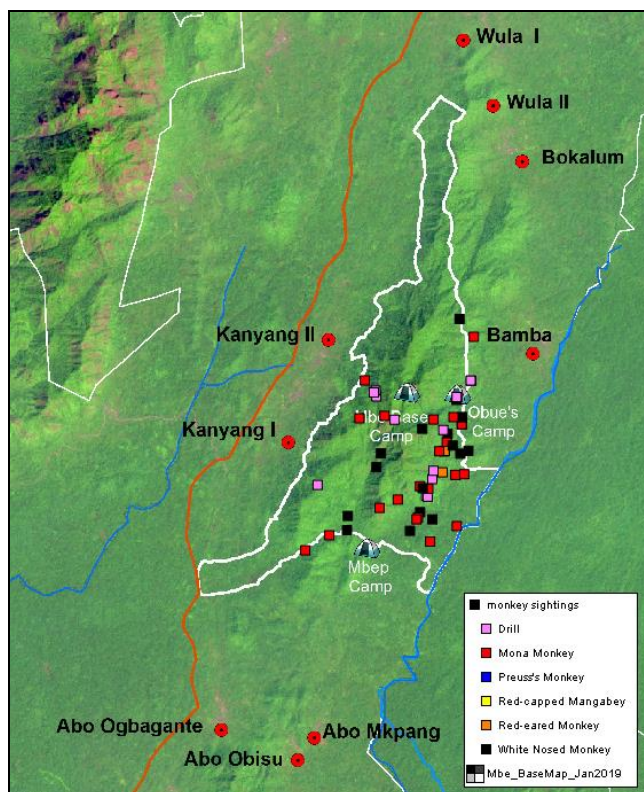
**Table 6. Nest sites recorded for the period October to December 2021.**

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



## Monkey sightings

Monkeys were sighted 60 times during this quarter (Table 7) including Mona monkey *Cercopithecus mona* (27 sightings), putty-nosed monkey *Cercopithecus nictitans* (19 sightings), drill *Mandrillus leucophaeus* (12 sightings) and red-eared monkey *Cercopithecus erythrotis* (2 sightings).



**Figure 6. Monkey sightings recorded for the period October to December 2021.**

**Table 7. Number and encounter rate of monkey species observed for the period October to December 2021.**

Species	Number of observations	Encounter rate
Drill	12	0.030
Mona monkey	27	0.067
Red-eared monkey	2	0.005
Putty-nosed monkey	19	0.047
Total	60	0.148

## Other Wildlife

Other large mammals recorded this quarter include African forest buffalo (*Syncerus caffer*), red river hog (*Potamochoerus porcus*), and yellow-backed duiker (*Cephalophus silvicultor*). See Appendix II for full list of species recorded. Non-primates sighted include pangolins, duikers, red river hog, rock hyrax, cusimanse, squirrels and bats.

## Conservation Education and Awareness

During the reporting period, WCS facilitated conservation education activities in schools and local communities to raise awareness among students and community people in Mbe. Activities implemented include film shows in eight villages, nine community meetings, seven school exchange visits between conservation club students, 6 guided field trips, and seven school visits.

### Exchange Visits

Seven exchange visits were organized involving fourteen schools around Mbe. A total of 679 students participated in the exchange visits (Table 8). The aim is to engage students to exchange experiences and discover new viewpoints and approaches on conservation issues. This activity enables school children to share ideas and knowledge they have acquired about wildlife and solving conservation problems within the area. In all the visits, students were engaged in Conservation games, quiz competition and drama. These activities were carried out in a competitive manner to generate interest in students/pupils.

**Table 8. School exchange visits in Mbe between October and December 2021**

Date	School(s)	Site	No of students
19/10/2021	Winners International School Kanyang and Dowell Partner Primary School Kanyang	Mbe	114
22/10/2021	Mari-Etta International Primary School Abo Ogbagante and Dominion Academy Abo Ogbagante	Mbe	95
20/11/2021	Eastern Academy Secondary School Wula and Buentsebe Secondary School Wula	Mbe	111
22/11/2021	Community Secondary School Kanyang and Secondary Commercial School Abo Ogbagante	Mbe	78
14/12/2021	Queens and Kings International Nursery/Primary School Bokalum and Government Primary School Bokalum	Mbe	87
15/12/2021	Community Secondary School Bokalum and Secondary Commercial School Abo Ogbagante	Mbe	93
17/12/2021	Government Primary School Busi 5 and Primary School Busi 6 School	Mbe	101

### 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 152 students led by 6 tutors 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 October and December 2021**

<b>Date</b>	<b>School(s)</b>	<b>Site</b>	<b># of pupils/ students</b>
21/10/2021	Dowell Partner Primary School Kanyang 1	Mbe	25
22/10/2021	Christ the King Primary School Abo Mkpang	Mbe	27
12/11/2021	Dowell Partners Nursery/Primary School Kanyang	Mbe	25
13/11/2021	Government Secondary School School Kanyang	Mbe	24
5/12/2021	Christ The King Secondary School Abo Mkpang	Mbe	27
6/12/2021	Community Secondary School Bokalum	Mbe	24
<b>Total</b>			<b>152</b>



**Figure 8. Field trip with Dowell Partner Academy Kanyang to Mbe Mountain**

### **School visit**

WCS education team visited five schools around Mbe Mountains Community Wildlife Sanctuary during the reporting period. Activities implemented include lessons, quiz, and conservation games (Table 10). Animal puppets were also used to discuss animal behavior in a dramatic way. A total of 60 pens and 100



wildlife branded notebooks were distributed to conservation club members and teachers as a way of motivating students and improving awareness on endangered wildlife species.

**Table 10. Schools visited in Mbe between October and December 2021**

Dates	Name of school visited	Site	# of items distributed
21/10/2021	Dowell Partner Primary School Kanyang 1	Mbe	50
22/10/2021	Christ the King Primary School Abo Mkpang	Mbe	50
20/11/2021	Eastern Academy Secondary School Wula1	Mbe	20
20/11/2021	Buentsebe Secondary School Wula	Mbe	20
9/12/2021	Government Primary School Abo Obisu	Mbe	20
9/12/2021	Government Primary School Abo Mkpang	Mbe	20
9/12/2021	Christ the King Primary School Abo Mkpang	Mbe	20
Total			200



Visit to Community Secondary School Abo Mkpang

### Film Shows

WCS organized eight wildlife film presentations in six Mbe villages to raise awareness on issues of wildlife conservation, reaching a total of 956 people (Table 11). The film shows provided opportunity

for discussion of human activities such as hunting, farm encroachment, logging, bush burning, and river poisoning that affect the environment.

**Table 11. Villages visited in Mbe for film presentation and estimated number of viewers**

<b>Date</b>	<b>Community</b>	<b>Site</b>	<b>Attendance</b>
21/10/2021	Kanyang 1	Mbe	115
23/10/2021	Kanyang 2	Mbe	120
12/11/2021	Kanyang 2	Mbe	74
13/11/2021	Abo Mkpang	Mbe	82
21/11/2021	Wula 1	Mbe	191
23/11/2021	Abo Obisu	Mbe	90
9/12/2021	Abo Obisu	Mbe	89
10/12/2021	Bokalum	Mbe	195
<b>Total</b>			<b>956</b>



Wildlife film presentation at Kanyang 2

### **Community Meetings**

Five community meetings were organized this quarter in six villages, attended by a total of 155 people (Table 12) including village heads, women and youth and other opinion leaders. The meetings discussed threats to Mbe including hunting, farm encroachment, illegal logging, and unsustainable harvesting of non-timber forest products. The current high rate of illegal logging in Cross River State and the dangers it poses to the environment was highlighted in the meetings.

**Table 12. Number of villages visited and attendance**

<b>Date</b>	<b>Community</b>	<b>Site</b>	<b>Attendance</b>
21/10/2021	Kanyang 1	Mbe	16
23/10/2021	Kanyang 2	Mbe	24
12/11/2021	Kanyang 2	Mbe	14
13/11/2021	Abo Mkpang	Mbe	12
21/11/2021	Wula 1	Mbe	25
23/11/2021	Abo Obisu	Mbe	17
9/12/2021	Abo Obisu	Mbe	29
10/12/2021	Bokalum	Mbe	18
Total			155

**WCS support to CAMM**

WCS supported and facilitated three CAMM meetings to resolve issues and discuss ways to improve the conservation of the Mbe Mountains. During a meeting in December 2021 a new leadership was selected for the different arms of CAMM. Peter Mkpe from Bamba was elected as chairman of the Management Committee, Gabriel Osangja of Kanyang I was elected chairman of the Board of Trustees, while Linus Etta of Abo Mkpang was elected chairman of the CAMM General Assembly. The new leadership of CAMM is awaiting inauguration which has been scheduled to take place in the first quarter of next year.

**Acknowledgements**

WCS is formally registered in Nigeria with the Ministry of Budget and National Planning of the Federal Republic of Nigeria. We are immensely grateful to the Great Ape Conservation Fund of the United States Fish and Wildlife Service. We are also grateful to all other donors who supported our work in the Mbe Mountains in 2021 including 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 October to December 2021.**

<b>Date</b>	<b>Number of patrols</b>	<b>Distance (km)</b>	<b>Number of hours</b>	<b>Number of rangers</b>
2021-10-12	2	6.7	6.1	13
2021-10-13	2	11.5	13.4	13
2021-10-14	2	11.1	16.2	13
2021-10-15	2	13.1	16.0	13
2021-10-16	2	16.6	16.0	13
2021-10-17	2	8.1	17.9	13
2021-10-18	2	5.1	16.8	13
2021-10-19	2	6.2	14.5	13
2021-10-24	1	2.3	5.7	6
2021-10-25	1	6.9	8.4	7
2021-10-26	1	6.1	8.2	7
2021-10-27	1	6.6	9.0	7
2021-10-28	1	4.4	8.4	7
2021-10-29	1	9.4	8.6	7
2021-10-30	1	7.8	8.3	7
2021-10-31	1	6.8	7.1	7
2021-11-04	1	8.2	7.0	5
2021-11-05	1	7.2	8.2	5
2021-11-06	1	9.3	8.3	5
2021-11-07	1	0.1	0.1	5
2021-11-08	1	11.4	8.2	5
2021-11-09	1	8.8	8.2	5
2021-11-10	1	4.7	6.0	5
2021-11-11	1	4.4	7.6	5
2021-11-15	1	4.8	3.9	5
2021-11-16	1	9.7	8.0	5
2021-11-20	1	8.5	8.2	5
2021-11-21	1	4.6	8.5	5
2021-11-22	1	9.6	8.1	5
2021-11-26	1	4.2	4.0	8
2021-11-27	1	10.1	8.0	8
2021-11-28	1	6.7	8.3	8
2021-11-29	1	8.2	7.9	8
2021-11-30	1	5.7	22.8	8
2021-12-01	1	6.3	5.9	8
2021-12-02	1	7.8	6.5	8
2021-12-03	1	10.9	8.3	8
2021-12-12	1	6.6	6.9	4

<b>Date</b>	<b>Number of patrols</b>	<b>Distance (km)</b>	<b>Number of hours</b>	<b>Number of rangers</b>
2021-12-13	1	8.5	6.7	8
2021-12-14	1	9.4	7.0	8
2021-12-15	1	6.2	6.2	8
2021-12-19	2	10.8	9.1	12
2021-12-20	2	13.6	16.8	13
2021-12-21	2	9.0	16.4	13
2021-12-22	2	16.5	17.0	13
2021-12-23	2	11.4	22.6	13
2021-12-24	1	0.0	11.7	7
2021-12-28	2	8.0	7.0	13
2021-12-29	2	15.4	16.2	13
2021-12-30	2	10.8	14.8	13

**Appendix II. Encounter rate of wildlife species observed during patrols October to December 2021. (NOTE: Species not encountered during patrols not shown).**

<b>Species common name</b>	<b>Scientific name</b>	<b># of observations</b>	<b>Encounter rate/km</b>
African-brush-tailed porcupine	<i>Atherurus africanus</i>	324	0.798
Red river hog	<i>Potamochoerus porcus</i>	321	0.791
Cusimanses	<i>Crossarchus sp</i>	175	0.431
Unidentified monkey	---	165	0.407
Unidentified medium duiker	---	141	0.347
Mona monkey	<i>Cercopithecus mona</i>	133	0.328
Unidentified small duiker	---	127	0.313
Unidentified large duiker	---	104	0.256
White-crested hornbill	<i>Tropicranus albocristatus</i>	89	0.219
Turaco	---	89	0.219
Putty-nosed monkey	<i>Cercopithecus nictitans</i>	84	0.207
Tree pangolin	<i>Phataginus tricuspis</i>	83	0.205
Crested guinea fowl	<i>Guttera pucherani</i>	81	0.200
Blue duiker	<i>Philantomba monticola</i>	56	0.138
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	53	0.131
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	49	0.121
Drill	<i>Mandrillus leucophaeus</i>	46	0.113
Unidentified great ape	---	18	0.044
Cross River gorilla	<i>Gorilla gorilla diehli</i>	13	0.032
Grey-necked picathartes	<i>Picathartes oreas</i>	10	0.025
Bay duiker	<i>Cephalophus dorsalis</i>	8	0.020
Palm civet	<i>Nandinia binotata</i>	7	0.017
Red-eared monkey	<i>Cercopithecus erythrotis</i>	4	0.010
African civet	<i>Civettictis civetta</i>	3	0.007
African forest buffalo	<i>Syncerus caffer</i>	1	0.002
Cane rat	<i>Thryonomys swinderianus</i>	1	0.002
Genet	<i>Genetta sp</i>	1	0.002
Ogilby's duiker	<i>Cephalophus ogilbyi</i>	1	0.002
Preuss's monkey	<i>Allochrocebus preussi</i>	1	0.002



**Appendix III. Ranger work time for the period October to December 2021.**

<b>Name</b>	<b>Number of patrols</b>	<b>Number of patrol days</b>	<b>Number of patrol hours</b>	<b>Total patrol distance (km)</b>
Benedict Osong	7	37	293.3	224.3
Jacob Osang	6	27	208.8	174.1
Jonas Attah	6	38	285.0	225.2
Jude Tawo	6	29	229.6	174.0
Justin Bebiem	5	30	228.4	206.0
Kenneth Obi	6	28	208.7	149.6
Peter Abraham	6	37	271.2	231.8
Peter Ocha	6	37	271.2	231.8
Philip Enyiam	7	35	265.5	193.3
Raymond Ochang	5	30	228.4	206.0
Robinson Afor	6	28	229.7	198.6
Roland Bessong	7	36	288.9	217.4
Terry Takeh	7	34	259.8	191.0