



**AFI MOUNTAIN WILDLIFE SANCTUARY
QUARTERLY REPORT: APRIL-JUNE, 2022**



Prepared by:
AYANG Vincent
WCS Nigeria Program

Summary

This report presents results from ranger patrols of Afi Mountain Wildlife Sanctuary (AMWS) conducted from April to June 2022 by the Wildlife Conservation Society (WCS). It also outlines activities implemented during the same period to raise levels of conservation awareness and improve local livelihoods.

A total of 14 anti-poaching patrols were completed this quarter covering 434.8 kilometers over 86 patrol days (608 man-days). Four offenders were apprehended including one hunter and 3 loggers, and a chainsaw was confiscated from the loggers. A total of 194 wire snares were removed from the forest and two hunting camps discovered were dismantled. In addition to hunting, six illegal farms were observed, mostly in the Olum Hills-Buanchor-Katabang area. A group of seven chimpanzees was sighted in the southern area of the sanctuary. One chimpanzee nest site was also observed in the same area. Three gorilla nest sites were observed just north of the southern base camp. Monkeys sighted include Mona monkey *Cercopithecus mona* (38 sightings), putty-nosed monkey *Cercopithecus nictitans* (27 sightings); and drill *Mandrillus leucophaeus* (27 sightings). Other large mammals recorded include yellow-backed duiker (*Cephalophus silvicultor*), red river hog (*Potamochoerus porcus*), and African civet (*Civettictis civetta*). In addition to regular patrols of the sanctuary, “Gorilla Guardians” trained and supported by WCS surveyed adjoining community forests in the Bitiah-Kakwagom-Kakubok, Esekwe-Ndemechang, and Katche-Asuben areas to monitor gorilla presence outside the sanctuary. The Afi gorillas are known to occasionally move out of the sanctuary into these areas in search of food. One gorilla nest site and 3 three unidentified ape nests were observed in the Esekwe-Ndemechang forest by the Gorilla Guardians.

Activities implemented to raise conservation awareness include great ape film shows in four villages around the sanctuary reaching 914 people, six exchange visits between conservation clubs involving 645 students, six guided field trips, 10 community meetings and 10 school visits. A total of 160 customized notebooks designed to promote conservation of Cross River gorillas and forest elephants were distributed during the school visits.

This quarter WCS organized fire management training for 84 cocoa farmers in four communities around Afi (Buanchor, Olum, Esekwe and Kakubok) focusing on creation of effective firebreaks and using practical demonstration sessions. Fires spreading into the sanctuary from nearby farms during the farming season is a problem at Afi.

Methods

Four to six patrols were completed per month each lasting 6-10 days. The patrols targeted hotspots of illegal human activities determined based on data from previous patrols and intelligence gathered from surrounding communities. Offenders encountered were arrested and all wire snares and hunting camps found were destroyed. Data were collected and analyzed using SMART software. The patrols covered the Esekwe Camp, Base Camp, the Buanchor axis, Base Camp, Nkayang-Kakubok, Katche-Asuben, Olum Hills, Njua Lowland, Katabang, Buanchor-Drill Ranch, and Ebakken-Boje-Asuben sectors of the sanctuary (Figure 1).

Results

1. Law Enforcement

Patrol effort

Fourteen patrols were completed this quarter covering a total distance of 434.8 kilometres over 86 patrol days (608 man-days) (Figure 1; Table 1).

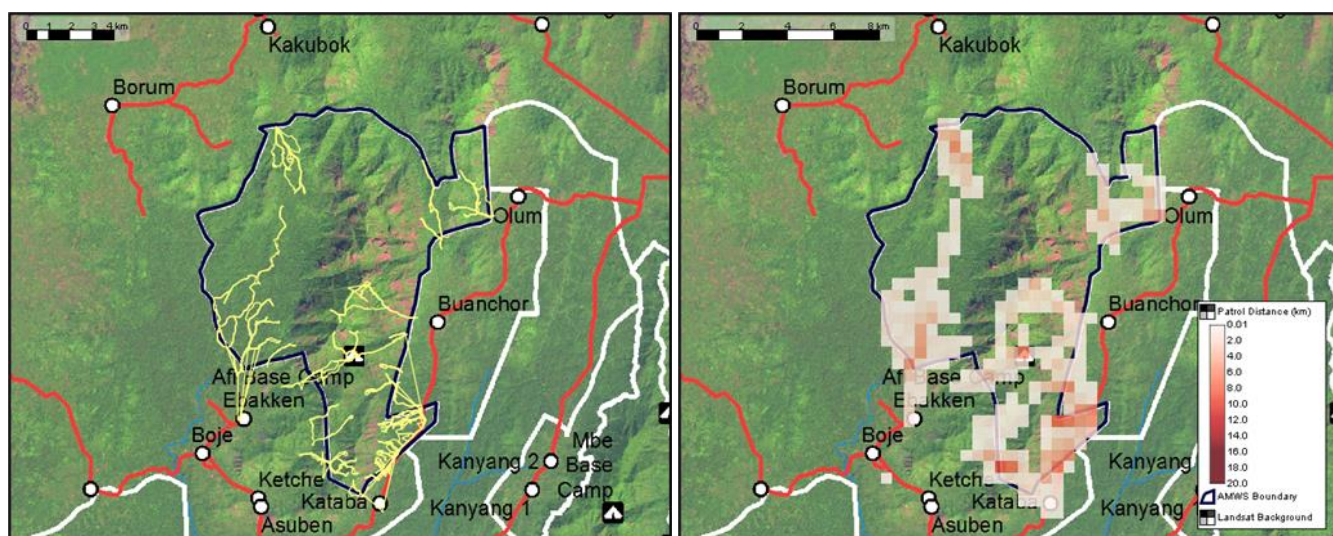


Figure 1. Patrol tracklogs and patrol effort in km walked per grid cell from April to June, 2022. Darker red color indicates areas of more intense patrol coverage.

Table 1. Summary of patrol effort by patrol area for the period April to June, 2022.

Area	Number of Patrols	Patrol Days	Patrol Hours	Distance (km)	Person - Days
Base Camp	2	12	75.9	58.2	82
Buanchor-Drill Ranch	4	24	150.9	118.5	175
Buanchor-Olum	1	5	34.8	24.7	30
Katabang Axis	2	12	85.0	41.2	97
Ketche-Asuben	2	12	70.7	60.3	72
Njua Lowland	1	8	47.8	60.9	48
Nkanyang-Kakubo	1	8	46.2	46.1	64
Olum Axis	1	5	36.2	24.9	40
Total	14	86	652.5	434.8	608

Average distance and length of patrols per month

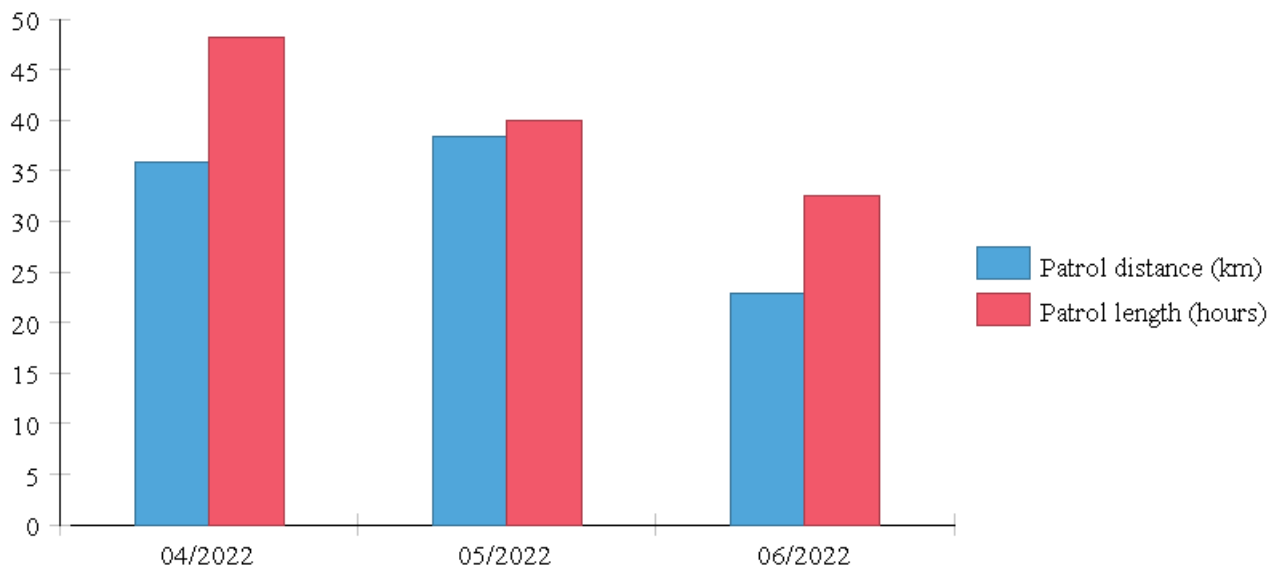


Figure 2. Average distance covered and time taken per patrol per month for the period April to June, 2022.

Total patrol distance and length per month

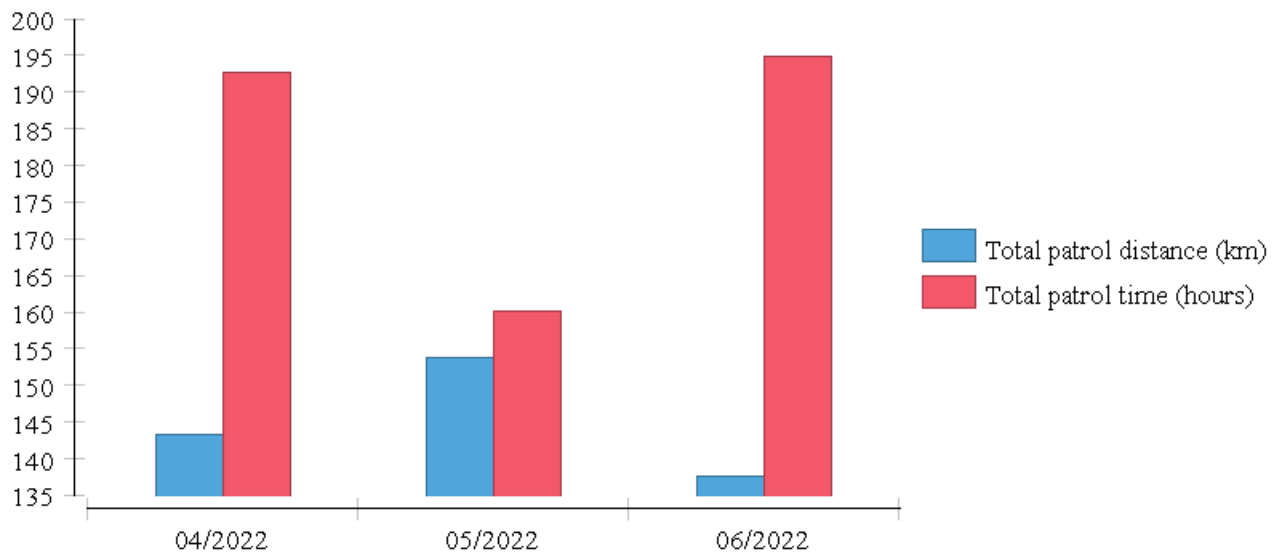


Figure 3. Total patrol distance and time per month for the period April to June, 2022.

Patrols this quarter apprehended four offenders including one hunter and three loggers (Tables 2 & 3). The patrols also removed 194 wire snares and dismantled one hunting camp and confiscated one chainsaw from the loggers. Other signs of hunting observed include 6 gunshots heard and 67 empty cartridges. Two logging sites and six farms were seen in the sanctuary during the patrols (Tables 4 and 5).

Table 2. Summary of arrests and other law enforcement for the period April to June, 2022.

Station	Leader	Date	Action Taken - People	Home Village	Name	Threat
Ketche-Asuben	Etta Joseph	Jun 20, 2022	Observed Only		Not disclosed	Trapping
Buanchor-Drill Ranch	David Otu	Jun 10, 2022	Arrested	Esekwe	Nicholas Onabe and two others	Logging

Table 3. Number of people seen as threat from April to June, 2022.

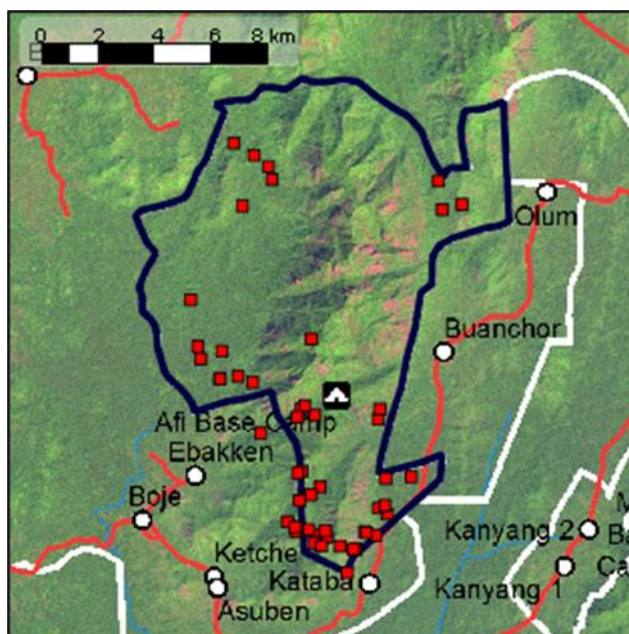
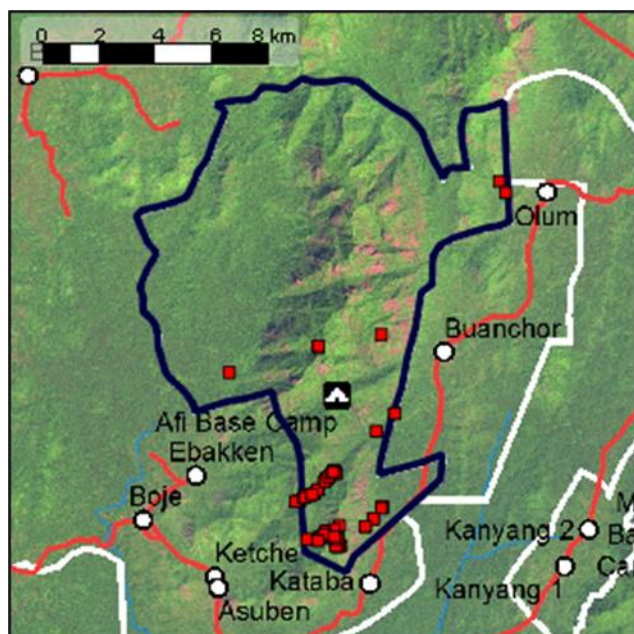
Threat	Number of People	Encounter Rate per km
Hunting	1	0.002
Logging	1	0.002

Table 4. Total encounter rates of signs of human activity from April to June, 2022.

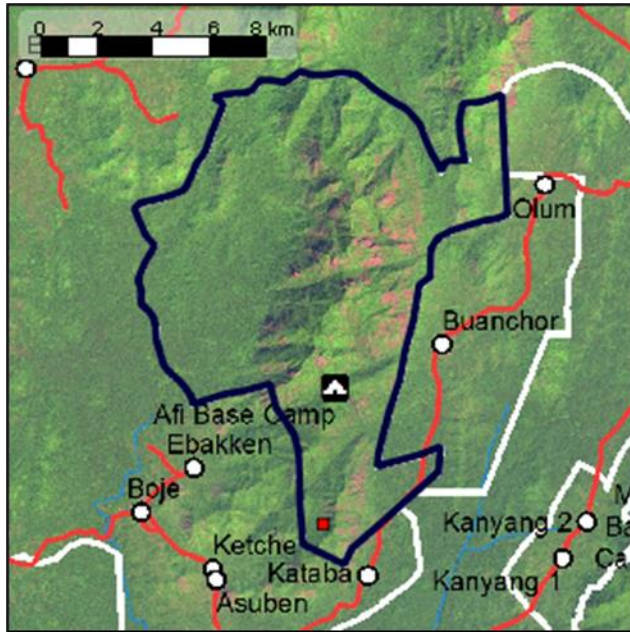
Activity	Number of Incidents	Encounter Rate per km
Farming and Land Clearing	6	0.014
Gunshot heard	6	0.014
Human Sign	22	0.051
Logging and Tree Cutting	3	0.007
People seen	2	0.005
Shed or Camp	1	0.002
Traps, Weapons & Equipment	123	0.283

Table 5. Specific evidence of logging for the period April to June, 2022.

Type of logging evidence	Action Taken - Items	Age of Sign	Number of Logs	Number of Stumps	Tree Species
Stump	Seen Only	Fresh		1	Other
Logs	Seen Only	Fresh	1		Mahogany
Logs	Seen Only	Fresh	5		Mahogany

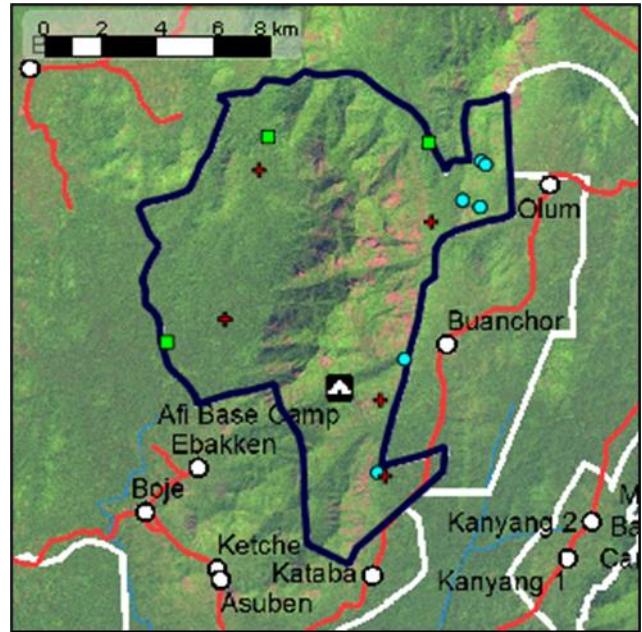


a) Wire snares



c) Sheds and camps

b) Empty cartridges



d) Farms (circles), gunshots heard (crosses), logging (squares)

Figure 4. Distribution of all signs of human activity recorded in April to June, 2022.

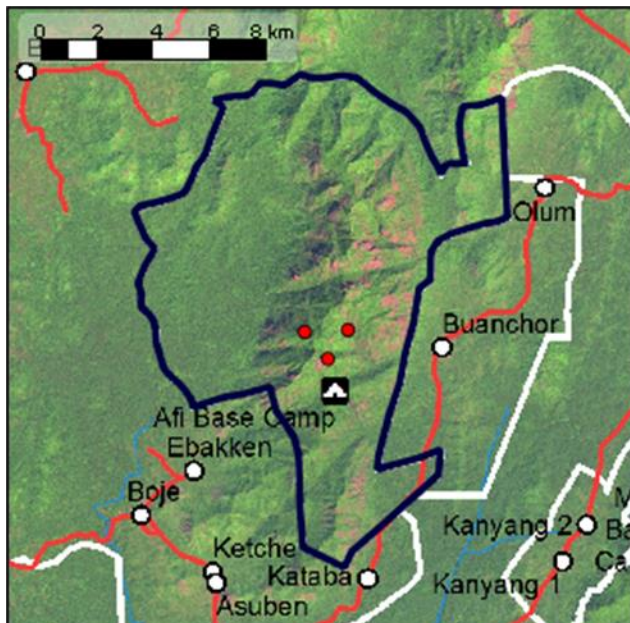
Table 6. Hunting signs recorded for the period April to June 2022.

Sign	Number of Observations	Encounter Rate per km
Gunshots heard	6	0.014
Set wire snares	194	0.446
Empty cartridges	67	0.154
Hunting camps	1	0.002

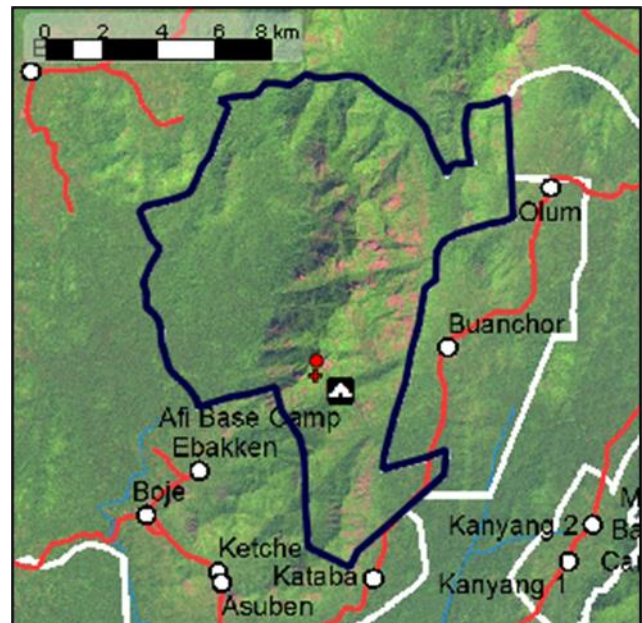
Wildlife Observations

Great apes

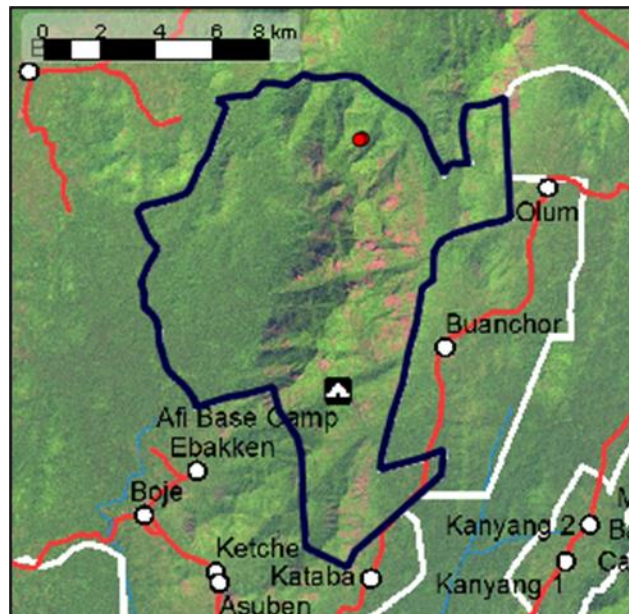
A group of seven chimpanzees was sighted in the southern area of the sanctuary. One chimpanzee nest site was observed in the same area. Three gorilla nest sites were observed just north of the southern base camp (Tables 7 & 8; Figure 5). One gorilla nest site and 3 three unidentified ape nests were observed in the Esekwe-Ndemechang forest by “Gorilla Guardians” trained and supported by WCS surveyed adjoining community forests in the Bitiah-Kakwagom-Kakubok, Esekwe-Ndemechang, and Katche-Asuben areas to monitor gorilla presence. Afi gorillas are known to occasionally move out of the sanctuary into these areas in search of food.



a) Gorillas



b) Chimpanzees



c) Unidentified apes

Figure 5. Ape sightings and nest sites recorded from April to June 2022. Nest sites shown as circles, sightings shown as crosses.

Table 7. Number and encounter rate of nest sites recorded for the period April to June, 2022.

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	1	0.002
Gorilla	3	0.007
Unidentified great ape	1	

Table 8. Nest sites recorded for the period April to June 2022.

Species	Nest site type	Age of Sign	Dung present	Number of ground nests	Total number of nests	Note
Chimpanzee	Day nest(s)	Fresh	false	1	10	
Gorilla	Day nest(s)	Fresh	false	0	8	
Gorilla	Night nest(s)	Fresh	true	8	2	
Gorilla	Night nest(s)	Recent	false	1	5	

Monkey sightings

Monkeys sighted this quarter include drill (*Mandrillus leucophaeus*), Mona monkey (*Cercopithecus mona*) and putty-nosed monkey (*Cercopithecus nictitans*). See Figure 6 and Table 9 for details. Vocalizations were also heard frequently during the patrols.

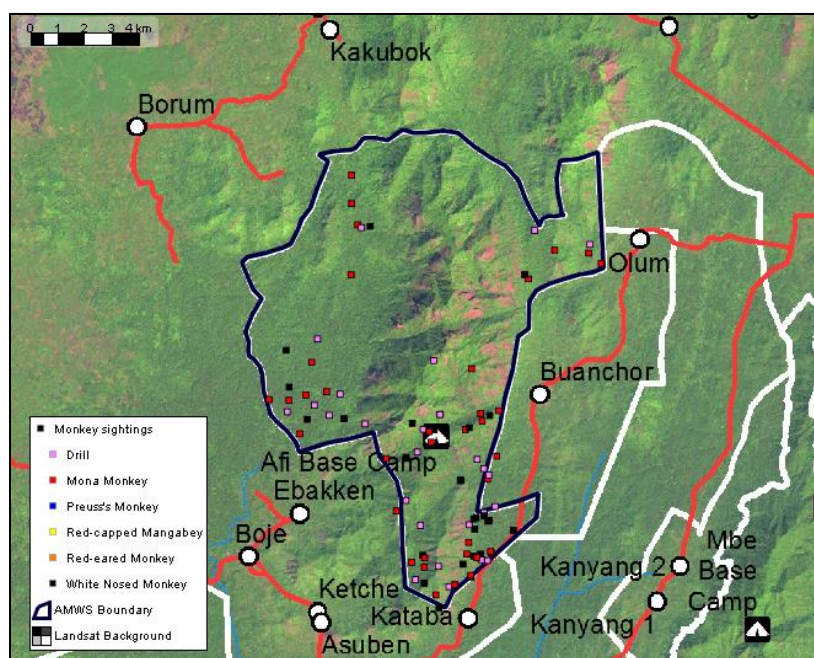


Figure 6. Monkey species observed for the period April to June 2022.

Table 9. Monkey species sighted from April to June, 2022.

Species	Number of observations	Encounter rate per km
Drill	27	0.062
Mona monkey	38	0.087
White-nosed monkey	27	0.062

Other Wildlife

Encounter rates of all the animal signs (including sightings) are presented in Appendix II below. Signs of blue duiker (*Philantomba monticola*), drill (*Mandrillus leucophaeus*) and red river hog (*Potamochoerus porcus*) were the most frequently observed.

1. Conservation Education and Awareness

Field Trips

This year WCS organized six field trips to AMWS for 140 students and six teachers from the local schools (Table 10). Field trips help to connect people to nature. They tend to produce lasting experiences that help to inspire people to value wildlife and support biodiversity conservation. Field trips organized this quarter provided students the opportunity to learn about the rainforest, threats to wildlife, and ongoing efforts to save endangered species from extinction.

Table 10: Field trips organized for schools around Afi April-June 2022

Date	School	site	No of pupils/students
April 28	Migrant Primary School Buanchor	Afi	27
April 28	Trinity Primary School Buanchor	Afi	29
May 11	Winners International School Katabang	Afi	21
May 11	Government Primary School Katabang	Afi	20
June 13	Community Secondary School Buanchor	Afi	23
June 13	Community Secondary School Olum	Afi	20

Exchange Visits

During the reporting period, WCS facilitated six exchange visits involving twelve schools around Afi and 549 students (Table 11). The exchange visits facilitated knowledge and experience sharing among students and allowed younger conservation clubs to learn from older ones.

Table 11: School Exchange visits and number of participants

Date	School(s)	Site	No of students
April 29	Government Primary School Olum and Pennel International Nursery and Primary School Olum	Afi	69
April 29	Aunty Joy International School and Government Migrant Primary School Buanchor	Afi	84
May 23	Government Primary School Buanchor and JAFOR International School Buanchor	Afi	84
March 24	Government Primary School Katabang and Winners International School Katabang	Afi	115
June 9	Migrant Primary School Ebranta and Government Primary School Ebok	Afi	109
June 9	Noble Breed International School Enyi and Government Primary School Enyi Boje	Afi	88

School Visits

The purpose of school visits is to organize conservation education lessons and introduce new concepts that would help student to participate in conservation education activities within their schools and communities. Four schools were visited this quarter (Table 12). A total of 94 customized notebooks and posters were distributed to students during the visits to enhance understanding of WCS activities and local wildlife.

Table 12. Schools visited at Afi between April to June 2022

Date	School(s)	Notebooks Distributed
April 29	Migrant Primary School Buanchor	30
April 29	Government Primary School Buanchor	30
June 9	Government Primary School Ebok	17
June 9	Migrant Primary School Ebranta	17



Visit to Winners primary school Katabang

Film Shows

WCS presented conservation focused films in 8 villages around Afi this quarter (Table 13). The films were viewed by a total of 1,250 people helping to create awareness about endangered wildlife.

Table 13: Communities visited in Afi for film shows from April to June 2022 and attendance

Date	Name of Community	Attendance
11/4/2022	Katabang	88
24/5/2022	Katabang	120
27/5/2022	Nkanya	190
28/5/2022	Kakubok	72
9/6/2022	Ebranta	150
13/6/2022	Buanchor	160
21/6/2022	Bitiah	340
22/6/2022	Kakwagom Irruan	130



Viewers at a film show in Nkanya village, AMWS

School Tree Nursery and Planting

Nineteen school conservation clubs in Afi were supported by WCS to establish nurseries of forest trees such as bush mango (*Irvingia* spp) and to plant the seedlings to provide shade in their schools as well as fruits for food and income. A total of 76 seedlings were produced and planted. WCS will support the students to monitor the planted seedlings to ensure good survival rate.



Members of conservation clubs at Afi with bush mango seedlings ready for planting

World Environment Day Celebration

WCS celebrated World Environment Day 2022 with the theme “ONLY ONE EARTH”, which highlighted the importance of living sustainably and in harmony with nature. To mark the occasion WCS organized a number of activities to mark the occasion including a rally at Enyi Boje with students from 15 schools around Afi, staff of Cross River Forestry Commission and WCS, and traditional rulers. Other activities include art competition, drama presentation, quiz and goodwill messages from invited guest. Gifts were

presented to deserving heads of schools and community leaders in recognition of their strong support of conservation activities in the area.

Community sensitization on bush fires

This quarter WCS organized sensitization meetings in communities around the sanctuary where poor farming practices often result in fire outbreaks. Fires spreading into the sanctuary from nearby farms during the farming season is a problem at Afi. To prevent such fire incidents WCS organized fire management training for 84 cocoa farmers in four communities (Buanchor, Olum, Esekwe and Kakubok) focusing on creation of effective firebreaks and using practical demonstration sessions.

Acknowledgements

We are grateful to the Great Ape Conservation Fund of the United States Fish and Wildlife Service and the United States Agency for International Development for providing financial support to WCS Nigeria for the conservation of AMWS. We also appreciate the funding support from Arcus Foundation, J.R.S. Biodiversity Foundation, Kolmården Zoo, AZA, and Zoo New England. WCS is formally registered in Nigeria through an agreement with the Ministry of Budget and National Planning of the Federal Republic of Nigeria. The Government of Cross River State is also appreciated for providing the enabling environment to operate. WCS works at Afi Mountain Wildlife Sanctuary in collaboration with the Ministry of Climate Change and Forestry and the Cross River State Forestry Commission.

Appendix I. Patrol effort statistics April to June 2022.

Date	Number of Patrols	Distance (km)	Number of Hours	Number of Rangers
2022-04-10	2	12.3	12.6	14
2022-04-11	2	9.7	14.6	14
2022-04-12	2	9.5	15.6	14
2022-04-13	2	10.1	14.1	14
2022-04-14	2	14.9	15.3	14
2022-04-15	2	13.3	13.3	14
2022-04-16	2	11.4	12.5	14
2022-04-21	2	8.8	10.9	14
2022-04-22	2	11.6	13.5	14
2022-04-23	2	3.1	16.4	14
2022-04-24	2	5.9	14.6	14
2022-04-25	2	12.6	14.1	14
2022-04-26	2	10.6	14.5	14
2022-04-27	2	9.6	10.8	14
2022-05-11	2	9.1	11.8	14
2022-05-12	2	17.8	13.4	14
2022-05-13	2	14.8	14.1	14
2022-05-14	2	10.6	6.7	14
2022-05-15	1	9.4	6.1	6
2022-05-16	1	7.1	6.1	6
2022-05-17	2	12.9	16.2	14
2022-05-18	2	11.0	11.0	14
2022-05-19	1	7.5	4.0	8
2022-05-20	1	6.7	4.7	8
2022-05-23	2	12.8	11.4	14
2022-05-24	2	7.7	14.9	14
2022-05-25	2	9.3	14.3	14
2022-05-26	2	7.3	13.5	14
2022-05-27	2	9.8	11.8	14
2022-06-06	2	11.5	11.8	14
2022-06-07	2	9.2	11.8	14
2022-06-08	2	8.1	10.3	13
2022-06-09	2	5.5	8.5	14
2022-06-10	2	13.8	14.1	14
2022-06-11	2	6.1	8.4	14
2022-06-16	2	6.0	11.0	13
2022-06-17	2	7.7	13.2	14
2022-06-18	2	9.0	14.1	14
2022-06-19	2	8.5	13.2	14
2022-06-20	2	8.2	9.4	14
2022-06-25	2	6.4	14.5	13
2022-06-26	2	7.3	12.8	14
2022-06-27	2	6.5	10.6	14
2022-06-28	2	15.1	18.6	14
2022-06-29	2	8.7	12.4	14

Appendix II. Encounter rate of wildlife species observed during patrols from April to June 2022.
Species not encountered during patrols are not shown.

Species	Number of observations	Encounter rate per km
Blue duiker	<i>Philantomba monticola</i>	0.715
Drill	<i>Mandrillus leucophaeus</i>	0.635
Red river hog	<i>Potamochoerus porcus</i>	0.628
Brush-tailed porcupine	<i>Atherurus africanus</i>	0.534
Mona monkey	<i>Cercopithecus mona</i>	0.370
Unidentified monkey	-	0.322
Mongoose	<i>Crossarchus</i> spp.	0.315
Turaco	-	0.292
Hornbill	-	0.288
White nosed monkey	<i>Cercopithecus nictitans</i>	0.186
African civet	<i>Civettictis civetta</i>	0.173
Bay duiker	<i>Cephalophus dorsalis</i>	0.166
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	0.129
Cane rat (grasscutter)	<i>Thryonomys swinderianus</i>	0.087
Palm civet	<i>Nandinia binotata</i>	0.076
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	0.071
Tree pangolin	<i>Phataginus tricuspis</i>	0.069
Rock fowl	<i>Picathartes oreas</i>	0.035
Unidentified great ape	-	0.023
Cross River gorilla	<i>Gorilla gorilla diehli</i>	0.021
Grey parrot	-	0.018
Genet	-	0.014
Unidentified large duiker	-	0.012
Unidentified medium duiker	-	0.012
Unidentified small duiker	-	0.005

Appendix III. Ranger work time for the period April to June 2022.

Name	Number of Patrols	Number of Patrol Days	Number Patrol Hours	Total Patrol Distance (km)
Olum Gorilla Guardian	2	4	32.2	22.7
Patrick Bankong	7	42	285.1	203.2
Patrick Kejie	8	44	256.4	232.4
Peter Adie	1	1	7.0	4.2
Peter Nsan	7	43	291.1	202.2
Alphonsus Oweh	9	46	306.6	220.3
Anthony Osang	8	44	256.4	232.4
Bernard Akpa	7	43	291.1	202.3
David Otu	8	44	256.4	232.4
Donald Ojie	8	44	256.4	232.4
Etta Joseph	8	44	256.4	232.4
George Mgbang	7	43	291.1	202.2
Henry Achua	7	42	285.9	197.7
Joseph Dibang	8	43	253.8	216.1
Katabang Gorilla Guardian	7	39	258.9	179.5
Philip Ashijua	7	42	284.0	198.0