

**WILDLIFE CONSERVATION SOCIETY  
CROSS RIVER NATIONAL PARK (OKWANGWO DIVISION)  
QUARTERLY REPORT: APRIL-JUNE, 2021**



Prepared by:  
*Emmanuel Bassey,*  
*Louis Nkonyu*  
*& Juliet Ntui.*  
WCS Nigeria Program

## Summary

This report presents the results of ranger patrols of the Okwangwo Division of Cross River National Park (Okwangwo) implemented with support from the Wildlife Conservation Society (WCS) from April to June 2021. It also describes activities implemented in the park support zone communities to raise awareness and improve local livelihoods. A total of 30 ranger patrols were completed during this reporting period, covering a total distance of 1,772.5 kilometers over 212 patrol-days (1027 person-days). Four offenders were arrested. The patrols also destroyed 15 hunting camps and removed 353 wire snares. In addition to law enforcement, data were collected during the patrols to monitor wildlife abundance and distribution. Chimpanzees were sighted on four occasions during this period. In addition to sightings, a total of 36 nest sites were encountered including 29 gorilla, 5 chimpanzee and 2 nest sites that could not be firmly identified as gorilla or chimpanzee. Other primates observed directly were red-eared monkey *Cercopithecus erythrotis* (sighted twice), Mona monkey *Cercopithecus mona* (81 sightings), putty-nosed monkey *Cercopithecus nictitans* (53 sightings), drill *Mandrillus leucophaeus* (11 sightings) and Preuss's monkey *Allochrocebus preussi* (7 sightings). While the continued sighting of primates in the park by rangers despite ongoing hunting pressure is an encouraging, their long-term survival is threatened by continued intense hunting requires increase protection effort. Forest elephants (*Loxodonta cyclotis*) were sighted seven times while signs of African buffalo (*Syncerus caffer*) were observed in the Okwa Hills and in the lowland area to the south. Elephant poaching remains a serious threat in the park. During this reporting period elephant carcass was reported in the Bashu area, suspected to have been killed by poachers from Cameroon. While rangers make significant effort to arrest offenders under challenging conditions, none of the arrested offenders was prosecuted due to certain constraints. Illegal activities in the park will be difficult to stop when offenders are not prosecuted and made to face appropriate punishment. Therefore, it is important for the park's management to intensify efforts to prosecute arrested offenders. In addition to deterring potential offenders, higher prosecution rate will boost morale among rangers and improve overall effectiveness of protection efforts. Joint patrols with the police or army around the periphery of the park is recommended, if possible, to check farm encroachment and other illegal activities in the park. A number of conservation education activities were implemented this quarter in the communities around the park to create awareness including nine school visits, six exchange visits between conservation clubs, and six guided field trips for school children. Others include film show in thirteen villages with a total attendance of 1,471 people. WCS also gathered conservation club members from 30 different schools, representatives from conservation stakeholders, community leaders and forest resource users to mark the World Environment Day, where discussion was focused on the theme for this year's WED - "Ecosystem Restoration". These activities were implemented jointly by WCS and CRNP education staff with support from the Okwangwo Sector Officer. In addition, WCS continued to support the production and broadcast of the My Gorilla My Community radio program (MGMC), which reaches over 100,000 people within the Cross River gorilla landscape and over one million in the entire Cross River State. Key Activities implemented to support sustainable livelihoods during the quarter were training of women in modern method of bush mango propagation and sustainable harvesting, and training of farmers in rational use of pesticides. Others include distribution of improved cocoa seedlings to farmers trained in sustainable agricultural practices.

## **Background**

In 2011, WCS established a CyberTracker-based monitoring project in Okwangwo with technical assistance from the North Carolina Zoo, and funding from the Great Ape Conservation Fund of the US Fish and Wildlife Service, the Great Apes Program of the Arcus Foundation and others. The main objectives of this project are to strengthen existing law enforcement efforts by increasing the frequency, duration, coverage and efficacy of anti-poaching patrols and to monitor wildlife, human sign and the effectiveness of ranger patrols. In 2016, the law enforcement monitoring system in Okwangwo was upgraded to Spatial Monitoring And Reporting Tool (SMART: <http://smartconservationtools.org/>) allowing improved analysis and reporting. WCS also implements a conservation education and awareness program in Okwangwo that includes conservation clubs, field trips, and the use of community meetings, film and radio to raise awareness and change attitudes and behavior towards conservation. In addition to law enforcement and education, WCS is working with cocoa farmers and women's groups to improve the sustainability of cocoa production and non-timber forest products harvesting, and increase income from improved efficiency of existing farms and improved marketing of bush mango. This report summarizes the results of law enforcement, conservation education and livelihood work in Okwangwo supported by WCS during the period from April to June 2021.

## **Methods**

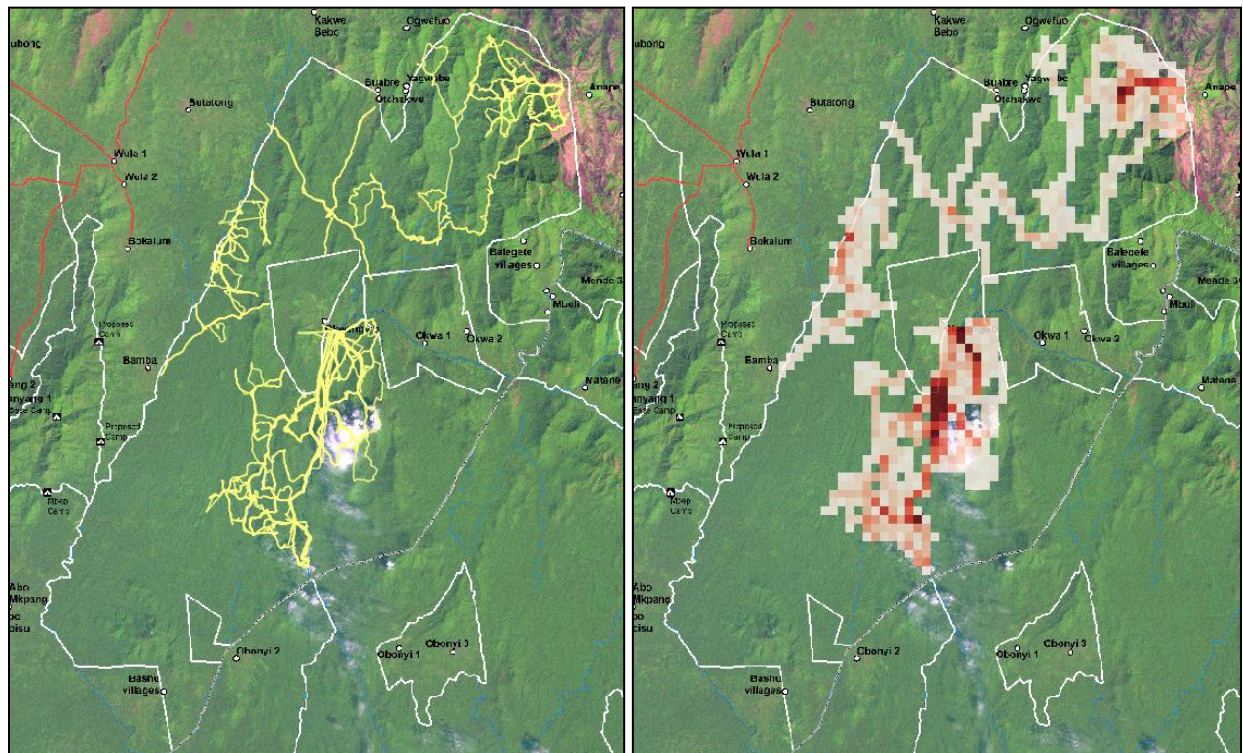
Ten camping patrols lasting 6 to 8 days each were completed per month by five teams of six rangers each. Teams patrolled different areas simultaneously targeting hunting "hotspots" identified in previous patrols and information gathered from the surrounding villages. Due to limited resources, patrols facilitated by WCS are focused on the Okwa Hills and Boshi Extension areas of the park, which are core areas used by gorillas. The lowland area to the west and the Saltlick axis were also patrolled. Data were recorded with handheld computers with CyberTracker software, which automatically records GPS coordinates for every observation, and analyzed using SMART software. The conservation education program in Okwangwo is implemented to complement the existing law enforcement monitoring project. The program focuses on raising levels of conservation awareness in the local communities and strengthening local support for conservation. Field activities are implemented jointly by WCS and CRNP education staff. WCS also works with cocoa farmers and women's groups in surrounding communities to improve the sustainability of cocoa farming and non-timber forest products harvesting through training and provision of improved planting material and other inputs

## 1. Results of Law Enforcement Action

### *Patrol effort*

Thirty patrols were completed this first quarter over 210 patrol days (1027 person-days). The patrols covered a total distance of 1,772.5 kilometers (Figure 1; Table 1).

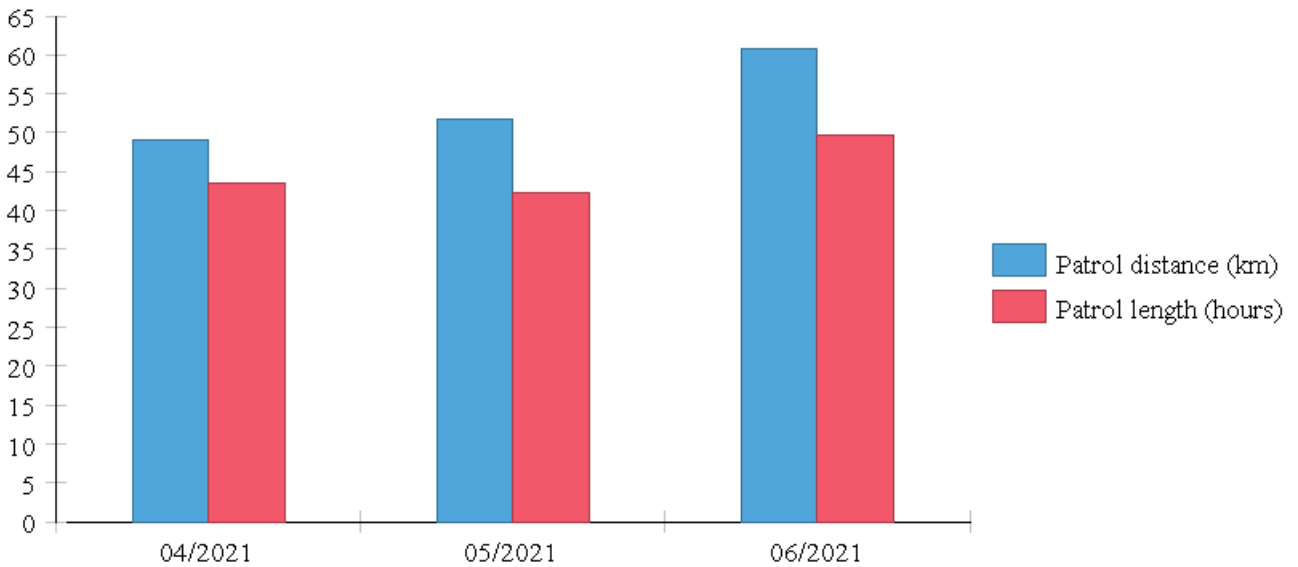
**Figure 1a. Patrol tracklogs and patrol effort in km walked per grid cell for the period April to June, 2021. Darker red color indicates areas of more intense patrol coverage.**



**Table 1.1. Summary of patrol effort for the period April to June, 2021.**

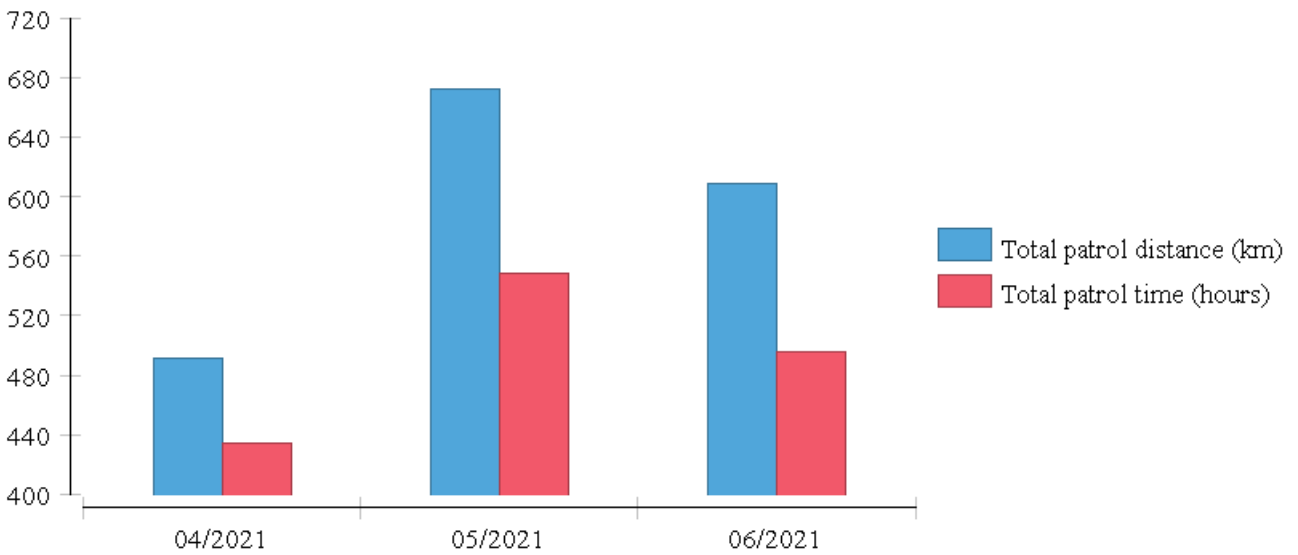
<b>Patrol ID</b>	<b>Number of Patrols</b>	<b>Number of Days</b>	<b>Distance (km)</b>	<b>Person - Days</b>
CRNP-OK_001	1	5	43.2	38
CRNP-OK_002	1	5	41.7	36
CRNP-OK_003	1	8	49.3	32
CRNP-OK_004	1	8	66.7	42
CRNP-OK_005	1	8	72.4	48
CRNP-OK_006	1	7	49.3	38
CRNP-OK_007	1	4	51.7	35
CRNP-OK_008	1	4	46.3	38
CRNP-OK_009	1	7	64.7	42
CRNP-OK_010	1	7	54.2	35
CRNP-OK_011	1	8	49.0	32
CRNP-OK_012	1	8	65.9	32
CRNP-OK_013	1	8	74.2	40
CRNP-OK_014	1	8	74.9	24
CRNP-OK_015	1	6	52.2	18
CRNP-OK_016	1	8	45.1	32
CRNP-OK_017	1	8	44.4	32
CRNP-OK_018	1	8	73.4	40
CRNP-OK_019	1	8	72.9	40
CRNP-OK_020	1	8	72.4	42
CRNP-OK_021	1	7	36.8	28
CRNP-OK_022	1	7	45.8	21
CRNP-OK_023	1	8	87.2	45
CRNP-OK_024	1	8	81.2	42
CRNP-OK_025	1	8	47.9	32
CRNP-OK_026	1	6	50.4	24
CRNP-OK_027	1	6	40.0	24
CRNP-OK_028	1	7	76.3	25
CRNP-OK_029	1	7	71.7	35
CRNP-OK_030	1	7	71.3	35
<b>Total</b>	<b>30</b>	<b>212</b>	<b>1772.5</b>	<b>1027</b>

### 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, 2021.**

### Total patrol distance and length per month



**Figure 3. Total patrol distance and time per month for the period April to June, 2021.**

## Law Enforcement

Four offenders (two hunters, one illegal logger and one illegal NTFP collector) were arrested during the reporting period (Tables 1.2). They were handed over to CRNP management for prosecution. A total of 353 wire snares were removed and 15 hunting and logging camps were destroyed. A total of 19 new farms were encountered inside the park (Tables 1.4 & 1.6). Illegal logging, especially of ebony (*Diospyros spp*), is a growing problem in Okwangwo. Prosecuting arrested loggers is critical to effectively deal with the problem of illegal logging. Communities conniving with loggers and accepting money from them has made combating illegal logging in the park more difficult. Some communities also charge levies including “evacuation fee”, “landing fee”, and “community development fee” etc from the loggers. The communities see this as a way of generating revenue for themselves and obtaining benefits from their “God given” assets. Farm encroachment is also growing problem in Okwangwo. Patrol teams encountered a total of 19 new farms this quarter (Table 1.4).

**Table 1.2. Summary of arrests and other law enforcement for the period April to June, 2021.**

Leader	Waypoint Date	Action Taken	Home Village	Name	Threat
Magnus Ukpeve	Jun 26, 2021	Arrested	Butatong	MC Sacra	Logging
Charles Otu	Apr 29, 2021	Arrested	Bamba	Kevin Osang	Gun hunting
Charles Otu	Apr 20, 2021	Arrested	Bamba	Peter Abang	Gun hunting
Peter Amoman Oshioka	May 13, 2021	Arrested	Tela, Taraba state	Usman, Jemo	Caplobia Collection

**Table 1.3. Number of people seen by threat for the period April to June, 2021.**

Threat	Number of People seen	Encounter rate per km
Hunting	9	0.005
Logging	1	0.001
NTFP Collection	3	0.002

**Table 1.4. Total encounter rates of signs of human activity for the period April to June, 2021.**

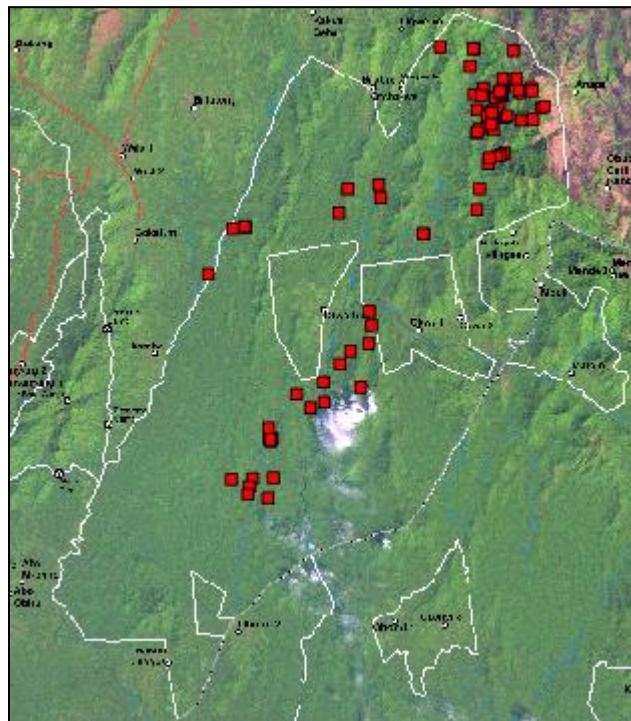
Activity	Number of Incidents	Encounter Rate per km
Domestic Animals	1	0.001
Farming and Land Clearing	19	0.011
Gunshot heard	7	0.004
Human Sign	130	0.073
Logging and Tree Cutting	13	0.007
NTFPs	2	0.001
People seen	13	0.007
Shed or Camp	24	0.014
Traps, Weapons & Equipment	123	0.069



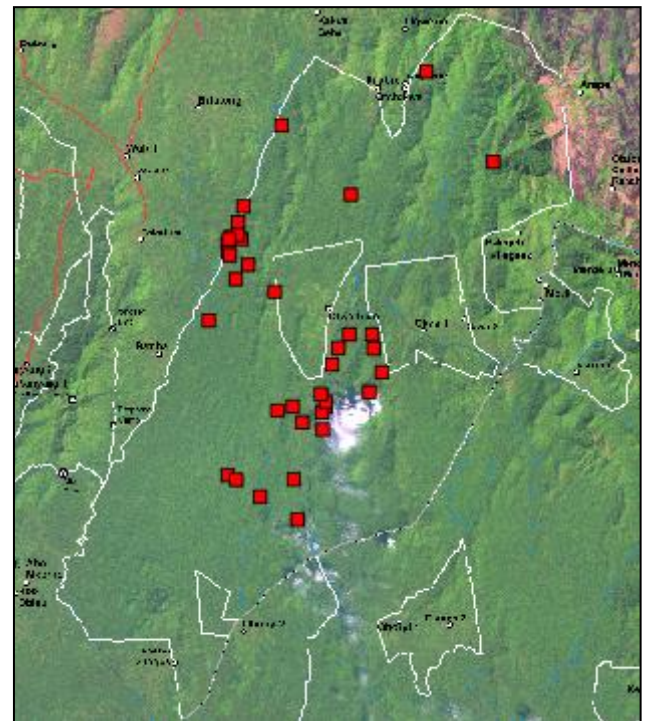
**Table 1.5. Specific evidence of logging activity for the period April to June, 2021.**

Type of logging evidence	Action Taken - Items	Age of Sign	No of cut pieces	No of Logs	No of Stumps	Tree Species
Logs	Seen Only	Fresh		1		Ebony
Logs	Seen Only	Fresh		2		Ebony
Stump	Seen Only	Fresh			2	Ebony
Stump	Seen Only	Fresh			2	Ebony
Stump	Seen Only	Fresh			5	Ebony
Stump	Seen Only	Fresh			1	Ebony
Cut Pieces	Destroyed	Fresh	1			Ebony
Cut Pieces	Destroyed	Fresh	2			Ebony
Cut Pieces	Collected	Fresh	1			Ebony
Logs	Seen Only	Fresh		10		Ebony
Stump	Seen Only	Old			1	Ebony
Stump	Seen Only	Recent			1	Ebony
Stump	Seen Only	Old			1	Ebony

**Figure 4. Distribution of all signs of human activity recorded during the period April to June, 2021.**

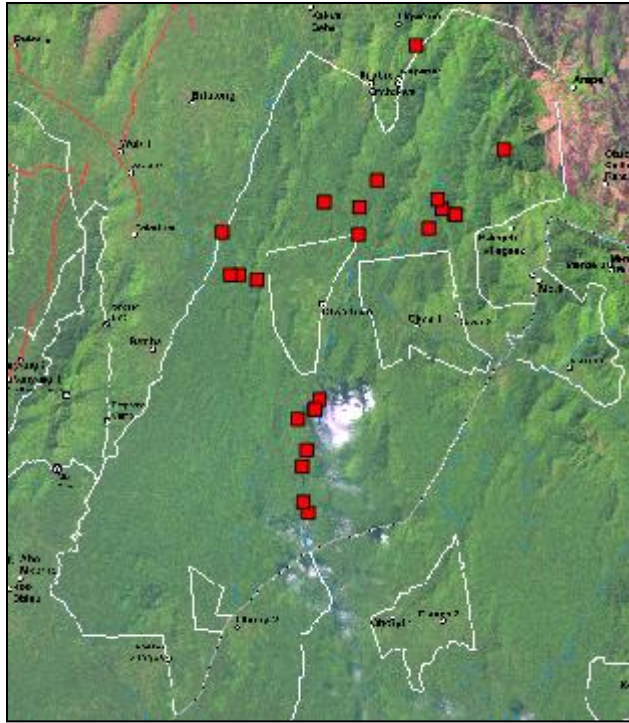


a) Wire snares

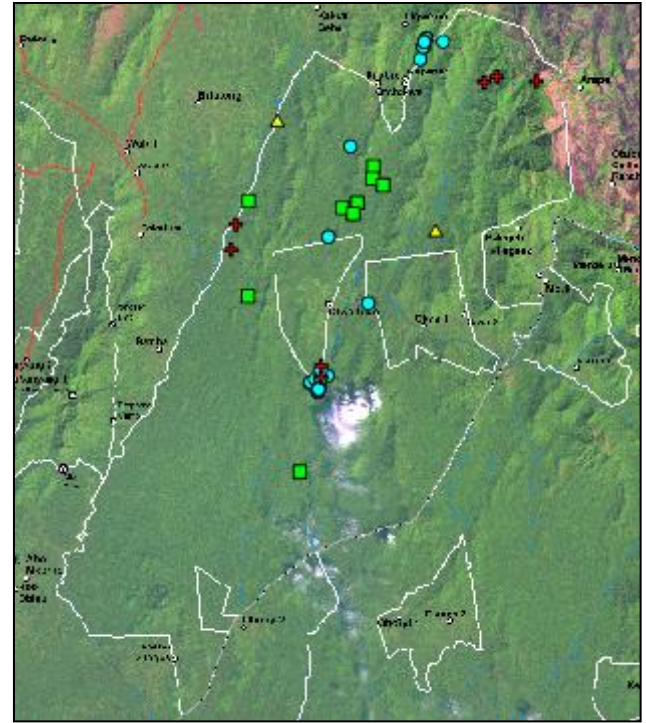


b) Empty cartridges





c) Sheds and camps



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

**Table 1.6. Hunting signs recorded for the period April to June, 2021.**

Sign	Number of Observations	Encounter Rate per km
Gunshots heard	7	0.004
Set wire snares	353	0.199
Unset wire snares	15	0.008
Empty cartridges	47	0.027
Hunting camps	15	0.008

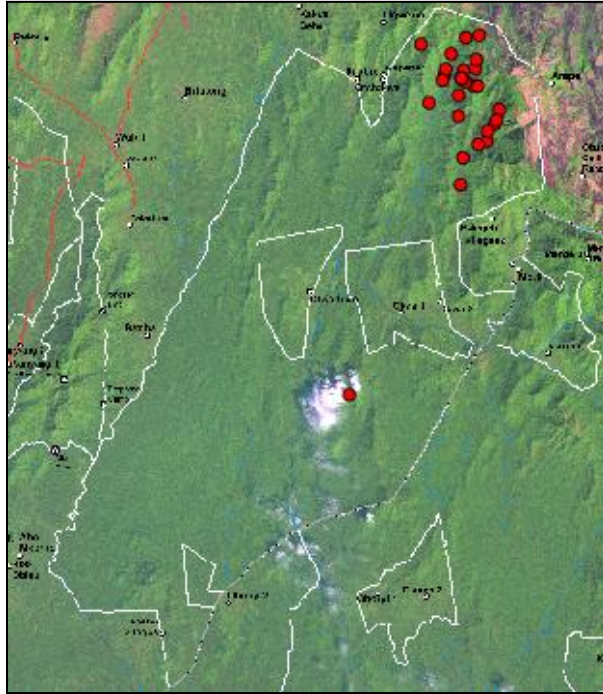
## Wildlife Observations

### *Great Apes*

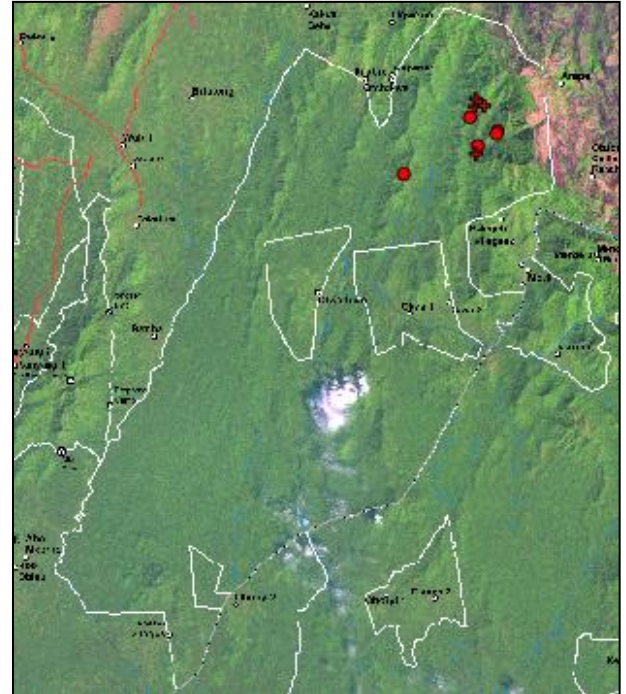
Chimpanzees were sighted on four occasions during patrols this quarter, all in the Boshia Extension area (Figure 5). Gorillas were not sighted during this period. Great apes sightings in the park are rare due to dense vegetation cover and years of hunting which has made them extremely shy of humans. A total of 36 ape nest sites were encountered during patrols this quarter: 29 gorilla, 5 chimpanzee and 2 nest sites that could not be firmly identified as gorilla or chimpanzee (Tables 1.8 & 1.9). Relatively few great ape nest sites were encountered in the Okwa Hills this period. The reason for this is not known. While rangers may have simply missed great apes nest sites (it is common for ranger teams focusing on detecting illegal activities to miss wildlife signs), the gorillas in the Okwa Hills are known to have a transboundary range, occasionally moving between CRNP and Takamanda National Park. However, it has not been established which time of the year this transboundary migration normally occurs, it is possible that during this period, the gorillas might have been ranging in the Cameroon side of the border or closer to the border than the area covered by the patrols. (There is still much to learn about the

ecology and ranging behavior of the gorillas living in the Okwa Hills-Takamanda transboundary area).

**Figure 5. Ape sightings and nest sites recorded for the period April to June, 2021. Nest sites shown as circles, sightings shown as crosses.**



a) Gorillas



b) Chimpanzees



c) Unidentified apes

**Table 1.7. Ape sightings recorded for the period April to June, 2021.**

Date	Species	No of Adult Males	No of Age/Sex Unknown	Total
Jun 23, 2021	Chimpanzee		4	4
Apr 21, 2021	Chimpanzee	1		1
Apr 21, 2021	Chimpanzee	2		2
May 15, 2021	Chimpanzee	6		6

**Table 1.8. Number and encounter rate of ape nest sites the period April to June, 2021.**

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	5	0.003
Gorilla	29	0.016
Unidentified great ape	2	0.001

**Table 1.9. Nest sites recorded for the period April to June, 2021.**

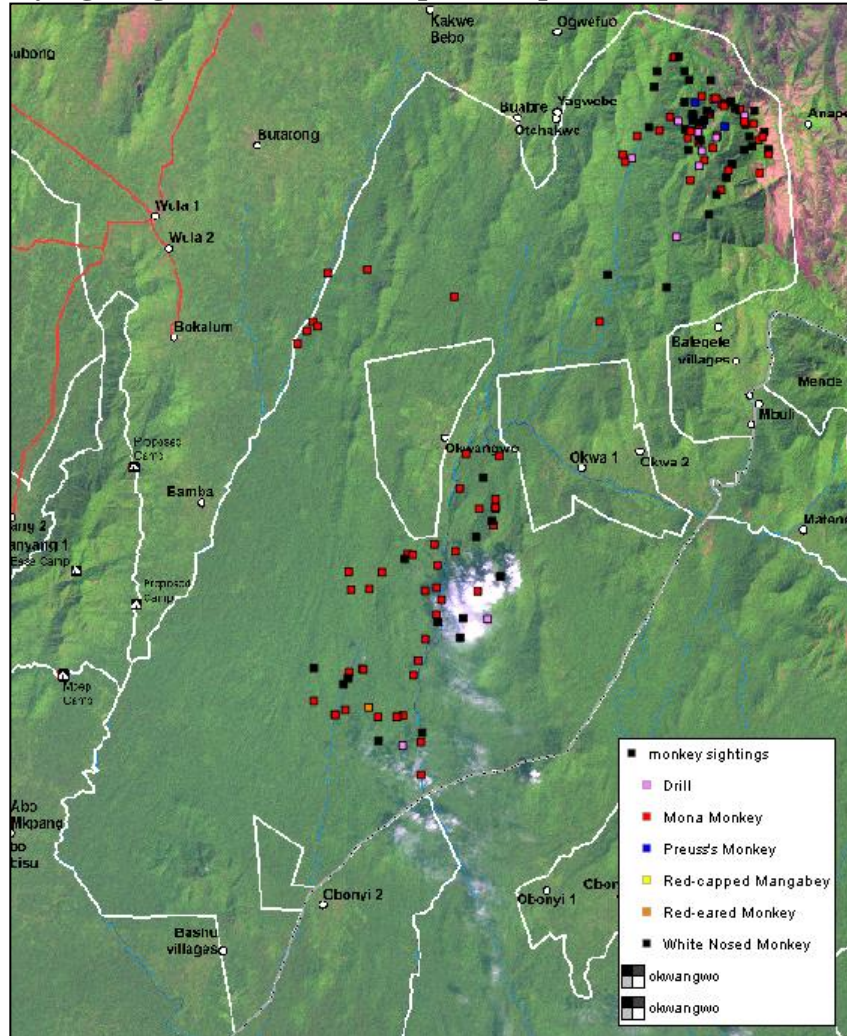
Species	Nest site type	Age	Dung present	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	Fresh	false	0	6
Chimpanzee	Night nest(s)	Recent	false	0	3
Chimpanzee	Night nest(s)	Recent	false	0	8
Chimpanzee	Night nest(s)	Recent	false	0	1
Chimpanzee	Night nest(s)	Old	false	0	4
Gorilla	Night nest(s)	Fresh	false	2	4
Gorilla	Night nest(s)	Fresh	true	1	5
Gorilla	Night nest(s)	Fresh	true	1	5
Gorilla	Night nest(s)	Fresh	false	2	2
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Recent	false	1	5
Gorilla	Night nest(s)	Recent	false	2	6
Gorilla	Day nest(s)	Fresh	false	1	1
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Recent	true	1	4
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Fresh	true	1	5
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Fresh	true	2	4
Gorilla	Night nest(s)	Fresh	true	2	6
Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Day nest(s)	Fresh	true	1	1
Gorilla	Night nest(s)	Fresh	true	2	2
Gorilla	Night nest(s)	Fresh	true	1	1
Gorilla	Night nest(s)	Fresh	true	0	4
Gorilla	Night nest(s)	Recent	true	1	6
Gorilla	Night nest(s)	Fresh	false	5	5
Gorilla	Night nest(s)	Fresh	true	2	6
Gorilla	Night nest(s)	Recent	true	2	5
Unidentified great ape	Night nest(s)	Fresh	false	0	2
Unidentified great ape	Night nest(s)	Old	false	0	2



## Monkeys

Monkeys were sighted a total of 154 times by rangers during patrols this quarter – drill, Mona monkey, red-eared monkey, white-nosed monkey and Preuss's monkey (Table 1.10)

**Figure 6. Monkey sightings recorded for the period April to June, 2021**



**Table 1.10. Number and encounter rate of monkey species observed for the period April to June, 2021.**

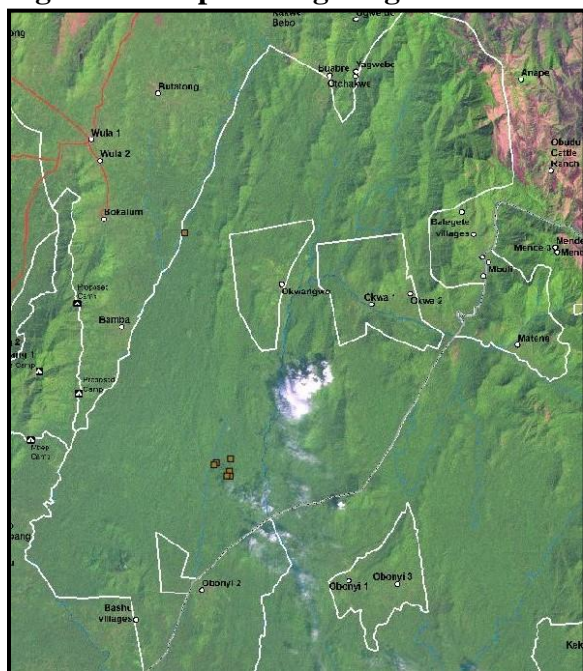
Species	Number of observations	Encounter rate
Drill	11	0.006
Mona monkey	81	0.046
Preuss's monkey	7	0.004
Red-eared monkey	2	0.001
White-nosed monkey	53	0.030

## Other Wildlife

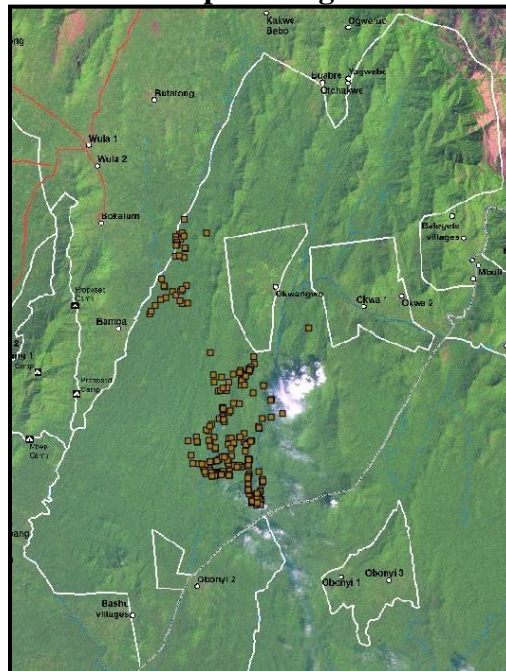
### *Elephants*

Forest elephants were sighted on seven different occasions during the quarter (see Figure 7a), and several elephant signs were observed in the saltlick and the lowland area close to Bamba (Figure 7b). With zero protection work in the Takamanda National Park due to the insecurity in the Southwest region of Cameroon, elephant poachers have been accessing the saltlick and other areas in Okwangwo used by elephants through neighboring Cameroonian communities to hunt elephants in the park. Within the period under review, our informants reported that an elephant was killed in the Bashu area of the park. Investigation is still ongoing; it is not clear yet how many and who is responsible. There were confirmed reports of elephants killed in the park in the last quarterly report (in the saltlick area close to Bamba community). Regular patrols of the saltlick area of the park are essential to protect the small population of elephants there that moves between Okwangwo and Takamanda.

**Figure 7a. Elephant Sightings**



**7b. All Elephant Signs**



### *Other large mammals*

Other large mammals sighted include African buffalo, yellow-backed duiker, blue duiker and herds of red river hog. Indirect signs such as dung and feeding remains encountered were also recorded (see Appendix II for encounter rate of all animals signs recorded). While there have been regular patrols of Okwangwo, prosecution of arrested offenders has been limited. To effectively deal with hunting (including elephant poaching), illegal logging and other illegal activities in the park, it is important for park management to intensify efforts to prosecute arrested offenders. Prosecution of offenders is a stronger deterrent than “compounding” of offences, and it is strongly recommended. In addition to deterring potential offenders, higher prosecution rate will boost morale among rangers and improve overall effectiveness of protection efforts.

## **Recommendations**

- Prosecution of arrested offenders is considered to be a stronger deterrent than “compounding” of offences, and it is highly recommended. In addition to deterring potential offenders, a higher rate of prosecution will boost morale among rangers and improve overall effectiveness of protection efforts.
- Increase surveillance on the Butatong-Okwangwo road to check movement of ebony and other forest products illegally extracted from the park. Arrested illegal ebony loggers and their sponsors should be prosecuted when arrested to discourage others.
- Regular refresher ranger training for all rangers in Okwangwo to improve their skills and raise morale.
- Park boundaries need to be cleared and marked to facilitate law enforcement.
- Occasional targeted patrols of Okwangwo by a joint team of rangers, the Police and the military would be useful.

## 2. Conservation Education and Awareness

### Exchange Visits

During this period, WCS facilitated six exchange visits in Okwangwo involving 12 school conservation clubs with 604 students participating (Table 1). The aim of the exchange visits was to facilitate exchange of knowledge and experiences among the conservation club members. During the visits, the students were guided through a variety of activities to encourage learning including conservation games, quiz and drama carried out in a competitive manner with winners receiving gifts as an incentive to encourage active participation.

Table 2.1: Exchange visits between conservation clubs in Okwangwo from April to June 2021

Date	School(s)	Site	No of students
April 30th	Government Primary School Bagabo and Government Primary School Bajiki Bumaji	Okwangwo	81
April 30th	Government Primary School Bakie and Government Primary School Bakuruku Bumaji	Okwangwo	79
May 13th	Government Primary School Busi 5 and Primary School Busi 6	Okwangwo	118
May 21st	Secondary Commercial School Bateriko and Community Secondary School Busi	Okwangwo	127
June 24th	Government Primary School Abija Beebo and Primary School Ukampor Beebo	Okwangwo	120
June 25th	Government Primary School Anape and Government Primary School Obudu Cattle Ranch	Okwangwo	79
<b>Total</b>			<b>604</b>





*Exchange visit between Secondary Commercial School Beteriko & Community Secondary School Busi VI.*

### Field Trips

Field trips are a valuable way to connect young people to nature. They tend to produce lasting experiences that help to inspire them to value and support nature conservation. WCS regularly organizes field trips for conservation clubs at the sites where we work in Cross River to build that connection. This quarter, WCS organized guided field trips for six conservation clubs in Okwangwo, with a total of 140 students participating (Table 2.2). The field trips provided pupils/students the opportunity to learn about the rainforest, threats to wildlife, and ongoing efforts to save species from extinction. WCS and CRNP field staff shared their knowledge and experiences with the students during the field trips.

Table 2.2: Participants of field trips to CRNP

Date	Schools	site	No of pupils/students
April 22th	Pioneer Secondary School Balegete	Okwangwo	22
April 24th	St. Linus Primary School Okwa	Okwangwo	20
May 22nd	Government Primary School Kakwe Beebo	Okwangwo	23
May 26th	Secondary Commercial School Bateriko	Okwangwo	26
June 25th	Kigoh Primary School, OCR	Okwangwo	25
June 25th	Government Primary School Anape	Okwangwo	24
<b>Total</b>			<b>140</b>



*Field trip with Pioneer Secondary School Belegete and Secondary Commercial School Bateriko to CRNP*

## School Visits

WCS and CRNP visited 7 schools to create conservation awareness among schoolchildren (Table 2.3). Lessons and outdoor activities were organized to teach the children about conservation and natural resource management. Other activities conducted include visit to logging sites, quiz competition and conservation games including puppet show. A total of 100 customized notebooks produced to promote conservation awareness for forest elephants were distributed to conservation club members and teachers.

Table 2.3: Schools visited in Okwangwo April to June 2021

Date	Schools visited	Site	Notebooks distributed	Pens distributed
29/4/2021	Government Primary School Bajiki Bumaji	Okwangwo	20	
29/4/2021	Government Primary School Bakie Bumaji	Okwangwo	20	
13/5/2021	Government Primary School Busi 4	Okwangwo	-	20
14/5/2021	Primary School Busi 5	Okwangwo	20	
14/5/2021	Community Secondary School Busi	Okwangwo	20	
24/6/2021	Primary school Ukampor Beebo	Okwangwo		30
24/6/2021	Community Secondary School Beebo	Okwangwo	20	
<b>Total</b>			<b>100</b>	<b>50</b>



School visits to students of Community Secondary School Busi (left) & Community Secondary School Beebo

### Film Shows

Great ape films were presented in ten communities and three schools in Okwangwo during this quarter to create conservation awareness (Table 2.4). The films were viewed by a total attendance of 1,471. Threats such as farm encroachment, illegal logging, bush burning, river poisoning and hunting were discussed at the end of the film shows

Table 2.4: Villages and schools in Okwangwo visited for film show and estimated number of viewer

Date	Name of Community/schools	Site	Attendance
15/4/2021	Okwangwo	Okwangwo	153
19/4/2021	Okwa I	Okwangwo	181
22/4/2021	Pioneer Secondary School Balegete	Okwangwo	24
24/4/2021	St. Linus Primary School Okwa	Okwangwo	20
30/4/2021	Baggabo Bumaji	Okwangwo	165
13/5/2021	Busi V	Okwangwo	125
14/5/2021	Kakwe Beebo	Okwangwo	140
15/5/2021	Ukambo Beebo	Okwangwo	116
22/5/2021	Abjja Beebo	Okwangwo	102
19/6/2021	Bajanfua Beebo	Okwangwo	109
21/6/2021	Busi III	Okwangwo	75
23/6/2021	Bajiki Bumaji	Okwangwo	170
24/6/2021	Community Secondary School Beebo	Okwangwo	91
<b>Total</b>			<b>1,471</b>





Film show in Kakwe-Beebo (left) and Bajiki-Bumaji (right)

## Community Meetings

WCS facilitated seven community meetings in Okwangwo to discuss threats to the park including hunting, farm encroachment and illegal logging (Table 2.5). During the period under review, two separate meetings were also held with the executive chairmen of Boki and Obanliku, the two host local government area of Okwangwo Division of the park to discuss the high rate of illegal timber extraction going on within their respective local government areas and proffer ways of stopping it.

Table 2.5. Attendance at community meetings in Okwangwo April to June 2021

Date	Name of Community	Site	Attendance
15/4/2021	Okwangwo	Okwangwo	53
30/4/2021	Bakie-Bumaji	Okwangwo	60
30/4/2021	Baggo-Bumaji	Okwangwo	39
13/5/2021	Busi 5	Okwangwo	45
14/5/2021	Kakwe-Beebo	Okwangwo	63
15/5/2021	Ukampor-Beebo	Okwangwo	18
22/5/2021	Abija-Beebo	Okwangwo	51
<b>Total</b>			<b>329</b>



*Meeting with Hon. (Mrs) Margaret Inde, Obanliku LGA Chairman (left) and Kekwe-Beebo community (right)*

### **World Environment Day (WED)**

This year WCS brought together conservation clubs from 30 schools and other relevant environment stakeholders to mark the WED. Activities and discussions were centered on this year's theme, "Ecosystem Restoration". WED is one annual event that WCS has utilized effectively over the years to engage with forest users, school children and opinion leaders on environmental issues and raise positive environmental awareness within the areas where we work.



*School children and stakeholders during WED 2021.*

### **My Gorilla My Community radio program**

Launched in 2015, the MGMC radio program has continued to draw large audiences within and outside the Cross River gorilla landscape. WCS continued to support the production and broadcast of the program, which reaches over 100,000 people within the Cross River gorilla landscape and over one million in the entire Cross River State. Regular monitoring visits to communities by the program manager, coordinator of the Cross River gorilla campaign for WCS and feedback from listener groups help to adapt and improve the program.

### 3. Support for Sustainable Livelihood

#### 3.1. Training of cocoa farmers and women's groups

Agricultural extension staff of the Agricultural Development Program of the Cross River State Ministry of Agriculture, were engaged by WCS to provide regular training in improved farming practices including appropriate spacing, pruning, use of shade trees, soil fertility management and fire management for farmers around the park. During the reporting period, training was organized for 112 women in two communities (81 in Okwa-1 and 31 in Boggo) in sustainable bush mango harvesting and domestication, storage and marketing. The training provided would enable farmers prevent or better manage fire through fire tracing of farms

#### 3.2. Farm Verification.

To be sure that the improved cocoa seedlings provided by WCS to farmers are not planted in the park or any other protected area, such farms are visited and mapped by collecting GPS coordinates of the farm area, before seedlings are distributed to the beneficiaries. 100 farms were visited in five communities and results of the mapping shows that all the farms are outside and more than 500 meters away from any protected area.



Verifying/mapping farms,

**Table 3.1. Communities and number of farms verified.**

S/N	Community	No of farms verified
1	Busi 6	22
2	Ukampor Beebo	21
3	Boggo	23
4	Okwa 1	13
5	Bakie-Bumaji	21
<b>Total</b>		<b>100</b>



### 3.3. Distribution of cocoa seedling.

Improved variety of cocoa seedlings from Cocoa Research Institute of Nigeria (CRIN) raised by WCS are distributed to beneficiaries in selected communities to help improve yield and reduce deforestation. During the quarter WCS distributed 5,500 high yielding and disease resistant cocoa seedlings to 22 beneficiaries in Busi-6 community (250 seedlings each) each beneficiary having signed a conservation agreement.



Distribution of cocoa seedlings

### Acknowledgements

We are grateful to the European Union, Great Ape Conservation Fund of the United States Fish and Wildlife Service, Arcus Foundation, and Critical Ecosystem Partnership Fund (CEPF) for funding support for this project. Support for the protection of Cross River National Park by WCS is made possible through an MoU with the Nigeria National Park Service. WCS is formally registered in Nigeria through an agreement with the Ministry of Budget and National Planning of the Federal Republic of Nigeria

**Appendix I. Patrol effort statistics April to June, 2021.**

<b>Date</b>	<b>Number of Patrols</b>	<b>Distance (km)</b>	<b>Number of Hours</b>	<b>Number of Rangers</b>
2021-04-16	3	14.6	15.5	13
2021-04-17	5	47.8	34.8	21
2021-04-18	5	43.5	36.7	21
2021-04-19	5	35.3	33.9	21
2021-04-20	5	49.7	46.7	21
2021-04-21	3	26.7	35.0	12
2021-04-22	3	18.8	30.0	11
2021-04-23	3	21.6	24.4	11
2021-04-24	2	15.2	11.7	8
2021-04-26	5	28.4	23.5	20
2021-04-27	5	49.0	35.1	20
2021-04-28	5	48.0	38.0	20
2021-04-29	5	67.5	46.6	20
2021-04-30	3	25.1	22.5	11
2021-05-01	3	28.5	20.3	11
2021-05-02	3	19.7	14.3	11
2021-05-12	1	8.0	6.0	3
2021-05-13	5	31.5	21.3	19
2021-05-14	5	43.5	32.1	19
2021-05-15	5	47.3	38.7	19
2021-05-16	5	49.1	41.1	19
2021-05-17	5	41.7	37.9	19
2021-05-18	5	47.2	38.8	19
2021-05-19	4	24.3	20.9	16
2021-05-20	3	23.6	11.5	13
2021-05-22	3	24.7	14.3	9
2021-05-23	5	30.2	22.9	18
2021-05-24	5	38.3	33.2	18
2021-05-25	5	39.0	46.1	18
2021-05-26	5	29.9	45.3	18
2021-05-27	5	50.0	37.0	18
2021-05-28	5	42.8	34.6	18
2021-05-29	5	43.9	25.2	18
2021-05-30	2	9.4	7.3	8
2021-06-10	3	21.6	16.2	10
2021-06-11	5	55.9	36.3	17
2021-06-12	5	39.8	36.9	17
2021-06-13	5	40.8	35.2	18
2021-06-14	5	39.1	33.9	17
2021-06-15	5	37.7	36.6	16
2021-06-16	5	32.9	41.6	16
2021-06-17	3	15.1	27.7	9
2021-06-18	2	16.0	9.4	6
2021-06-21	5	30.7	20.5	16
2021-06-22	5	50.4	38.2	15
2021-06-23	5	38.0	30.7	15
2021-06-24	5	61.5	38.9	15
2021-06-25	5	48.9	39.7	16
2021-06-26	5	51.2	40.8	16
2021-06-27	3	29.1	13.3	8

**Appendix II. Encounter rate of wildlife species observed during patrols April to June, 2021.**  
**Species not encountered during patrols are not shown.**

<b>Common name</b>	<b>Scientific name</b>	<b>Encounter rate per km</b>
Unidentified monkey	-	0.270
Brush-tailed porcupine	<i>Atherurus africanus</i>	0.248
Red river hog	<i>Potamochoerus porcus</i>	0.238
Mona monkey	<i>Cercopithecus mona</i>	0.234
Common mongoose	<i>Crossarchus sp</i>	0.195
Blue duiker	<i>Philantomba monticola</i>	0.173
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	0.147
Forest elephant	<i>Loxodonta cyclotis</i>	0.140
White nosed monkey	<i>Cercopithecus nictitans</i>	0.113
Unidentified large duiker	-	0.047
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	0.046
African buffalo	<i>Syncerus caffer</i>	0.033
Cross River gorilla	<i>Gorilla gorilla diehli</i>	0.027
Pangolin	<i>Phataginus tricuspis</i>	0.027
Drill	<i>Mandrillus leucophaeus</i>	0.026
Cane rat	<i>Thryonomys swinderianus</i>	0.017
African civet	<i>Civettictis civetta</i>	0.015
Unidentified great ape	-	0.011
Bay duiker	<i>Cephalophus dorsalis</i>	0.009
Unidentified medium duiker	-	0.009
Palm civet	<i>Nandinia binotata</i>	0.008
Unidentified small duiker	-	0.008
Preuss's monkey	<i>Allochrocebus preussi</i>	0.006
Red-eared monkey	<i>Cercopithecus erythrotis</i>	0.003
Rock fowl	<i>Picathartes oreas</i>	0.002
Bushbuck	<i>Tragelaphus scriptus</i>	0.001

**Appendix III. Ranger work time for the period April 1, 2021 to June 30, 2021.**

Name	Number of Patrols	Number of Patrol Days	Number of Patrol Hours	Patrol Distance (km)
Akuba Emmanuel	2	16	116.1	138.3
Augustine Yaya Abang	1	8	65.7	72.4
Bartholomew Adie Abu	2	9	55.1	82.4
Bassey Vincent Igiri	4	23	153.3	224.8
Charles Otu	3	10	71.8	103.1
Christopher Offorbuike	4	26	188.4	274.4
Cosmas Esor Akam	3	23	148.0	218.4
Desmond Ita Igbor	2	13	82.1	107.6
Dominic Effiom Edet	2	12	74.8	105.9
Douglas Odu	1	6	60.5	52.3
Edet Etim Ekpor	5	36	262.2	230.2
Emmanson Irom	1	5	34.0	43.2
Emmanuel Dibang	4	19	129.8	167.6
Engelis Okon Ekpe	1	1	5.4	6.7
Eric Ajom Achatne	2	15	109.0	135.4
Ernest Achura Anwah	1	7	46.2	36.8
Francis Akor Muyorkem	2	15	96.6	97.1
Ignatius Kechi Etum	5	37	254.6	239.6
Jerome Anya Anya	3	23	137.3	143.4
John Effiom Usim	5	35	259.6	265.3
Jonas Ekpa Ashikubre	3	22	165.1	145.9
Joseph Erim Mkpka	2	14	98.0	110.5
Jurry Anom	4	17	110.6	161.9
Kelvin Barnabas Menge	6	46	345.8	436.2
Kenedy Missang Oyama	4	28	191.2	264.9
Kingsley Otu Osang	3	24	167.0	220.0
Magnus Ukpeve	2	14	101.7	98.3
Mathias Bisong Ashu	1	8	61.8	81.2
Mathias Mbua Osor	2	12	79.0	95.8
Moses Gabriel Egbe	2	15	97.4	111.0
Ndifon Amon Ojang	5	34	250.9	290.7
Oru Patrick Erom	3	18	126.2	173.9
Paul Okpan Effiong	1	8	66.2	49.3
Peter Amoman Oshioka	4	25	163.2	213.8
Raphael Ukam Inna	1	6	39.1	40.0
Richard Emmanuel Ayum	5	24	168.9	182.7
Spencer Kecho Kecho	4	31	195.5	191.2
Stephen Odu Arop	4	26	174.2	253.2
Sunday Oyong Eban	1	8	65.7	72.4
Ubi Okpa Otu	1	1	7.6	15.4
Valentine Okon Effim	3	22	160.5	210.1
William Utang Esira	3	23	152.4	156.8