

**WILDLIFE CONSERVATION SOCIETY
CROSS RIVER NATIONAL PARK (OKWANGWO DIVISION)
ANNUAL REPORT: JANUARY – DECEMBER 2021**



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Summary

This report summarizes the results of 108 ranger patrols of the Okwangwo Division of Cross River National Park (Okwangwo) conducted from January to December 2021 with support from Wildlife Conservation Society (WCS). It also describes activities implemented to raise levels of conservation awareness and improve local livelihoods. One hundred and eight patrols were completed this year. The patrols focused mostly on the Boshi Extension and Okwa Hills areas of the park, which are core areas for gorillas and chimpanzees, and covered a total distance of 6,544.2 km over 797 patrol-days. Fewer arrests (9) were made this year compared to the previous two years; a result likely indicative of declining motivation among the rangers to make arrests given the low rate of prosecution of previously arrested offenders. However, 44 hunting camps were discovered and dismantled and 1,953 wire snares were removed by the rangers. Great apes were sighted 13 times by patrol teams (gorillas twice, and chimpanzees eleven times). In addition to sightings, a total of 184 ape nest sites were observed. Monkeys sighted include drill (47 sightings), Preuss's monkey (24 sightings), red-eared monkey (10 sightings), Mona monkey (264 sightings), and putty-nosed monkey (209 sightings). Illegal logging inside the park is a growing problem. More patrols, including joint patrols by park rangers and the military, are needed to reduce levels of illegal human activity in the park, especially illegal logging.

Activities implemented to raise levels of conservation awareness include several film shows that were viewed by a total of 5,997 people, 24 schools exchange visits, 23 field trips for schoolchildren, 28 school visits by WCS and Cross River National Park (CRNP) education staff, and 33 community meetings. A total of 485 customized notebooks designed to promote Cross River gorilla and forest elephant conservation were distributed to students in the area. Other activities implemented include, teachers' training workshop, celebration of World Environment Day and World Gorilla Day, and meeting with Boki Local Government Council Chairman. All conservation education activities were jointly planned and implemented by WCS and Cross River National Park staff.

WCS continued to support the training of farmers in agricultural best practices to reduce deforestation and promote sustainable harvesting of non-timber forest products. This year, 140 farmers were trained in sustainable cocoa farming, and 301 women were trained in sustainable bush mango harvesting and propagation. A total of 38,667 improved cocoa seedlings and 330 bush mango seedlings were distributed to farmers in eight communities around the park. Five new cocoa nurseries were established to raise additional seedlings for distribution in 2022.

Introduction

Created in 1991 and managed by the Nigeria National Parks Service, Cross River National Park consists of two separate divisions: Oban and Okwangwo. Covering an area of about 640 km², the Okwangwo Division was established from an amalgamation of four former forest reserves and elevations range from 150 m to around 1,700 m. Hunting is widespread in Okwangwo, and as a result density of large mammals is low and at least two primate species are now considered locally

extinct in Okwangwo: the crowned guenon (*Cercopithecus pogonias*) and the grey-cheeked mangabey (*Lophocebus albigena*). In addition to hunting, a major unresolved problem is the presence of three large enclave villages within the park. Two enclaves were created to accommodate these villages when the area was established as the Okwangwo Forest Reserve in 1930. However, since that time, the villages have increased greatly in size and large areas of forest have been cleared for farmland. The expansion of these farmlands threatens to split the park in two halves, isolating the gorillas within the Boshi Extension from those in the rest of Okwangwo and Takamanda National Park (TNP) in Cameroon. With technical assistance from the North Carolina Zoo, WCS established a CyberTracker-based monitoring project in Okwangwo in 2011 with 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. A key feature of the project is strengthening transboundary conservation between Okwangwo and the adjacent TNP, which has unfortunately been unable to hold due to the political and armed conflict in the Southwest and Northwest regions of Cameroon. WCS has implemented a conservation education program in the Cross River gorilla landscape since 2011 to complement the existing law enforcement monitoring project there. The program focuses on increasing conservation awareness among communities surrounding the Park and building local support for conservation. Funding from the European Commission in Nigeria in 2020 allowed WCS, in collaboration with CRNP, to expand the existing livelihood project in Okwangwo. Focusing on cocoa farmers and women's groups, the project aims to improve local livelihoods by improving the productivity and sustainability of cocoa, a major source of income for local communities but also a major driver of deforestation in the region, and the sustainability of non-timber forest products harvesting and marketing. This report covers the period from January to December 2021.

Methods

Patrols in 2021 focused on the Boshi Extension and Okwa Hills areas of the park as well as the saltlick area up to the international boundary with Cameroon which elephants frequently use. Patrols also extended to the lowland areas to the west of the Okwa Hills and to the areas around Bumaji, Mbuli and Buabre where there has been widespread ebony logging. Areas not adequately covered by patrols in 2021 including areas around the Butatong-Okwangwo and Butatong-Okwa roads where illegal logging activity is increasing will be included in patrol plans for 2022. Patrol teams comprised of six CRNP rangers and a WCS staff who provides supervision. During patrols signs of human activities and wildlife were recorded using Cybertracker/SMART (Spatial Monitoring and Reporting Tool) software which automatically records GPS coordinates for every observation. Data were downloaded and analyzed using the SMART.

Results

1. Law Enforcement

Patrol effort

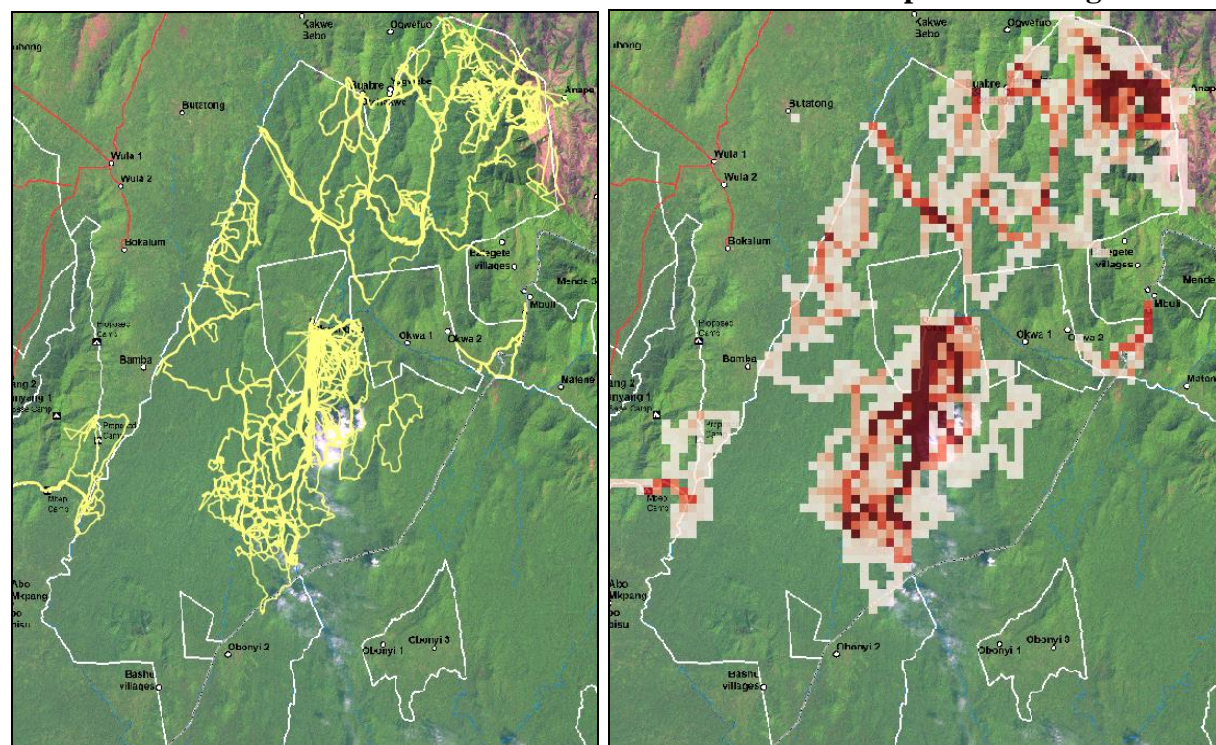
A total of 108 long-distance foot patrols were completed this year over 797 patrol-days, a significant increase from patrol effort in the previous year (Table 1). The patrols covered a total distance of 6,544.2 km, with the highest distance covered in a month around 685 km and lowest around 250 km (Figure 3). Figure 1 shows the overall patrol coverage from January–December 2021.

Table 1. Comparison of patrol effort in Okwangwo 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
No of patrols	35	40	44	46	47	51	49	63	81	108
No of patrol-days	235	317	382*	358*	341*	348	377	388	621	797
Distance covered (km)	1,603	2,187	2,165*	2,503*	2,001*	2059	2,291	2,765	4,674	6544

*Incomplete data (41 patrol days in 2014, 10 in 2015 and 59 in 2016) due to problems encountered with PDAs used for data collection in the field resulting in data not collected with CyberTracker on some patrol days.

Figure 1. Patrol tracklogs and effort in km walked per grid cell for the period January - December 2021. Darker red color indicates areas of more intense patrol coverage.



Average distance and length of patrols per month

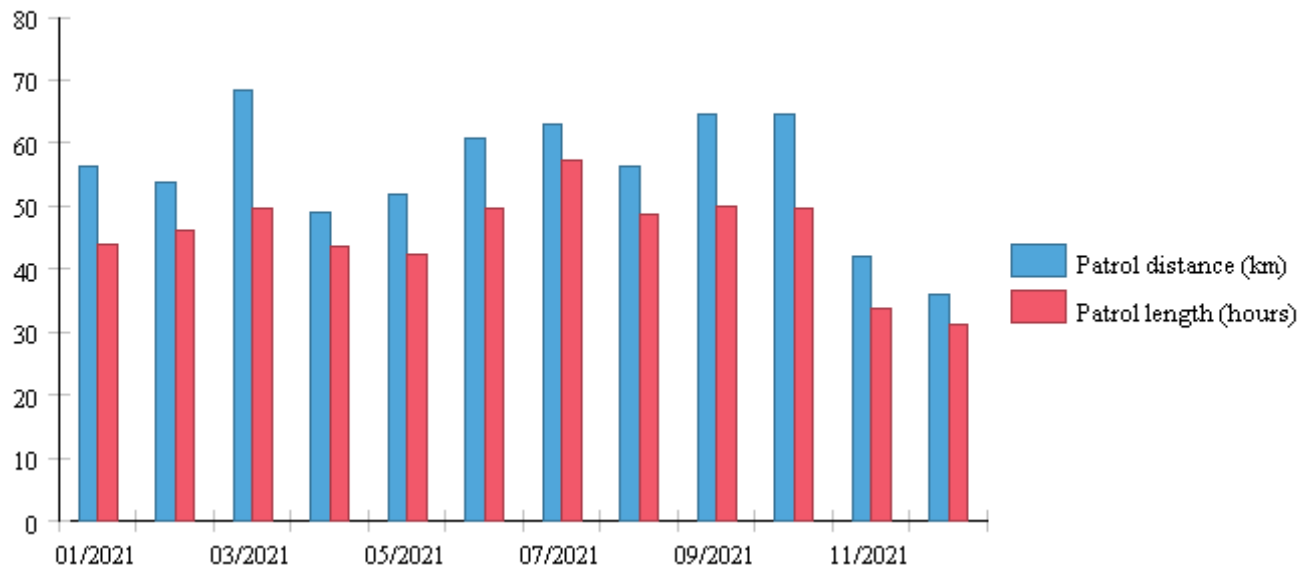


Figure 2. Average distance covered and time taken per patrol per month for the period January - December, 2021.

Total patrol distance and length per month

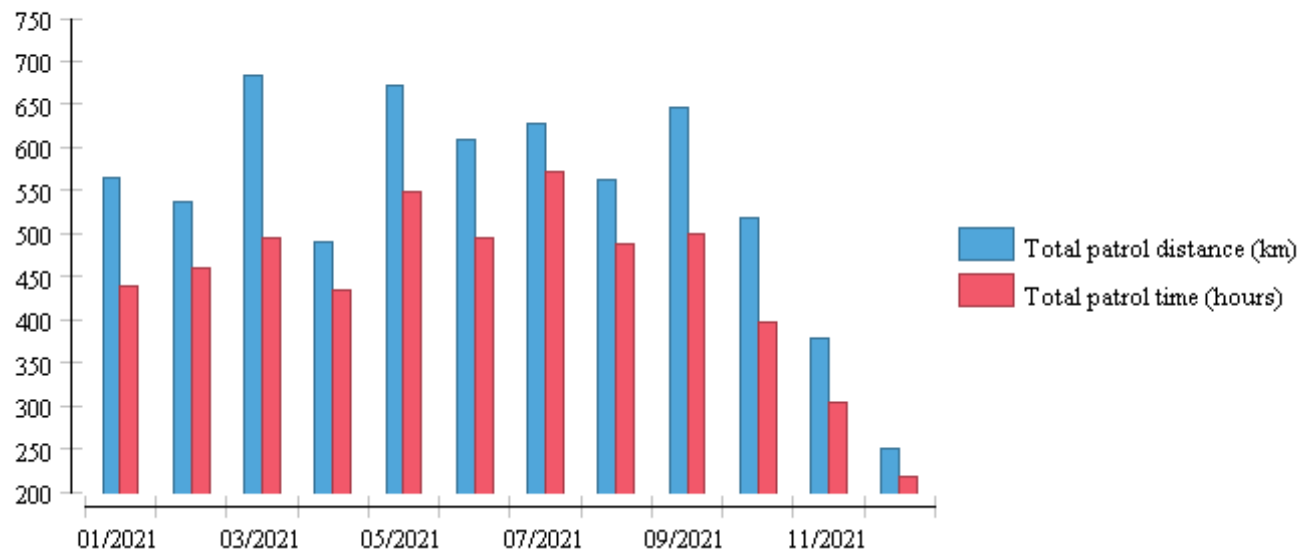


Figure 3. Total patrol distance and time per month for the period January - December, 2021.

Hunting pressure

Hunting with wire snares and shotguns remains a major threat to great apes and other wildlife in the park. Although encounter rate of hunting signs in 2021 was lower compared to 2020 (Table 2), the number of wire snares, empty shotgun cartridges and hunting camps discovered remained high (1,953, 386, and 44 respectively). Nine offenders were arrested in the park in 2021 including five hunters (Table 3). Illegal logging, especially logging of ebony (*Diospyro* spp.) and farm encroachment into the park (Figure 4) – especially around Bumaji, Okwangwo, Okwa, and Balegete, Bamba, and Bashu areas – have increased significantly since 2020. The low rate of prosecution of arrested offenders is limiting effectiveness of anti-poaching efforts, as prosecution is a stronger deterrent than “compoundment” (out-of-court settlement) of cases. Inability to access some remote parts of the park during the rainy season because of large rivers, and weak community support are the other factors limiting effective law enforcement in Okwangwo. Local support for law enforcement is essential for the effective protection of the park and needs to improve. Also, without a well-defined NTFPs collection protocol, it is hard distinguishing between people collecting NTFPs from those hunting. Having a clear entry protocol and issuing identification tags for people collecting NTFPs in the park will greatly help to check illegal activities. This has been a model used in the adjacent Takamanda National Park in Cameroon.

Table 2. Comparison of hunting pressure in Okwangwo 2012-2021

Signs	Period									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wire snares	18.60	7.00	3.18	0.39	2.66	3.38	3.95	5.96	9.24	2.98
Expended cartridges	6.60	3.46	2.13	0.66	0.45	0.20	0.79	1.29	1.02	0.59
Gunshots heard	0.24	0.17	0.04	0.04	0.02	0.04	0.07	0.12	0.11	0.08
Camps destroyed	0.81	0.48	0.36	0.15	0.10	0.06	0.20	0.18	0.16	0.07
Patrol-days	235	317	382	358	341	348	377	388	621	797
Distance covered (km)	1,603	2,187	2,165*	2,503*	2,001*	2059	2,291	2,765	4,674	6544

*Incomplete data due to problems with encountered with PDAs used for data collection in the field resulting in data not collected with CyberTracker on some patrol days (41 patrol days in 2014, 10 in 2015 and 59 in 2016)

Table 3. Summary of arrests for the period January - December, 2021.

Leader	Waypoint Date	Action Taken	Home Village	Name	Threat
Stephen Arop	Jan 17, 2021	Arrested	Baggo	Peter Ekuri	Gun hunting
Peter Oshioka	Jan 26, 2021	Arrested	Okwangwo	Jeremiah Abang	Gun hunting
Peter Oshioka	Feb 26, 2021	Arrested	Bumaji-Ogbuefor	Patrick Utebe	Gun hunting
Mathias Osor	Mar 21, 2021	Arrested	Abo Ogbagante	Francis Akpuo	Logging
Mathias Osor	Mar 21, 2021	Arrested	Abo Ogbagante	Michael Okari	Logging
Charles Otu	Apr 20, 2021	Arrested	Bamba	Peter Abang	Gun hunting
Charles Otu	Apr 29, 2021	Arrested	Bamba	Kevin Osang	Gun hunting
Peter Oshioka	May 13, 2021	Arrested	Tela, Taraba state	Usman, Jemo	NTFP collection
Magnus Ukpeve	Jun 26, 2021	Arrested	NA	NA	Logging

Table 4. Number of people seen by threat for the period January - December, 2021.

Threat	Number of People seen	Encounter rate per km
Farming	1	0.000
Fishing	1	0.000
Hunting	32	0.005
Livestock	1	0.000
Logging	3	0.000
NTFP Collection	14	0.002

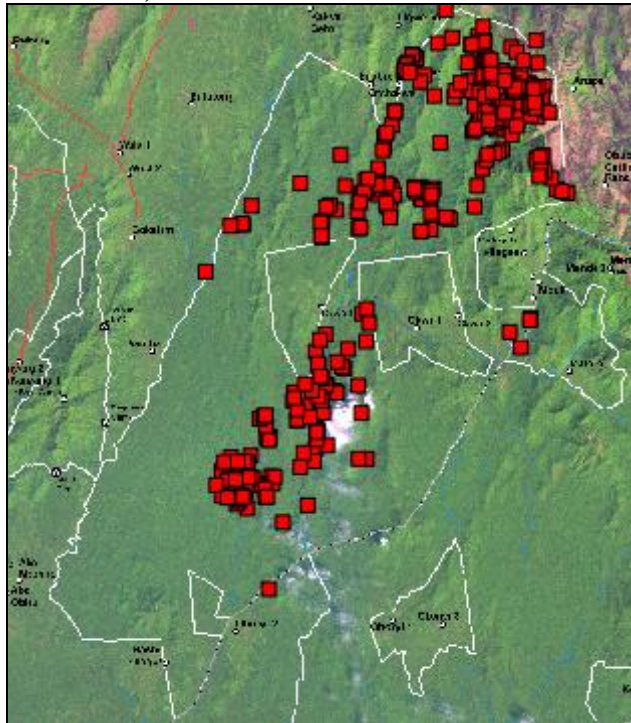
Table 5. Total encounter rates of signs of human activity for the period January - December, 2021.

Activity	Number of Incidents	Encounter Rate per km
Domestic Animals	2	0.000
Farming and Land Clearing	77	0.012
Gunshot heard	55	0.008
Human Sign	361	0.055
Logging and Tree Cutting	67	0.010
NTFPs	4	0.001
People seen	52	0.008
Shed or Camp	65	0.010
Traps, Weapons & Equipment	725	0.111

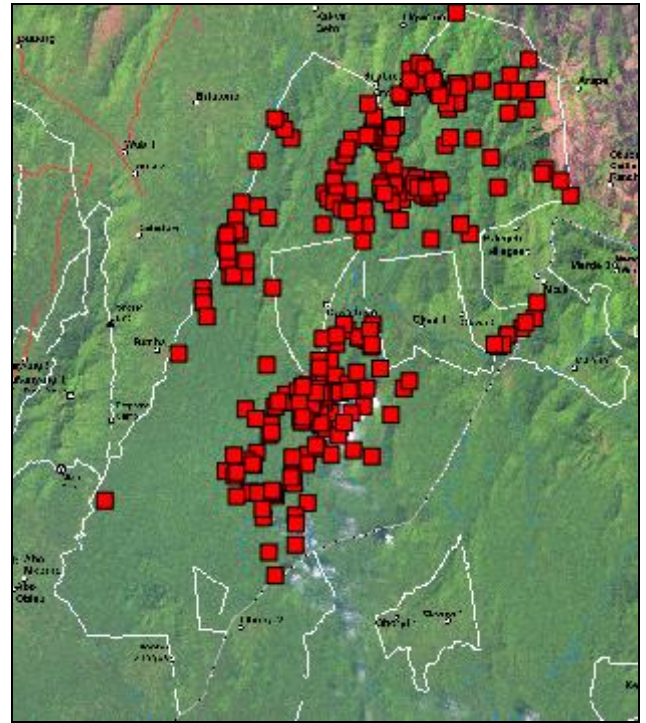
Table 6. Hunting signs recorded for the period January - December, 2021.

Sign	Number of Observations	Encounter Rate per km
Gunshots heard	55	0.008
Set wire snares	1953	0.298
Unset wire snares	38	0.006
Empty cartridges	386	0.059
Hunting camps	44	0.007

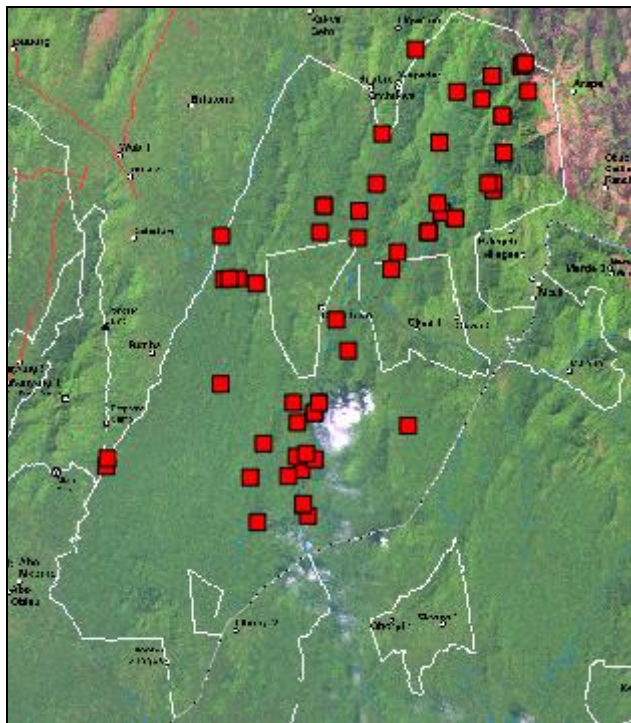
Figure 4. Distribution of all signs of human activity recorded during the period January - December, 2021.



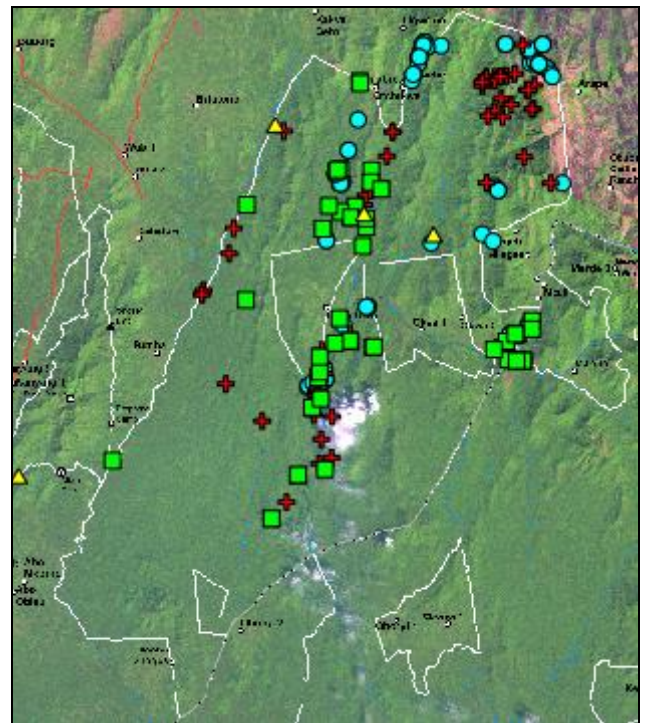
a) Wire snares



b) Empty cartridges



c) Sheds and camps



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

Ranger training

In addition to ongoing training of rangers in the use of SMART software for law enforcement data collection while patrolling, WCS organized a formal refresher ranger training course for 30 CRNP rangers. The training was conducted by “Conservation Outcomes”, a South Africa based specialist ranger training company and lasted for a total of 42 days divided into two courses, each lasting 21 days. Fourteen Cross River State Forestry Commission rangers from Afi Mountain Wildlife Sanctuary and 16 eco-guards from the Mbe Mountains also participated in the training, which took place at the Erokut Gate Camp on the edge of the Oban Division of CRNP. The training covered physical fitness, first aid, patrol techniques, drill, discipline, human rights, and self-defense. In addition to increasing their knowledge and skills, the refresher training helped raise morale among the rangers who are now better motivated to perform their duties and better protect the forest and wildlife of in the park. WCS invited a magistrate to the training to educate the rangers on the provisions of the Administration Criminal Justice Law of Cross River State and on collecting and documenting evidence to present in court to support and ensure successful prosecutions.



Photo 1: Ranger refresher training at Erokut Gate organized by WCS in collaboration with CRNP

Wildlife Observations

Great Apes

Great apes were sighted thirteen times during patrols in 2021: gorillas twice, and chimpanzees on eleven occasions (Table 7). A total of 184 ape nest sites were also recorded: 135 gorilla, 37 chimpanzee and 12 unidentified (Table 8; Figure 5). Most of the nest sites and sightings were made in the Boshi extension area (Figure 5).

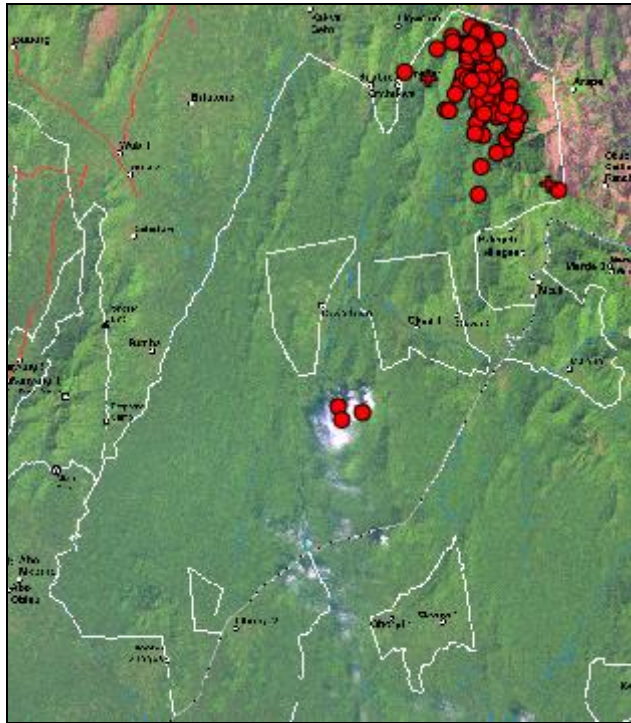
Table 7. Ape sightings recorded for the period January - December, 2021.

Date	Species	Number of adult males	Number of adult females	Number of young	Number age/sex unknown	Total
Feb 26, 2021	Chimpanzee				5	5
Nov 14, 2021	Gorilla	3				3
Feb 21, 2021	Chimpanzee	1				1
Jul 12, 2021	Chimpanzee	0	0		8	8
Jun 23, 2021	Chimpanzee				4	4
Apr 21, 2021	Chimpanzee	1				1
Apr 21, 2021	Chimpanzee	2				2
Oct 30, 2021	Chimpanzee	15				15
Jul 21, 2021	Chimpanzee				1	1
Dec 17, 2021	Chimpanzee	6				6
May 15, 2021	Chimpanzee	6				6
Jan 15, 2021	Gorilla	4	0	0	0	4
Feb 12, 2021	Chimpanzee	9	4	3	4	20

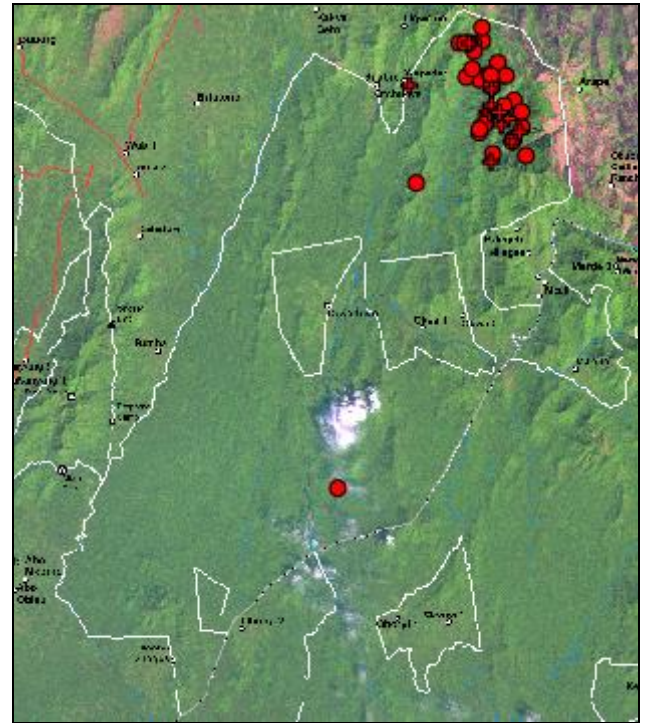
Table 8. Number and encounter rate of ape nest sites recorded January - December, 2021.

Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	37	0.006
Gorilla	135	0.021
Unidentified great ape	12	0.002

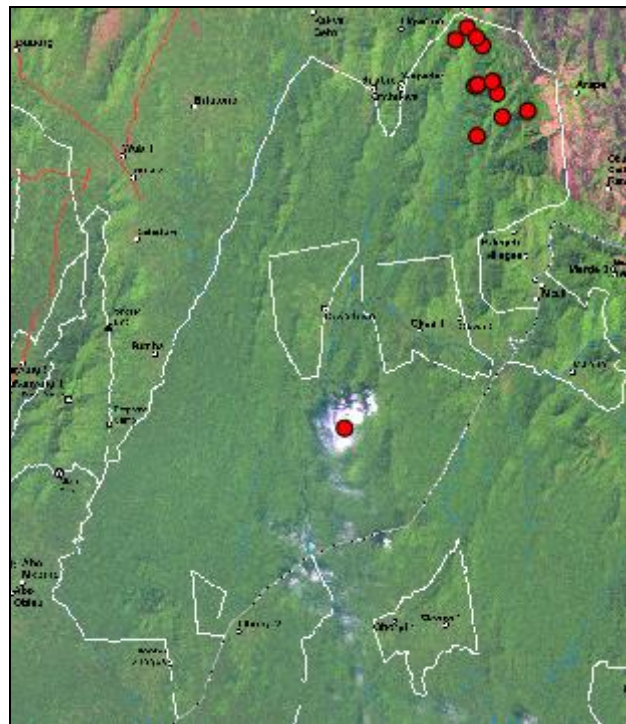
Figure 5. Ape sightings and nest sites recorded for the period January - December, 2021. Nest sites shown as circles, sightings shown as crosses.



a) Gorillas



b) Chimpanzees



c) Unidentified apes

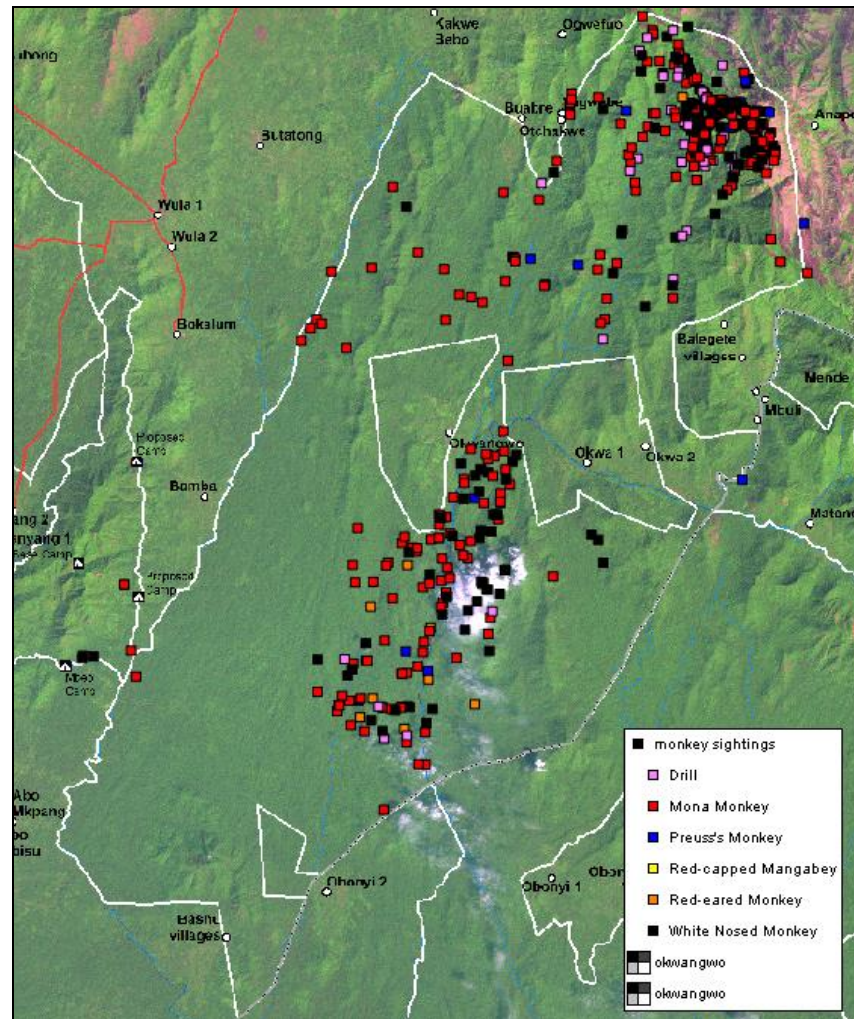
Monkeys

Monkeys were sighted a total of 554 times by rangers during patrols in 2021 including drill, Mona monkey, Preuss' monkey, red-eared monkey, and white-nosed monkey (Table 9; Figure 6). Mona monkey and white-nosed monkey were the most frequently sighted species.

Table 9. Monkey sightings for the period January - December, 2021.

Species	Number of observations	Encounter rate
Drill	47	0.007
Mona monkey	264	0.040
Preuss's monkey	24	0.004
Red-eared monkey	10	0.002
White-nosed monkey	209	0.032
Total	554	

Figure 6. Monkey sightings recorded for the period January - December, 2021



Elephants

Forest elephants (*Loxodonta cyclotis*) were sighted 15 times, mostly in the Okwa Hills up to the boundary with Takamanda National Park and in the lowland area close to Bamba and Bokalum (Figure 6). In addition to sightings, indirect signs such as dung, feeding remains, and trails were frequently observed. Regular patrols of those areas of the park are critical to the survival of the small remaining population of elephants that moves between Takamanda National Park and Okwangwo. With no protection work in the Takamanda National Park currently, elephant poachers have been accessing the saltlick and other areas used by elephants in Okwangwo through the neighboring Cameroon communities to hunt elephants. At least four elephants were reported killed in by poachers reportedly accessing the Park from the contiguous Takamanda National Park in 2021.

Figure 6. Elephant signs recorded in Okwangwo January - December, 2021

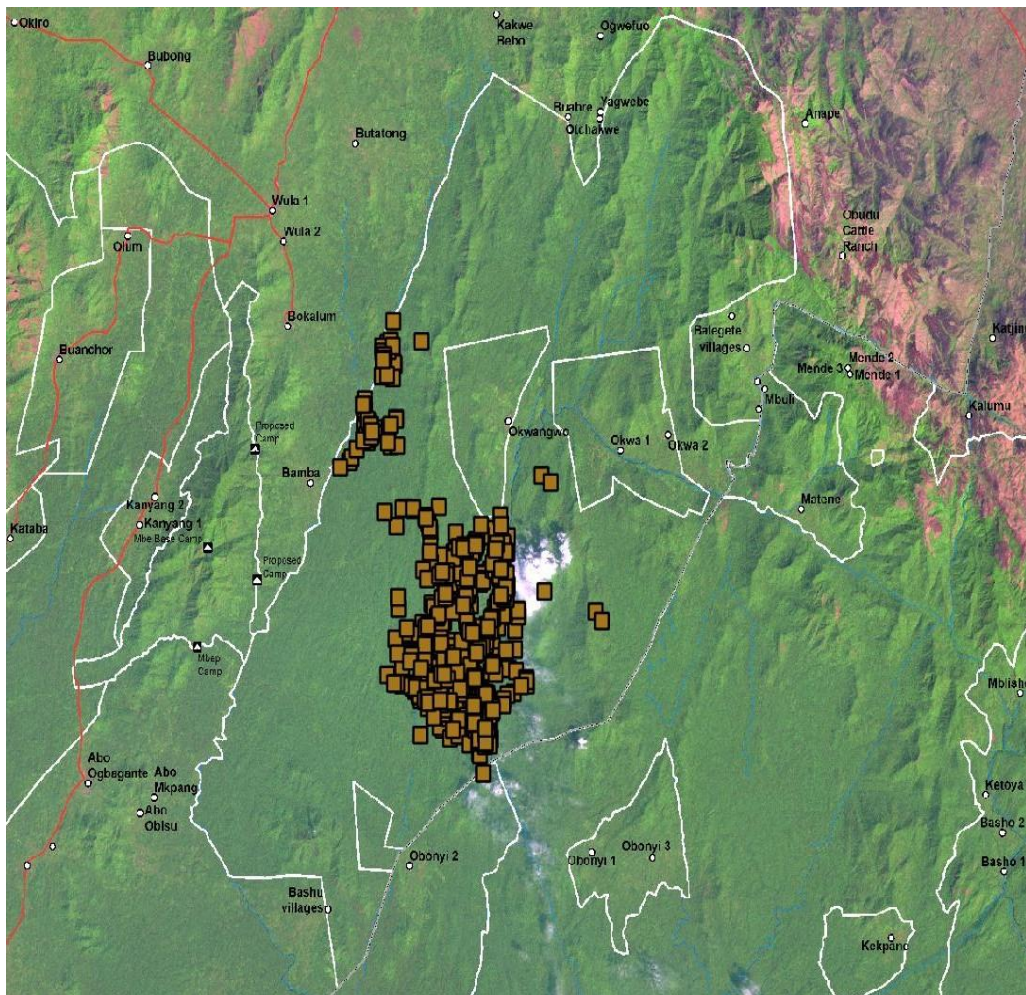


Table 10. Elephant sightings recorded for the period January - December, 2021

Date	Patrol leader	Total number
April 18, 2021	Sunday Oyong	1
April 18, 2021	Sunday Oyong	4
April 19, 2021	Mathias Mbua	2
June 26, 2021	Bassey Vincent	13
June 26, 2021	Bassey Vincent	17
June 26, 2021	Bassey Vincent	5
June 26, 2021	Christopher Oforbuike	3
July 23, 2021	Christopher Oforbuike	2
Sept. 15, 2021	Kelvin Barnabas	5
Oct. 16, 2021	Kelvin Barnabas	5
Oct. 16, 2021	Cosmas Akam	9
Oct. 26, 2021	Kelvin Barnabas	9
Oct. 26, 2021	Kelvin Barnabas	3
Oct. 26, 2021	Kelvin Barnabas	1
Dec. 16, 2021	Mathias Ashu	9

Support for park infrastructure development

WCS supported the development of a number of important park infrastructure in Okwangwo, including the construction of three box culverts and rehabilitation of sections of important access roads that facilitate law enforcement and other park management operations, with plans in place for the construction of two ranger posts on the edge of the park in early 2022. Participatory demarcation of Park boundaries in Okwangwo is ongoing while plans are moving forward for the installation of a radio system for the park to enhance communication. Plans are also in progress to engage a consultant to finalize the draft management plan for CRNP. While progress on the World Heritage Site nomination process has been slow, political will and commitment to the process remains strong from both the Nigerian and Cameroonian Governments with a Transboundary Conservation Cooperation Framework Agreement between the two Governments expected to be signed soon.

WCS also started discussions with a communications and intelligence tools company, Kinetic 6, to install a radio system for Cross River National Park, potentially a HF system with transmitter masts/base stations at Park headquarters in Akamkpa and at six ranger posts: Aking, Ifumkpa, Butatong, Okwangwo, Anape, and Bashu. We have already purchased inReach Explorer Handheld Satellite Communicators with GPS Navigation that allow two-way text messaging to complement any radio system installed.



Three new box culverts constructed along Butatong-Okwangwo road with support from WCS



Rehabilitation of the Obudu Cattle Ranch-Anape community road supported by WCS

2. Conservation Education and Awareness

In 2021, WCS facilitated a number of education activities in communities (48) and schools in Okwangwo aimed at increasing awareness and strengthening local support for biodiversity conservation. Activities implemented include great ape film shows viewed by a total of 5,997 people, 24 schools exchange visits, 23 field trips, 28 school visits by WCS and CRNP conservation education teams, and 33 community meetings. A total of 485 branded notebooks were distributed to raise awareness about Cross River gorillas and forest elephants. Other activities implemented include, teachers training workshop, celebration of World Environment Day and World Gorilla Day, and a meeting with the Chairman of Boki Local Government Council to discuss the increasing threat of illegal logging to the forests of Boki. Activities were planned and implemented in jointly by WCS and CRNP staff and supervised by WCS Okwangwo Coordinator and CRNP Okwangwo Sector Head.

Field Trips

In 2021, WCS organized 23 guided field trips with schools around Okwangwo with a total of 571 students and 41 teachers into Afi Mountain, Mbe Mountain and Cross River National Park. (Table 10). The field trips provided students with the opportunity to learn about the rainforest, threats to wildlife, and ongoing efforts to save species from extinction. Conservation education is crucial to engage those that will shape the future of wildlife and their habitat. By experiencing and exploring nature, children learn to understand value and appreciate natural world around them. Field trips connect students/pupils to nature and produce lasting experiences that help to inspire people to place more value on wildlife and make them more willing to support biodiversity conservation. WCS regularly organized these trips for conservation club members to introduce them to conservation concepts, experiences and ideas that cannot be given in the classroom environment.

Table 10: Field trips organized for schoolchildren in Okwangwo January-December 2021

Date	School(s)	No of students
January 14	Community Secondary School Busi	22
January 20	Madonna International Nursery/Primary School OCR	20
February 11	Community Secondary School Bumaji	25
February 19	Community Secondary School Butatong	24
March 23	Community Secondary School Kubong	23
March 27	Adventist Int'l Nursery and Primary School Bateriko	25
April 22	Pioneer Secondary School Balegete	22
April 24	St. Linus Primary School Okwa	20
May 22	Government Primary School Kakwe Beebo	23
May 26	Secondary Commercial School Bateriko	26
June 25	Kigoh Primary School, OCR	25
June 25	Government Primary School Anape	24
July 8	JADEE International Nursery/Primary School Butatong	24
July 14	Primary School Ogwefor Bumaji	30
August 23	Community Secondary School Butatong	24
September 20	Government Primary School Bakie	27
September 22	Government Secondary School Obudu Cattle Ranch	25
September 30	Government Primary School Butatong	41
October 13	Blossom International Nursery/Primary School Butatong	28
October 14	St. Michael the Arch-Angel Secondary School Bateriko	26
November 15	JADEE Secondary Primary School Butatong	25
November 18	Madonna Int'l Nursery/Primary School OCR	27
December 7	Community Secondary School Beebo	25



Field trip with Government Secondary School Obudu Cattle Ranch to patches of montane forest on the Obudu Plateau

Film Show

Films focusing on great ape conservation were presented 47 times in villages in Okwangwo (Table 11). The films attracted a total audience of 5,997 people. Film presented include ‘How to save the rainforest’ and ‘Climate change and great apes’. The film shows increased understanding about local wildlife and sensitized forest communities on environmental problems aiming to change attitudes and behaviour towards forest and wildlife. To enhance understanding of film content, WCS staff facilitated discussions among the viewers on conservation issues highlighted by the films, including threats and potential solutions.

Table 11: Communities and schools visited for film shows and estimated number of viewers

S/No	Date	Name of Community	Attendance
1	20/1/2021	Apajili Becheve	70
2	15/2/2021	Community Secondary School Okwa	91
3	15/2/2021	Balegete	170
4	24/3/2021	Buabre	124
5	25/3/2021	Yangwabe	67
6	26/3/2021	Bumfua	48
7	29/3/2021	Bashu	196
8	15/4/2021	Okwangwo	153
9	19/4/2021	Okwa 1	181
10	22/4/2021	Pioneer Sec. Sch. Balegete	24

11	24/4/2021	St. Linus Primary School Okwa	20
12	30/4/2021	Baggabo Bumaji	165
13	13/5/2021	Busi 5	125
14	14/5/2021	Kakwe Beebo	140
15	15/5/2021	Ukampo Beebo	116
16	22/5/2021	Abjja Beebo	102
17	19/6/2021	Bajanfua Beebo	109
18	21/6/2021	Busi 3	75
19	23/6/2021	Bajiki Bumaji	170
20	24/6/2021	Community Secondary School Beebo	90
21	12/7/2021	Okwa 1	120
22	23/7/2021	Baggo	106
23	26/7/2021	Okwamu Becheve	74
24	17/8/2021	Busi 6	145
25	19/8/2021	Butataong (WRD)	60
26	22/8/2021	Bashu Kaku	170
27	26/8/2021	Kigoh Becheve	220
28	27/8/2021	Okpazange	92
29	29/8/2021	Bajiki Bumaji	215
30	11/9/2021	Bogo	71
31	13/9/2021	Kundeve 1	59
32	14/9/2021	Kundeve 2	87
33	19/9/2021	Bago/Bunu Bumaji	303
34	20/9/2021	Bambariku	120
35	21/9/2021	Oguefor	125
36	12/10/2021	Beebo	83
37	27/10/2021	Busi 3	313
38	28/10/2021	Bajiki Bumaji	149
39	29/10/2021	Busi 4	107
40	18/11/2021	Okpazange Becheve	122
41	19/11/2021	Keji-kwu	109
42	25/11/2021	St. M. A. Angel Schools Bateriko	140
43	26/11/2021	Bogo	63
44	7/12/2021	Ukampo Beebo	113
45	16/12/2021	Abijah Beebo	152
46	17/12/2021	Busi 5	203
47	18/12/2021	Busi 6	101



Film Presentation in Busi VI

School Visits

WCS and Cross River National Park education staff visited 28 schools in and around the national park to organize lessons and outdoor activities with conservation clubs on conservation and natural resource management. Other activities include, visit to logging sites, quiz competition and conservation games (Table 12). WCS also uses animal's puppets to discuss animals' behaviour in a dramatic way. A total of 90 pens, 40 posters and 485 WCS branded notebooks designed to promote conservation awareness for forest elephants were distributed to conservation club members.

Table1 12: Name of schools visited in Okwangwo January - December 2021

Date	Name of schools visited	No of notebooks distributed
13/1/2021	Community Secondary School Busi	15
13/1/2021	Comprehensive Secondary School Okwabang	15
20/1/2021	Government Primary School Anape	15
20/1/2021	Madonna International Nursery and Primary School, Obudu Cattle Ranch	15
11/2/2021	Government Primary School Bago Bumaji	15
11/2/2021	Community Secondary Secondary School Bateriko	15
12/2/2021	Community Secondary School Busi	15
16/2/2021	Pioneer Secondary School Balegete	15
16/2/2021	Government Primary School Balegete	15
25/3/2021	Government Primary School Bago Buabre	20
29/3/2021	Community Secondary School Bashu	20
28/4/2021	Government Primary School Kanyang	20
28/4/2021	Dowell Partner International Nursery and Primary School Kanyang	20
29/4/2021	Government Primary School Bajiki Bumaji	20
29/4/2021	Government Primary School Bakie Bumaji	20
13/5/2021	Government Primary School Busi 4	20
14/5/2021	Primary School Busi 5	20
14/5/2021	Community Secondary School Busi	20
24/6/2021	Primary school Ukampor Beebo	30
24/6/2021	Community Secondary School Beebo	20
8/7/2021	St. Michael Primary School Bateriko	20
8/7/2021	JADEE International Nursery and Primary School Butatong	20
23/7/2021	Primary school Bakie Bumaji	30
23/7/2021	Government Primary School Baggabo Bumaji	20
20/9/2021	Holy Trinity Primary School Baggio	30
20/9/2021	St. Augustine Primary School Bambariku	30
21/9/2021	Community Secondary School Bumaji	30
22/9/2021	Community Secondary School Obudu Cattle Ranch	30



Conservation education activity with pupils of Government Primary School Bateriko

Schools Exchange Visits

During the reporting period, WCS in collaboration with CRNP education staff facilitated 24 exchange visits in Okwangwo Division of Cross River National Park involving 48 conservation clubs with 2,288 students participating (Table 13). The aim is to engage students to exchange experiences and discover new viewpoints and approaches for specific conservation activity. Activities implemented during exchange visits includes Cross River gorilla game, nature poems, quiz competition and great apes film show. These activities were carried out in a competitive manner helping to generate interest among students.

Table 13: Schools Exchange visits and number of participants

Date	Schools	No of students
January 13th	Community Secondary School Busi and Community Secondary School Okwabang	93
January 20th	Government Primary School Anape and Madonna Int'l Nursery/Primary School, Obudu Cattle Ranch	98
January 29th	Secondary Commercial School Bateriko and Buentsebe Secondary School Wula	80
February 15th	Government Primary School Balegete and Future Int'l Academy Balegete	87
February 17th	Community Secondary School Butatong and Secondary School Bateriko	100
March 25th	Government Primary School Buabre and Primary School Otsakwai/Yangwabe	92
March 29th	Government Primary School Bashu Ekpambe and Arm Primary School Bashu Kaku	103
April 30th	Government Primary School Bagabo and Government Primary School Bajiki Bumaji	81
April 30th	Government Primary School Bakie and Government Primary School Bakuruku Bumaji	79
May 13th	Govt. Primary School Busi 5 and Primary School Busi 6	118
May 21st	Secondary Commercial School Bateriko and Community Secondary School Busi	127
June 24th	Government Primary School Abija Beebo and Primary School Ukampor Beebo	120
June 25th	Government Primary School Anape and Government Primary School Obudu Cattle Ranch	79
July 8th	St Michael Int'l School Bateriko and JADEE International Nursery/Primary School Butatong	97
July 23rd	Govt. Prim. School Bakie and Prim. School Baggabo	90
September 20th	ThankGod Int'l Nursery and Primary School Bunu and Ushie Nursery/Primary School Bakuruku Bumaji	104
September 21st	St. Augustine Primary School Bambariku and Holy Trinity Primary School Baggo Bumaji	124
October 13th	Blossom Int'l Nursery and Primary School Butatong and RABU Nursery/Primary School Butatong	88
October 14th	7th Day Adventis Primary School and St. Michael The Arch-Angel Primary School Bateriko	122
November 11th	JADEE Int'l Nursery and Primary School Butatong and Obi Abu Nursery/Primary School Butatong	89
November 16th	RABU Primary School and Divine Int'l Academy Okwabang	104
December 13th	Migrants Technical Secondary School Enyi and Community Secondary School Boje	99
December 16th	Government Primary School Abijah Beebo and Primary School Bajanfua Beebo	114



Exchange visit between Trinity Primary School Baggo Bumaji and St. Augustine Primary School Bajiki Bumaji

Teachers Training Workshop

As part of WCS strategies to strengthen conservation education activities in schools, a teachers' training workshops was organized for Schools in Okwangwo Division of Cross River National Park. A total of 28 teachers were trained on how to facilitate conservation education activities in schools with conservation clubs. The essence is to provide teachers with background information and knowledge about forest conservation and challenges associated with Cross River National Park. We believed that teacher's substantial knowledge on teaching methodology couple with knowledge acquired on biodiversity conservation could help in facilitating conservation activities effectively in schools.



Teachers training workshop held in Okwangwo Division of CRNP

Community Meetings

During this period, WCS organized 33 community meetings in Okwangwo (Table 14) to create awareness and increase local support for conservation. Issues discussed include hunting, farm encroachment and illegal logging.



Community meeting in Bamba and Bokalum

Table 14. Communities visited in Okwangwo for meetings

S/no	Date	Community	Site	Attendance
1	15/4/2021	Okwangwo	Okwangwo	53
2	30/4/2021	Bakie	Okwangwo	60
3	30/4/2021	Baggo Bumaji	Okwangwo	39
4	13/5/2021	Busi V	Okwangwo	45
5	14/5/2021	Kakwe Beebo	Okwangwo	63
6	15/5/2021	Ukampor Beebo	Okwangwo	18
7	22/5/2021	Abija Beebo	Okwangwo	51
8	18/1/2021	Okwa II	Okwangwo	21
9	19/1/2021	Okwa I	Okwangwo	20
10	15/2/2021	Okwa II	Okwangwo	60
11	16/2/2021	Balegete	Okwangwo	45
12	24/3/2021	Buabre	Okwangwo	60
13	25/3/2021	Yangwabe	Okwangwo	45
14	28/3/2021	Bashu	Okwangwo	40
15	17/8/2021	Busi VI	Okwangwo	45
16	22/8/2021	Bashu Kaku	Okwangwo	60
17	26/8/2021	Kigoh Becheve	Okwangwo	25
18	29/8/2021	Bajiki Bumaji	Okwangwo	15
19	10/9/2021	Bogo	Okwangwo	32
20	13/9/2021	Kundeve I	Okwangwo	18
21	14/9/2021	Kundeve II	Okwangwo	45
22	20/9/2021	Bunu	Okwangwo	51
23	21/9/2021	Bakie	Okwangwo	28
24	12/10/2021	Beebo	Okwangwo	30
25	27/10/2021	Busi III	Okwangwo	64
26	28/10/2021	Bajiki Bumaji	Okwagwo	19
27	29/10/2021	Busi IV	Okwangwo	34
28	31/10/2021	Okwa II	Okwangwo	255
29	18/11/2021	Okpazange Becheve	Okwangwo	41
30	19/11/2021	Keji-kwu	Okwangwo	19
31	26/11/2021	Bogo	Okwangwo	31
32	17/12/2021	Busi V	Okwangwo	37
33	18/12/2021	Busi VI	Okwangwo	16

Partnership with Boki Local Government Council

A meeting was held with the newly elected Chairman of Boki Local Government Council, Mr. John Ewah, to discuss WCS' activities in the area and to seek his support and collaboration in efforts to improve the protection of wildlife and forests on Boki. The Chairman appreciated the efforts of WCS towards saving wildlife and wild places and encouraged staff to continue with the good work. At the end of the meetings, 20 posters were presented to him to support his on-going awareness effort to sustain Boki environment.

World Environment Day Celebration

This year, WCS joined the rest of the world to celebrate World Environment Day on 5 June with the theme “Ecosystem Restoration”, can take many forms: growing trees, greening cities, rewilding gardens, changing diets or cleaning up rivers and coasts. WCS used the occasion to remind and encourage all stakeholders to take action to protect and restore the environment, helping to halt the ongoing damage. Students were selected from Okwangwo schools to join Afi and Mbe schools in a “walk for the environment” organized as part of the celebration. At the end of the program, awards were given to participating principals, village heads, partners and students performed well.



World Gorilla Day

September 24 marks World Gorilla Day, set aside to celebrate these threatened giants of the forest as well as to renew calls for action to protect them. WCS celebrated the Cross River gorilla as the rarest among the four subspecies with an estimated population between 250-300 individuals in the wild. The gorillas are threatened with human activities including illegal logging, hunting and unsustainable farming practices in and around protected areas. WCS used the occasion of World Gorilla Day to create awareness of the conservation status of this subspecies and to advocate their protection.



World Gorilla Day Celebration in Kanyang and Wula communities in the Mbe Mountains

3. SUPPORT TO IMPROVE LOCAL LIVELIHOODS

Livelihood activities carried out in Okwangwo during the reporting period include training of cocoa farmers in fire management, rational use of pesticides, planting-replanting and diversification, shade management. Training was also provided for women's groups in bush mango propagation, sustainable harvesting, storage and marketing. A total of 301 women were trained in bush mango propagation, harvesting, storage and marketing, and 120 farmers (89 males and 31 females) were trained in water shade management and other sustainable cocoa farming practices (Tables 15 & 16). Additional twenty farmers were trained in planting-replanting and diversification. A total of 38,667 improved variety cocoa seedlings were distributed to 119 farmers in six communities to replant old, unproductive farms to improve productivity and reduce deforestation from clearing forest for farm expansion (Table 17). A total of 330 improved variety bush mango seedlings were also distributed in two communities in Okwangwo. Five new cocoa nurseries were established to produce additional seedlings for distribution to farmers in 2022. The nurseries were planted with seeds acquired from the Cocoa Research Institute of Nigeria (CRIN). The CRIN TC hybrid variety which we are using to establish the nurseries is early bearing, high yielding with very low input, resistant to major pests and diseases of cocoa, highly adaptable to cocoa ecologies of Nigeria, and have very good cocoa quality traits. Each farmer supported by the project signed a conservation contract, agreeing to not clear new forest and to apply best practices that reduce deforestation.

Table 15 Attendance at cocoa farm shade management training in Okwangwo

S/N	Community	Male	Female	Total
1	Yangwabe	15	5	20
2	Bakie	16	4	20
3	Ukampor	13	7	20
4	Boggo	15	5	20
5	Busi VI	15	5	20
6	Okwa I	15	5	20
Total		89	31	120

Table 16. Attendance at bush mango training in Okwangwo

S/N	Community	No. of participants
1	Boggo	31
2	Okwa I	81
3	Bakie	43
4	Ukampor	42
5	Yangwuabe	42
6	Busi VI	62
Total		301

Table 17: Number of improved cocoa seedlings distributed to farmers in Okwangwo in 2021

S/N	Community	No. of beneficiaries	No. of seedlings per farmer	Total seedlings distributed
1	Busi VI	22	430	9460
2	Ukampor	22	360	7920
3	Yangwabe	21	300	6300
4	Boggo	19	223	4237
5	Okwa I	13	150	1950
6	Bakie	22	400	8800
Total				38,667



Acknowledgements

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Appendix I. Patrol data from Okwangwo for 2012-2021

	2012 *	2013	2014	2015	2016	2017	2018	2019	2020	2021
# Wire snares	3,026	1540	690	99	534	696	907	1649	4322	1953
# Gunshots heard	39	38	9	11	3	10	17	34	52	55
# Expended cartridges	1,065	757	463	166	90	43	178	357	477	386
# Hunting sheds	130	106	80	39	37	14	46	52	78	44
# Farms recorded	25	5	25	1	9	1	14	48	239	77
# Logging sites	27	8	7	9	16	1	15	36	24	67
# Poachers apprehended	4	13	3	2	3	2	3	20	20	9
# gorilla groups sighted	2	0	0	0	1	0	1	1	1	2
# Chimpanzee groups sighted	3	1	3	1	2	2	2	8	6	11
# Gorilla nest sites	21	59	26	56	18	57	137	125	163	135
# Chimpanzee nest sites	7	11	20	39	24	40	77	54	70	37
Unidentified ape nest sites	22	11	1	27	23	14	21	15	12	12
Time taken (hours)	1,401	1,947	2,197	2,593	2,180	2,444	2438	2671	4,101	5355
Total distance covered (km)	1,603	2,187	2,165	2,503	2,001	2059	2291	2765	4,674	6544
No of patrol days	235	317	332	358	282*	348	377	388	621	797
# Rangers per 10 km ²	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

*In 2011 data available only for the period March–June & September–December; in 2012 data not available for August; in 2016 data not available for 59 patrol days

Appendix II. Great ape nest sites recorded in January - December 2021

Species	Nest site type	Age	Dung present	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	Fresh	false	0	7
Chimpanzee	Night nest(s)	Fresh	false	0	3
Chimpanzee	Night nest(s)	Old	false	0	5
Chimpanzee	Night nest(s)	Recent	false	0	6
Chimpanzee	Night nest(s)	Old	false	0	2
Chimpanzee	Night nest(s)	Recent	false	0	6
Chimpanzee	Night nest(s)	Recent	false	0	5
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)	Old	false	0	6
Chimpanzee	Night nest(s)	Fresh	false	0	6
Chimpanzee	Night nest(s)	Old	false	0	8
Chimpanzee	Night nest(s)	Fresh	false	0	8

Chimpanzee	Night nest(s)	Recent	false	0	5
Chimpanzee	Night nest(s)	Recent	false	0	6
Chimpanzee	Night nest(s)	Recent	false	0	6
Chimpanzee	Night nest(s)	Fresh	false	0	4
Chimpanzee	Night nest(s)	Recent	false	0	1
Chimpanzee	Night nest(s)	Old	false	0	4
Chimpanzee	Night nest(s)	Fresh	false	0	8
Chimpanzee	Night nest(s)	Recent	false	0	5
Chimpanzee	Night nest(s)	Fresh	false	0	8
Chimpanzee	Night nest(s)	Fresh	false	0	5
Chimpanzee	Night nest(s)	Old	false	0	5
Chimpanzee	Night nest(s)	Recent	false	0	6
Chimpanzee	Night nest(s)	Fresh	false	0	4
Chimpanzee	Night nest(s)	Old	false	0	6
Chimpanzee	Night nest(s)	Fresh	false	0	4
Chimpanzee	Night nest(s)	Recent	false	0	8
Chimpanzee	Night nest(s)	Fresh	false	0	5
Chimpanzee	Night nest(s)	Fresh	false	0	5
Chimpanzee	Night nest(s)	Fresh	false	0	8
Chimpanzee	Night nest(s)	Recent	false	0	9
Chimpanzee	Night nest(s)	Fresh	false	0	6
Chimpanzee	Night nest(s)	Recent	false	0	6
Gorilla	Night nest(s)	Fresh	true	1	
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Recent	true	1	4
Gorilla	Night nest(s)	Old	false	2	5
Gorilla	Day nest(s)	Fresh	false	2	
Gorilla	Night nest(s)	Fresh	true	1	2
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	2
Gorilla	Night nest(s)	Recent	true	2	5
Gorilla	Night nest(s)	Fresh	true	2	2
Gorilla	Night nest(s)	Fresh	false	2	4
Gorilla	Night nest(s)	Old	false	0	5
Gorilla	Day nest(s)	Fresh	false	3	3
Gorilla	Night nest(s)	Recent	false	3	3
Gorilla	Night nest(s)	Fresh	true	1	6
Gorilla	Night nest(s)	Fresh	true	2	8
Gorilla	Night nest(s)	Fresh	true	2	5
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)	Fresh	true	1	3

Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Night nest(s)	Fresh	false	0	1
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Day nest(s)	Fresh	false	2	2
Gorilla	Night nest(s)	Fresh	true	3	5
Gorilla	Night nest(s)	Fresh	true	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)	Old	true	0	3
Gorilla	Night nest(s)	Recent	true	3	3
Gorilla	Night nest(s)	Fresh	false	2	6
Gorilla	Night nest(s)	Recent	false	2	6
Gorilla	Day nest(s)	Recent	true	2	
Gorilla	Night nest(s)	Recent	true	2	5
Gorilla	Night nest(s)	Recent	false	1	3
Gorilla	Night nest(s)	Recent	false	0	2
Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Day nest(s)	Fresh	false	2	
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Fresh	true	1	2
Gorilla	Night nest(s)	Fresh	false	2	5
Gorilla	Day nest(s)	Recent	false	1	
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Fresh	true	1	2
Gorilla	Night nest(s)	Fresh	false	3	3
Gorilla	Day nest(s)	Fresh	false	1	1
Gorilla	Night nest(s)	Fresh	false	1	4
Gorilla	Night nest(s)	Recent	true	1	3
Gorilla	Night nest(s)	Recent	true	2	5
Gorilla	Night nest(s)	Fresh	true	1	3

Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Night nest(s)	Fresh	true	0	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)	Recent	true	2	5
Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Night nest(s)	Fresh	false	1	1
Gorilla	Night nest(s)	Recent	true	5	8
Gorilla	Night nest(s)	Recent	false	2	2
Gorilla	Night nest(s)	Fresh	true	2	6
Gorilla	Night nest(s)	Recent	true	2	5
Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Fresh	true	2	2
Gorilla	Night nest(s)	Fresh	true	2	4
Gorilla	Night nest(s)	Fresh	true	1	5
Gorilla	Night nest(s)	Fresh	false	2	2
Gorilla	Day nest(s)	Recent	false	1	
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Fresh	false	1	4
Gorilla	Night nest(s)	Fresh	true	2	2
Gorilla	Night nest(s)	Recent	true	3	5
Gorilla	Day nest(s)	Recent	true	2	
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Old	false	1	4
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Day nest(s)	Fresh	false	1	
Gorilla	Night nest(s)	Fresh	true	1	5
Gorilla	Night nest(s)	Fresh	false	0	2
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Recent	true	2	2
Gorilla	Day nest(s)	Fresh	false	2	
Gorilla	Day nest(s)	Recent	true	1	
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Day nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Recent	true	2	6
Gorilla	Night nest(s)	Fresh	true	1	4
Gorilla	Night nest(s)	Recent	false	1	4

Gorilla	Day nest(s)	Fresh	true	1	1
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Recent	false	2	5
Gorilla	Night nest(s)	Fresh	true	1	2
Gorilla	Night nest(s)	Recent	true	2	5
Gorilla	Night nest(s)	Recent	true	2	3
Gorilla	Night nest(s)	Fresh	false	1	4
Gorilla	Day nest(s)	Recent	true	1	3
Gorilla	Night nest(s)	Fresh	true	1	3
Gorilla	Night nest(s)	Fresh	true	2	6
Gorilla	Night nest(s)	Fresh	true	2	8
Gorilla	Night nest(s)	Recent	false	0	6
Gorilla	Night nest(s)	Fresh	false	1	3
Gorilla	Night nest(s)	Fresh	true	2	3
Gorilla	Night nest(s)	Fresh	true	1	1
Gorilla	Night nest(s)	Fresh	false	2	2
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Fresh	true	1	6
Gorilla	Night nest(s)	Fresh	true	2	5
Gorilla	Night nest(s)	Recent	true	2	4
Gorilla	Night nest(s)	Fresh	true	2	6
Gorilla	Night nest(s)	Fresh	true	1	3
Unidentified ape	Night nest(s)	Recent	true	0	6
Unidentified ape	Night nest(s)	Fresh	false	0	2
Unidentified ape	Night nest(s)	Old	false	0	2
Unidentified ape	Night nest(s)	Recent	false	0	5
Unidentified ape	Night nest(s)	Fresh	false	0	2
Unidentified ape	Night nest(s)	Fresh	false	0	1
Unidentified ape	Night nest(s)	Recent	false	0	3
Unidentified ape	Night nest(s)	Fresh	false	0	2
Unidentified ape	Night nest(s)	Recent	true	0	4
Unidentified ape	Night nest(s)	Fresh	true	0	6
Unidentified ape	Night nest(s)	Fresh	false	0	8
Unidentified ape	Night nest(s)	Fresh	false	0	2

Appendix III. Encounter rate of wildlife species observed during patrols January - December, 2021. Species not encountered during patrols are not shown.

Species	Scientific name	Encounter rate per km
Unidentified monkey	-	0.244
Brush-tailed porcupine	<i>Atherurus africanus</i>	0.233
Red river hog	<i>Potamochoerus porcus</i>	0.212
Mona monkey	<i>Cercopithecus mona</i>	0.189
Mongoose	-	0.180
Blue duiker	<i>Philantomba monticola</i>	0.173
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	0.139
Forest elephant	<i>Loxodonta cyclotis</i>	0.127
White-nosed monkey	<i>Cercopithecus nictitans</i>	0.116
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	0.055
Cross River gorilla	<i>Gorilla gorilla diehli</i>	0.035
Unidentified large duiker	-	0.033
Drill	<i>Mandrillus leucophaeus</i>	0.024
African buffalo	<i>Syncerus caffer</i>	0.023
White-bellied pangolin	<i>Phataginus tricuspis</i>	0.023
African civet	<i>Civettictis civetta</i>	0.018
Cane rat	<i>Thryonomys swinderianus</i>	0.015
Unidentified great ape	-	0.014
Unidentified medium duiker	-	0.012
Preuss's monkey	<i>Cercopithecus preussi</i>	0.011
Bay duiker	<i>Cephalophus dorsalis</i>	0.008
Unidentified small duiker	-	0.006
Palm civet	<i>Nandinia binotata</i>	0.005
Rock fowl	<i>Picathartes oreas</i>	0.004
Red-eared monkey	<i>Cercopithecus erythrotis</i>	0.003
Ogilby's duiker	<i>Cephalophus ogilbyi</i>	0.001
Bushbuck	<i>Tragelaphus scriptus</i>	0.000