

Gorilla Guardian: A Community-based Gorilla Monitoring Network

Progress Report for July 2010 – June 2011

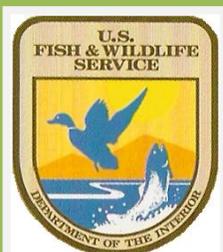


Prepared for:

U.S. Fish & Wildlife Service
Margot Marsh Biodiversity Foundation
Berggorilla & Regenwald Direkthilfe
The Ministry of Forestry and Wildlife
Wildlife Conservation Society

Prepared by:

The Wildlife Conservation Society
Takamanda-Mone Landscape Project
PO Box 1308
Limbe, South West Region
Republic of Cameroon



The Gorilla Guardian monitoring program is supported by the U.S. Fish and Wildlife Service, the Margot Marsh Biodiversity Foundation, Berggorilla & Regenwald Direkthilfe and the Wildlife Conservation Society.

WCS Personnel:	Director	Christopher Jameson
	Project Manager	Anthony Nchanji
	Field Manager	Romanus Ikfuingei
	GIS & Data Management Officer	Eni Kuchambi
	Biological Research Assistant	Albert Ekinde
	Bio-monitoring Officer	Khumbah Pius
	Administrative Officer	Ngalamo Josaine
	Administrative Assistant	Gwendoline Kwankam
	Gorilla Guardians	Essa Simon, Eyong Ferdinand, Tampi John Tipa Peter, Nkwa William, Takie Moses
	Drivers	Ebenki Smith, Alexander Ngoasong, Victor Ngwa

Written by: Romanus Ikfuingei

Edited by: Anthony Chifu Nchanji & Christopher Jameson

Produced: August 2011

Recommended citation: Ikfuingei, R. (2011). *Gorilla Guardian: A Community-based Monitoring Network progress report for July 2010 to June 2011*. An unpublished report submitted to the Wildlife Conservation Society, the US Fish & Wildlife Service, the Margot Marsh Biodiversity Foundation, Berggorilla & Regenwald Direkthilfe, and the Cameroon Ministry of Forestry and Wildlife. Edits: A. C. Nchanji & C. M. Jameson

Contents

List of Figures	iii
List of Tables	iii
Executive Summary	iv
Introduction	1
Methods	1
<i>Study area</i>	<i>1</i>
<i>Data collection</i>	<i>1</i>
Results and Discussion	3
<i>Cross River gorilla and other great ape numbers</i>	<i>3</i>
<i>Ashunda-Bachama forest area</i>	<i>5</i>
<i>Mbu-Nga forest area</i>	<i>6</i>
<i>Eshobi-Kunku forest area</i>	<i>7</i>
Other Gorilla Guardian Network Outputs	9
<i>Chimpanzee hunting</i>	<i>9</i>
<i>Gorilla Guardian coordination</i>	<i>9</i>
<i>Updating reptile species list</i>	<i>10</i>
Next Steps for the Gorilla Guardian Programme	11
References	11

List of Figures

Figure 1: Cross River gorilla distribution in Nigeria and Cameroon, including the location of Gorilla Guardian villages. (Map adapted from Bergl & Vigilant 2007)	2
Figure 2: Gorilla Guardians and hunters in Mbu forest collecting nest site data in December 2010. (©WCS/TMLP 2010)	3
Figure 3: Distribution of nest sites recorded in Ashunda-Bachama forest area from July 2010 to June 2011.	5
Figure 4: Distribution of nest sites recorded in Mbu-Nga forest area from July 2010 to June 2011.	6
Figure 5: Distribution of nest sites recorded in Eshobi-Kunku forest area from July 2010 to June 2011	8
Figure 6: <i>Chameleo cristatus</i> (crested chameleon). December 2010. (©WCS/TMLP 2010)	10
Figure 7: <i>Kinixys homeana</i> (Home's forest hinge-back tortoise). December 2010. (©WCS/TMLP 2010)	10

List of Tables

Table 1: Total number of nest sites and nest counts recorded by Gorilla Guardians in the four forest areas for current reporting period.....	4
Table 2: Number of hunters who collaborated with Gorilla Guardians, number of field visits for current reporting period, and total number of field visits since beginning of GG programme.	8
Table 3: Estimated minimum numbers of Cross River gorilla for Gorilla Guardian network sites.	8

Executive Summary

The Cross River gorilla (*Gorilla gorilla diehli*) is the most endangered sub-species of gorilla in Africa and a large number of gorillas survive in unprotected forest. The Gorilla Guardian community-based monitoring network continues to provide updated knowledge related to the status and distribution of less-known gorilla groups and has proven itself to be a cost-effective and efficient way of monitoring the most vulnerable and remote gorilla populations. With continued support for the Gorilla Guardian network and for its expansion to additional villages, the network will develop into a true community-based conservation programme.

Gorilla Guardians visited a total of 266 nest sites between July 2010 and June 2011 and examined 1334 nests. Within the 154 confirmed Cross River gorilla nest sites, 807 ground nests were counted. Four chimpanzee nest sites were confirmed with 36 individual nests. The remaining 108 nest sites were recorded as ‘great ape’ nest sites as they could not be confidently distinguished from chimpanzee nest sites. Large, single-age nest counts were recorded from several sites in Mbu-Nga and Ashunda-Bachama forests. From these observations we are able to conclude with confidence that there are groups of gorillas consisting of at least 19 and 10 weaned individuals in Mbu-Nga and Ashunda-Bachama forests respectively. Due to continued interest in the programme, during this reporting period the Gorilla Guardians were able to work closely with 18 hunters from 6 villages.

Other notable successes included support from Gorilla Guardians to MINFOF through the reporting of serious incidence of *Capolibia* (Hausa stick) harvesting and hunting, including the killing of two chimpanzees by a hunter in Eshobi-Bajou village in November 2010. This information was reported to WCS Field Manager who contacted the Manyu MINFOF Divisional Delegate and the Southwest Regional MINFOF Delegate.

Introduction

Cross River gorillas (*Gorilla gorilla diehli*) are Critically Endangered and with remaining numbers estimated to be perhaps as low as 200-250 individuals, it is important that as many gorillas as possible be brought under some kind of conservation management strategy quickly.

Despite recent successes in creating protected areas, surveys have also revealed that Cross River gorillas still occur in a number of unprotected forest sites in Cameroon. Many of these sites are difficult to reach and survey, posing a problem for ongoing monitoring. Government also has very limited capacity to mount protection efforts in many of these areas. Born from these challenges, “the Gorilla Guardian”, a community-based monitoring network was created in 2008 as a way of stimulating the involvement of local communities in gorilla monitoring and conservation.

The main objective of the Gorilla Guardian program is to work with traditional authorities in communities with traditional forest rights over unprotected forest areas where Cross River gorillas are known to occur and to collaborate with local hunters, to gather information related to Cross River gorilla distribution, status and threats. The information gathered is then used in supporting Cross River gorilla conservation, awareness-raising, and conservation planning.

Methods

Study area

The project now covers four main forest areas and involves 10 remote villages, namely Awuri, Takpe, Mbu, Nga, Bachama, Ashunda, Eshobi, Kunku, Amebishu, and Batambe (Figure 1).

Data collection

Gorilla Guardians make records each time a hunter reports a great ape nest site, a great ape sighting, or other noteworthy observation (such as sighting of other important species, poaching activity, illegal logging, or forest collection). The Gorilla Guardian Coordinator conducts quarterly field verification visits to collect this information, and the Gorilla Guardians coordinate visits to each of the nest site with the hunters who have provided the information.

Three main nest site types are recorded in the field as follows:

1. Gorilla (*Gorilla gorilla diehli*) nest site (GG) - contained a ground nest with other 100% reliable evidence of gorilla presence (such as fresh lobed gorilla dung).
2. Chimpanzee (*Pan troglodytes ellioti*) nest site (PT) - no ground nests and 100% reliable evidence of chimpanzee presence (such as observation of chimpanzee in the nest, or fresh non-lobed dung).
3. Great Ape (GA) or Tree (T) nest site - nest sites with no ground nest, with all nests located in trees.

For details of data collection methodology see Nicholas et al 2010.

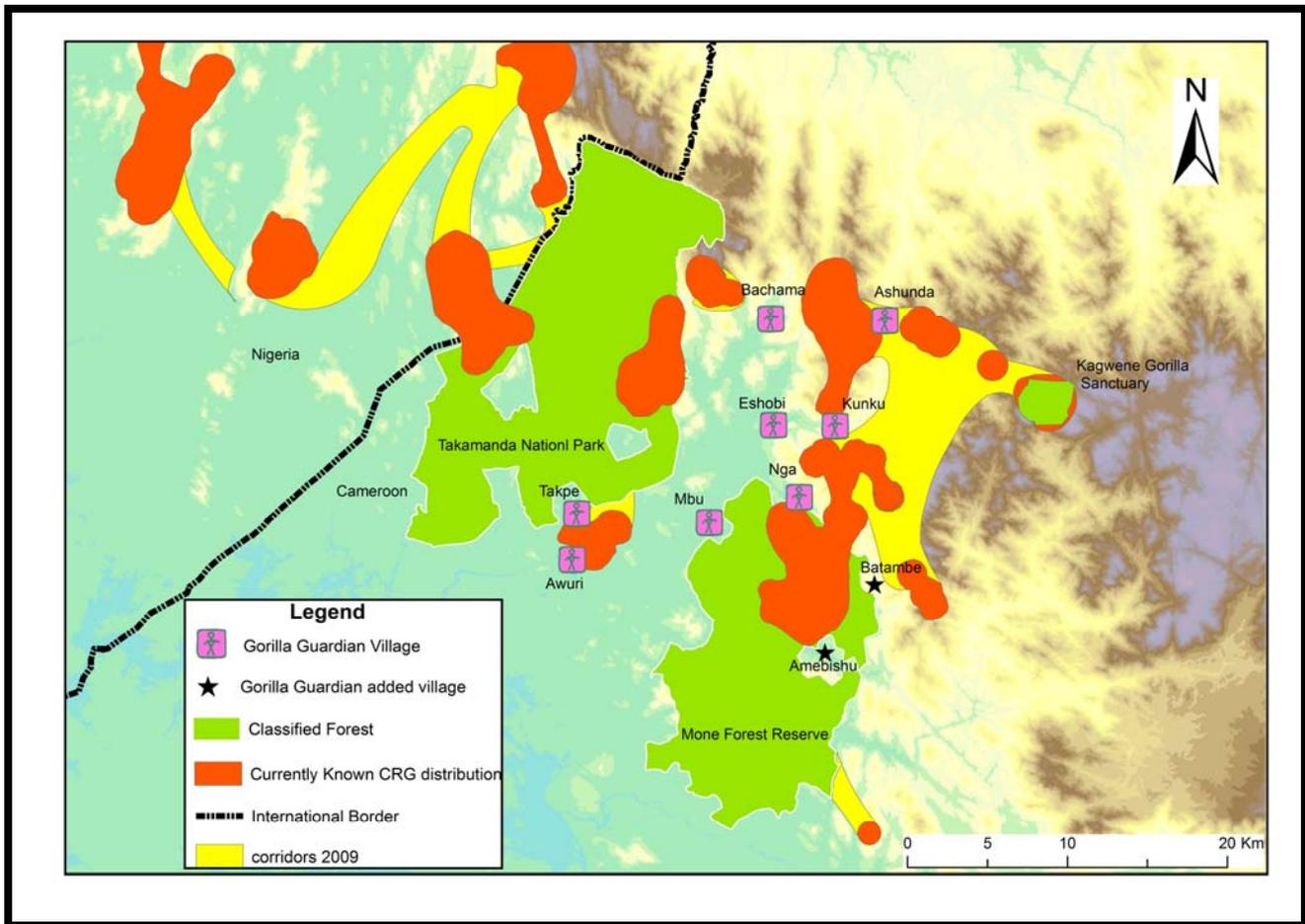


Figure 1: Cross River gorilla distribution in Nigeria and Cameroon, including the location of Gorilla Guardian villages. (Map adapted from Bergl & Vigilant 2007)

Results and Discussion

Cross River gorilla and other great ape numbers

Between July 2010 and June 2011, WCS Bio-monitoring Officers conducted four field verification visits to six of the eight Gorilla Guardian communities involved in the gorilla monitoring and conservation programme. Data was not collected from two communities (Takpe & Awuri) by the Bio-monitoring Officers and the Field Manager because of a conflict between the communities and the authorities managing the Takamanda National Park concerning the location of the park head quarters.

A total of 154 confirmed Cross River gorilla nest sites were recorded containing 807 individual nests¹. An additional 108 unclassified great ape nest sites with 491 individual nests and four confirmed chimpanzee nest sites with 36 individual nests were recorded during this period. Figure 2 shows Gorilla Guardians and hunters in Mbu forest collecting nest site data in December 2010.

Mbu-Nga forest contained the highest number of nest sites for Cross River gorilla (N = 88), followed by Ashunda-Bachama forest (N = 59), and Eshobi-Kunku (N = 7). The largest number of unclassified great ape nest sites was recorded in Eshobi-Kunku forest area (N = 63). The largest number of weaned individual Cross River gorilla nests was recorded in Mbu-Nga (N = 19) (Table 1).



Figure 2: Gorilla Guardians and hunters in Mbu forest collecting nest site data in December 2010. (©WCS/TMLP 2010)

¹ Individual nests are night nests constructed by weaned Cross River gorillas.

Eshobi-Kunku recorded four Cameroon-Nigeria chimpanzee nest sites as well. The Monitoring Programme Assistant heard the Cameroon-Nigerian chimpanzees vocalizing in Eshobi-Kunku forest. The highest average weaned Cross River gorilla nest count per nest site was recorded in Mbu-Nga forest (N = 5.8) while Ashunda-Bachama recorded (N = 4.6).

During this reporting period data unfortunately was not collected from the Takpe-Awuri forest because of a conflict between the community and the authorities managing the Takamanda National Park concerning the location of the park headquarters. The WCS Field Manager plans to visit the area during the next supervisory visits for an update of the situation with views of re-instating the Gorilla Guardian activities.

Table 1: Total number of nest sites and nest counts recorded by Gorilla Guardians in the four forest areas for current reporting period.

Forest Area	Nest Type	# of nest sites per community	Nest count per community	Maximum # of same age nests per site ²	Minimum # of same age nests per site	Average # of nest
Takpe-Awuri³	GG	-	-	-	-	-
	GA	-	-	-	-	-
	PT	-	-	-	-	-
Mbu-Nga	GG	88	510	19	1	5.8
	GA	19	94	9	1	4.9
	PT	0	0	0	0	0
Ashunda-Bachama	GG	59	271	10	1	4.6
	GA	26	110	8	1	4.2
	PT	0	0	0	0	0
Eshobi-Kunku	GG	7	26	5	1	3.7
	GA	63	287	10	1	4.6
	PT	4	36	11	8	9
TOTAL	GG	154	807	19	1	4.7
	GA	108	491	10	1	4.6
	PT	4	36	11	8	9

² “Same age” nests are group of Cross River gorilla nests estimated to be constructed on the same day or period by weaned gorillas.

³ No data was collected from Tapke & Awuri during this reporting period because of a conflict between the communities and the authorities managing the Takamanda National Park concerning the location of the park head quarters.

Figures 3 through 5 show the distribution of nest sites found in the three forest sites in which data was collected in this reporting period.

Ashunda-Bachama forest area

On the 10th of October 2010, in Ashunda-Bachama forest area, Gorilla Guardians recorded a Cross River gorilla fresh nest site consisting of five individual same age nests south of Ashunda village. The location is beyond the boundaries of currently known range for Cross River gorillas in area and outside the proposed corridor, thereby expanding the previously known range for Cross River gorillas in this forest (Figure 3). Several great ape nest sites were also recorded for the Ashunda-Bachama forest block, all within the currently known Cross River gorilla distribution.

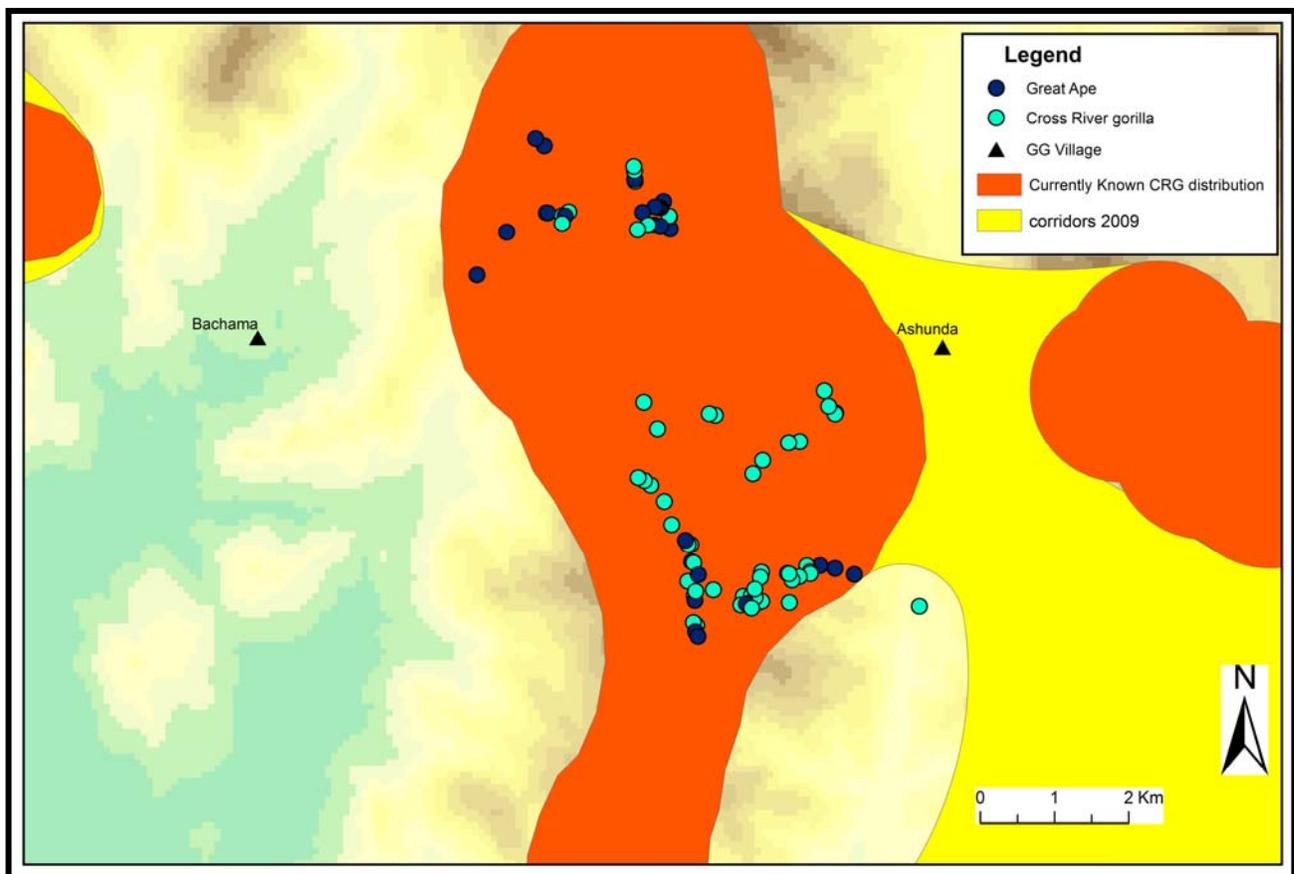


Figure 3: Distribution of nest sites recorded in Ashunda-Bachama forest area from July 2010 to June 2011.

Mbu-Nga forest area

In Mbu-Nga forest area, Gorilla Guardians recorded several Cross River gorilla nest sites on the boarder and just outside the currently estimated distribution area. (Figure 4) However, these nest sites are still within Mone River Forest Reserve. Some nest sites were also recorded close to Batambe and Amebisu communities. These observations along with strong interest by these two communities in the programme necessitated the recent selection of Gorilla Guardians in Batambe and Amebishu communities. Allowing the programme to expand into and cover more of the areas outside protected areas and outside the currently known ranges for Cross River gorillas, and thereby increasing the conservation and survival chances for the Cross River gorilla.

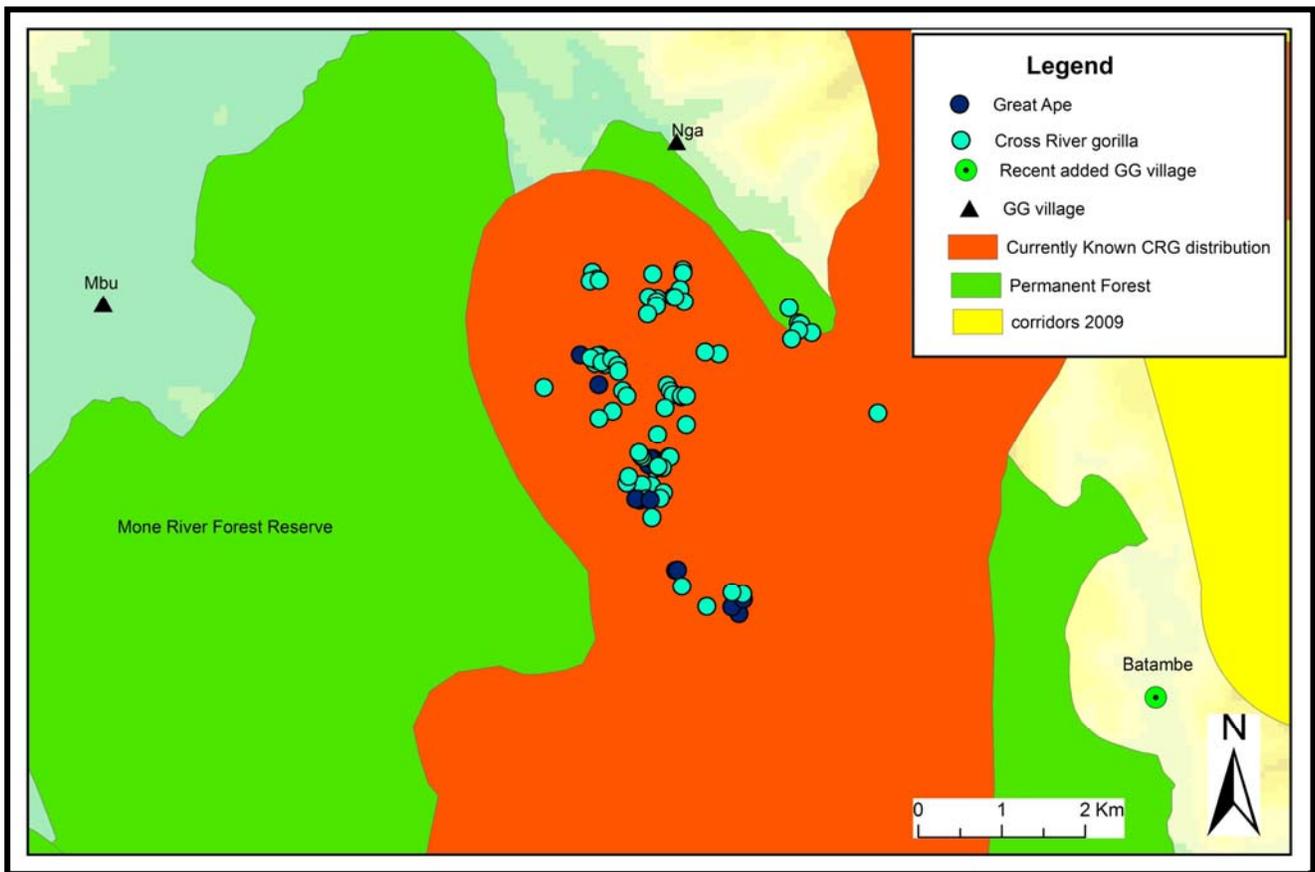


Figure 4: Distribution of nest sites recorded in Mbu-Nga forest area from July 2010 to June 2011.

Eshobi-Kunku forest area

In Eshobi-Kunku forest four chimpanzee nest sites were recorded. Two Cross River gorilla and several great ape nest sites were recorded outside the estimated known distribution of Cross River gorillas (Figure 5).

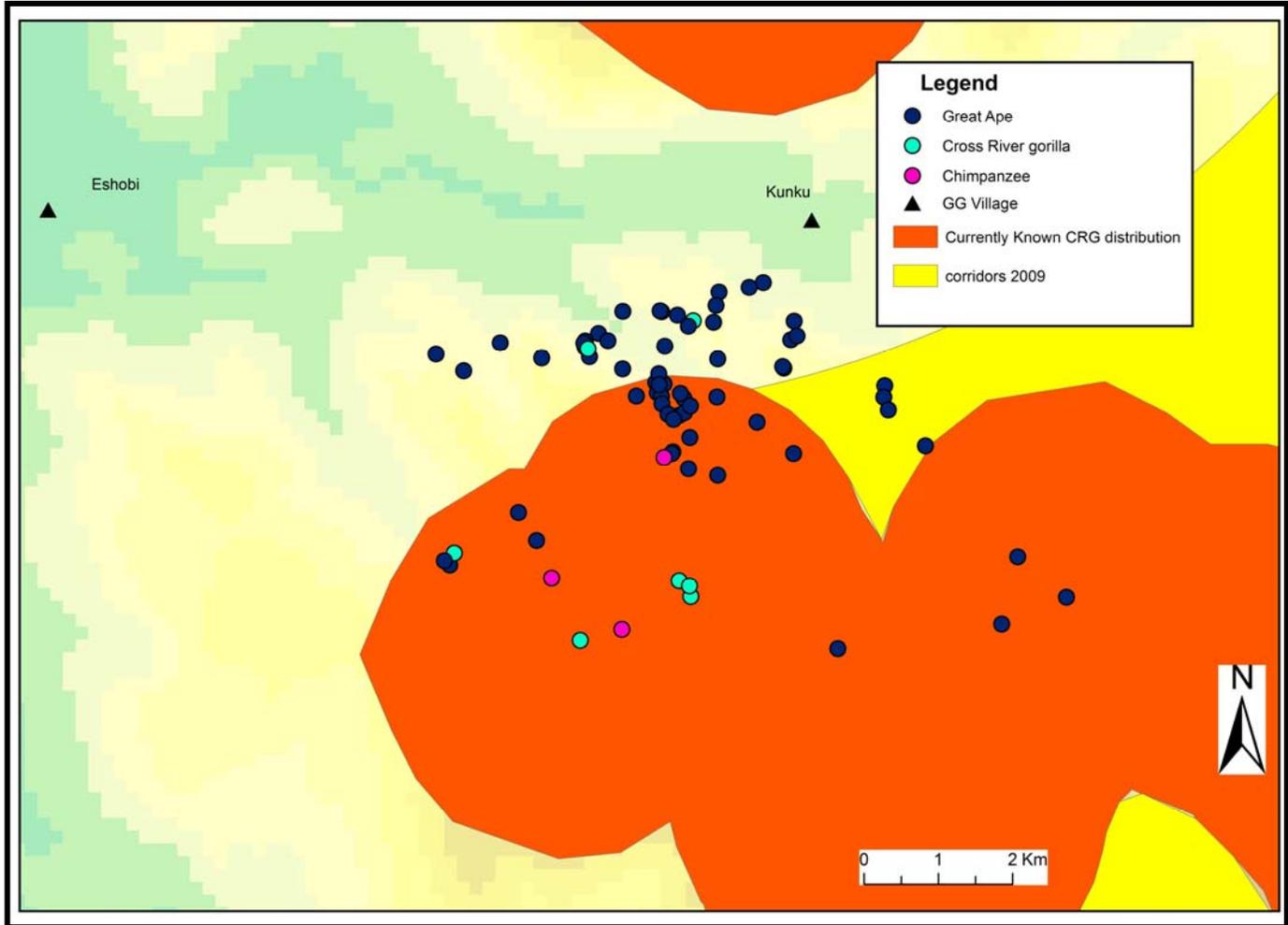


Figure 5: Distribution of nest sites recorded in Eshobi-Kunku forest area from July 2010 to June 2011.

Gorilla Guardians worked with eighteen different hunters in the three different localities to gather information related to Cross River gorilla distribution, status and threats. There were more hunters (7) in Ashunda-Bachama area as against 3 in 2009/2010 who were willing to collaborate and hence more hunters reported nests to the Gorilla Guardians (Table 2). Hunters from Mbu-Nga and Eshobi-Kunku had only limited involvement with the program during the reporting period due to their need to focus on cocoa harvesting.

Table 2: Number of hunters who collaborated with Gorilla Guardians, number of field visits for current reporting period, and total number of field visits since beginning of GG programme.

Forest Area	# of hunters 2009/2010	# of hunters 2010/2011	Gorilla Guardians	# of visits 2010/2011	Total # of visits to date ⁴
Tapke-Awuri ⁵	2	-	2	-	4
Ashunda-Bachama	3	7	2	4	10
Mbu-Nga	8	5	2	4	10
Eshobi-Kunku ⁶	-	6	2	4	4
Total	13	18	6	12	28

The maximum number of same age Cross River gorilla nests in a nest site gives an indication of the minimum number weaned of gorillas present in the forest at that particular day. This information is summarized in Table 3 below.

Table 3: Estimated minimum numbers of Cross River gorilla for Gorilla Guardian network sites.

Site Name	Min # CRG's	Count Type	Source/Date	Notes
Mawambi Hills	22	Nest Counts	WCS/2010	Study
Mone Forest	19	Nest Counts	WCS/2010	GG work
Mbulu Hills	14	Nest Counts	WCS/2010	GG work
Eshobi-Kunku hills	5	Nest counts	WCS/2011	GG work

⁴ Total # of visits to date is from January 2009 through June 2011.

⁵ No data was collected from Tapke & Awuri during this reporting period because of a conflict between the communities and the authorities managing the Takamanda National Park concerning the location of the park head quarters.

⁶ Gorilla Guardians were selected in May 2010 and therefore visits only commenced in September 2010, after the 2009/2010 reporting period.

Other Gorilla Guardian Network Outputs

Chimpanzee hunting

Gorilla Guardians reported the killing of two chimpanzees by a hunter in Eshobi-Bajou village in November 2010. This information was reported the Manyu MINFOF Divisional Delegate and the Southwest Regional MINFOF Delegate. It is our hope that future improvements in the network and access will allow accurate arrests and prosecutions. However, the powerful and clear message that there is conservation in action in these remote areas and things will no longer be loose as in the past was attained.

Gorilla Guardians were involved in actively sensitizing their communities on various wildlife species protected by Cameroon wildlife law.

A number of other communities have also expressed interest that the Gorilla Guardian program should be extended to their areas. There is a growing realization that the programme is not about taking forests away from the people, rather increasing their involvement in managing Cross River gorillas, their wildlife and their forest resources. Testimony of this raised awareness and interest in the programme is the selection of Gorilla Guardian in Batambe and Amebishu on request from their communities during the reported period.

Gorilla Guardian coordination

During the reporting period, Richard Tampie Nchayi who was coordinating the Gorilla Guardian network programme came under judicial police custody in Buea pending a criminal investigation. Therefore experienced WCS staff (Monitoring Programme Assistant, Ekinde Albert, Bio-Monitoring Officer, Khumbah Pius and Field Manager, Romanus Ikfuingei) took over the coordination of the programme to ensure efficient and continued programme management.

Updating reptile species list

Figures 6 and 7 are photographs of two reptile species that could not be readily identified in the field at Mone Forest Reserve. The photographs were forwarded to Smolensky Nicole Limunga a PhD student specializing in herpetology at the department of wildlife and fisheries, Texas A &M university, U.S, for identification and were respectively confirmed as *Chameleo cristatus* (crested chameleon) and juvenile *Kinixys homeana* (Home's forest hinge-back tortoise). This has assisted in updating our reptile data base.



Figure 6: *Chameleo cristatus* (crested chameleon). December 2010. (©WCS/TMLP 2010)



Figure 7: *Kinixys homeana* (Home's forest hinge-back tortoise). December 2010. (©WCS/TMLP 2010)

Next Steps for the Gorilla Guardian Programme

The two recently selected Gorilla Guardians will be trained on the 'Gorilla Guardian Manual' and the Cameroon wildlife law in collaboration with the Ministry of Forestry and Wildlife (MINFOF) and a refresher course organized for all the earlier Gorilla Guardians and some selected hunters. There is need to recruit a Gorilla Guardian supervisor and probably an assistant to replace Richard Tampie still in police custody. The Central MINFOF in the Ministry will be sensitized to give the Gorilla Guardian programme a formal recognition and to initiate increased MINFOF participation in the programme through regular involvement of the TOU Ecoguards at the Divisional Delegation level. A full Conservation Education programme will be initiated in all the Gorilla Guardian villages to enhance a fuller understanding and greater support and participation of the communities in the programme.

References

- Bergl, R., and L. Vigilant. 2007. Genetic analysis reveals population structure and recent migration within the highly fragmented range of the Cross River gorilla (*Gorilla gorilla diehli*). *Molecular Ecology* **16**:501-516.
- Nicholas, A, Warren, Y and Ikfuingei, R (2010). The Gorilla Guardian Manual. Wildlife Conservation Society (WCS)- Takamanda Mone Landscape Project, Limbe, Cameroon.
- Tutin, C., R. Parnell, L. White, and M. Fernandez. 1995. Nest Building by Lowland Gorillas in the Lopé Reserve, Gabon: Environmental Influences and Implications for Censusing. *International Journal of Primatology* **16**:53-76.