

REPORT OF THE SURVEY OF AFRICAN FOREST ELEPHANTS (*Loxodonta africana cyclotis*) IN IFON GAME RESERVE, ONDO STATE, NIGERIA.

By

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Background:

Nigeria's rich and highly diverse flora, fauna and habitats are declining both in quality and quantity due to unsustainable exploitation and mis-use. Consequently, more than 90% its rich and diverse lowland rainforest and its associated forest-dwelling and dependent fauna had been lost. The remaining forest relics, though now highly fragmented still form the natural habitat of very important wildlife species, especially the nationally rare and highly endangered African Forest Elephant (*Loxodonta africana cyclotis*).

The Ifon Game Reserve, a remnant of the previously contiguous forest block of the old Western Region of Nigeria was created to protect one of the few remaining patches of the rich forest and its associated fauna resources, some of which may be endemic and or threatened.

Technical report produced on the biodiversity survey of the Reserve conducted by the Nigerian Conservation Foundation (2007) confirmed the presence of the African forest Elephant, listed by IUCN (1994) and CITES, (2000) as highly endangered. Thus, conservation of forest Elephants in their natural habitat and across their historical ranges is of very high priority wherever they occur to ensure the survival of the remaining isolated wild populations. And as habitats are becoming more fragmented and degraded, it is therefore essential to keep accurate and up-to-date information on size and distribution of population for habitat monitoring and providing conservation and management plans for the animal.

Thus, the objectives of the survey are:

1. To establish the presence of the forest Elephant in Ifon Game Reserve
2. To obtain/collect geo-referenced data on the distribution and ranging pattern of the animal.
3. To estimate population size of the forest Elephant
4. To identify key habitats for forest Elephants leading to more detailed research and design of conservation action plan to protect the animal and these habitats.

The Study Area:

The main natural vegetation types in Ondo State are swamp and lowland moist forests with some savannah woodlands known for species endemism and high biodiversity richness. Historically, the area that constitutes the present Ondo State has been a major contributor to the Nigerian economy by way of rich biodiversity. It was in recognition of this that some areas of the defunct Ondo province in what was then Western Nigeria were carved out in 1963 as potential wildlife sanctuaries in order to protect and preserve certain important flora and fauna resources. Ifon Forest Reserve was one of such sanctuaries so established through Government Gazette No.2 of 4/1/1951, especially for the protection of wild game.

It covers an area of about 282.35km Sq. lying between 6°54' and 7° 14' N and 5° 43' and 5° 54' E as one of the remnants of the previously contiguous forest block in the defunct Western Region of Nigeria. Its forest is now highly fragmented and fast disappearing. Therefore, its fauna is a representative of this fast disappearing forest biome.

The Reserve is drained by six main rivers - Big Osse, Little Osse, Uwesse, Omo, Oroken and Okua.

The climate is tropical with a distinct rainy season between March and October and a dry season between November and February. The map in Fig. 1 shows the three main divisions of Ifon Forest Reserve thus: (a) Ido Ani occurring in the North; (b) Ipele at the centre and (c) Ifon occurring in the South respectively.

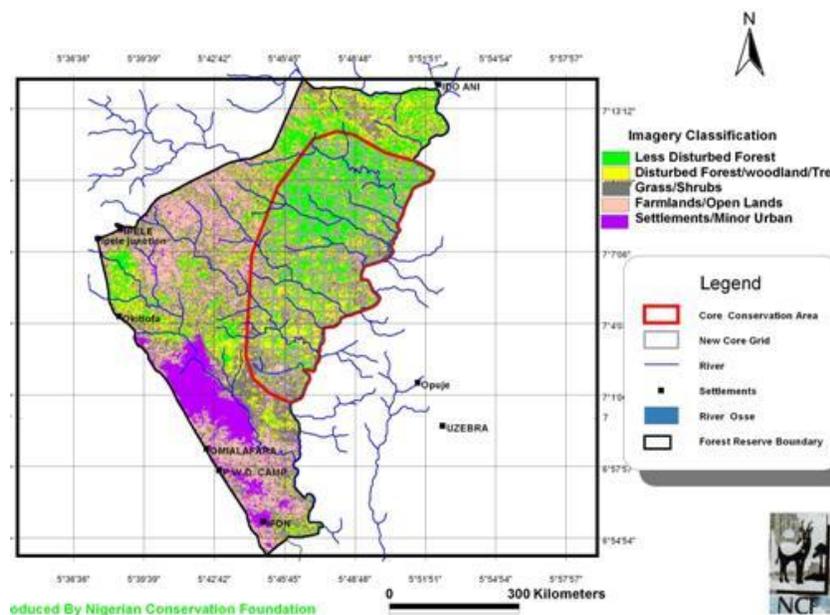


FIG 1: Map of the Study Area

Method of Study:

NCF, (2007) and Afolayan, T.A et al, (1990) as well as oral evidences provided by local hunters had all confirmed the presence of forest Elephants at certain locations in the Ifon Forest Reserve. These as well as information gathered from local hunters, farmers and gatherers of non-timber forest products through focused group discussions, interviews and structured questionnaires informed the choice of the directed searches employed in this study to investigate but not limited to possible areas where recent sightings of forest Elephants had been reported.

We found the line-transect method impractical due to the dense vegetation, high rate of re-growth of vegetation, coupled with the low density and the rather patchy distribution of Elephants in the study area made line-transect method both time consuming and difficult to maintain. Therefore the existing human trails/footpaths that traverse the study area were regarded as adequate transects because Elephants in the study area occasionally seem to search out hunters' and gatherers' of non-timber forest products camps where they eat fruits of the bush mango (*Irvingia* sp) gathered and processed in such camps.

All records of indirect sightings/observations of Elephants and their activities had occurred at the Oke-Ogun axis in the Ipele sector of the reserve.

Recent footprints, trails, playground and mud bath site of Elephants were observed and geo-referenced using GPS handset to obtain data on the locations for mapping, while diameter of footprints were measured in order to be able to determine the age as well as group size.

Areas where these observations had occurred were recorded for vivid description of the area, as in whether, forest, forest edge, savannah or riverine

Results and Discussion

Date	Transect No.	Location	Coordinates	Observation	Comments	Footprint Diameter	Estimated No. of Elephant
6/11/07 – 13/11/07	1	Oke-Ogun	N07.11584 E005.82232 Nil. N07.11547 E005.82179 N07.11565 E005.82219	Footprint and dung Footprint Footprint Footprint	All observations were made in the semi-closed forest.	0.53m 0.38m 0.38 0.38	2
17/11/07 – 25/11/07	2	Oke-Ogun	N07.11912 E005.82652 N07.11905 E005.82644 N07.11904 E005.82638 Nil N07.11924 E005.82638 N07.11920 E005.82654	Footprint Footprint Footprint Footprint Footprint Footprint	All evidences (trail and footprint) were recorded in a semi-closed forest. All activities were observed in a semi-closed forest.	0.63m 0.50m 0.40m 0.28m 0.68m 0.54m	6
			N07.11917 E005.82653	Footprint	All activities were observed in a semi-closed forest.	0.68m	
29/11/07 – 5/12/07	3	Oke-Ogun	N07.11956 E005.83224 N07.11956 E005.83201 Nil Nil Nil N07.11509 E005.83076 N07.11506 E005.83071	Footprint Footprint Footprint Footprint Footprint Footprint Footprint	All activities (playground and mud bath site) were observed in a semi-closed forest	0.35m 0.40m 0.40m 0.40m 0.35m 0.35m 0.28m	3

			N07.11522 E005.83062	Footprint		0.35m	
9/12/07 – 16/12/07	4	Oke-Ogun	N07.11818 E005.83548	Footprint	All activities (trails and playground) were observed in the savannah close to forest edges	0.38m	2
			N07.11823 E005.83549	Footprint		0.40m	
			N07.11837 E005.83557	Footprint		0.40m	
			N07.11810 E005.83537	Playground		Nil	

Table1. Summarizes data collected during this survey.

Measurements of footprint diameter suggest that there could be between 5-8 individuals and probably with 1-2 calf (ves).

All records of observation had occurred at the central lowland area of the reserve at Oke-Ogun axis lying close and toward Uwesse axis in the northern sector of the reserve.

Fig. 2 and 3 show the geo-referenced areas where signs of Elephants were recorded and one of the signs observed (Elephant dung) respectively

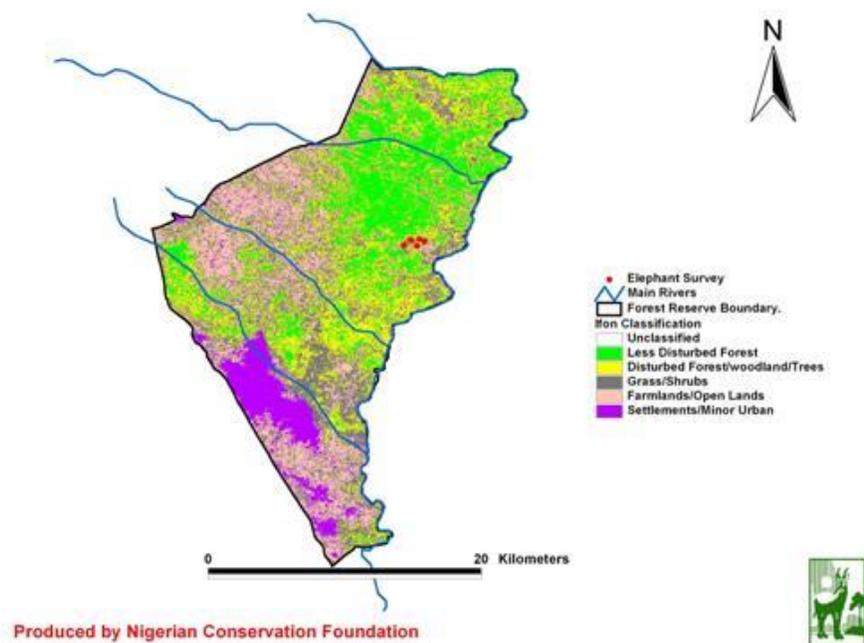


FIG 2: Map Showing Signs of Elephants During Survey



FIG 3: Elephant Dung in Ifon Forest Reserve

Other Wildlife

Invertebrates

The ubiquitous night and day sounds of insects and other arthropods in the Reserve were indicative of the rich invertebrate fauna of the Reserve. Invertebrate diversity appeared to be higher in the forest fragments of the Reserve than in the savanna area. Molluscs including the Giant African Snail (*Achachatina chalachatina maginata*) are among the common invertebrates of the Reserve. The Giant African Snail is a gastronomic delicacy which is now becoming difficult to find in some parts of southern Nigeria where it commands very high market prices.

Vertebrates

Fishes, Amphibians and Reptiles

As with the invertebrates, no specific efforts were made to sample these three taxa during the survey. Nonetheless, many of these taxa were encountered incidentally as the Reserve was being traversed.

Birds

The Ifon Forest Reserve has a very rich avifauna. The nationally endemic Ibadan malimbe (*Malimbus ibadanensis*) rated by IUCN (1994) and BirdLife International (2002) as critically endangered occurs in the Reserve. This and earlier sightings reported in two separate surveys conducted by NCF (November, 2007) and March (2008) have led Ifon Reserve to be proposed as Nigeria's newest Important Bird Area thus raising its conservation profile and significance. The Reserve's bird assemblage also includes about 44 of Nigeria's 182 Guinea-Congo Forest biome restricted bird species. The Reserve is also a refuge to the

endangered African Grey Parrot (*Psittacus erithacus*), thus raising its conservation profile and significance and thereby making it an important site for this fauna guild.

Mammals

The diversity of mammals wildlife species encountered in the Reserve is very high. And in comparison to other protected areas of its category nationwide, the large mammal diversity of Ifon Forest Reserve is still relatively high despite the widespread unsustainable forest utilization. This underscores the relative vegetation heterogeneity of the Reserve despite the relentless anthropogenic pressure.

Primates

A total of ten primate species were observed. This is relatively high when compared to most of the other forest reserves in the region where averages of six or seven species have been reported by Agbelusi et al, (1999 and 2003).

Chimpanzee

Two observable signs of chimpanzee were recorded within forest patches along Uwesse River in the northern sector of the Reserve and at Oke-Ogun axis occurring at Ipele sector.

Buffallo

There was report of a sighting of a herd of about 10 individuals of the nationally rare forest race of the African Buffalo (*Syncerus cafer*).

Challenges

Threats to the Reserve through anthropogenic activities were major constraints. Though, designated by the State Government, there is yet no strict conservation effort to protect the forest from degradation and decline. Consequently, the Reserve's rich resources have been greatly encroached, depleted and heavily degraded (through illegal logging, illegal hunting and farming) resulting in about 60% loss of the original resources. The survey had to incorporate conservation education to enlist the support of the local people living inside and around the Reserve.

Achievements

This survey successfully built on recent findings reported by NCF and reawakened interest in conservation efforts resulting in commissioning of many other surveys that have been carried out.

The survey laid the foundation for other scientific surveys recorded in the Reserve while the project lasted through provision of basic survey tools and field equipment.

The survey opened greater opportunity for conservation planning in Ifon Forest Reserve. As a follow up to the survey, Ondo State Government approved the development of a blueprint for conservation for Ifon Forest Reserve. Following the preparation of a blueprint, the State Government has approved the sum of #100 million naira (equivalent to about \$700,000.00. for long term conservation support within the budgetary plan for 2009/2010.

Conclusion

There appear to be a herd of at least eight (8) elephants including 1 – 2 calf (ves).

This population is considered extremely small for sustainability of the population in the long run. We envisage in-breeding and a very unclear future for survival of this small population. However, with the growing efforts and emphasis on conservation, high level protection can keep the population in existence for a long period and may sustain the population if no more poaching is allowed.

We recommend a more detailed study of this population and strategy to save them in the long run.

This very small population restricted to a small corner of the reserve toward the Reserve boundary along the Osse River on the Edo state side is greatly at risk and with history of last killing of an Elephant dating back to over ten years, it is possible to protect this small population if positive and sustained efforts are directed at protecting their habitat as well as development of a sound conservation action plan.

Acknowledgements

We express our sincere gratitude to Rufford Small Grant for Conservation for providing the support to carry out this survey. The grant as small as it was timely enough to sensitize the Ondo State Government into action on conservation and also attracted the interest of other biologists who assisted in carrying out surveys of other wildlife species in the forest reserve. With the foundation laying effort provided by Rufford Small Grant, a long term conservation plan is being put in place to protect the African elephants and other species in Ifon Forest Reserve.

We appreciate the support provided by the Ondo State Government through the Ministry of Agriculture, Fisheries and Forest Resources.

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Appendix

Study of elephants in IFON FOREST Reserve, Ondo State, Nigeria

LAGE MAMMAL AND ELEPHANTS QUESTIONNAIRE

1) Village:	2) Date:	
3)A) Hunter Age Group: (<30, 30-40, 40-50,>50)		
b) How often do you go the forest (per week)?		
c) Are you a hunter (Shooting) or trapper?		
d) When did you start hunting?		
4) Do you have any special tradition regarding any of the animals in your forest		
a) Are any of them scared? If yes which ones.		
b) Why are they scared?		
c) Are any they not hunted? If yes which ones.		
d) Why they are not hunted?		
5) Which village or villages do you Share the bush		
6) Can you describe an elephant		a) Colour (body/face):
Tick if the interviewee correctly Described an elephant <input type="checkbox"/>		b) Sounds like:
		c) Size:
		d) Other observation
7) Where can elephants be found in your area?		
Local Area Name		

8) How far are these/this area from the village (hours (elephants))
ELEPHANTS
9) a) when did you last see an elephants?
b) How many?
c) Where
d) How many group do you think still Live in the area
e) How many individuals are there
Normally in each group?

f) Size of the largest group		
g) direct observations/seen		
h) Are lone elephants ever seen?		
10) Are the areas where elephants are found Highlands (hills) or lowlands (level lands)?	Highlands only:	
	Lowlands only:	
	Lowlands and hills:	
11) Why do you think Elephants are found (or Found more often) in the area stated above?	Less shooting:	
	Less trapping:	
	More elephants:	
	Less other human	
	Other (specify):	
12) Do elephants ever go to lowland areas or which lowland areas do elephants use?	a) Where b) When (season, Month, last time) c) Year d) Seen (number & age) e) Activity: doing what? Feeding on what?	
13) Were elephants ever Found in different areas where they are no longer found today (e.g. nearer the village)?	a) Where, (lowland or hills)?	
	b) When did they disappear?	
	c) Why did they disappear?	
14) Do you know of other village (nearby) who say they also have elephant in their forest?	Village names:	
15) a) in the last five years has the number of elephant increased or decreased? b) Why?		

IMPORTANT NOTES:

Before questions are asked, explain that no names are recorded and that interviewees are anonymous. It is important to receive this information and perspective from the local communities on the animals in their forests.

Interview at least 10 hunters in each village. These need to be people who have hunted in the past and still hunt i.e. people of different age classes.