
SCIENTIFIC PRESENTATIONS

Current Elephant Range and Status in Mozambique

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Abstract

This report gives a general overview of the range and status of the African elephant (*Loxodonta africana*) in Mozambique. There are 3 main populations: southern, central and northern. The central population appears to be the most promising in the long-term, followed by the northern populations (Rovuma and Lugenda areas) in the provinces of Niassa and Cabo Delgado, and lastly the populations of southern Mozambique (from the Save River down to the Ponta de Ouro).

Introduction

The Republic of Mozambique, with a human population of approximately 15 million, covers a total land surface area of about 800,000 km², of which 13,000 km² is made up of inland waters (rivers and lakes) with 6,880 km² belonging to Lake Niassa alone. About 14% of the country has been set aside as conservation areas of which 2% are National Parks, 2.5% are Game/Especial Reserves and 9.5% are designated as multiple land use areas/hunting areas, commonly known as "coutadas". About 70% of the total land surface is still covered by natural forest, while approximately 75% is infested by the tsetse fly (*Glossina sp.*), the vector of trypanosomiasis, which renders livestock production economically unviable and ecologically unjustifiable. Large parts of the interior of Mozambique are virtually uninhabited by humans. As a result of the prolonged civil war, many people moved into the towns. A large proportion live in the south and along the coast.

In 1945 the elephant population of Mozambique was estimated at not less than 120,000 (Rosinha, J.A., personal communication). From 1947 to 1969, a continuous campaign against trypanosomiasis was undertaken with the aim of encouraging animal husbandry, farming and human settlement. In the south, this campaign consisted of indiscriminate killing of all types of game including elephant and rhinoceros, while in the northern and central regions, vegetation was cleared with the opening of wide roads. By 1969 an

estimated 233,513 game animals of all species had been killed.

There have been no country-wide systematic studies in Mozambique on animal distribution and movement. In 1978, following a fortnight's visit, Iain Douglas-Hamilton estimated the elephant population at not less than 57,000. However, more recent surveys by the author, from 1985 - 1992, indicate that the animal population in the south has been especially affected by both the trypanosomiasis campaign and by indiscriminate hunting during the civil war.

Methodology

The following methods were used for the collection of data in the 1985 - 1992 surveys:

A - Questionnaires

Questionnaires were prepared and data collected by a direct approach. The questions were read out verbally to the field wildlife staff, regional wildlife officers, mine prospectors, farmers, ranchers, military personnel, villagers and other people knowledgeable of wildlife. The answers were immediately recorded on relevant questionnaire forms. The individuals questioned were selected at random in the three regions surveyed: southern, central and northern. This method was simple, less time consuming and eliminated the problems of illiteracy, loss of questionnaire forms and improper answers.

B - Interview and Discussions

To supplement the data obtained by direct questioning, interviews and discussions were conducted with safari operators, game scouts, trackers, mine prospectors, farmers and elders from various villages within the three regions. In certain localities it was difficult to communicate with village elders due to language limitations. Notwithstanding this method added more useful information which otherwise would have been omitted from the questionnaires. In addition, monthly and annual regional reports were read thoroughly and analyzed.

C - Direct and Indirect Field Observation

This methodology involved the use of light aircraft (a CESSNA 185 and a CESSNA 206 highwing), a helicopter, a vehicle, or field walking - depending on the nature of the terrain and the presence of guerilla activities.

Aeronautical maps (1:50000, 1:250000, 1:1000000 and 1:2000000) were used for flying. The areas for survey were selected randomly within the country and a combination of block counting and sampling counting was applied.

The combined methodology provided data on animal distribution (including cross-border populations) and numbers, as well as identification of land utilization patterns, agricultural and other human activities. Information on vegetation status and the effects of animals on habitat were also noted.

Results

The bulk of Mozambique's elephant (and black rhino) populations are to be found in the central and northern regions, where human population pressure is very low.

The total population of the African elephant in Mozambique is estimated at between 15,000 and 20,000, as seen in Table 1. The survey results suggest that the central and northern populations are the most abundant, particularly in Tete, Niassa, Sofala and Cabo Delgado provinces. Apart from the populations in the Gorongosa National Park, the Marrameu Wildlife Complex in Sofala province and Niassa Game Reserve in Niassa province, the remaining elephants occur outside protected areas. In Tete province, groups numbering 150-200 animals are not uncommon. In the dry season (September/October)

Table 1: Estimated population of elephant in Mozambique in different provinces

PROVINCES	1978	1992 - LOWEST ESTIMATE	1992 - HIGHEST ESTIMATE
Southern			
Maputo	500	187.5	250
Gaza	8500	1500	2000
Inhambane	8000	1312.5	1750
Central			
Sofala	12000	2625	3500
Manica	7000	750	1000
Tete	8000	3375	4500
Zambezia	2000	1425	1900
Northern			
Cabo Delgado	5000	1500	2000
Niassa	8000	2250	3000
Nampula	?	75	100
TOTAL	57000	15000	20000

NB. Reports from Nampula revealed that elephant populations do cross the provincial border between Zambezia and Nampula provinces at Ligonha river, causing crop destruction.

Table 2: Estimated range of elephants in Mozambique in km²

REGION TOTAL	LAND SURFACE (km ²)	LAND SURFACE INHABITED BY THE ELEPHANT (km ²)	LAND SURFACE INHABITED BY THE ELEPHANT (%)
Northern	280,137	103,461	13.1
Central	341,339	122,888	15.6
Southern	167,335	35,359	4.5
TOTAL	788,811*	261,708	33.2

* excludes inland waters

several hundred elephants can be seen along the Cahora Bassa plains and Panhame rivers. In this area, it is evident that there is already some destruction of the mopane woodlands.

In the southern region, the Gonarhezou National Park and surrounding areas in Gaza province still support a healthy population of elephants.

Table 2 shows the estimated range of the elephant in km² and as a percentage of the total land surface of Mozambique. The current elephant range is also displayed on the map in Figure 1.

Conclusions and Recommendations

The 1985-1992 survey revealed that a healthy elephant population can still be found in the central and northern regions of Mozambique.

It is important to consider the creation of conservation areas in Tete and Cabo Delgado provinces, where significant elephant populations exist outside the few protected areas. This is especially important with the expectation that up to 1.3 million people may return to Mozambique following the end of the war. Unless there is proper planning for human settlements, there will be an inevitable increase in human/animal conflict in the central and northern regions.

It is also suggested that an International Park be created to protect the southern elephant population

which crosses the borders between Mozambique and Zimbabwe. A final recommendation is to upgrade the Zambezi Valley ecosystem from its present status of a Game Reserve, to a World Site Heritage combined with the Gorongosa ecosystem.

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Reference

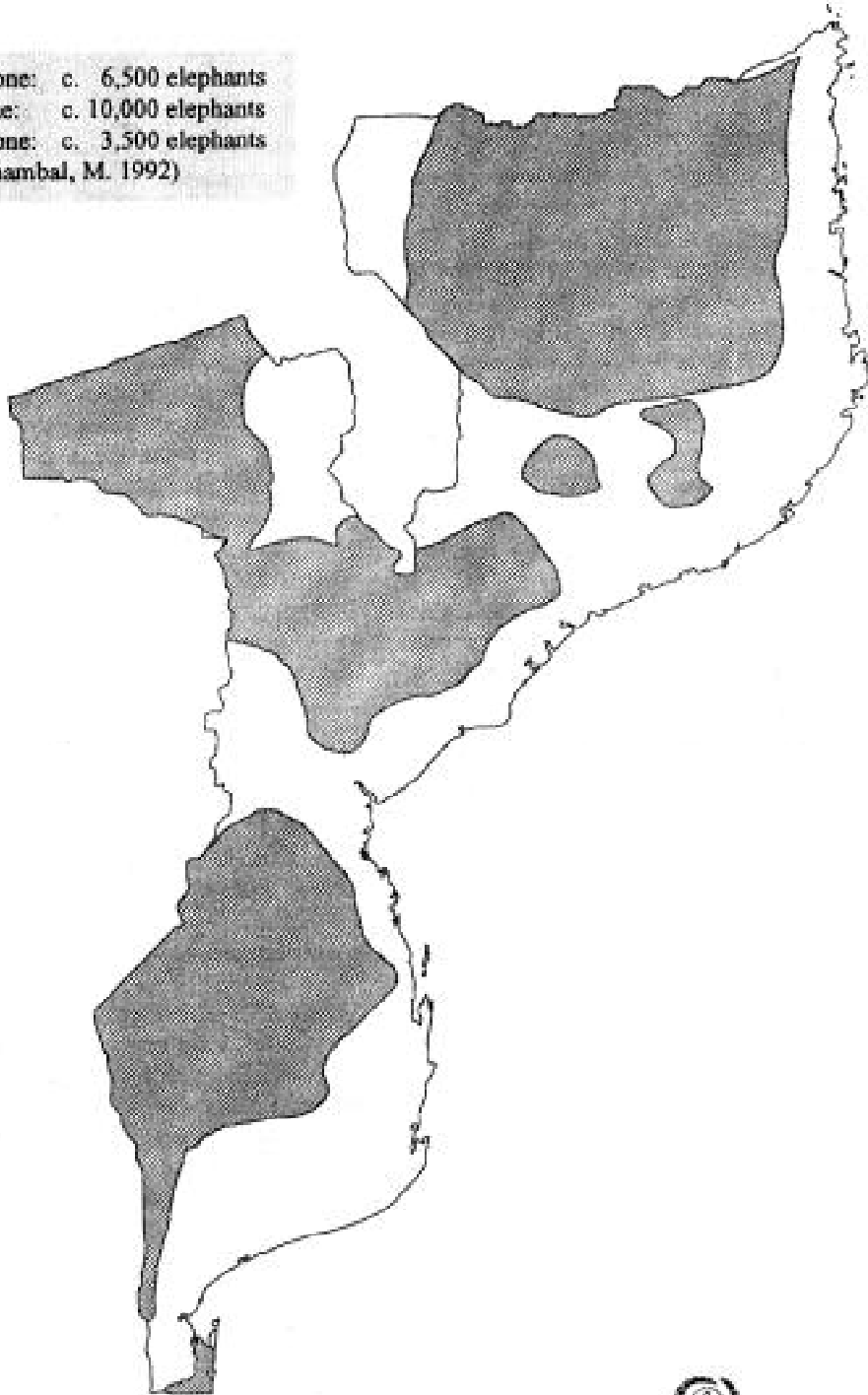
Douglas-Hamilton I. 14th General Assembly of IUCN, Ashkabad- URSS- September/October 1978.

Photo by: Nina Marshall



Mozambique - Current Elephant Range Distribution, 1992

Northern Zone: c. 6,500 elephants
Central Zone: c. 10,000 elephants
Southern Zone: c. 3,500 elephants
(source: Chambal, M. 1992)



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