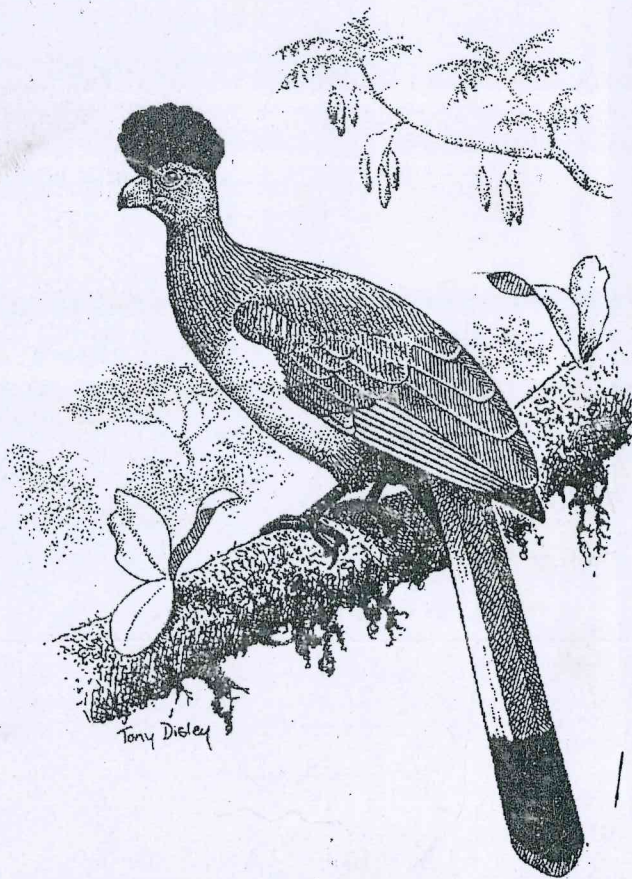


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The Nigerian Field

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Great Blue Turaco (*Corythaeola cristata*)

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WHY THE CONSERVATION OF WILDLIFE IS IMPORTANT TO NIGERIA

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Conservation has been variously defined by different authors. The definition adopted by any particular individual or organization depends on the interest and outlook of such an individual or organization. According to the International Union for Conservation of Nature and Natural Resources – IUCN (considered to be one of the most authoritative), conservation is defined as “the rational use of the environment in order to achieve the highest sustainable quality of living for mankind” (IUCN, 1987a). Conservation of wildlife (plants and animals) involves the continuous protection, management and development of wildlife resources in accordance with principles that ensure their optimum economic and social enjoyment. Wildlife – which comprises both terrestrial and aquatic ecosystems that have not been modified by human activities – makes up an essential part of nature and contributes to the beauty and wonder of life.

The wildlife resources of tropical Africa’s rural landscape, including Nigeria, consist of wild animals, birds, reptiles, plants and other aquatic inhabitants of the forests and rivers. These resources play conspicuous roles in the rural as well as the national economies of tropical Africa. The most important value of wild animals is their use as a source of meat for human consumption (Olayide, 1975). For example, communities living near a forest in Nigeria obtain about 84% of their animal protein from bush meat (Asibey and Child, 1990). Apart from this, wildlife (plants and animals) acts as a reservoir of genetic diversity from which new stock can be domesticated. It provides drugs and animals for the advancement of medical research and knowledge. It serves as a source of raw materials for industries. It provides incomes for rural communities and foreign exchange for the nation. It is also a major base for recreation and the tourist industry.

Wildlife conservation efforts have stemmed from concern over the severe depletion and in some cases near or complete extinction of some large game species. Wildlife conservation is inseparably connected with the planned management of lands and waters and of the forest products, crops and other valuables that are taken from them each year.

Despite the importance of wildlife conservation, Nigeria still has a dismal record in this exercise as a result of poor funding, inadequate infrastructure and legislative logistics, and administrative inadequacies. In the light of this, and in order to ensure sustained long term benefits from the nation’s living resources, Nigeria must pay proper and adequate attention to the conservation of wildlife in the country.

Wildlife resources in Nigeria

Nigeria has a considerable diversity of habitats, from arid areas in the North to fresh water swampy forest in the South, through many types of forests and savanna. Associated with the varied vegetation zones is an array of plant and animal species. Lebrun (1967) lists 4614 plant species in the country, ranking it eleventh in Africa in diversity. According to Davies *et al.*, (1986), there are 205 endemic plant species with the highest degree of endemism occurring in the lowlands of southeast Nigeria, particularly around Oban Hill in the present Cross River State (Bremner, 1978).

The Nigerian moist forests are especially rich in epiphytic ferns and orchids and contain over 560 species of trees which attain heights of at least 12m and a girth of 60cm. Threatened species of Nigerian flora number about 496, which represent about 10% of the total plant species (NEST, 1992).

Happold (1987) gives a checklist and distribution data for mammals in the various vegetation zones of Nigeria. He lists a total of 248 species, of which 125 are found in the forests (Table 1). It is important to observe that of the total number of species of mammals in the country, two are endemic while the white-throated guenon *Cercopithecus erythrogaster* and Sclater's guenon *Cercopithecus Sclateri*, are endangered.

Nigeria ranks eighth in the world for primate diversity, with 23 species and 13 genera. However, Harcourt, *et al.* (1989) estimated that at least 50 percent of gorillas that are born each year are killed in Nigeria. Due to poaching, deforestation and the spread of agriculture, the number of elephants in Nigeria has continued to decline.

There are 839 bird species recorded in Nigeria (Elgood; 1965, Ash and Sharland, 1986). Six of these are thought to be threatened (Collar and Stuart, 1985). Butler and Reid (1990) list 105 species of snakes, including 56 forest snakes, of which one (*Mehelya eghensis*) is endemic. There is a rich invertebrate fauna in Nigeria as may be expected in a country with a wide range of ecosystems, but little is known about species numbers or degree of threat.

Table 1: Number of mammals and their distribution

	All spp	Forest	Guinea Savanna	Sudan Savanna
Insectivora	26	11	10	8
Chiroptera	71	38	40	34
Primates	21	11	11	4

Pholidota	2	2	1	
Lagomorpha	2	1	1	
Rodentia	54	35	29	20
Carnivora	33	11	23	21
Sirenia	1			
Tubulidentata	1	1	1	
Proboscidea	1	1	1	
Hyracoidea	2	1	1	
Perissodactyla	2		1	
Artiodactyla	32	13	20	18
Totals	248	125	139	105

(Source Happold, 1987)

The importance of wildlife conservation to Nigeria

Biological resources constitute a capital asset with great potential for yielding sustainable benefits. The diversity of life (plants and animals) to be found in nature and the intricacy of the interactions among the different life forms are the greatest wonder of our world. Nigeria is blessed with numerous wild and domesticated plants that contribute immensely towards food supplies, fibre for cloth making and raw materials for building purposes. Wild plants and animals are of great importance to Nigeria, and some of the benefits enjoyed from wildlife include the following:

1. Provision of food and feed by wild plants

The major and basic role of wild plants is biological. Plants provide food and feed which constitute the major products of that grandiose process of living nature powered by the sun and based on photosynthesis. The energy of the sun is utilized by the chlorophyll of the leaf of green plants and in the plankton of salt and fresh waters. Green plants make use of solar radiation in the photosynthesis of such substances as sugar, starches, proteins etc., acceptable as food or feed to man, animals and fungi. Green plants, therefore, are the prime resources of all living substances. They are "energy parasites" on the sun, whilst men and animals as well as fungi are "food parasites" on green plants (Philips, 1961).

2. Wild plants provide insurance against environmental changes

Wild plants serve as a major catalyst in a number of physical and biochemical processes that act separately or in combination in shaping the earth into what it is at a particular time. For instance, vegetation not only plays a vital role in pedogenic processes by which soil is formed (Boul *et al.*, 1976), it also serves as one of the most important factors that influence the extent of soil conservation after it has been put into use.

3. Wild plants play an important role in the modification of the micro-climatic condition of an area

Climate has an overwhelming influence on all the processes in our natural environment. For instance, in the Nigerian forest area, moisture from the Atlantic Ocean falls as rain on adjacent coastal lands. This is then sent back to the atmosphere through transpiration of the foliage to fall again on forest areas further inland. This recycling of water occurs several times so that the dry season and rainy season in the country are modified and regulated. In the same vein, daily and seasonal temperature extremes have been found to increase dramatically in areas where there are no vegetation covers (Harrison, 1966).

4. Prevention of desertification

Vegetation cover plays an important role in stabilizing soil and giving shade to people and animals. When vegetation covers are removed, cropland and rangeland become more exposed to the many elements of desertification. The United Nation Environmental Programme (UNEP) has suggested that there has been a continued "southward march" of the Sahara desert by about 100 kilometers between 1958 and 1975 (Forse, 1989). This poses a great threat to the semi-arid regions of Nigeria and often results in water shortage, reduced soil productivity and soil erosion in the area.

5. Wild plants provide medicinal resources

Traditional medicine based on wild plants and animal species forms the basis of health care for 80% of the nation's population (Akinyemi *et al.*, 2001). These resources are also the source of many chemical compounds which are now being produced synthetically, e.g. aspirin. Beside this, raw materials such as wood, fibre and ornamental blooms are obtained from wild plants.

With regards to wild animals, their major importance to Nigeria is given hereunder:

1. Wild animals as a source of meat

The most important biological value of wild animals is their use as a source of meat for human consumption. For example, the estimated demand for "bush meat", as it is called

in Nigeria, grew from 198, 872 long tons in 1977 to 216, 703 long tons in 1985. On a per capita consumption level, the fresh weight available supply averages 0.095lbs per week or 4.94lbs per year. More than 75 percent of animal protein consumption in rural communities is obtained from bush meat (Olayide and Idachaba 1974).

2. **Wildlife as a source of revenue :NO LONGER ALLOWED. ED.**

Wild animals perform useful economic roles in rural and national life. First, wildlife constitutes a source of revenue, especially in the foreign trade sector. For example, the substantial export demand of such wild animal products as reptile skins, furs, animal oils, ivory, caged birds etc. of our tropical forest origin continues to grow rapidly. Between 1960 and 1970, average annual exports of reptile and fur skins were respectively 63.84 percent and 2.77 tons and these respectively gave an average annual revenue of ₦0.550 million and ₦0.129 million (Federal Office of Statistics, 1971).

3. **Wild animals for tourism and aesthetic value**

The whole structure of wildlife conservation and the manner of its funding through taxing hunters and viewers inevitably dictate a programme of unique value to tourism and holiday-makers. The demand of the non-hunting public for the pleasure of seeing wild animals in their natural and/or captive habitats has developed much more rapidly than hunting values. Olayide (1975) shows that this aspect of wildlife is capable of creating about 9,000 jobs in a prosperous tourist industry, in addition to bringing over 50,000 foreign visitors and earning foreign exchange to the value of some ₦7.8 million (now = N) per annum for Nigeria if well developed.

4. **Wildlife as a means of scientific research**

Wildlife is important in scientific research. Research in medicine, including immunology and other studies on disease, frequently depends on the availability of various species of wild animals.

Plant breeding programmes also make use of wild genes. For example, genes from wild grasses provide today's crop of wheat (*Triticum aestivum*) with resistance to rust disease, tolerance of drought, winter hardiness and higher kernel protein content.

Despite all this, wildlife conservation in Nigeria has continued to face problems and tended to stagnate. The few protected areas in the country face threats from shifting cultivation, illegal hunting (poaching), illegal grazing, drought, fuel-wood and timber demand, uncontrolled bushfires, expansion of road networks, oil exploration and extraction and local irrigation and damming schemes. Nonetheless, since natural resources (including wildlife) cannot be tapped endlessly, and since the effects of past depredation are now clearly seen, the need for conservation remains incontrovertible.

Conservation efforts in Nigeria

Three categories of protected areas exist in Nigeria. These include strict nature reserves, game reserves and national parks, all of which were formerly reserved forests. Currently some 3.5 per cent of Nigeria is under one or two of the above-mentioned reserves for nature conservation. The strict nature reserves, relatively small and intended to conserve various examples of primary vegetation, are within the forest reserve under the aegis of the Forestry Research Institute of Nigeria (FRIN), but are not protected by specific legislation. The game reserves are controlled by the states and are expected to be areas where hunting is strictly regulated, the habitat protected and wildlife conserved and managed.

At the national level, wildlife conservation and protected areas are the responsibility of the Federal Department of Forestry and the Ministry of Agriculture, Water Resources and Rural Development. The first National Park to be created was at Kainji Lake, gazetted in 1976. The Wildlife and Conservation Division of the Federal Department of Forestry is responsible for the establishment and development of national schemes for the enforcement of international wildlife conventions.

However, because of financial stringencies that have affected Nigeria for most of the past decade, government activities in wildlife conservation have tended to stagnate; staff generally lack funds, transport and resources to do their work.

There are three main non-governmental organizations in Nigeria concerned with conservation:

- The Nigerian Field Society, founded in 1930, which publishes an internationally respected journal and organizes meetings and lectures.
- The Nigerian Conservation Foundation (NCF) established in 1982, which is active in organizing and funding conservation projects and in promoting conservation awareness.
- The Nigerian Environmental Study/Action team, a research and advocacy agency established in 1987 and dedicated to increasing public awareness of issues of the environment and sustainable development.

Problems of wildlife conservation in Nigeria

There are social and ecological problems facing the conservation of wildlife (plants and animals) in Nigeria. Ayeni (1980b) identified the major problems of wildlife conservation as wildlife poaching, illegal grazing of livestock in the reserves and indiscriminate setting of fire to vegetation in the wildlife conservation areas. One other factor is the lack of man power and funds.

Game poaching: Illegal hunting (poaching) has continued to threaten with extinction many kinds of wildlife game in Nigeria. Despite the many laws regulating hunting and fishing, poaching continues in many places. The immediate effect of poaching is the decimation of game. Poachers use dangerous means to trap wildlife near farms. Traditional muzzle-loader Dane guns are used by hunters for the indiscriminate shooting of different species of wildlife during daylight, while carbide lamps are used to blind them during night hunting expeditions (Ayeni, 1985). This continues to have debilitating effects on wildlife conservation in Nigeria.

Illegal grazing of livestock in reserves: Habitat destruction constitutes one of the main threats to wildlife today. During the dry season, the Fulanis grazing their livestock in wildlife conservation areas normally attack carnivores which are a constant threat to their stock. In the same vein, leguminous trees such as *Azizelia africana* and other wild plants that serve as sources of feed and protein to the wild game are cut down by the Fulanis as they invade reserves in search of pasture. This act continues to pose a serious threat to the conservation of wildlife in the country.

The carnage effect of fire: Fire is a good servant but a bad master. In order to provide an early flush of palatable tender grass for wild animals, early burning is done between November and January by forest officers. Despite this, however, fires originating from outside the park and those set by poachers often penetrate and burn up protected areas. Besides, repeated early burning has been found to result in the decreasing growth of perennial grass. Uncontrolled use of fire often causes multifarious damage in conservation areas.

Lack of manpower and funds: Numerically, Nigeria is rich in proposed and gazetted wildlife conservation areas but, sadly, the level of supervision and enforcement of policies in the wildlife areas constituting about 3% of land areas in Nigeria (Afolayan, 1980) leaves much to be desired. In many states there are no trained personnel to man the wildlife conservation areas. For instance, at the University of Ibadan, the number of students in the final year class of the Department of Wildlife Management for the ongoing 2002/2003 session is only three. Coupled with this, in some game reserves infrastructural development is grossly inadequate. The amount budgeted for wildlife conservation has always been insufficient. Unless the trend is changed, there cannot be real improvement in the management of wildlife resources.

Suggested measures for improving the conservation of wildlife in Nigeria

Despite all the rhetoric about the importance of the conservation of our wildlife resources and the problems of its implementation, wildlife in Nigeria is disappearing at an alarming rate. For effective wildlife conservation towards the realization of optimum benefits, the following measures are suggested:

1. There is the need for re-organization of our established protected areas such as the

National Parks and Forest Reserves. Parks and reserves should be re-ordered based on themes and criteria of national significance which include geological, cultural, biological, aesthetic, scenic and other environmental characteristics considered worthy of conservation from the national point of view. There is no doubting the fact that this process may alter the boundaries of existing parks and reserves, but it will also go a long way to ensure an integrated, effective and sustainable management of these protected areas.

2. There is also the need to review and enforce all existing wildlife legislation. It is of high priority that a national wildlife law be promulgated quickly to check the present laxity in wildlife conservation and utilization. However, it is not enough to enact conservation laws without providing alternative employment for the poachers. In other words, any wildlife policy that does not include the rights of the indigenous community to utilize game for meat is not likely to succeed in Nigeria.
3. Tourist promotion infrastructures and facilities such as a good network of roads, water holes, salt-licks and tourist lodges should be developed in all conservation areas.
4. There should be advocacy for the improved funding of conservation activities in Nigeria. The government and management authorities of protected areas should encourage adequate research and full utilization of the results of various experiments carried out by scientists in this country and in other parts of the world.
5. Education is central to the continuous management of wildlife in Nigeria. This would involve adequate and proper training of personnel and enlightenment campaigns for citizens on the importance of wildlife conservation.

Conclusion

Nigeria contains a striking range of wildlife resources. The conservation of these living resources is important to us because of their numerous bio-economic values. Nevertheless, the conservation of wildlife in Nigeria is beset with a mixture of ignorance, apathy and ruthless exploitation for personal gain. To reverse or even halt this trend, major efforts in education, law enforcement and the re-thinking of traditional ideas is essential. With this, it is hoped that in future wildlife conservation and management in Nigeria will attain an enviable status.

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