

Once a forest, now a mining installation.



Hope for Liberia

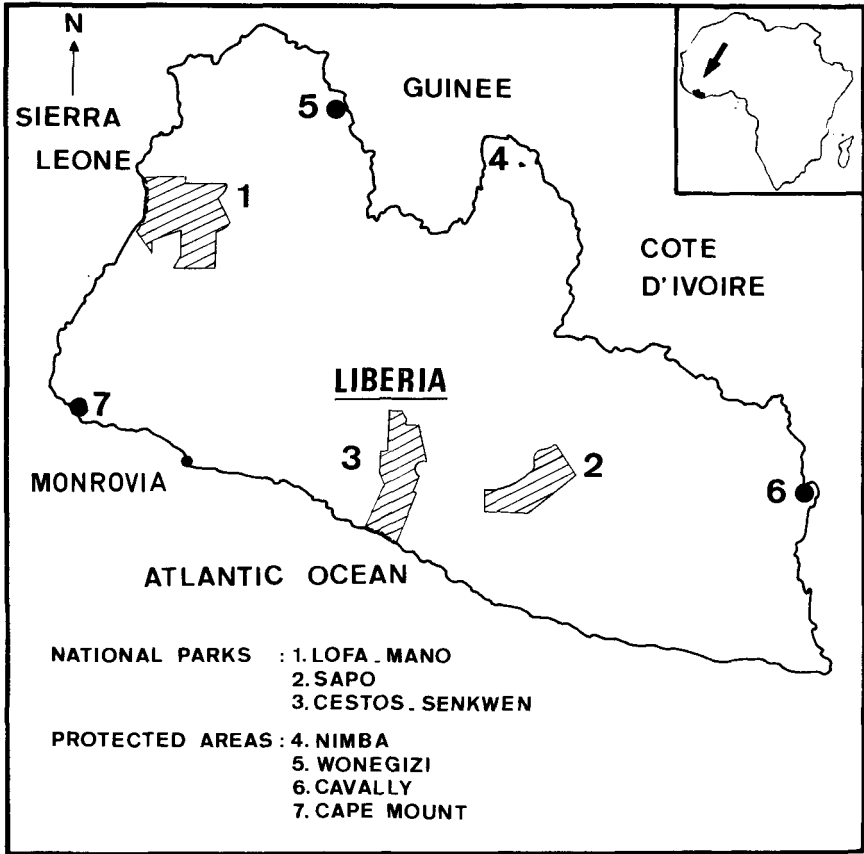
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Until recently Liberia has lagged far behind the rest of Africa in conservation, with no national parks, no hunting regulations, and widespread forest destruction. But the creation in 1976 of a Forest Development Authority with a dynamic staff offers real hope for the future. The author, widely known for his conservation work, especially in Zaire, spent four months on a WWF/IUCN survey in 1978-79; he describes what he found and the proposals he made to the Liberian authorities.

Before dealing with a most encouraging present,* let us look at a sad past. For years Liberia could hardly be quoted as a conservation country and this is an understatement. . . . Visitors in the 1960s came back with extremely pessimistic reports, particularly about Nimba, where Kai Curry-Lindahl has been 'ringing the alarm bell' for over 15 years.^{1, 2, 3, 4, 5, 7, 9} But in 1976 the government set up a Forest Development Authority (FDA) with the dual function of both preserving the forests and rationally exploiting them. One of its first acts was to request a WWF/IUCN mission, and between November 1978 and February 1979 the author, who had already spent six months in Nimba in 1965-66, made a survey of the whole country that included several low-altitude flights. What he saw showed that 'the impenetrable forest' of Liberia is a vanishing dream.

Liberia covers some 105,000 sq km and lies just north of the Equator. With

* Sarpo National Park was proposed to be officially decreed on 26 July 1982. It covers 505 square miles of primary rainforest – which is more than previously suggested – and is well controlled by rangers. Tremendous progress has been made in nature conservation in Liberia since 1980, especially in recent months.



an annual rainfall of between three and six metres the climax vegetation is tropical forest which is what most maps still show. But, in fact, this forest now covers less than half the country; industrial development, agriculture and secondary vegetation cover more than half, while shifting cultivation advances in leaps and bounds. The whole of the central strip, from Monrovia to Nimba, has been completely deforested – except in places along the coast it is rare to see genuine, or even secondary, forest along any of the roads. Large forest blocks survive only in the north-west and the central south-east.

In the north-west, a great strip of forest has been exposed to the drying winds of the *harmattan* and recedes every year. In the south, the forest has been divided into blocks for rapid exploitation. Liberia's official map of forest concessions is informative. Even where large blocks survive intact it is only a matter of years before they are destroyed if some concessions are not withdrawn. Vast zones that were designated 'national forests' exist but have virtually no protection.*

* An important inventory of forest resources has been made with the help of the German Forestry Mission, which is also concerned with reforestation, and the FAO/World Bank. This is a good augury for the future.

Banded duikers are frequently sold for meat at the roadside.



For the wildlife the situation is alarming. Until recently hunting was uncontrolled – ‘anyone kills anything, anytime, anyhow, any place...’. Guns are sold freely – more than 13,000 were sold officially in 1977, and there must now be more than 100,000 in the country, one for every 12 inhabitants; in some regions every family possesses at least one and sometimes several. The demand for ammunition is such that a local cartridge factory has been set up. No game survives within 10 km of the main highways, and as the country is more or less criss-crossed with roads, undisturbed places are rare. Game is sold openly, everywhere. All birds are killed, including birds of prey and carrion feeders, except sparrows (not worth a cartridge) and cattle egrets *Bubulcus ibis* (protected by taboo). Night hunting using vehicle headlights enormously increases the hunters’ destructive capacity.

Tree hyraxes are difficult to hunt and are seldom eaten.



Status of Principal Species

Based on personal observations and information received, I can make only a very approximate estimate of the present situation regarding the principal species.

Fewer than 500 elephant *Loxodonta africana* probably survive, mainly in the north-west, centre and east. The populations are totally isolated from one another by vast inhabited cultivated zones, although recolonization is possible from the herds in neighbouring Sierra Leone and Ivory Coast where pressure is apparently less heavy.

The pygmy hippopotamus *Choeropsis liberiensis* gives little cause for concern in the immediate future. Tracks along most of the rivers in sparsely inhabited areas showed one to two animals per 5 km of bank, which, at a conservative estimate, suggests at least 1000 for the whole country. The pygmy hippo's strictly nocturnal way of life is a protection, and they breed well in captivity. We have suggested that it should be Liberia's emblem.

African buffalo *Synceros caffer* are widely scattered. Herds that frequented the grasslands of the Wologozi mountains have recently been completely wiped out by hunters from Lisco, a mining community. The small forest antelopes are still relatively numerous despite hunting pressure; together with monkeys they are the hunter's prime target. Maxwell's duiker *Cephalophus maxwelli* is still common, even in degraded forests; they find refuge in the impenetrable coastal bush and tracks and were seen on beaches close to the capital, Monrovia. Two West African endemics, banded duiker *C. zebra* and Jentink's duiker *C. jentinki* are among those whose carcasses are most frequently for sale along the roads. The bongo *Tragelaphus euryceros* has certainly not disappeared; tracks of a female with young were noticed near the Jo river, less than 150 km from Monrovia.

Wild pigs, particularly the bush pig *Potamochoerus porcus*, are still abundant in certain regions such as the Lofa-Mano. The warthog *Phacochoerus aethiopicus* does not occur in Liberia. African manatees *Trichechus senegalensis* are doubtless to be found in the mangroves where the hunters rarely seem to venture.

Monkeys of all species are hunted mercilessly; it is rare to see either *Cercopithecus* or *Colobus* spp., except in the most remote areas. Chimpanzees *Pan troglodytes* are sought for pets, for food (locally) and for bio-medical purposes.

It is impossible to determine the status of the large predators although leopards *Panthera pardus* appear to be present in many regions. Most large African savanna mammals, such as lion, do not occur in Liberia. Other mammals that are widely hunted include tree pangolins *Manis tricuspis*, and the large rodents *Cricetomys gambianus* and *Thryonomys swinderianus*. Difficult to hunt and seldom taken are tree hyraxes *Dendrohyrax dorsalis* which one sometimes hears of at Grassfield and Yekepa – Nimba, in the mist of a mining installation.

The numerous fruit bats which we have studied in detail,¹⁰ are not hunted despite their potential food value. The number of straw-coloured and little collared fruit bats *Epomops buettikoferi* and *Myonycteris torquata* captured near Schiefflin (Monrovia) suggests that there must be hundreds of thousands of these Chiroptera in Liberia. Thousands of *Eidolon helvum* fly above Monrovia as well as near the Lofa, but their roosting site is not known. In Nigeria large numbers of these are eaten.⁶

Marine turtles are said to nest near Monrovia, but we could get no information on which beaches they laid their eggs. Crocodiles have recently been caught in mangroves on the edge of Monrovia.

Liberia has recently signed and ratified CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) but the country does not appear to be a major transit route for 'illegal' traffic, although certainly some goes through from neighbouring countries.

Proposals

Faced with this situation, the author presented a series of suggestions for action to the Liberian authorities.¹¹

Effective and enforceable hunting legislation should be a priority. This is currently being tackled by the FDA, although finding substitutes for bush-meat in a country which has practically no livestock will not be easy. A proposal for a five-year moratorium on all hunting of large species and protected animals was sympathetically received but declared unrealistic. Control of guns and cartridges is absolutely vital, and 'deterrent taxes' should be introduced. All forestry concessions should be urgently reviewed, and some annulled since, quite apart from the ecological aspects, Liberia is being looted by certain exploiters. Shifting cultivation can only be stopped with coercive measures and sanctions. Finally, genuine 'national forests' should be protected. Three national parks and four protected areas were suggested, a total of 500,000–600,000 hectares representing about 5 per cent of the country, and covering the maximum number of biotopes.

The authorities have rightly given priority to the proposal for Sarpo National Park, in the east-central part of Liberia, and taken steps to establish it. Here there are 120,000 ha of primary forest, in the region drained by the tributaries of the Sinoe river, south of the Mputo mountains. The forest is luxuriant, with trees more than 70m tall, the 'forest cathedral' in all its splendour and the most impressive the author has seen in 20 years' surveying equatorial regions. Large mammals still seem to be relatively abundant – at least for Liberia. The Mputo mountains were not included because of mining projects. Officially, this forest was condemned following a whole series of concessions, granted but not yet exploited except for preliminary marking of certain trees. There are no 'indigenous' local rights. So the Sarpo appears to have been saved. Administration can be carried out from Pynetown or Chien-Zwedru.

In north-west Liberia, there appear to be about one and a half million hectares of almost untouched forest. Pressure from cultivation and the mines of Lisco preclude the setting-up of a reserve in the northern part; in the south, a gigantic dam on the Mano and its tributaries will drown vast areas, but 200,000 ha in the central part could become the Lofa-Mano National Park. The forest in this, Liberia's potential national park, differs from that of Sarpo tending towards the north to be increasingly semi-deciduous. There are vast marshes, scrub that is probably secondary, mountains approaching 1000m high, rocky protrusions, and on the rivers spectacular waterfalls, rapids and cascades. Wildlife is still plentiful and includes all the classic species of Liberia: elephants are seen regularly and the pygmy hippopotamus seems to have its main stronghold there. Because of the topography, forestry concessions are not yet a problem, but there are numerous local rights, shifting cultivation and diamond mines, as well as roads for taking out the iron-ore and the high-tension lines of the Lisco. Tourism in this region, where there are some famous bat caves at Vahun, is perfectly feasible from the Voinjama area, which has the advantage of the least humid climate in the country. From a purely economic point of view, the preservation of the



Mining has destroyed much of Mt Nimba but its high altitude grasslands on the Guinea side are safe — no mining will take place there.

High Mano forests is vital, for the headwaters of the future inter-state dam of Mano rise there.

The third proposed national park is designed to protect the remaining areas of shoreline forest as well as to maintain a transition zone between the forest of the interior and the coastal mangroves. The proposed Cestos-Senkwen reserve, some 150km from Monrovia in the centre of the country, covers 140,000ha at the low altitude of 300–400m. The park will also protect the course of the torrential river Cestos and preserve the numerous rapids and waterfalls intact; it is not, at least in the immediate future, threatened by dam projects. An inventory of the wildlife still has to be made, but bongos have been seen, and if the African manatee survives in Liberia, it should be here. Shifting cultivation and forestry concessions are threats here too, but it appears that the latter can be controlled fairly easily.

Among the protected areas, it is clear that priority should be given to the important area of Mt Nimba, second highest point in West Africa and well known for its endemic species such as the toads *Nectophrynoides* spp and Nimba otter-shrew *Micropotamogale lamottei*. A substantial part of the mountain has been cut away by iron mining; nevertheless, in the south-eastern part the valuable transition zones from high altitude forest to the plain still survive, and the enclosed Iti valley is still intact (1980). But the overriding priority for Liberia is that all deforestation on Nimba should be stopped. The Guinean part of the mountain bordering Liberia will not be exploited by mining (Prof. M. Lamotte, pers. comm.), so that a good part of the famous high-altitude grasslands will be saved.

The Wonegizi mountains should be made part of a vast inter-state national park that would protect the spectacular mountains in the Macenta region of neighbouring Guinea. We have also suggested the setting-up of protected areas for the coastal forest and rocky coastline at Cape Mount, an unusual habitat in Liberia, and in the Cavally forest, on the Ivory Coast frontier not far from the Tai National Park.

Liberia faces special problems in setting up national parks. Ideally, the largest possible amount of the protected zones should be 'strict nature reserves', and it may be that another term than 'national park' should be used. Access points will have to be locked as it would be unrealistic to patrol all of them, and the poaching control in country where concealment is easy will be an enormous problem. Eventually a total of 100 guards will be needed, and all should be responsible to the Wildlife and National Parks Division of the FDA Service. Co-operation with WWF/IUCN and other international organizations should be continued so that

Mangroves, a habitat relatively little threatened in Liberia.



advice is available on the setting-up of the reserves. Scientific research and recording stations should be established as soon as possible.

Important political changes have taken place recently (1980). Let us hope fervently that the new authorities will provide a new, more dynamic initiative to conservation, and above all, that they will take the essential authoritative and energetic measures to save *in extremis* the Liberian rain-forest and its wildlife. Decisions are essential in the immediate future if Liberia is to become one of the active African countries proud to conserve their wildlife heritage.

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