



CHAPTER 1 Defining the Gulf of Guinea Forests

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CHAPTER 1

Defining the Gulf of Guinea Forests



Iladyi valley, southern highlands, Bioko Island.

The area within the West African rain forest zone between the Niger and Sanaga rivers, including the continental-shelf island of Bioko (see map, p. 7), has been long recognized for high species richness and high endemism in many taxa. At the same time, parts of this region also have some of the highest human population densities in tropical Africa, and throughout the area human numbers continue to grow rapidly. Consequently, the region's remaining forests are becoming increasingly degraded and fragmented, and its large-animal populations are under intense pressure from hunting, particularly for the bushmeat trade.

The volcano Mount Cameroon, the highest mountain in West Africa at 4,095 m, sits within the region, part of a chain of highlands along a tectonic fault that extends northwest-southeast into the Gulf of Guinea through Bioko, Príncipe, São Tomé, Annobón, and on to St. Helena. The Cross River runs through the mainland portion of the region, while the delta of the River Niger—the largest river delta in tropical Africa—occupies the region's western edge. Important coastal swamplands lie east of the Niger Delta. From the southern shore of Bioko to the Nigerian town of Obudu, 380 km to the north, annual rainfall ranges from more than 10,000 mm (the highest in Africa) to around 1,800 mm, with a four-month dry season. The resultant ecological diversity, combined with high species richness, high endemism, and high threat, make this region a classic “biodiversity hotspot,” and therefore a high global priority for conservation. Indeed, the European Commission's Joint Research Centre TREES project classified a major section of this area (labeled “Korup-Cross River”) as one of 19 tropical humid forest deforestation hotspots in West and Central Africa (Achard *et al.* 1998).

Despite its exceptional characteristics, this region remains without a generally accepted name. It has been referred to as “Cameroon” (Oates 1986), “West-Cameroon” (Grubb 1990), and “Cameroon Highlands” (Sayer *et al.* 1992), but none of these names is entirely appropriate because a significant part of the region is in Nigeria, another part on the island of Bioko (a component of the Republic of Equatorial Guinea), and much of the area is lowland forest.

The geography of the area includes the coastal areas and islands of the Bight of Biafra, a name that appears in many atlases. Letouzey (1968) refers to the coastal forest area from southeastern Nigeria to the south of Cameroon as *la forêt biafrière* (Biafran forest), and in an analysis of African centers of endemism, Kingdon (1990) uses the term Bight of Biafra for one of his centers. Kingdon does not precisely define this center's boundaries, but his reference map covers the area from the Bénin-Nigeria border in the west to the mouth of the Ogooué River in Gabon in the south. He notes that this area contains “one of the greatest concentrations of plant and animal life on the entire continent.” However, by treating the entire area under one broad rubric, Kingdon disregards the distinct zoogeographical communities within it, especially the major faunal disjunction which occurs in the region of the Sanaga River in Cameroon. The name “Biafra” also has unfortunate political connotations in Nigeria as it is associated with the secession of the Eastern Region in 1967 and the subsequent civil war.

Given the problems associated with the various alternative names described above and the lack of any other familiar term, in this report we use “Gulf of Guinea Forests” for this region. We recognize that this term is not ideal, for the geographical limits of the Gulf are usually considered to extend well to the west of this region as it is defined here. We use this term only on a provisional basis, in the absence of any obviously satisfactory alternative.

AN UNDERSTUDIED AREA

Although Eisentraut's classic study (1973) compares the vertebrate fauna of Bioko with that of West Cameroon, and although a recent quantitative analysis confirms the pattern of high species richness and high endemism for the primates of this region (Eeley & Lawes 1999), no unified investigation has yet been done of biodiversity patterns in the Gulf of Guinea forests as a whole. To be sure, the region's birds have been quite well studied, and its montane forests are recognized as an important area of bird species endemism (Jensen & Stuart 1984, Collar & Stuart 1988, Stattersfield *et al.* 1998). Lists of butterfly, amphibian, reptile, and plant species have also been compiled for several sites in the region, but in most cases these have not been accompanied by analyses of the number and proportion of species that are narrowly or broadly endemic, or by an examination of how patterns of endemism compare with areas to the west and east.

This region has also been relatively neglected in international conservation planning. It was not given special attention in a continent-wide “ecoregional” assessment conducted by WWF-US in Cape Town in August 1998, nor was it included in Conservation International's Upper Guinea Rain Forest Priority-setting Workshop, held in Ghana in December 1999. The region has also been excluded from a variety of special conservation activities targeted at the Congo Basin.

For a variety of reasons, the Gulf of Guinea forest region lacks an integrated approach to its conservation problems. Creating an integrated plan is difficult not only because of problems posed by the long border between Nigeria and Cameroon (a border which passes directly through some of the largest remaining areas of natural forest), but also by the political isolation of Nigeria under its recent military regimes (and associated lack of foreign aid funds), and the Equatorial Guinean government's apparent wariness of foreign scientists and organizations. Although Nigeria, Cameroon, and Equatorial Guinea have each designated or proposed protected areas within the Gulf of Guinea forest region, the extent to which these areas provide adequate protection for the region's biodiversity has not been carefully examined.

In this volume, we give particular attention to the primates of the Gulf of Guinea forests because they are relatively well known and of special interest to the authors, and because this region is clearly a world hotspot for this group. Between the Niger and Sanaga Rivers, including Bioko Island, 22 primate species have been recorded, with some forests in the region supporting up to 14 sympatric species. At least six of the region's primate species are endemics, as are most of the region's primate subspecies, particularly those on Bioko. Furthermore, because these primates occur in a relatively small area, and because the pressures from hunting and habitat destruction are great, the region contains a high concentration of endangered and critically endangered taxa. Chapter 4 provides more extended discussion of these primates and their distribution.

This study was carried out to address the need for more information regarding the Gulf of Guinea forests, to more fully document their biological importance, and to promote a unified treatment of the forests' biodiversity and conservation needs. To accomplish these goals, we

- documented and mapped existing information on biogeographic patterns in the Gulf of Guinea forests,
- compared these patterns to those of neighboring regions, paying particular attention to the status of several rare and endemic primates,
- investigated the extent to which existing conservation activities provide adequate protection to the region's biodiversity, and
- identified gaps in existing knowledge and conservation activities and developed recommendations for actions needed to be taken to fill these gaps.

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