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Gorilla Conservation: Anatomy of a Campaign

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Introduction

Different species, habitats, and countries have different requirements and priorities for conservation. The conservation program for the gorilla population in Rwanda has been described as a model project, hence its inclusion in this section of the symposium. It is certainly an unusual project in several respects, including the structure of its funding, its broad approach to conservation of the region, the close monitoring of its results, its long duration, and perhaps also in the extent of its success. However, before it is used as a blueprint for other projects, the context of the program and the nature of its success need to be clearly understood. I therefore first sketch the biological, socioeconomic, and administrative setting of the program and outline the reasoning behind the form that it took; then I describe its results; and finally discuss some implications of the program for conservation. Particular emphasis is placed on the necessity for research aimed at the management of conservation areas as integral parts of a wider ecosystem that includes humankind, instead of as sacrosanct islands in a sea of hostile human influence.

Background

Gorilla Conservation in Africa

In terms of the conservation of the gorilla (Gorilla gorilla) in Africa as a whole, the Rwandan gorilla conservation program is a small contribution. It concerns one part of one population of one subspecies in one country. In fact, the gorilla occurs as three subspecies in many populations in nine countries of Africa (Fig. 4.1). The bulk of the population is in West Africa, where the western lowland gorilla (Gorilla g. gorilla) numbers about 40,000 animals, 35,000 of them in Gabon (Tutin and Fernandez, 1984). The population size of the eastern lowland gorilla (Gorilla gorilla graueri) of Zaire is not well known but is probably not less than 5000, judging from average population densities (Harcourt et al., 1981; Tutin and Fernandez, 1984) and the area of available habitat. Known populations of the mountain gorilla (Gorilla g. beringei) of Zaire, Uganda, and Rwanda

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number less than 400, 260 of them in the 375 km$^2$ Virunga conservation area (Harcourt et al., 1983) and 115 in the 310 km$^2$ Bwindi Forest Reserve of Uganda (Harcourt, 1981). Most of the known mountain gorilla population lies in officially protected areas, but less than 20% of the eastern lowland and only about 6% of the western lowland populations are in parks or reserves. The Rwandan gorilla conservation program concerns only the population of the Rwandan sector, the Parc National des Volcans, of the Virunga conservation area (Fig. 4.2), i.e., less than 0.5% of the total gorilla population in Africa.

**Rwandan Socioeconomics**

Rwanda is one of the poorest, most densely populated countries in Africa (Prioul and Sirven, 1981). Both imports and foreign aid exceed exports. The density of Rwanda's population, 95% of which is rural, is around 250/km$^2$ but exceeds 400/km$^2$ around the Parc National des Volcans. Although over the country as a whole it is increasing at over 2.5% per year, in the region of the Park, it dropped between 1978 and 1981, because of emigration. The fact that no other area of the country is agriculturally richer and yet people are leaving the Park region indicates severe overcrowding around the Virunga conservation area. Food production has kept pace with the country's population increase, largely because of