

# Elephant status and conservation in the Upper Bandama Game Reserve, Ivory Coast

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In West Africa, elephant (*Loxodonta africana*) populations remain vulnerable because they are small and often isolated.

Once, Ivory Coast was considered the country where elephants were the most abundant in West Africa. Today less than 1200 animals are estimated to be living there. As in all of West Africa, elephants suffer from the loss of habitat because of people's need for land and the hunting pressure for trade in ivory and bush-meat.

The Upper Bandama Game Reserve, gazetted in 1973, is the largest game reserve in Ivory Coast.

The reserve, situated in the centre of the country (between 8° 13' and 8° 45' N and 5° 20' and 5° 30' W) (fig. 1), covers 1300 km<sup>2</sup>. Vegetation, of the Sudan-Guinean type, is dominated by woodland savannahs. It was observed that 60 elephants lived in the reserve in the 1980s. However, it is highly unlikely that this number has remained stable.

During a reconnaissance flight carried out in 1996 with a Cessna 172 along flight lines 2 km apart, no elephants were seen. It cannot be concluded, however, that no elephants were present. Between 1995 and 1999 several people observed elephants when flying over the area. But as large forest patches remain inside the reserve, too thick to allow accurate observation from the air, ground observations are necessary. In the

1990s, the estimate was that there were 40 elephants. Today the figure of 20 is more realistic. It is possible that the elephants moved away from the game reserve, but it is not probable because the increasing amount of human settlement around the reserve make it unlikely that elephants could find sanctuary outside the reserve.

Hunting pressure is high in Ivory Coast, for both

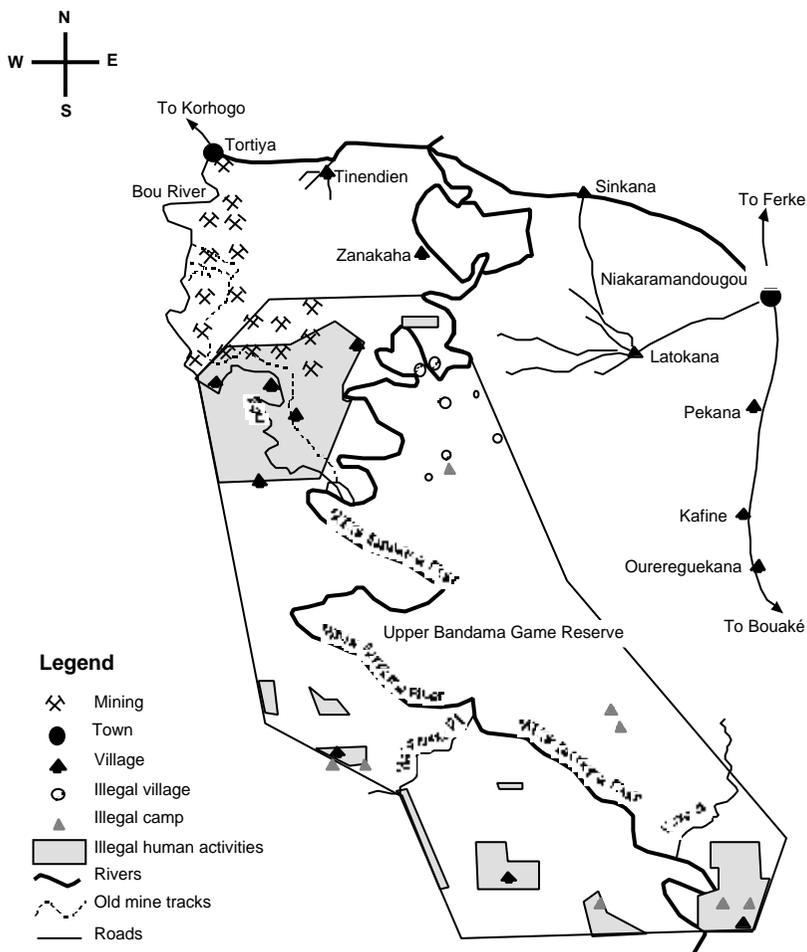


Figure 1. Map of Upper Bandama Game Reserve and environs.

ivory and meat. Game meat commands a higher price than does domestic meat. Rural people depend on bushmeat to supply their protein needs, and they also use it for medicines. For hunters and their well-organized bushmeat network that supplies town markets, hunting down an animal that weighs more than 1500 kg means good revenue, especially with the sale of ivory. Hunting is encouraged by the fact that 12-calibre bullets are freely sold in shops called 'cartoucherie' in each town. Local elephant hunters are able to kill elephants with home-made guns by loading the powder and the lead of several cartridges into one shot. Military guns are readily available because of the war in Liberia.

With increasing human population and the urge for more land for crops and cattle, elephants are increasingly confined to protected areas. However, even

the protected areas are subject to poaching. The lack of logistical supplies and sufficient staff in many protected areas in West Africa prevents adequate conservation of wildlife in general and of elephants in particular. The consequence is that two-thirds of the elephants in the Upper Bandama Reserve have been lost in the last 10 years. Maybe this small population can still find some refuge inside the remnant forest patches of the reserve.

Upper Bandama, the largest game reserve in Ivory Coast, suffers, as do many other reserves in West Africa, from the lack of materials, logistical support and sufficient staff—but also from the lack of land and conservation management.

The situation is not favourable for elephant conservation in Ivory Coast unless the protected areas are better managed.

## Erratum

Please note the following corrections in the paper in issue 31 'Elephant census in the Ankasa Conservation Area in south-western Ghana', by Emmanuel Danquah, Yaw Bofo, Umaru Farouk Dubiure, Nandjui Awo, Emmanuel M. Héma, Mildred Amofah Appiah. Corrected maps:

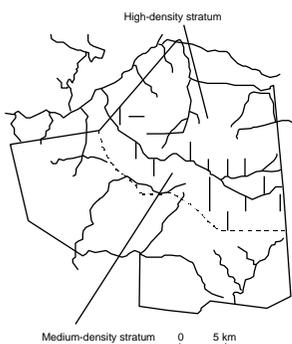


Figure 2. Ankasa Conservation Area showing the distribution of transects in the high- and medium-density strata.

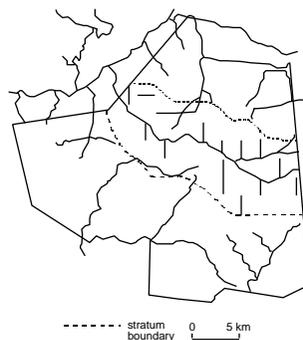


Figure 4. Ankasa Conservation Area showing the distribution of transects after the post-facto stratification.

The last paragraph under 'Post-facto stratification', p. 66–67, should read as follows, with the additions indicated in bold:

Elephant numbers were derived by using the steady-state assumption model of elephant densities: dung pile density as given in table 1, dung **decay** rates from Barnes et al. (1994) and defecation rates from Tchamba (1992). **The combined estimate was 27 with 95% confidence limits of  $\pm 20$ , that is,  $27 \pm 20$ . The post-facto stratification gave an estimate of  $21 \pm 15$ .** Values were multiplied by the area of each stratum (table 1). Elephant numbers thus derived were  $11 \pm 15$  in the high-density stratum and  $16 \pm 16$  in the medium-density stratum.