SOUTHERN GROUND-HORNBILL (GROUND HORNBILL) | *Bucorvus leadbeateri*

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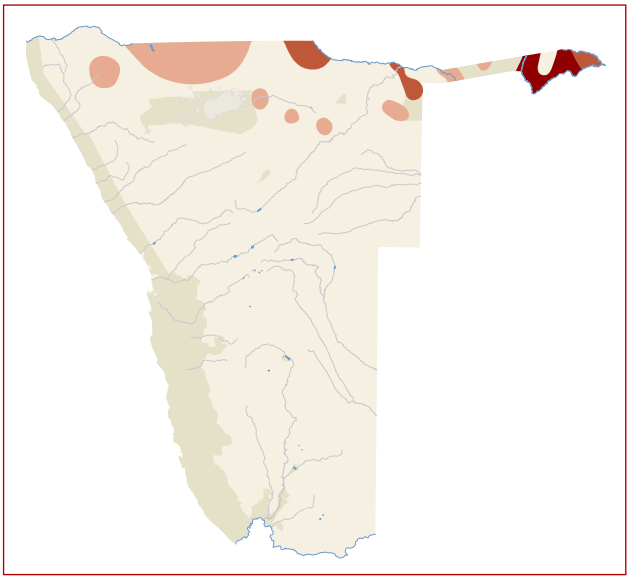
Conservation Status:	Endangered
Southern African Range:	Northern Namibia, north-eastern Botswana, north-eastern and eastern South Africa, Zimbabwe, Mozambique
Area of Occupancy:	35,200 km^2
Population Estimate:	About 1,100 birds
Population Trend:	Slow decline
Habitat:	Woodland savannah and open grassland
Threats:	Degradation of habitat through wood removal, extensive burning

DISTRIBUTION AND ABUNDANCE

This large terrestrial hornbill is found at low density throughout mesic woodland savannahs from the equator southwards and regularly occurs in family groups (Vernon & Herremans 1997b). In Namibia, it occupies an area of 35,200 km^2 of which only 16% lies within protected areas (Jarvis *et al.* 2001). In other parts of southern Africa this species occurs most commonly in large protected areas, including Chobe, Hwange and Kruger national parks and adjacent conservation areas. This is not the case in Namibia's Etosha National Park, where the habitat is largely unsuitable because of the lower rainfall and lack of large nesting trees. Because of its huge territory size, exceeding 100 km^2 in some protected areas, the population density of this species is very low (Kemp 1995a). Given a density of one group (averaging 3.5 birds) per 100 km^2 (Kemp 1995a), the population in Namibia, extrapolated across its area of occupancy, is 1,230 birds. Numbers are probably much smaller because of the degraded habitat in the north-central regions and parts of the eastern Zambezi region, putting Namibia's estimated population at just over 1,000 birds. Reporting rates in Namibia averaged 18% during the SABAP1 atlassing period (Jarvis *et al.* 2001) and it was most commonly recorded in the Nkasa Rupara (Mamili) National Park, centred on Nkasa and Lupala islands on the Kwando and Linyanti rivers (reporting rate of 55%). Average reporting rates for the Kwando River conservation areas were 24% higher than the 20% reporting rate for similar but unprotected habitat in the eastern third of the east Zambezi region (data in Jarvis *et al.* 2001). Similar disparities in reporting rates for this species inside and outside protected areas were noted in Botswana (Vernon & Herremans 1997b).



ECOLOGY

This species, best located by its low booming calls, is a cooperative breeder that spends all of its time in groups of two to 11 birds (mean of three to five birds: Kemp 1995a). Birds roost together in trees and nest in tree hollows or in holes in rock faces. The same nest site is used over several years but the alpha pair breed on average only once every 2.6 years and successfully rear one young every nine years in optimal habitat (Kemp 1990). This makes it one of the slowest breeding bird species in southern Africa, severely limiting its recovery from any population decline. No assessment of its breeding ecology has been made in Namibia and there are only two breeding records from the northern Kwando River region for April 1999, both with a single nestling (Jarvis et al. 2001). Groups spend about 70% of the day walking through grassland habitat searching for a wide range of prey (Kemp & Kemp 1977). The diet includes virtually anything that the bird can overpower, including insects, snails, reptiles (snakes), birds and their eggs, and occasionally carrion (Kemp 1995a).

THREATS

Since only one alpha pair of a group of three to five individuals ever breeds among Southern Ground-Hornbill (Kemp 1995a), the effective breeding population of a metapopulation in Namibia estimated at 1,100 individuals, would be just 220 to 370 pairs. This small breeding population puts the genetic integrity at high risk and increases the probability of stochastic events reducing population viability. In addition, this species is threatened by habitat destruction due to the high human pressure in the eastern Zambezi region and the densely populated north-central regions. This is evident from the extensive use of wood for cooking and construction in the north-central regions (Mendelsohn *et al.* 2000) and the extraordinarily high proportion of grassland and wooded savannah that is burned each year in the Zambezi and Kavango regions (Mendelsohn & Roberts 1997). Both habitats are essential for the breeding and foraging of Southern Ground-Hornbills. Direct persecution may arise as a response to birds breaking the windows of buildings in which they attack their reflection (Kemp 1995a, RE Simmons pers. obs.). It is, however, revered in some areas by local inhabitants, suggesting that it would not be directly persecuted or hunted for meat or for nestlings; reports of groups foraging close to human dwellings in the north-central regions indicate a certain tolerance (A Kemp, M Kemp pers. obs.).

CONSERVATION STATUS

This species is ranked as *Endangered* in Namibia because of its small estimated population size and an inferred population decline of at least 20% in the last two generations (or 40 to 60 years) as a result of habitat degradation. It is also considered *Endangered* in South Africa (Taylor *et al*. in press), and in 2010 was reclassified from not being considered globally threatened to *Vulnerable* (IUCN 2012a). It does occur widely in conservation areas in southern Africa, indicating that habitat disturbance and degradation play the major role in its rarity in that region. In Namibia, it occurs uncommonly in Etosha National Park and commonly in the Nkasa Rupara (Mamili) National Park, both of which are Important Bird Areas (Simmons *et al.* 2001b). Because of its threat status, it should be given *Specially Protected* status in revised or new Namibian Parks and Wildlife legislation.

ACTIONS

The large areas required by this species make it one of the most difficult birds to conserve in Namibia. For example, large parts of the north-central regions where it was probably once abundant would need to be conserved to contain even one breeding group. Since very few areas, except private grounds such as the Ogongo Agricultural College, have retained the natural treed savannah of this region, even a conservancy approach may not make any difference. The erection of artificial nest boxes may also reclaim habitat that may sustain Southern Ground-Hornbills (A Kemp, M Kemp pers. obs.). In the Zambezi and Kavango regions, this species may benefit from a reduction in the intense burning of grassland savannah, although fire can promote hornbill foraging efficiency in the short term, because birds are attracted to the new growth following fires or to the incapacitated prey shortly after burning. Finally, this species is in urgent need of study, given the paucity of critical ecological data from Namibia. Comparative studies of protected and unprotected areas with similar habitats (e.g. Nkasa Rupara (Mamili) National Park) and communal areas of the Zambezi region would be highly instructive in gauging the conservation needs of this species.