



Ground Hornbill

Bromvoël

Bucorvus leadbeateri

Ground Hornbills occur throughout the moister Afrotropics, with the populations north of the equator now usually being placed in a separate species (Kemp & Kemp 1980; Fry *et al.* 1988; Kemp 1995). The southern species is widespread in the humid subequatorial savannas (Kemp 1995). In southern Africa it is found throughout Zimbabwe, in northern Namibia, northern and eastern Botswana, far northern Transvaal and the Transvaal lowveld. Along the east coast it extends south from Mozambique, through KwaZulu-Natal and the Transkei, to the eastern Cape Province (Vernon 1986c; Kemp 1995). There is a considerable gap in the distribution in northern KwaZulu-Natal and Swaziland where it is absent or very rare (Parker 1994). There are strongholds in the Kruger National Park (see also Kemp *et al.* 1989), and in the region of the Okavango, Chobe and Hwange National Parks in northern Botswana and western Zimbabwe, respectively.

The relatively high reporting rates were a consequence of it being large, conspicuous and readily identified, either visually or vocally; it is less abundant than the reporting rates might suggest. It lives in family groups of 2–11 birds (mostly 3–5) (Kemp *et al.* 1989) which have large permanent territories (Kemp 1995). Even in optimal areas these territories are more than 100 km² in area (Kemp & Kemp 1980; Kemp 1995). The birds maintain their territories by giving calls in duet or chorus, which can be heard at great distances, up to 3 km under favourable conditions (Stark & Sclater 1903; Kemp 1995).

Habitat: It inhabits woodland and savanna. Groups move into grassland to forage, or into forest to roost and breed (Fry *et al.* 1988). It is particularly associated with broad-

leaved woodland. The preferred vegetation types are Okavango and Mopane, which are moist, tropical woodlands, but non-forested habitats. In Miombo, a habitat which also falls into this category, the Ground Hornbill was less frequently reported.

Movements: It is considered a resident (Fry *et al.* 1988). The atlas data confirm this as there is little seasonal variation in reporting rates.

Breeding: Throughout its range, the main egg-laying period is September–December (Dean 1971; Kemp 1976b; Irwin 1981; Tarboton *et al.* 1987b). In Zimbabwe there are also a few records for August and January (Irwin 1981). Breeding is in response to rain (Kemp 1976b; Kemp & Kemp 1980).

Breeding evidence in the atlas included observation of dependent birds after departure from the nest. With an incubation period of 40 days, a nestling period of 85 days and a period of dependence on the adults of several months (Kemp 1976b; Kemp 1995), it is not surprising that breeding activity was recorded throughout the year.

Interspecific relationships: The exact habitat preferences of the Ground Hornbill are not clear, but could relate to the presence and habitat use of hornbills of the genus *Tockus* (Kemp *et al.* 1989).

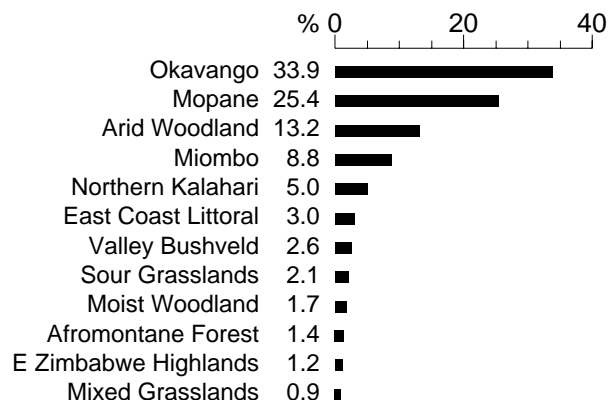
Historical distribution and conservation: The overall range in southern Africa appears to be similar to that described by Stark & Sclater (1903). However, within this range, its abundance has decreased sharply outside of protected areas, notably in the grassland areas of the eastern Cape Province (Vernon 1986c) and in parts of the Transvaal (Tarboton *et al.* 1987b). It was listed as 'vulnerable' in South Africa (Brooke 1984b).

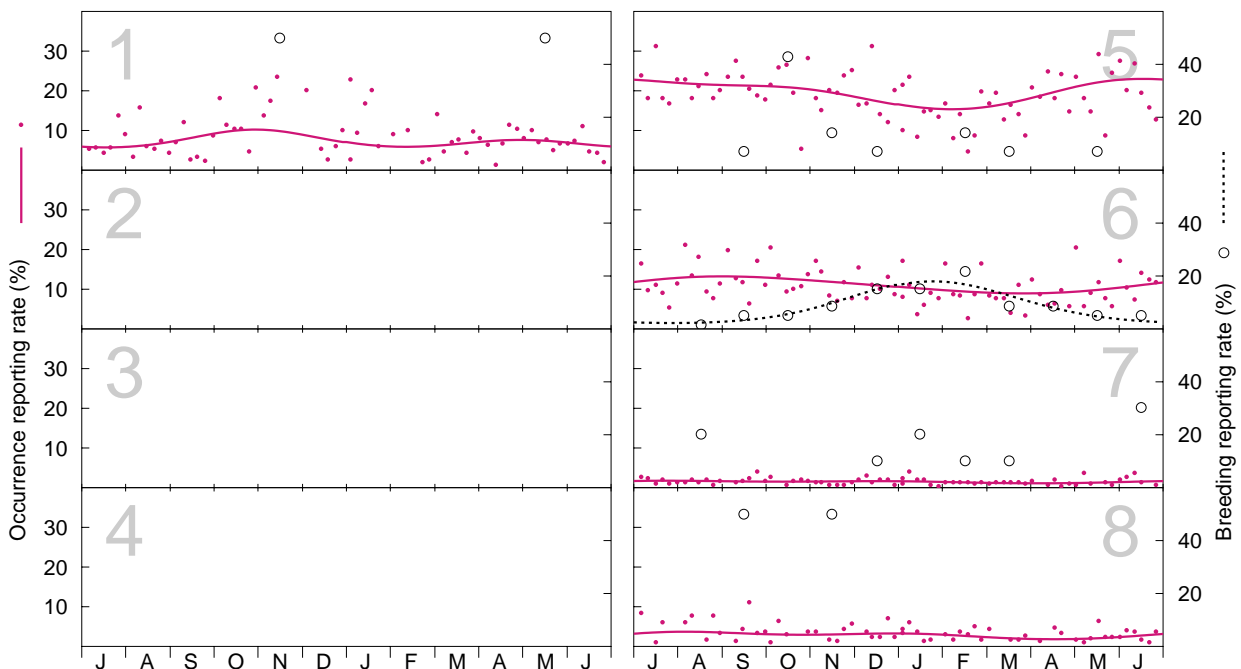
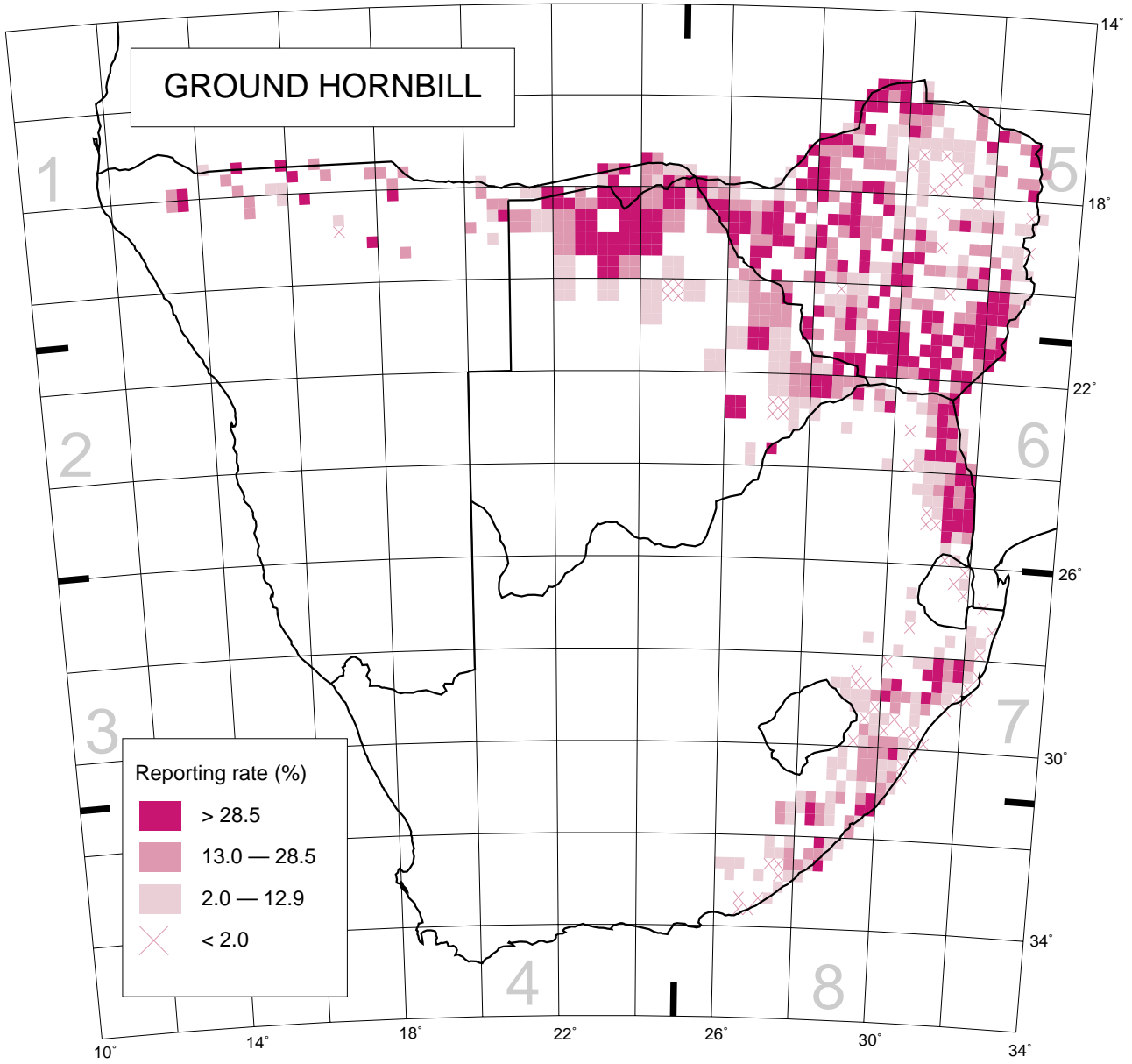
It appears that the Ground Hornbill has declined as a consequence of human development of the environment, both in Zimbabwe and in the northern Transvaal bushveld, as compared to the lowveld. Even in Botswana, a country with limited crop farming, low overall human population density and large areas under conservation, reporting rates differed by over 20% between protected and unprotected areas (M.H. unpubl. data). The Ground Hornbill is a sensitive species with low reproductive success (Kemp & Kemp 1980); the long-term survival of populations outside conservation areas is likely to be problematical.

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Recorded in 832 grid cells, 18.3%
Total number of records: 6471
Mean reporting rate for range: 16.7%

Reporting rates for vegetation types





Models of seasonality for Zones. Number of records (top to bottom, left to right):
 Occurrence: 242, 0, 0, 0, 1730, 1258, 288, 155; Breeding: 2, 0, 0, 0, 14, 59, 10, 2.