

Namaqua Sandgrouse

Kelkiewyn

Pterocles namaqua

The Namaqua Sandgrouse is endemic and well adapted to life in the semi-arid regions of southwestern Africa (Cade & Maclean 1967; Thomas 1984a, 1984b; Maclean 1993b). It feeds exclusively on small, hard seeds of ephemeral plants (Urban *et al.* 1986), and is dependent on, and faithful to, good-quality drinking water (Knight 1989; Little *et al.* 1993c). It is apparently migratory within southern Africa (Clancey 1967a; Urban *et al.* 1986; Malan *et al.* 1992).

There are population centres in the Karoo, southern Kalahari and the Etosha depression, the last referring to a separate subspecies *P. n. ngami* (Clancey 1980b). There are striking differences in occurrence along the southern border between Botswana and South Africa, and this may relate to differences in the availability of reliable water from boreholes.

This species is distinctive and the atlas data can be considered comprehensive.

Habitat: It inhabits stone and gravel desert and open semi-desert with sparse scattering of low shrubs or grass tufts, sometimes arid sandy savanna with denser vegetation, but generally where average annual rainfall is less than 300 mm (Urban *et al.* 1986). During the atlas period, it was recorded most often in the Nama Karoo, the Namibian Escarpment and Southern Kalahari.

Movements: Southern populations (mostly *furvus*) are apparently migratory (Urban *et al.* 1986; Maclean 1993b; Malan *et al.* 1994). The northwestern true-desert forms (*namaqua* and *ngami*) are largely resident within their range, and the southeastern form (*furvus*) is more mobile when not breeding, especially in the Karoo (Clancey 1967a, 1979b). Malan *et al.* (1992) suggested that populations of the northern Cape Province breed mostly in the western portion of their range during early summer (September–November), and migrate eastwards for the nonbreeding season (April–August). The atlas data show that the majority of Namaqua Sandgrouse concentrate in Bushmanland, in the northwestern Cape Province, September–December. During March–July, they move to the north and east of Bushmanland, and apparently return August–September.

Breeding: In Namibia, Brown & Clinning (in press) recorded egg-laying in all months with a distinct peak April–June, which coincides with the setting of seed by grasses after peak rains, March–May. The small sample of atlas breeding records supports this pattern. Egg-laying in the southeastern race *furvus* has been recorded in all months of the year except February with a winter–spring peak (McLachlan 1985). The atlas data for Zones 3 and 4 show similarly extended breeding activity; the extension into late summer is attributable to observations of dependent young.

Interspecific relationships: Where it is found in association with Burchell's Sandgrouse *P. burchelli*, it usually inhabits rocky, calcrete biotopes while Burchell's Sandgrouse generally forages and roosts on sands, particularly the Kalahari dunes. Where these two species are partially sympatric with Doublebanded Sandgrouse *P. bicinctus*, this last species usually occurs in better-vegetated sites.

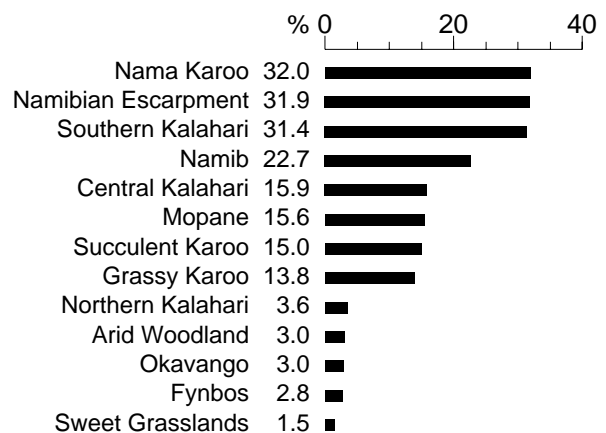
Historical distribution and conservation: Although it is one of the Afrotropical birds which has large population fluctuations (Maclean 1968), there is no evidence of extensive and persistent changes in distribution. At the periphery of the range, e.g. in most of Botswana, occurrence may be irregular.

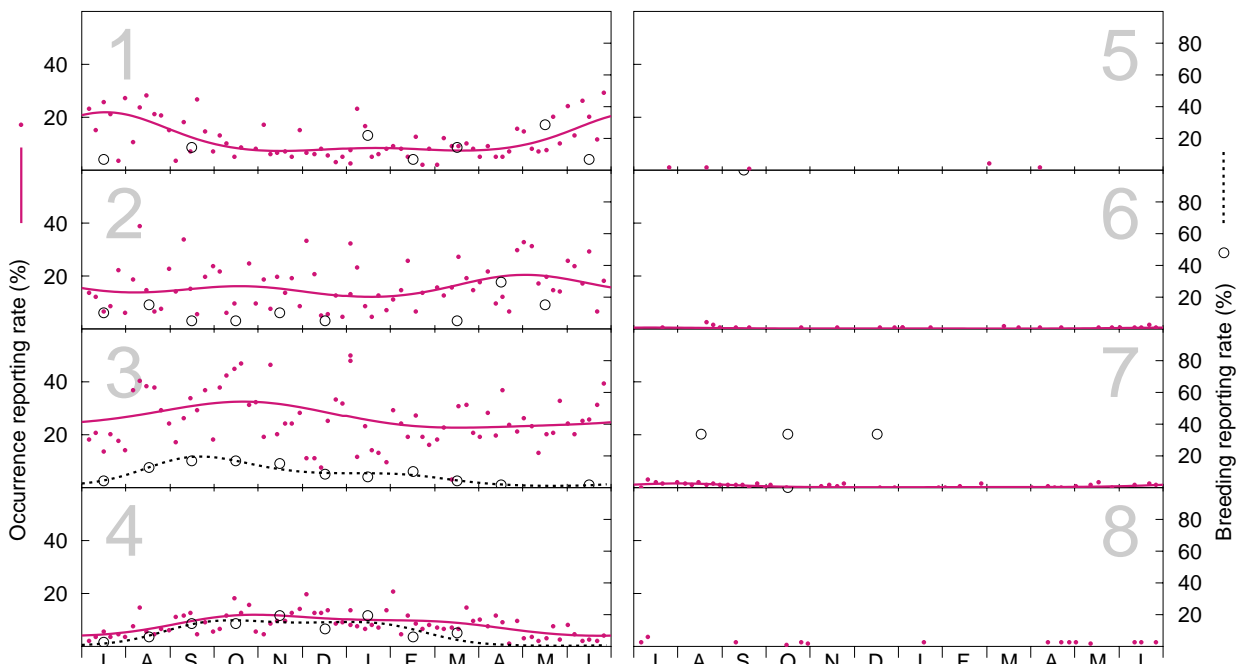
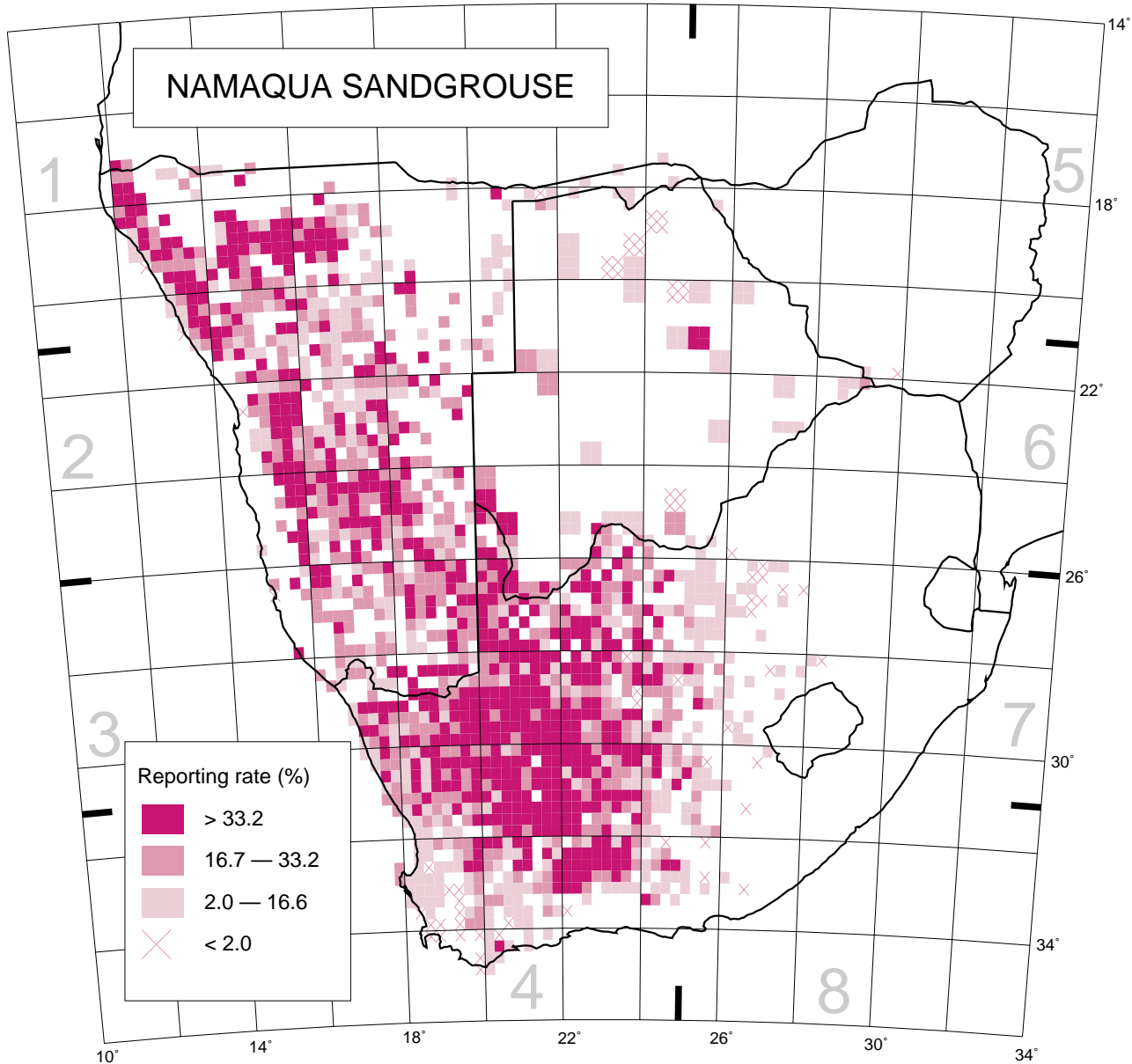
Although there have been reports of declines in the number of Namaqua Sandgrouse during the second half of the 20th century, these apparent declines may be an artefact of increased dispersion in response to an increased number of artificial watering points in semi-arid areas during this period (Little *et al.* 1996). Because of their propensity to congregate in large flocks at traditional watering sites, particularly during the nonbreeding season (McLachlan 1985), Namaqua Sandgrouse have attracted considerable attention from local bird hunters (Berry & Crowe 1985; Malan *et al.* 1993). There is an embryonic commercial hunting industry based on Namaqua Sandgrouse in the northern Cape Province which supplements agriculture in this semi-arid and desertification-prone environment (Malan *et al.* 1993). The management implications of any temporal and spatial patterns of abundance and breeding activity are that hunting should be restricted to the nonbreeding portion of their range and permitted only during the nonbreeding months. Further research is required on the environmental correlates of timing and place of breeding and on the factors influencing reproductive success.

R.M. Little

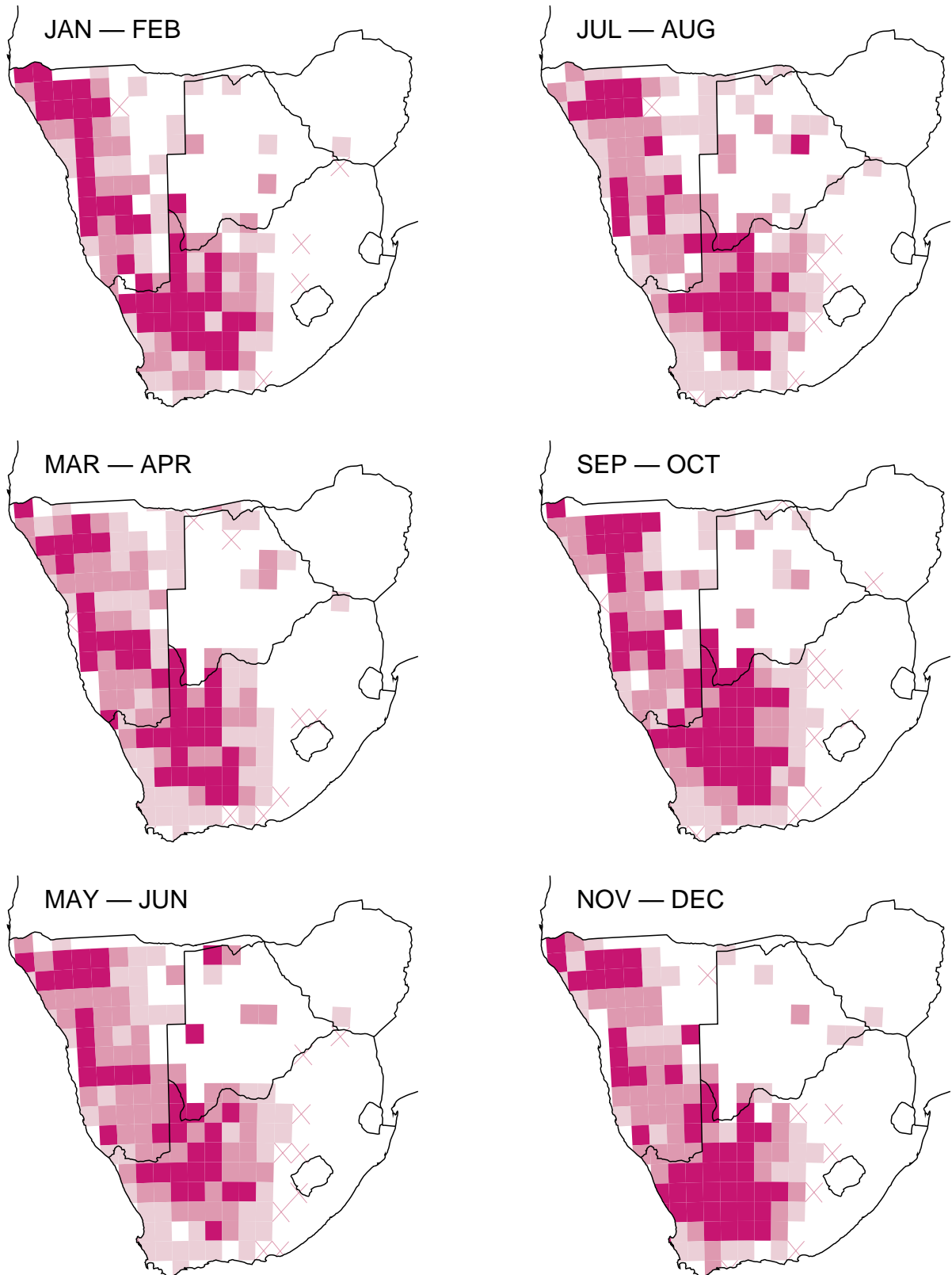
Recorded in 1578 grid cells, 34.8%
Total number of records: 9219
Mean reporting rate for range: 20.6%

Reporting rates for vegetation types





NAMAQUA SANDGROUSE



Seasonal distribution maps; one-degree grid.