

Redbilled Quelea

Rooibekkwela

Quelea quelea

One of the world's most numerous bird species, the Redbilled Quelea occurs in sub-Saharan Africa outside the forest zone (Bruggers & Elliott 1989; Mundy & Jarvis 1989). Widespread in southern Africa, it has not been recorded from most of Lesotho and Transkei, the southwestern Cape Province, southwestern Botswana and several areas in Namibia such as Damaraland. Within the region, queleas must number in the hundreds of millions (Bruggers & Elliott 1989).

The subspecies in southern Africa is *Q. q. lathamii* (Bruggers & Elliott 1989). The status of the race *spoliator* (Clancey 1960a; Clancey 1980b) has been contested (Bruggers & Elliott 1989).

It is usually conspicuous and identifiable throughout the year, by virtue of the sheer size of the flocks and their typical 'rolling' movement when feeding on the ground. Although flocking normally reduces reporting rates, the massive flocks of this species are so conspicuous that congregation probably did not depress reporting rates.

Habitat: It was recorded in most vegetation types, but not in Fynbos. It prefers woodlands and grasslands at any altitude below 2000 m. It does not breed throughout the vast range depicted; the preferred breeding habitat is thorny or spiny vegetation at altitudes below 1000 m, particularly the *Acacia* savannas of Botswana and lowveld areas of South Africa and Zimbabwe.

Annual grasses form the bulk of the diet and birds drink at least twice a day (Bruggers & Elliott 1989). Access to surface water limits the distribution in arid areas.

Movements: It is highly mobile, commuting considerable distances between roosts, food and water on a daily basis. Seasonal long-distance migrations have been suggested (Ward 1971) and movements of up to 2200 km by ringed birds are known (Bruggers & Elliott 1989). Although a regular seasonal 'early-rains migration' towards KwaZulu-Natal, Swaziland and Mozambique, November–January, has been suggested (Ward 1971; Bruggers & Elliott 1989), return migration has not been proven.

The seasonal maps and models show a November–February influx into the Limpopo Valley and the Transvaal lowveld (Zone 6 and to some extent Zone 2) extending marginally into Swaziland and northwestern KwaZulu-Natal, but not to the southeastern Transvaal or the remainder of KwaZulu-Natal (Zone 7; Allan *et al.* 1995b). Data in Zones 1 and 5 are scattered, but suggest a decline September–December and December–March respectively. It is uncertain how these changes in reporting rate interconnect, but ringing recoveries show movements between South Africa and Zimbabwe (Mundy & Jarvis 1989). In the crop-farming areas of the northern Cape Province and the Free State, reporting rates were stable. Consequently, the atlas data do partially confirm the 'early-rains' migration pattern, but there is no evidence for regular and comprehensive migrations throughout the region. Quelea presence is also known to depend on rainfall and veld conditions, and the lack of pattern in ring recoveries suggests that the species, or at least some populations, is nomadic in the region, and beyond (Bruggers & Elliott 1989; Mundy & Jarvis 1989).

Breeding: Breeding is localized and erratic, but in vast colonies of tens of thousands to millions of pairs, and usually occurs in years or localities of good rainfall (Tarboton *et al.* 1987b; Bruggers & Elliott 1989). In the northern Zones 1, 5 and 6, breeding was in



the second half of the wet season (December–May, peak January–March), as in other studies (Irwin 1981; Tarboton *et al.* 1987b; Jones 1989; Allan *et al.* 1995b; Skinner 1995a). Breeding further south spans a longer period (September–May). In any year in any region, breeding is usually synchronized (Bruggers & Elliott 1989). Winter breeding records are mostly errors; males build nests in areas and at times unsuitable for breeding, and for diurnal roosting (e.g. Oschadleus 1989).

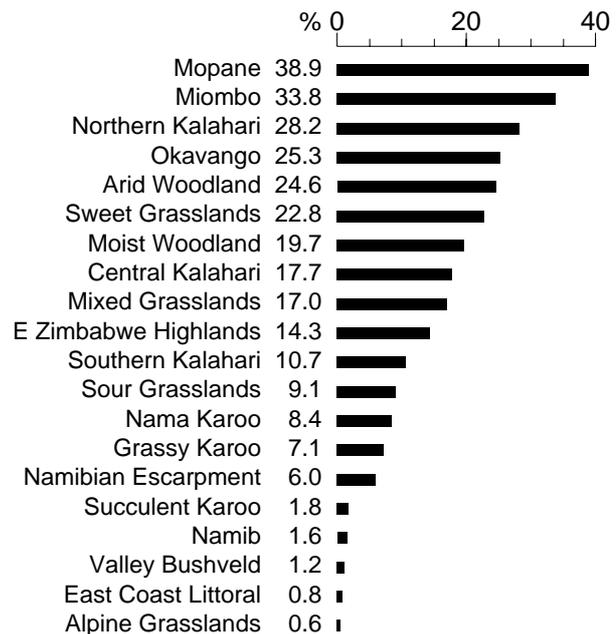
Interspecific relationships: Redbilled Queleas can constitute a significant proportion of the bird biomass in savanna ecosystems, and roosts and breeding colonies attract a wide variety of predators and scavengers in large numbers, including herons, storks, raptors, owls, hornbills, rollers, kingfishers and crows (Bruggers & Elliott 1989; Allan *et al.* 1995b).

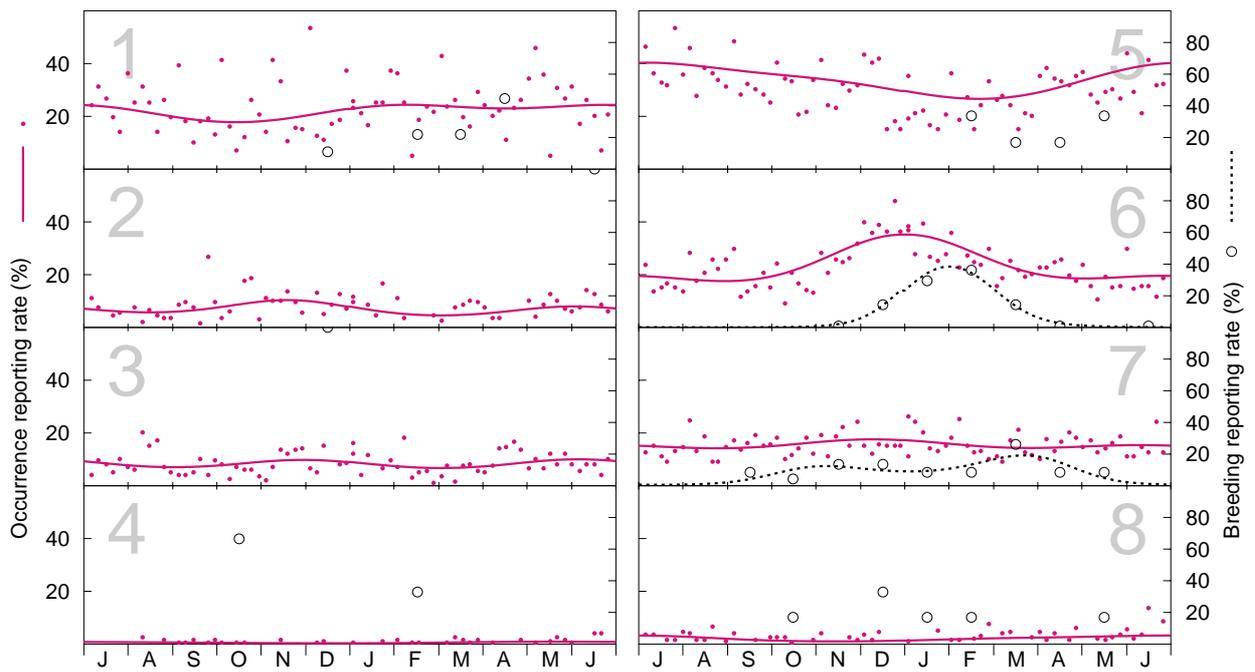
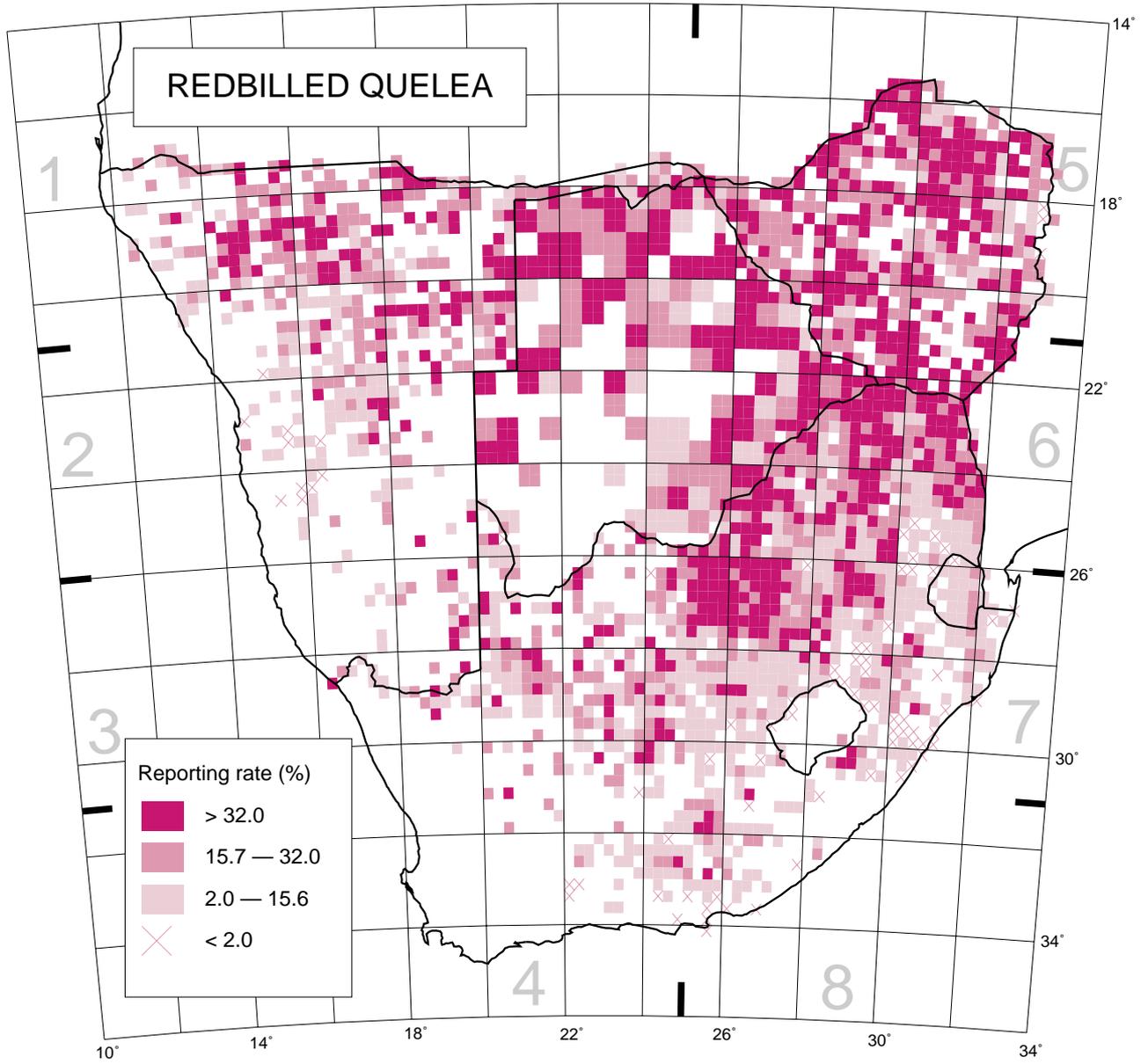
Historical distribution and conservation: It has expanded its range and increased in numbers as a result of the availability of cereal crops. Numbers reach pest levels and control actions are undertaken, but the killing of 65–180 million birds p.a. in the region during recent decades has had no effect on the population, other than temporary local relief from crop damage (Jones 1980; Bruggers & Elliott 1989). Many non-target species get killed in quelea-control operations (e.g. Bruggers & Elliott 1989; Verdoorn 1994) which may be a significant 'sink' for the populations of those species. Quelea-control measures are in need of review and their impact on non-target species should be monitored regularly and on an ongoing basis; appropriate ameliorative precautions need to be built into control operations. Queleas are a source of protein to some peasant populations (Bruggers & Elliott 1989) and as such the image of the species should perhaps be shifted from that of pest to that of a resource with potential for sustainable utilization.

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Recorded in 2423 grid cells, 53.4%
 Total number of records: 20 173
 Mean reporting rate for range: 19.9%

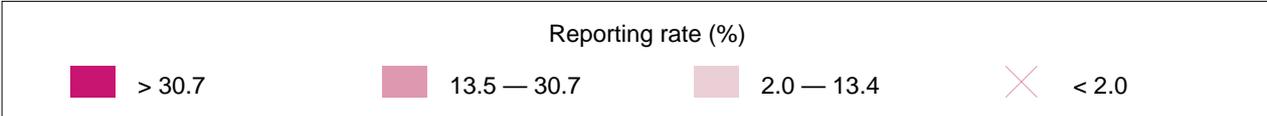
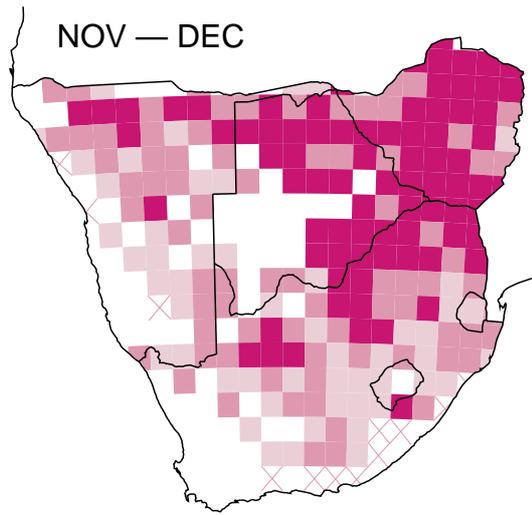
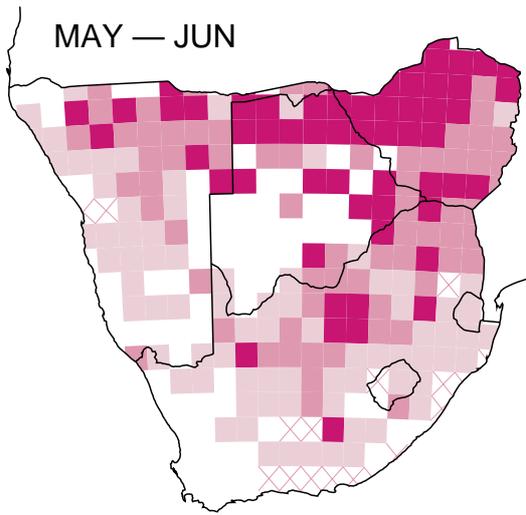
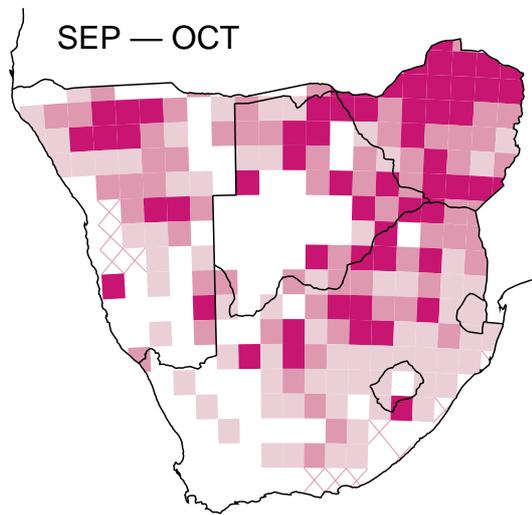
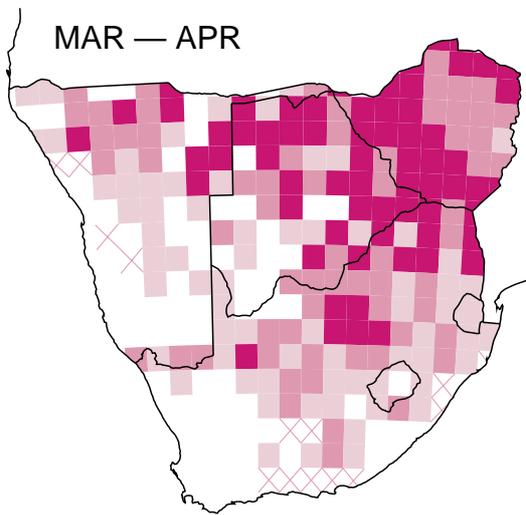
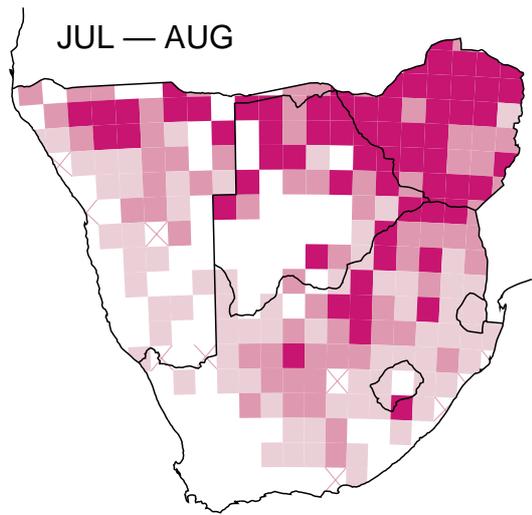
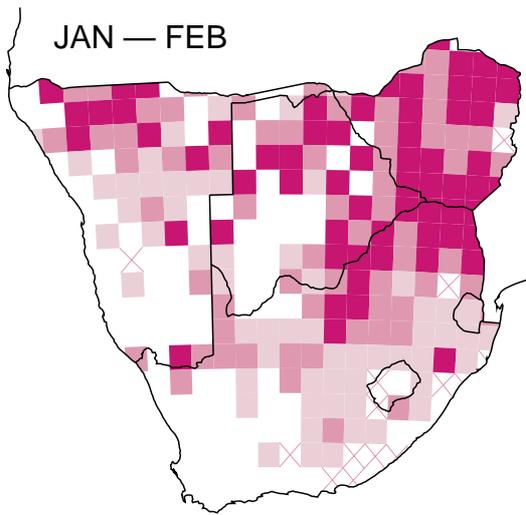
Reporting rates for vegetation types





Models of seasonality for Zones. Number of records (top to bottom, left to right):
 Occurrence: 736, 244, 460, 53, 2963, 2679, 3025, 114; Breeding: 9, 1, 2, 3, 6, 74, 23, 6.

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Seasonal distribution maps; one-degree grid.