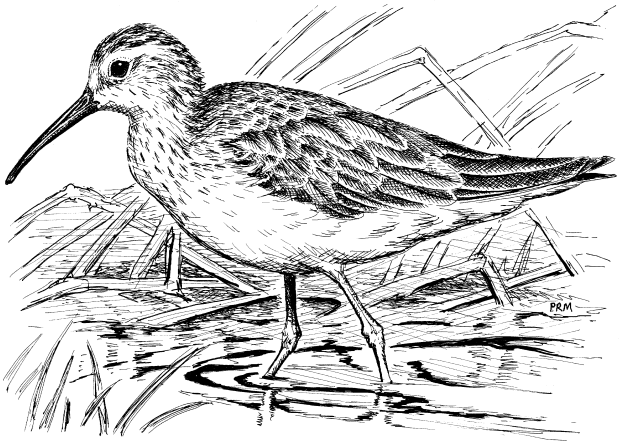


Curlew Sandpiper

Krombekstrandloper

Calidris ferruginea

The Curlew Sandpiper occurs at suitable wetlands throughout southern Africa, with concentrations in the Transvaal–Free State panveld (Allan *et al.* 1995c), the Manyame Lakes (1730D) in Zimbabwe (Tree 1988a, 1989b), and in northern and southeastern Botswana. It also occurs along the coastline, apart from a conspicuous gap in southern Namibia.

It breeds in a relatively small sector of the central Siberian arctic, and then only in a narrow latitudinal range. The nonbreeding season is spent in Africa and Australasia mainly at latitudes south of the Tropic of Cancer (Hayman *et al.* 1986). The total population on the coast, and at coastal wetlands of Namibia and South Africa, has been estimated at 115 000 (Summers *et al.* 1987a); the size of the inland population is unknown, but it is unlikely to exceed the coastal population. The world population has been estimated to be *c.* 1 million birds; of these 746 000 migrate to Africa (Rose & Scott 1994) of which *c.* 10–20% reach southern Africa.

The annual breeding productivity is related to lemming cycles on the breeding grounds, which are normally of three-year duration. When lemmings *Lemmus sibiricus* and *Dycrostonyx torquatus* are abundant, Arctic Foxes *Alopex lagopus* and other lemming predators breed successfully with little disturbance to birds. By the following breeding season, the lemming population has normally collapsed or is decreasing, and predators switch to eggs and young of ground-nesting birds, including the Curlew Sandpiper, resulting in near-complete breeding failure. Breeding productivity in the third year of the cycle is unpredictable, resulting in 1–2 year runs of good or poor breeding productivity (Summers & Underhill 1987; Underhill 1987b; Underhill *et al.* 1993).

Habitat: It occurs at wetlands anywhere in southern Africa, but suitable waterbodies are mainly along the coast and in the pans of the highveld in the Free State and Transvaal. Suitable inland wetlands are usually characterized by muddy edges with receding waterlines. The more scattered distribution in the interior, compared to species such as Greenshank *Tringa nebularia* and Common Sandpiper *A. hypoleucos*, suggests that it is less catholic in its choice of wetlands. On the coast, most are at tidal estuaries. The coastline itself is generally not attractive, but sheltered shores with stranded seaweeds can attract large flocks.

Movements: The models show that departure is mainly March–April, and arrival August–October. First-year birds arrive after adults (Elliott *et al.* 1976). In all Zones some birds remain during the austral winter.

Its migration system is relatively well understood. A total of 24 851 have been ringed in southern Africa, generating 98 recoveries. These show that it migrates to breeding grounds in the Taimyr Peninsula along the great circle route through the eastern Mediterranean, Black and Caspian seas (Elliott *et al.* 1976; Wilson *et al.* 1980; Vandewalle 1988b; Underhill *et al.* 1989; SAFRING).

There is some local movement during the austral summer induced by the drying up of temporary wetlands, particularly in the southwestern Cape Province (Elliott *et al.* 1976).

Although individuals are rarely faithful to breeding sites on the tundra (Tomkovich & Soloviev 1994), recaptures of ringed birds in the nonbreeding areas are almost invariably made at the same wetland, even after more than a decade (SAFRING). However, a male, retrapped on 4 September 1987 in Dubai (25°N 55°E) in the Persian Gulf, had probably changed its nonbreeding site from the Swartkops River estuary (3325DC) where it had been ringed in February 1985 (Martin *et al.* 1992). When retrapped, it was moulting its sixth primary; Curlew Sandpipers commence primary moult after arrival in southern Africa and males leave the tundra by early July, so passage through Dubai's latitude on migration to southern Africa ought to take place by the end of July (Elliott *et al.* 1976; Underhill *et al.* 1993).

Interspecific relationships: It is the most abundant wader at many southern African wetlands, typically making up more than half the number of waders at coastal wetlands in summer; at inland wetlands it is less dominant, but almost invariably prominent (Underhill 1995a). The less common waders and plovers frequently feed and roost in association with it. The distribution pattern is closely similar to that of the Little Stint *C. minuta.*

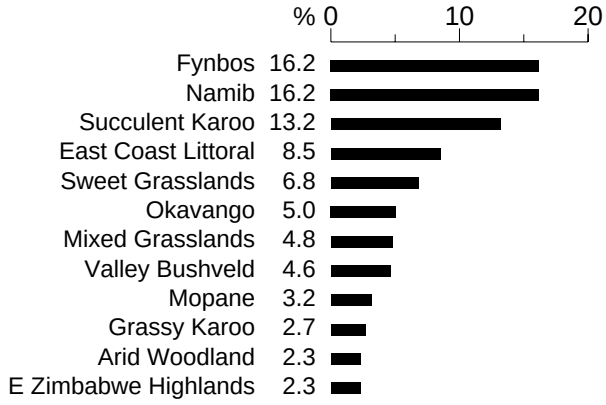
Historical distribution and conservation: In the past, records in Zimbabwe were mainly of birds on passage, but the construction of large dams has resulted in birds remaining throughout the austral summer. This has been established by retrapping later in the summer waders ringed in spring (A.J. Tree *in litt.*).

Loss of wetlands is the major threat. Of the 12 South African Ramsar wetlands (Cowan 1995), only Langebaan Lagoon (3318AA) supports large numbers (median of 11 midsummer counts, 21 000 (Underhill 1987a)). Two Ramsar wetlands in Namibia, Walvis Bay (2214CD) and Sandwich Harbour (2314AD), support 19 000 and 11 000 birds, respectively (R.E. Simmons *in litt.*). The conservation of the Curlew Sandpiper depends on the establishment of protected areas in the breeding range, the nonbreeding range, and at chains of stopover sites used for refuelling on migration.

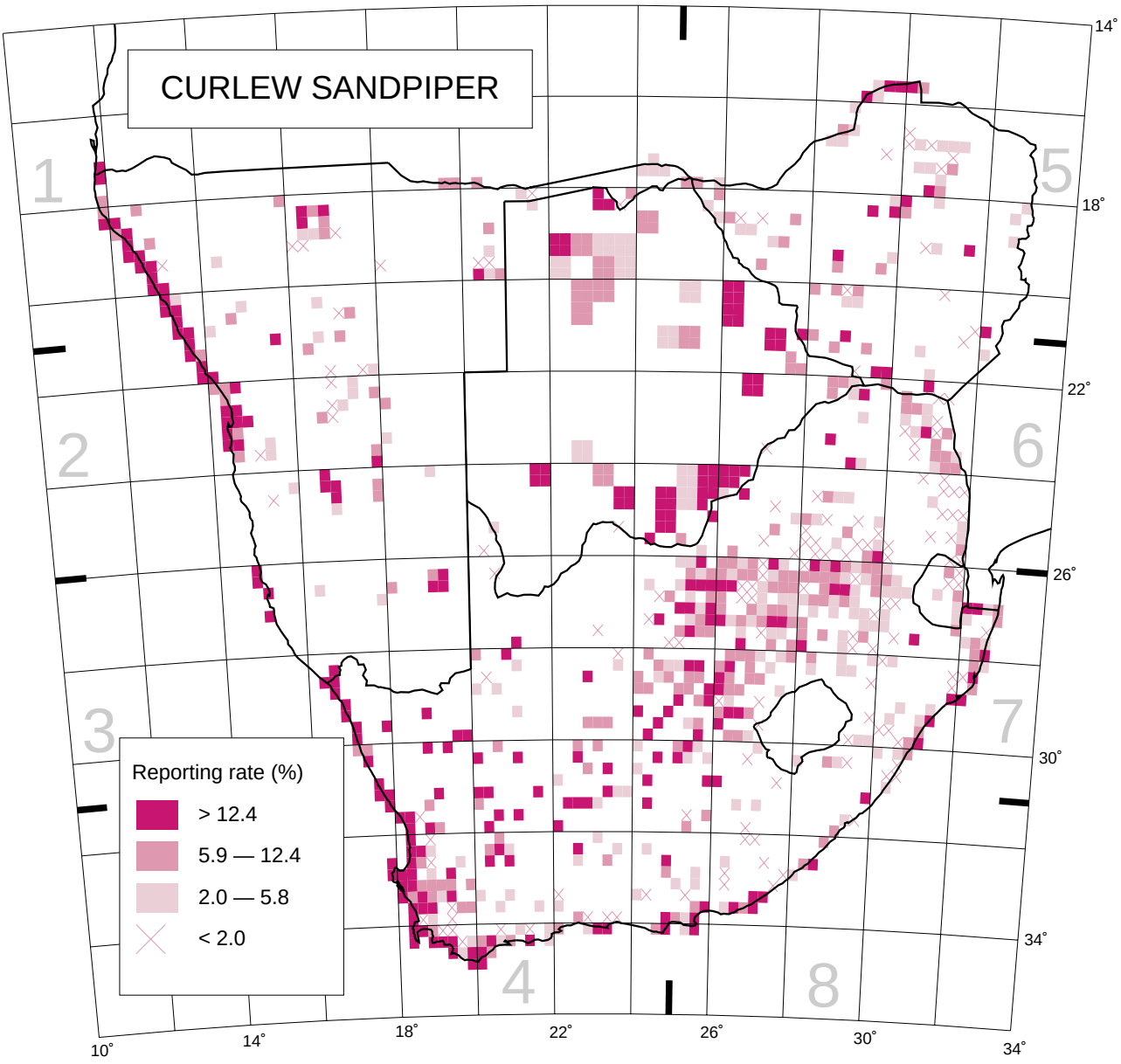
L.G. Underhill

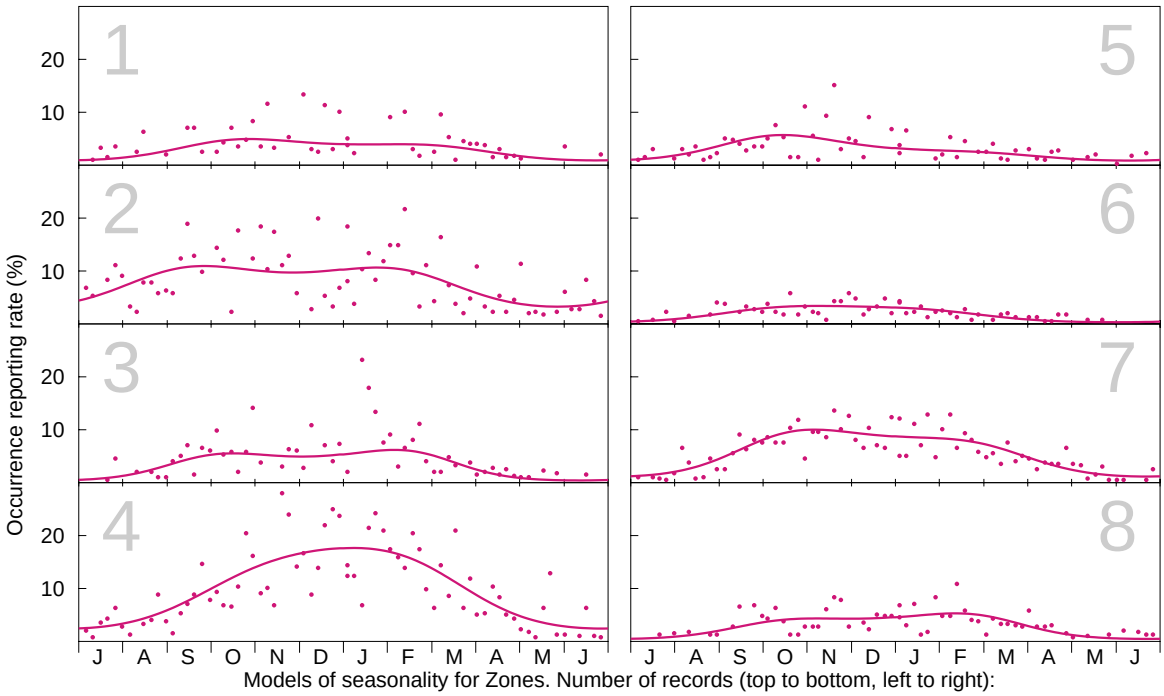
Recorded in 895 grid cells, 19.7%
Total number of records: 8678
Mean reporting rate for range: 10.7%

Reporting rates for vegetation types



Also Nama Karoo, Miombo, Central Kalahari, Northern Kalahari, Sour Grasslands, Moist Woodland, Southern Kalahari and Namibian Escarpment.





Models of seasonality for Zones. Number of records (top to bottom, left to right):
Occurrence: 92, 266, 170, 819, 252, 206, 1120, 162.