

Desert Sparrows in Morocco



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The Desert Sparrow *Passer simplex* is one of the most enigmatic, elusive and least-studied birds of the Western Palearctic. In the process of retracting its range, very specific in its habitat requirements and, like many desert species, markedly nomadic in habit, this is a very difficult species to encounter, even in regions where it is known to occur. Its presently known status, distribution and biology have recently been published in detail (Summers-Smith 1988). The only detailed study of its breeding, made on the now very rare Asian population, is contained in Sopyev (1965), and very little recent published information is available on the species in North Africa.

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This account summarises observations made on a small nesting colony of Desert Sparrows in southeast Morocco in April 1988, the first published occurrence of breeding in that country (Dr D. J. Summers-Smith *in litt.*).

Study area and habitat

My observations of breeding Desert Sparrows were made on 28th April 1988, in an area known as Erg Chebbi, a series of spectacularly high sand-dunes on the edge of the Hammada du Gui, which straddles the ill-defined border between southeast Morocco and Algeria. The actual site lies a few kilometres north of the small, remote oasis settlement of Merzouga.

Although previously unrecorded in Morocco by Summers-Smith (1988), small numbers of Desert Sparrows had in fact been present (and probably breeding) in this general area for several years (Mrs Erika Sharrock verbally; Gantlett 1988).

The breeding pairs that I encountered frequented habitat typical of that for the species in North Africa: flat, open areas of sand extensively colonised by awn grass *Aristida pungens*, a species recalling marram *Ammophila*, with a seed-head like that of oats *Avena*, about 75 cm high, which is apparently the staple food of adult Desert Sparrows. The only other vegetation appeared to be several isolated mature date palms *Phoenix dactylifera* and a few yellow-flowered desert plants provisionally identified as *Asteriscus spinosus* (*Pallenis spinosa*) and *Phagnalon rupestre*. Other birds seen in the area were Hoopoe Lark *Alaemon alaudipes*, Bar-tailed Desert Lark

117. Habitat of Desert Sparrows *Passer simplex*, Morocco, April 1988 (*M. Densley*)



Ammomanes cincturus and Trumpeter Finch *Rhodopechys githaginea*. Several Arabs were also summering here with their goats, which had already grazed off most of the *Aristida* seed-heads, no doubt a significant factor limiting the occurrence and survival of Desert Sparrows throughout their North African range.

Behaviour and appearance of adults

A minimum of six adult male Desert Sparrows was present in my study area, but only three females. It was immediately obvious that nests were present in a multi-stemmed mature date palm some 8-9 m high, which had been severely pollarded in the past and had since developed a dense spiny mass of secondary growth, within which three nests were located.

One was situated on the east side of the tree, about 2 m from the ground, receiving the light from the early morning sun. The other two were on the south side of the tree, about 1 m apart and about 1.5 m from the ground; both received the heat of the sun for much of the day.

In general, the males were much less shy than the females, and spent much more time at and near the nests, repeatedly examining the contents of them or sitting in the vegetation nearby.

No detailed descriptions of the voice of Desert Sparrow have apparently appeared in print (Summers-Smith 1988). The call of the males much resembled the ordinary chirping of the male House Sparrow *P. domesticus*. The song, however, was much more musical: a melodious trilling, reminiscent of Linnet *Carduelis cannabina* or, more especially, the rippling spring call of the Greenfinch *C. chloris*. The females were completely silent.

Apart from its basic diet of *Aristida* seeds, Summers-Smith (1988) recorded as the food of adult Desert Sparrows the seeds of a variety of desert plants, insects and miscellaneous gleanings from around human habitations. Only the seeds of *Aristida pungens* were recorded by me as food consumed by the adults, obtained by first fluttering into the air to grasp and then break down the tall, fruiting stems.

At no time did I see any of the sparrows drinking, nor did I see any source of available water; Summers-Smith (1988) suggested that the Desert Sparrow has no need of direct access to water, deriving all the moisture it needs from its food. Durrell & Durrell (1986), however, observed Desert Sparrows in Soviet Turkmeniya, some of them breeding, regularly visiting a tap to drink, and it is interesting to note that another pair of breeding Desert Sparrows, in the same general area as the ones I studied, and observed at the same time, whose existence was subsequently made known to me, had actually sited their nest containing young in the stone side-walls of an isolated well (R. A. Frost *in litt.*).

Judging from the colour rendering of illustrations of Desert Sparrow in field guides and other books, I suspect that most of them have been made from faded cabinet skins or from field descriptions unduly influenced by the very bright natural light conditions which normally prevail when one encounters the species. This has the effect of visually bleaching out much of the detail and subtlety of the plumage, especially the warmer elements of it. My own observations of plumage were made in the relatively cool



118. Male Desert Sparrow *Passer simplex*, Morocco, April 1988 (*M. Densley*)

and more optically relaxed conditions of early morning, creating (to my mind) a truer impression of colour and plumage detail. The accompanying photographs (plates 118-120), which were taken at the same time, have been selected specifically to convey the most accurate impression as possible of the birds' plumage. They are also some of the first ever published of Desert Sparrow.

Breeding biology

The outer, visible section of the nests consisted of an apparently randomly assembled mass of fibres from the bark of the date palm, and dry, green seed-heads of *Aristida* with the fruits removed. Intermixed with this were several small pieces of paper, lumps of matted blue-grey animal hair and one long strand of purple wool, clearly originating from a human garment. This seemingly disorganised exterior to the nest, however, concealed a much more sophisticated inner structure, set horizontally deep into the hostile mass of palm growth. Flask-shaped, about 25 cm long, with a sloping entrance, it was tightly and skilfully woven from the toughest bark fibres, which had the consistency of wire: a most effective deterrent to predators (fig.1). In shape and construction, it much resembled the nests of some weavers *Ploceus*. The inner cup to the nest was composed of very fine palm-bark fibres and dry grasses, mixed with a few feathers and traces of animal hair.

All three nests contained young, which were being fed by their parents, and the contents of two of the nests were examined. The nest on the east side of the tree, the one studied in most detail, held three very small,



119. Female Desert Sparrow *Passer simplex*, Morocco, April 1988 (M. Densley)

totally naked young, judged to be only a few days old. This could be deduced without removing them from the nest.

One of the nests on the south side of the tree contained two, much larger, well-feathered young, which were taken out of the nest for my examination in an unsolicited and rather misguided gesture of friendship on the part of one of the local Arabs. Both these young were judged to be between seven and ten days old, with only their major wing and tail feathers still in sheath. (A full description of the nestlings, probably the first to be published, appears as an appendix.)

It was immediately obvious that one of these two nestlings was markedly more advanced than the other, both in size and in feather development, clearly a manifestation of the prolonged hatching period of the eggs, characteristic of Desert Sparrow. This is believed by Summers-Smith (1988) to be a product of the high ambient temperature in the birds'

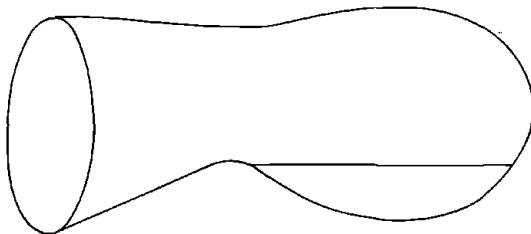
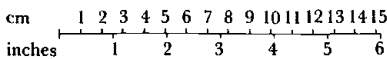


Fig. 1. Diagram of shape of nest of Desert Sparrows *Passer simplex*, Morocco, April 1988 (M. Densley)



120. Nestling Desert Sparrow *Passer simplex*, Morocco, April 1988 (*M. Densley*)

breeding area, which, apparently, initiates the development of the egg as soon as it is laid and before active incubation by the female. In view of the fact that all three nests found were placed on the sunniest, and thus warmest sides of the tree, perhaps this 'incubation by proxy' phenomenon has, for whatever reason, now developed into a prerequisite for breeding success by this species?

Most of my observations of breeding adults were made at the nest on the east side of the tree (the one containing the three newly hatched young and, in the early morning, the one in the best light). I was able to study the behaviour and appearance of the birds from a distance of about 10 m.

The male visited the nest to feed the young much more frequently, and, during the course of one hour, a total of nine feeding visits was made to the nest, two-thirds of them by the male. This frequency of visits compares well with Sopyev's (1965) early-morning observations on

121. Male Desert Sparrow *Passer simplex*, Morocco, January 1989 (*Ed Opperman*)



feeding by Russian Desert Sparrows, which averaged eight or nine per hour. Apart from her feeding duties, the female that I watched made only two very brief visits to the nest during the hour.

Food brought to the nest for the young seems not previously to have been specifically recorded. At the nest I studied, the female brought what appeared to be masticated seeds of *Aristida*, and also long-legged spiders (perhaps harvestmen). The male brought small Calypterate flies, small, brown, fleshy bodied moths and caterpillars. The male was seen to forage for these under small stones, in low vegetation and from the leaves and root bases of *Aristida*. The disturbance factor of nearby grazing goats was also exploited by the male sparrow while collecting insects and, at this time, and especially in flight to and from the nest, his appearance was strongly reminiscent of a diminutive Lesser Grey Shrike *Lanius minor*.

Acknowledgments

Dr J. D. Summers-Smith commented constructively on an early draft of this paper. I am further grateful to him for access to his computerised file of references on Desert Sparrow, and for his encouragement throughout.

I am grateful to Roy Frost for drawing my attention to the additional breeding pair of Desert Sparrows, and for help in other ways. Advice and assistance was also readily provided by W. A. Ely, David Lange, Martin Roome and C. S. V. Yeates.

Summary

The habitat, food, behaviour, appearance, voice, nest and nestlings of Desert Sparrows *Passer simplex* in Morocco are described, discussed and illustrated, as a result of observations made in April 1988.

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Appendix

Description of nestling about 7-10 days old

All feather growth apparently complete with exception of primaries, secondaries and tail feathers, which were all still three-quarters in sheath.

PLUMAGE Ear-coverts, plus chin, throat, breast and all other underparts, including undertail-coverts, pale, warm cream. Ear-coverts washed pale cinnamon. Forehead, crown, nape, back, rump and all wing feathers, except primaries and secondaries, pale cinnamon-brown tinged pink, very pale on rump and back and darker on forehead and front of crown. Centres and, especially, bases of greater coverts, greater primary coverts and tertials darker, creating a subtly mottled effect of darker-centred, paler-edged feathers. Loes and area immediately surrounding eye sooty-brown (a character of immature male?). Emergent primaries and secondaries warm grey-brown, with very narrow, contrasting fringes of pale pinkish-buff. Emergent tail feathers virtually black in central area, narrowly fringed pale pinkish-buff. Outer feathers essentially pinkish-buff, with small central markings of warm grey-brown.

BARE PARTS Bill, legs and feet pale pink/flesh. Eye black with hazel-nud-brown iris. Gape creamy lemon-yellow.