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Nest-site selection of the Common Wheatear in high mountain areas of southeastern Spain.—The nest site and its surrounding microhabitat are two fundamental elements that act both as proximate factors in territorial establishment (Hildén 1965) and as ultimate factors conditioning reproductive success (Wray and Whitmore 1979). Despite the fact that the microhabitat may be as important to the bird as the nest site itself (Martin and Roper 1988), few works have concentrated on the characteristics of the microhabitat surrounding the nest (but see Mackenzie and Sealy 1981; Clark et al. 1983; Petersen and Best 1985a, b). This note describes the nest site and the immediate microhabitat surrounding the nests of the Common Wheatear (*Oenanthe oenanthe*).

Common Wheatear nests were found during a random survey carried out between 2000 and 2800 m a.s.l. in the pasture-scrubland of the high-mountain area of the Sierra Nevada in southeastern Spain (see Zamora 1988 for a detailed description of the habitat). Sampling of the nest microhabitat and the territorial habitat was carried out in the following manner: four lines, each 15 m long, were traced outwards from the nest, the first direction being chosen at random and the other three following successively at 90° angles. The first sample within each line was taken at 25 cm from the edge of the rock covering the nest and the next three at further 25-cm intervals up to 100 cm from the rock. In this way 16 samples were obtained of the microhabitat immediately surrounding the nest. Five more samples spaced at 3-m intervals were taken along the remaining 14 m of each line, giving a total of 20 samples of the sector of territory surrounding the nest. The data were obtained by sticking a round metal rod, 1 cm in diameter, vertically into the ground at each sample point and noting the type of substrate that touched the bottom of the rod and at 5-cm intervals throughout its height (as described by Wiens and Rotenberry 1981). The following variables resulted (the corresponding nomenclature used in Table 1 appears in brackets): (1) The main elements covering the habitat (in percent cover): herbaceous layer (GRASS); total shrub cover (SH.CO), including *Genista baetica* (GENI) and *Juniperus communis* (JUNI); bare ground (BARE); litter (LITTER); and rocks (ROCK). (2) Vegetation structure: HIT.$\bar{X}$ = average number of hits per sample; MAX.H = the height of the highest shrub encountered along all four sample lines; DIV.I = diversity index of the vertical profile of the shrub layer; and HET.I = horizontal heterogeneity index of the vegetation (Wiens 1974).

TABLE 1

THE MEANS AND STANDARD DEVIATIONS OF THE REPRESENTATIVE VARIABLES FOR THE TERRITORIAL AND NESTING MICROHABITATS

Variables	Territorial habitat	Nesting microhabitat	t-test[a]
GRASS	38.95 (19.94)	23.18 (17.63)	3.79
GENI	11.66 (09.40)	4.43 (06.77)	2.16
JUNI	9.17 (14.72)	1.56 (06.45)	4.31
SH.CO	23.75 (16.24)	9.90 (15.85)	5.37
BARE	38.75 (13.77)	21.61 (17.96)	3.39
ROCK	28.13 (15.24)	56.21 (16.10)	7.85
LITTER	17.71 (14.22)	11.45 (11.01)	2.42
HIT.$\bar{X}$	3.00 (01.84)	1.51 (01.43)	3.06
MAX.H	30.00 (16.94)	10.00 (08.04)	6.52
DIV.I	4.27 (02.16)	1.77 (01.10)	6.61
HET.I	6.45 (03.09)	6.80 (04.52)	0.42

[a] All t-values are significant at $P < 0.05$ except HET.I.

Statistical analyses were carried out using the paired t-test and stepwise discriminant function analyses (DFA). Data were tested for statistical assumptions of these analyses. The variables were transformed prior to the statistical analyses: the arcsine transformation ($x = \arcsin[\sqrt{x/100}]$) was used for variables expressed as percentages, and the logarithmic transformation ($x = \log[x + 1]$) was applied to the remaining ones. The BMDP statistical package (Dixon 1983) was used for all analyses.

Of the 24 Common Wheatear nests found, 22 were tucked under loose rocks on the ground surface, and two were hidden in excavated holes beneath semi-buried rocks. The rocks covering the nest were all more or less similar size (height = 20.1 ± 11.1 cm, length 90.0 ± 26.9 cm, width 66.2 ± 23.2 cm, [$\bar{x}$ ± SD], N = 22) and the nest themselves were situated at a distance of 30.9 ± 17.1 cm from the outer edge of the rock.

Of the 11 variables compared, only HET.I was not statistically different between the nesting microhabitats and the samples of the territories (Table 1). The values of the cover and structure of the vegetation were in the territory, as a whole, higher than those of the microhabitat surrounding the nesting sites. In fact, only for the variable ROCK were the values for the nesting sites higher than those of the territory.

I performed stepwise discriminant function analysis of a matrix of 11 variables and 48 samples, the latter representing the 24 samples relating to the nesting-site microhabitat and the 24 samples of the nearby patch of territory. The analyses included the variables ROCK, MAX.H, and HIT.$\bar{X}$ in the discriminant function, identifying them as those which best differentiated between the nesting microhabitat and that of the territorial habitat. The discriminant function correctly classified 89.6% of the cases to their corresponding group. Thus, both univariate and multivariate analyses reveal that the Common Wheatear chooses particular microhabitats for nesting that differ from other nearby patches within the territory.

The Common Wheatear in the Sierra Nevada makes its nest on the ground beneath a rock, and the size of these rocks is relatively uniform. Similar specific nest-site requirements have been reported for other birds that nest in scrubland (cf. Petersen and Best 1985a, b; Parker 1986; Martin and Roper 1988). Furthermore, a statistical comparison shows clearly that the nature of the microhabitat immediately surrounding the nest site differs significantly from that of the territorial habitat, and it is likely that the mating pair use all these different elements as proximate factors in their choice of nesting site. The biological significance of those preferences is that the rocky microhabitats conceal the nest from predators (see also Martin and Roper 1988).

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Gull-billed Tern predation on a Least Tern chick.—During July, 1988, I often saw two Gull-billed Terns (*Sterna nilotica*) flying back and forth through the Least Tern (*Sterna antillarum*) colony of approximately 1500 pairs in Gulfport, Harrison County, Mississippi. On 13 July, one Gull-billed Tern, searching along the water's edge, swooped down and picked up a 7-to-10-day-old Least Tern chick. It landed 70 m down the beach where it swallowed the chick head first. It appeared to have some difficulty handling its prey, taking a couple of minutes to shake the chick and position it. Only one adult Least Tern harassed the Gull-billed Tern. The diet of the Gull-billed Tern primarily consists of insects, but also includes fish, amphibians, reptiles, crustaceans, earthworms, small mammals, and nestling birds. Rohwer and Woolfenden (1968) reported that the diets of six Gull-billed Terns nesting in Gulfport, Florida, included green anoles (*Anolis carolinensis*). Pellets from a population at Ivanhoe, New South Wales, primarily consisted of mice, although a few contained feathers from Hoary-headed Grebe (*Poliocephalus poliocephalus*) chicks (Hobbs 1976). Other avian