

# Range extensions, food and breeding of the Marsh Owl in the northwestern Namib, South West Africa/Namibia

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## ABSTRACT

Marsh owls *Asio capensis* were found at 13 localities along the northwestern Namib, SWA/Namibia. Three nests were found. These records indicate a more extensive distribution along the Namib coast than was previously thought. Observations were made on the owl's hunting methods, food, breeding biology and behaviour near the nest.

## INTRODUCTION

The marsh owl *Asio capensis* is an African species thought previously to occur only in open, grassy and marshy habitats (Mackworth-Praed & Grant 1962). Although Steyn (1982, ex. Dixon 1970) refers to isolated pockets in the west of SWA/Namibia, Newman (1984) and Maclean (1985) give no distribution for this area.

This paper reports on new distribution and breeding records within and adjacent to the Skeleton Coast Park, in northwestern SWA/Namibia.

## STUDY AREA AND METHODS

Observations were made on the breeding behaviour of marsh owls in the Ugab River mouth ( $21^{\circ}09'S$ ;  $13^{\circ}40'E$ ) and the Uniab Delta ( $20^{\circ}10'S$ ;  $13^{\circ}13'E$ ) in the Skeleton Coast Park, and the Obob River in Damaraland ( $19^{\circ}53'S$ ;  $13^{\circ}27'E$ ). The first two sites were in dense scrub, surrounded by open gravel plains and fluvial terraces. The third site was in eroded gullies surrounded by open gravel and stony plains.

Daily observations were made on the Ugab nest from when it was first located on 9 April (containing three eggs) until the nestlings had left the nest on 9 May. The Uniab nest site, also found in April (with two eggs), was visited infrequently until the nest was deserted. The Obob nest (with two nestlings), found on a patrol in mid-June, was not revisited. The Ugab nest was visited every afternoon, usually between 17h00 and sunset at about 20h00. Pellets were collected and identified by Dr. M. Avery of the South African Museum, Cape Town. Remains of fresh prey brought to the nest were identified when possible, but invertebrate prey was under-represented in these samples.

## RESULTS AND DISCUSSION

### Distribution

Sight and breeding records for marsh owls along the northwestern Namib coast (Figure 1) indicate that they are confined mainly to river courses and particularly to the delta regions of rivers, but they were also seen away from rivers in the desert. These latter sites are considerably more arid than the habitat previously

ascribed to this species (e.g. Steyn 1982). These birds probably return to the river courses during dry periods and to breed.

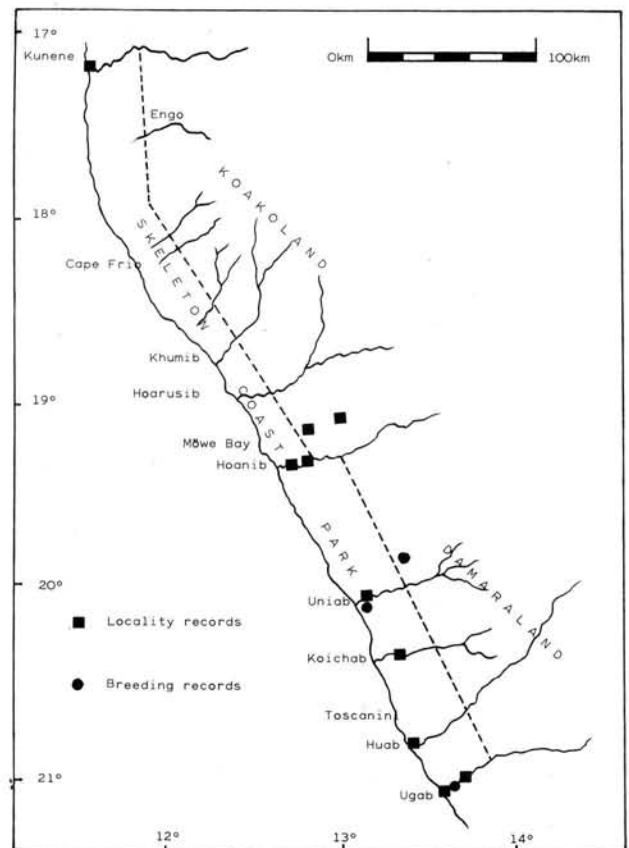


FIGURE 1: Sight and breeding records for marsh owls along the northwestern Namib Coast.

### Hunting methods

The hunting methods recorded were similar to those documented by Steyn (1982). The owls either hunted from a perch or while in flight. When hunting from a perch the Ugab owls would sit motionless on the outer branches of a dried out *Nicotiana glauca* or *Acacia al-bida* overlooking the river bed, which was vegetated mainly by grass and sedges. After spotting prey, the owl would glide towards the area and then drop onto the prey with talons outstretched and wings arched upwards. The average time spent perch-hunting between

attempted strikes was 1,5 min ( $n = 6$ ). The percentage of successful hunts could not be assessed because of the high vegetation. When hunting on the wing the owls would glide slowly over the ground at 1–2 m above the vegetation. On locating prey, the owl would dive into the grass, and disappear from sight. Sometimes the owls would hunt from 3–4 m above the vegetation, hovering over an area for about 6 s before resuming the quartering flight. Strikes at prey were sometimes also made from a hovering position. The average time spent gliding and hovering between perching was 4 min 45 s ( $n = 9$ ). The Uniab owls did all their hunting from the wing as there were no suitable perches in the area.

### Prey

A list of prey items ( $n = 351$ ) identified from pellets is given in Table 1. Nine fresh prey items brought to the nest consisted of *Parotomys littledalei* ( $n = 5$ ), *Rhabdomys pumilio* ( $n = 3$ ) and a Cape sparrow *Passer melanurus*. Of the total sample, 86% (by number) were small mammals, 0,3% birds and 14% invertebrates, mainly insects. By mass, approximately 97% was of small mammals, mainly rodents. This is similar to the findings in other collections of marsh owl pellets, where rodents and insects predominate (Steyn 1982).

TABLE 1: Diet of the marsh owl in the Skeleton Coast Park, determined from pellets collected from two nest sites in the Ugab and Uniab Rivers. The data on the mammalian prey remains were published previously by Avery (1986).

Group	Species	No. records	
Mammals: Insectivora Rodentia	<i>Crociodura cyanea</i>	4	
	<i>Desmodillus auricularis</i>	4	
	<i>Gerbillurus paeba</i>	230	
	<i>Praomys natalensis</i>	45	
	<i>Rhabdomys pumilio</i>	7	
	<i>Parotomys littledalei</i>	7	
	<i>Petromyscus collinus</i>	3	
	Subtotal (mammals)	300	
Insects: Scarabidae	<i>Scarabaeus</i> sp.	10	
	<i>Heteroliquus perinquelyi</i>	6	
	Tenebrionidae	<i>Cauricara brunnipes</i>	1
		<i>Onymacris bicolor</i>	1
		Unidentified sp.	4
	Cuculionidae	<i>Cleonus</i> sp.	4
		Unidentified sp.	1
	Orthoptera	<i>Comicus</i> sp.	3
		Unidentified crickets	9
		Unidentified grasshopper	2
Arachnids:		<i>Carparachne</i> sp.	8
	Unidentified solifuge sp.	2	
	Subtotal (invertebrates)	51	
Total		351	

### Nest sites

The nest sites chosen by the owls differed at the three localities. The Ugab nest was amongst dense *Sueda*

*plumosa* scrub and *Sporobolus virginicus* grass, surrounded by *A. albida* and the invasive alien *N. glauca* which were used as perches. The Uniab nest was well hidden under large (1,5 m tall) *Scirpus diocus* sedge with no higher vegetation nearby to offer perches. The Obob nest was on top of a rock shelf under the matted inner branches and roots of a *Salvadora persica* growing against a rock face in the river.

Both the Ugab and Uniab nests were typical of the species, being well hidden and with a short tunnel entrance consisting of a shallow basin of matted dry grass. The Obob nest was atypical; it was not well hidden and the nest basin was flat and built on top of a rock shelf. The Ugab and Uniab nests were near the coast, and both had northwest facing entrances. The prevailing wind along the coast is southwest and many birds build their nests facing north in this region, e.g. dusky sunbirds *Nectarinia fusca* (per. obs.)

### Breeding period

Two nests were found in April, containing two and three eggs respectively. The mean measurements of the five eggs were  $39,7 \times 33,8$  mm (range  $38,7 - 40,2 \times 33,1 - 34,3$  mm) which compares favourably with published measurements (Steyn 1982; Maclean 1985). The other nest, found in mid-June, had two nestlings. The first egg in the Ugab nest hatched on 20 April and by 24 April all three eggs had hatched. Taking the incubation period as 27–28 days (Steyn 1982) the eggs were laid on about 22–25 March. These records coincide with the March–April laying peak suggested by Steyn (1982).

### Parental and nesting behaviour

The Ugab nest was found when one of the adults was flushed from underfoot and circled overhead before landing again. On subsequent visits the owl flew overhead and occasionally uttered a harsh croak. This sometimes attracted its mate, which also flew about, but did not call. Once the observer had moved about 40 m away the owl settled and continued incubating. This behaviour continued until the eggs hatched, when the bird became more agitated and aggressive. The bird would mock-dive an intruder and call constantly. The mate also called during this period. When the nestlings were about 10 days old the owl on duty at the nest would fly up when an intruder was 50–70 m away and start diving and calling. When the nestlings were about 14 days old the parents began “broken wing” distraction displays. These were done in the vicinity of the nest while emitting high-pitched mewling calls. The parent birds would flop across the grass, moving away from the nest, for 30–40 m before flying off and settling 60–80 m away. Similar behaviour was recorded by Dean (1969) and Steyn (1982). At about 12 days old nestling were sitting upright, hissing and snapping their bills at the observer. This continued until the nestlings left the nest, on 9 May, at about 20 days old (cf. Steyn (1982) states that the

nestling can stand at 10 days and leaves the nest at 18 days). After the nestling had left the nest, the parents continued performing the broken wing displays as well as circling and croaking above the intruder when he approached to within about 50 m of the young owls.

One of the adult birds, probably the female, played a major role in the incubation and care of the nestlings. Alarm and distraction displays were initiated by this bird. The other parent usually roosted in the sedge and grass about 100 m away, and would join the on-duty bird only once it had started to call.

Two of the three breeding records were successful, producing five young (1.7 per breeding attempt). These records suggest a more resident population on the northwest Namib coast than was previously thought. Steyn (1982) suggests that "although stated to be resident, this species is undoubtedly nomadic to a certain extent". This is probably true, but at some localities, e.g. some rivers and deltas which remain well vegetated throughout the year as well as in dry years, the birds may well be resident.

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