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THE SPOTTED CRAKE *PORZANA PORZANA* (AVES: RALLIDAE) IN SOUTH-CENTRAL AND SOUTHERN AFRICA

by

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DISTRIBUTION

McLachlan & Liversidge (1970) give the southern African distribution of the migratory Spotted Crake *Porzana porzana* (L.) of the Palaearctic as "as far south as Lesotho, Potchefstroom and northern South West Africa". Smithers *et al.* (1957), give one record from Rhodesia: a specimen taken in February near Marandellas now in the U.S. National Museum in Washington. There are subsequent published records from Banket, north-west of Salisbury, in Rhodesia, by Parnell (1964, 1965, 1967). Personal sight records from Rhodesia will be found in Table 1 and dated records from all sources in Table 2. All records are shown on Map 1.

Certain distributional aspects of Map 1 should be noted. Dr. R. A. C. Jensen (*in litt.*) sent to Mr. P. A. Clancey, Director of Durban Museum and Art Gallery, a photograph of a *P. porzana* captured at Gobabeb in South-West Africa early in 1972 and knew of two other records from the area in the same season. In the same territory Dixon (1970) was shown a captive bird which he was told was trapped near Walvis Bay. Courtenay-Latimer (1963) gives a sight record dated 5 August from the Cape Province side of the Orange River mouth. This record is not shown in Table 2 or Map 1, nor was it accepted by Winterbottom (1968); in my opinion correctly. In the first place, the date, August, is unlikely for a palae-arctic migrant; no supporting data, other than habitat, are given

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and there is no indication that the author had had any previous experience of *P. porzana* or even appreciated that it was the first record for the Cape Province. The Savuti Swamp specimen in the National Museum of Rhodesia, Bulawayo, is the second record for Botswana (Smithers (1964)). These records seem to be the only recent ones for southern Africa outside Rhodesia.

Mr. E. L. Button, Taxidermist of the Durban Museum, kindly informs me that he obtained three *P. porzana* in Zambia: a female caught by a dog in a swamp at the Lundazi/Msuzi confluence on 13 December; a male shot on a snipe shoot at the Itawa swamp, near Ndola, on 1 January, and an unsexed bird, too damaged to preserve, in a dambo near Solwezi on 12 February. The bird taken on 13 December seemed to be exhausted and had perhaps just arrived from the north. Other Zambian records are given in Benson *et al.* (1971). Stoehr & Sclater's (1906) records for February, 1904, are not from Feira on the Zambezi River as most books have it but from Ntambwa in Zambia, which is *c.* 65 km up the Luangwa River from its confluence with the Zambezi at Feira (Benson *et al.*, 1970, p. 55). Dr. J. M. Winterbottom advises (*in litt.*) that the South African Museum in Cape Town has three specimens collected by Dr. Stoehr: two females obtained on 25 February, 1904, being the ones referred to in Stoehr & Sclater (1906) and one collected earlier, judging by Dr. Stoehr's collection number but otherwise lacking data. This explains Stark & Sclater's (1906) comment that "the South African Museum has recently received several examples from the Zambezi Valley, near Feira, presented by Dr. Stoehr."

A specimen from Weenen in Natal was taken by Arnold in 1908, and was at one time mounted for public display in the Transvaal Museum, Pretoria. It was not mentioned by Roberts (1940), doubtless because he, in common with most workers, had forgotten what was on display in his own museum. Since Roberts (1940) did not mention it and because it was still on display, it was not included in the Natal avifauna by Clancey (1964).

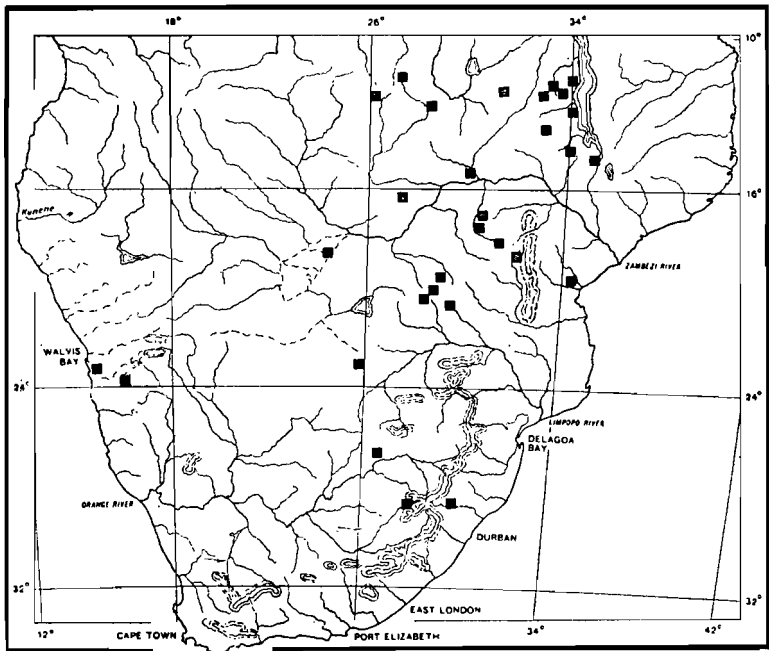
Five of the seven Rhodesian specimens of *P. porzana* in the National Museum in Bulawayo were picked up dead or dying, as was the Lesotho specimen (Murray (1913)). They travel at night and very low down, 1 to 3 m above the substrate according to Dement'ev *et al.* (1969). A. N. B. Masterson (*in litt.*) also makes the point that in most seasons they are only seen for a day or two and then cannot be found even with the aid of a dog to flush them. They did not seem to be permanent residents at Aisleby Sewage Dam, Bulawayo, Rhode-

sia, in early 1973 (Table 1). They are itinerants, as Moreau (1972) would call them, within their winter range.

It appears from Table 2 that *P. porzana* is present in southern and central Africa from December to early May. While there is no reason to doubt that it occurs regularly in season in southern and south-central Africa, no estimate of numbers present is yet possible for so unobtrusive a bird. The numbers may, in fact, be substantial since it is regarded as a common bird in the western parts of the Soviet Union (Dement'ev *et al.*, *loc. cit.*), and Backhurst *et al.* (1973), regard it as more a passage migrant than a winter resident in East Africa. Largely by trapping, a technique seldom used in southern Africa, 28 specimens were obtained in Malawi (Benson (1953)).

The return journey to the breeding grounds may be rapid since arrival dates in the Soviet Union vary between 7 March and 16 May, and a bird, presumably on northward migration, died at Queen's Mine, Rhodesia, on 30 April. According to Dement'ev and others they leave the Soviet Union from the last third of August to the end of October. The southward journey may be slower than the northern one since they do not reach the Zambezi until well into December.

MAP 1



Records of the Spotted Crake *Porzana porzana* from south-central to southern Africa. The Tete, Moçambique, record of Peters and Loveridge (1953) is not included.

MOULT

Stresemann & Stresemann (1966) report a ringed *P. porzana* which dropped all its flight-feathers and grew a new set in the first three weeks of August; this being the postnuptial moult. Witherby *et al.* (1943), distinguish a winter and a summer plumage (off-season and nuptial respectively) and believe that the prenuptial moult is incomplete, affecting only the contour feathers and that it takes place between December and April. This is supported by an examination of 26 African-taken specimens.

Some birds have markedly worn primaries and some fresh to normal primaries. The specimens in each category are listed in Table 3. It would seem that the birds with worn primaries are juveniles, since it is often the case that juvenal feathers are less strong and abrade more easily than adult feathers and are grown before the adults undergo their postnuptial moult. The corollary would be that birds with fresh to normal primaries are adults. Such normal primaries are found in March. The resulting proportion of 10 juveniles to 17 adults is not unreasonable for a species which probably breeds at one year old.

BIOLOGICAL DATA FROM SPECIMENS

A female taken at Chipata (Fort Jameson), Zambia, on 3 February had grass seeds and grit in the stomach, and another taken at Kanyezi, Dedza district, Malawi, on 26 February had grass seeds and insects. A female taken at Salisbury, Rhodesia, on 24 February had a dusky brown palate and weighed 84g. Birds taken on 11 February and 15 April were markedly fat, while a male taken in Malawi on 21 March had the gonads enlarging.

BEHAVIOUR AND HABITAT

After over twenty years of bird study in Rhodesia the present author in company with Mrs. P. Lorber saw his first Spotted Crake at the Aisleby Sewage Dam in the late afternoon of 28 January, 1973 (Table 1). Other migratory crakes seen, *viz.*, African Crake *Crex egregia* and the palaeartic Corncrake *C. crex*, are also listed in Table 1. The 1972/73 drought concentrated crakes at Aisleby, which was one of the few places with suitable habitat left in the Bulawayo area of Rhodesia. The *P. porzana* seen on 28 January was foraging at the

outer or waterside edge of a sedgebed: it was shy and frequently moved from point to point by going inside the sedges rather than by the easier route over the mud just beyond the outermost plants.

TABLE I

Sight records of migrant crakes at Aisleby Sewage Dam, Bulawayo
January to March, 1973

Date	<i>Porzana porzana</i>	<i>Crex crex</i>	<i>Crex egregia</i>
14 Jan.	-	1	1
21 Jan.	-	-	1
28 Jan.	1	1	-
3 Feb.	-	-	-
11 Feb.	-	-	1
17 Feb.	2	-	-
4 Mar.	1	1	1
11 Mar.	1	1	1
17 Mar.	-	-	-

On 18 February in the afternoon Mrs. Lorber's and my attention was caught by two *P. porzana* sparring and fluttering up into the air by a rivulet separating two blocks of sedgebeds at Aisleby. The fight ended with both birds disappearing into the southern block. No call was heard. Thereafter, two birds were seen foraging separately, one in the eastern and one in the southern block. One bird was duller, less yellow in colour but with bright buff under tail-coverts, this probably a female judging by the secondary sexual characters laid down in Witherby *et al.* (1943), and the other was brighter, with markedly yellow legs and pale buff under tail-coverts, and was probably a male. The observation suggests intersexual temporary territoriality in winter-quarters. One had a prominent pale patch between the bill and the eye but the other did not. Variability in this character is also apparent in specimens but is not sex-linked.

Much of their time was spent inside sedgebeds and when they appeared outside them it was to move quickly from one bed to another or to forage for a little while on the edge. Normally when visible they foraged by erratic walking and pecking at the vegetation or the surface of the water but one of them also foraged like a Ruff *Philomachus pugnax* (also present), wading up to its belly in the water and probing the mud with its bill, the head being largely submerged.

When in the open the tail is normally held erect and jerked as the bird moves. It gives the impression of never being fully at ease when exposed. Preening is undertaken in the open and this may be extensive. On 11 March a preening *Porzana porzana* was approached by a juvenile Common Moorhen *Gallinula chloropus* in the course of the latter's foraging. As it got near, the crake suddenly fled into the sedges. The crake was not molested by other species present, nor was it noticeably afraid of them, *viz.*, Redknobbed Coot *Fulica cristata*, Common Moorhen, except as described above, *Philomachus pugnax*, Wood Sandpiper *Tringa glareola*, and Blackwinged Stilt *Himantopus himantopus*.

G. W. Parnell's (1965, 1967) behavioural observations on this crake at Banket, Rhodesia, do not completely parallel those made at Aisleby but all fall within the norms given by Bannerman (1963) and Witherby *et al.* (1943). This correspondent points out, *in litt.*, that there is a word left out in his (1972) comments on the present species. The intention was for it to read "*Mainly* appears to feed swimming . . .". He did not intend to say that that was the only method by which they foraged.

My correspondent, Mr. A. N. B. Masterson, who has much experience of *P. porzana* around Salisbury and has collected it there, writes that "When flying across, but not when flying away except when it brakes just as it falls into the grass, this bird has a very distinct if narrow white margin along the leading edge of the wing. It appears otherwise rather nondescript, though in good light and favourable conditions I have also seen the yellow at the base of the bill. In size it is noticeably smaller than the African Crake, being more like the Striped Crake *Porzana marginalis*, though that is smaller still" (? not as specimens). Mr. Masterson believes that the white shoulder line is used as a signal when the wings are flexed in dense cover. He adds that he also has never heard the species call in Africa despite many hours spent observing them in the field.

The comparative feeding ecology of rails and crakes in seasonal swamps needs to be studied. By trapping in one seasonally flooded vlei in Malawi Benson (1944) obtained five species: *Crex crex*, *C. egregia*, *Porzana marginalis*, *P. porzana* and the Streakybreasted Flufftail *Sarothrura boehmi*. He also obtained specimens in the habitat of the Redchested Flufftail *S. rufa* (C. W. Benson, *in litt.*). The first two were noted at the same place as *P. porzana* at Aisleby (Table 1). Masterson (*in litt.*) also collected an African Water Rail *Rallus caerulescens* at the same time as he obtained his *P. porzana*

specimen and often heard *S.rufa* there (round Salisbury). Overlap with the Black Crake *Limnocorax flavirostris* and the Lesser Reedhen *Porphyrio alleni* should also occur, but species such as moorhens *Gallinula* spp. and *Fulica cristata* do not come into consideration since they normally feed in open water.

It would appear that the basic habitat requirement of *P.porzana* in Africa is dense vegetation in shallow standing water or on wet ground (Benson (1953) and *in litt.*, Benson *et al.* (1971), Parnell (1972) and *in litt.*, Masterson *in litt.*, and own obs.), and that it is more euryoecious than those rails and crakes which breed on its wintering grounds.

ACKNOWLEDGMENTS

I am obliged to Mrs. P. Lorber for assistance in field work, Mr. C. W. Benson for providing a list of specimens in the British Museum (Natural History) and commenting on a draft of this paper, Mr. P. A. Clancey who drew my attention to Dr. Jensen's letter and commented on a draft of this paper, Mr. M. P. Stuart Irwin for facilities for study in the National Museum of Rhodesia in Bulawayo, Dr. A. C. Kemp for the loan of material in the Transvaal Museum, Mr. A. N. B. Masterson for his very full letter on *P.porzana*, Mr. G. W. Parnell for commenting on a draft of this paper, Mr. A. J. Tree for data *in litt.*, and Dr. J. M. Winterbottom for data on material in the South African Museum. Mr. E. L. Button kindly supplied details of birds shot by him during his career in Zambia.

SUMMARY

Specimen and sight records of the Spotted Crake *Porzana porzana* (L.) in south, central and southern African countries are assembled and reviewed. On the east side of the continent it occurs down to 29°S, and appears to be present from December to early May, the c.70 dated records showing a peak in February. In its winter-quarters it is largely itinerant. Birds with noticeably worn primaries are believed to be juveniles; 10 such specimens were noted vis-à-vis 17 apparent adults. Notes on its foraging show that there is no difference in such behaviour as observed in Eurasia and in Africa. An observation suggestive of intersexual territoriality in winter-quarters is presented. Its normal habitat is dense vegetation in shallow water or on wet ground. This habitat is usually seasonal and is shared with other rallids of the genera *Rallus*, *Crex*, *Porzana*, *Limnocorax*, *Sarothrura* and *Porphyrio*.

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TABLE 2

Dated records of *Porzana porzana* in Africa south of 10°S.

Date	Place	Number	Collected or visual	Source
Dec.				
13	Lundazi/Msuzi confluence, Zambia	♀	C	E. L. Button
13	Mpika, Zambia	♀	C	N.M.B.
29	Selenia, Botswana	♀♀	C	B.M.N.H.
30	Banket, Rhodesia	1	V	Parnell, 1967
31	Bulawayo, Rhodesia	♀	C	N.M.B.
—	Nauas, S.W.A.	o	C	Stark & Sclater, 1906
Jan.				
1	Ndola, Zambia	♂	C	E. L. Button
4	Banket	2	V	Parnell, 1967
6	Chinteche, Malawi	♀	C	T.M.P.
9	Chinteche	♀	C	T.M.P.
11	Salisbury, Rhodesia	1	V	A. N. B. Masterson
25	Bulawayo	♀	C	N.M.B.
26	Figtree, Rhodesia	♀	C	N.M.B.
27	Filabusi, Rhodesia	♀	C	N.M.B.
27	Tete, Moçambique	♂	C	Peters & Loveridge, 1953
28	Aisleby, Rhodesia	1	V	R.K.B.
—	Salisbury	several	V	A. N. B. Masterson
Feb.				
3	Chipata, Zambia	♀	C	N.M.B.
6	Khota Kota, Malawi	5♂♂, ♀	C	B.M.N.H.
6	Mangoche, Malawi	♀	C	T.M.P.
7	Mangoche	♀♀	C	T.M.P.
8	Mangoche	♂♀	C	B.M.N.H., T.M.P.
8	South Rukuru R., Malawi	♂♀♀	C	B.M.N.H., T.M.P.
11	Mangoche	♀	C	T.M.P.
13	South Rukuru R.	♂	C	B.M.N.H.
17	Aisleby	2	V	R.K.B.
24	Salisbury	♀	C	N.M.B.
25	Ntambwa, Zambia	♀♀	C	S.A.M.
25	Kanyezi, Malawi	♀	C	C. W. Benson
26	Choma, Zambia	♀	C	N.M.B.
26	Kanyezi	♂	C	B.M.N.H.
28	Kanyezi	♀	C	B.M.N.H.
—	Salisbury	several	V	A. N. B. Masterson
—	Marandellas, Rhodesia	o	C	Smithers <i>et al.</i> , 1957

TABLE 2 (continued)

Date	Place	Number	Collected or visual	Source
March				
—	Salisbury	several	V	A. N. B. Masterson
4	Aisleby	1	V	R.K.B.
6	Mphunzi, Malawi	♀	C	T.M.P.
11	Aisleby	1	V	R.K.B.
12	Solwezi, Zambia	o	C	E. L. Button
14	Umtali, Rhodesia	♂	C	N.M.B.
21	Kanyezi	♂♀♀	C	T.M.P.
27	Kanyezi	♂	C	B.M.N.H.
April				
1	south of Mbala, Zambia	1	V	A. J. Tree
13	Savuti, Botswana	♀	C	N.M.B.
15	Potchefstroom, Tvl.	o	C	T.M.P.
22	Tanzania	o	C	B.M.N.H.
30	Queen's Mine, Rhodesia	♀	C	N.M.B.

Abbreviations

B.M.N.H. = British Museum (Natural History) (Tring)

C = Collected

N.M.B. = National Museum of Rhodesia, Bulawayo

R.K.B. = Author

S.A.M. = South African Museum, Cape Town

T.M.P. = Transvaal Museum, Pretoria

V = Visually recorded

Names and initials are used to indicate records provided *in litt.* or *pers.comm.*

TABLE 3

Dates, sexes, and places at which *Porzana porzana* have been taken with worn primaries (A) and with fresh to normal primaries (B).

A. Worn Primaries		B. Fresh to Normal Primaries	
Date	Place	Date	Place
13 Dec.	Mpika	6 Jan.	Chinteche
31 Dec.	Bulawayo	9 Jan.	Chinteche
26 Jan.	Figtree	25 Jan.	Bulawayo
8 Feb.	Rukuru R.	27 Jan.	Filabusi
24 Feb.	Castellon, Spain	3 Feb.	Chipata
24 Feb.	Salisbury	6 Feb.	Mangoche
26 Feb.	Choma	7 Feb.	Mangoche
14 March	Umtali	8 Feb.	Rukuru R.
21 March	Kanyezi	8 Feb.	Mangoche
n.d.	Lesotho	11 Feb.	Mangoche
		6 March	Mphunzi
		13 March	Savuti
		21 March	Kanyezi
		21 March	Kanyezi
		15 April	Potchefstroom
		30 April	Queen's Mine
		n.d.	Weenen, Natal