# NOTES ON A SMALL COLLECTION OF BIRDS FROM PANDA MATENGA, N.E. BECHUANALAND

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### INTRODUCTION

At the beginning of November, 1953, I visited the Colonial Development Corporation's cattle ranch at Panda Matenga on the Bechuanaland/Southern Rhodesia border, 40 miles south of the Victoria Falls. The main ranch buildings are on the "Old Hunter's Road". Small bird collections were made last century by Oates and Holub when travelling on this road but the only recent collecting in north-eastern Bechuanaland was by the 1930 Vernay-Lang Kalahari expedition (in the dry season) and Roberts (1932) described a number of new forms from their skins. One of the main objects of my collection was to ascertain the eastern limits of the ranges of some of these forms and to obtain some of the same birds in the wet season, particularly the Cisticolas, which have a distinctive breeding and non-breeding dress.

I therefore chose the early rains for my visit, although this meant that movements would be restricted, and I did most of my collecting within walking distance of the headquarters of the ranch at Panda Matenga, and from the Agricultural Section, about seven miles north-west. In addition I had several runs further afield, to the Khazuma Pan and Reprieve Plain, when transport was going in those directions.

### TYPES OF COUNTRY

Even within these limits it was possible to collect in several different types of country. These have been numbered so that they may be referred to briefly in the Summarised List of the Collection (pages 107-8): in this list I have enclosed the number in brackets when the species was seen, but not collected, in that type of country.

- 1. Bush Country. The headquarters at Panda Matenga are surrounded by open bush country on red basaltic soils. There are few big trees, but there is some tangled bush and undergrowth and occasional grassy clearings. Birds were usually found singly or in pairs; they were evenly distributed over the area and comparatively static so that one could be reasonably sure of finding the same birds within a limited area several days in succession. Typical birds were the Flappet and Sabota Larks Mirafra rufocinnamomea and M. sabota, the Goaway Bird Corythaixoides concolor, the Black-headed Tchagra Tchagra senegala, and the Mouse-coloured Flycatcher Bradornis pallidus.
- 2. Sandveld. Ten miles north-west of Panda Matenga the soil is Kalahari Sand, and there is an extensive belt of heavily wooded country with tall timber trees, mukwa Pterocarpus angolensis, mopomena Entandrophragma caudatum, and Rhodesian Teak Baikiaea plurijuga predominating. There is little tangled bush. Only a small area of the sandveld, along the edge of agricultural lands and on either side of the road near the head of the Gawana River was worked. Although fewer days were spent there, the sandveld yielded more species than the bush country. A longer stay would undoubtedly have revealed more. In spite of this richness of bird life it was possible to walk for some distance or sit for some

time in the sandveld without seeing any birds at all, for here there seemed few territorial claims and the birds were largely in parties incessantly on the move. Many of these parties, especially of the larger birds—Shrikes, Orioles, Hoopoes, Babblers—consisted of one, or possibly two, species travelling together (species found in these smaller parties are marked "S" in the Summarised List of the Collection). I had the impression that the smaller passerines moved in more widely dispersed and larger parties of mixed species (species found in these larger parties are marked "L"): when these parties were about there was such a confusion of birds that it was not easy to tell if single birds were associated with the parties or not; this was particularly true of the Woodpeckers which never appeared to move with the other birds but yet were usually collected when parties were about. Winterbottom has made a particular study of parties in Northern Rhodesia: comparison with his lists (1943 and 1950) show that I collected few birds in the sandveld which he had not found in these mixed parties. Of these few only the Long-tailed Shrike Urolestes melanoleucus and the White-crowned Shrike Eurocephalus anguitimens were seen or collected with the smaller type of party, while the Scarlet-throated Sunbird Chalcomitra senegalensis and the Neddicky Cisticola fulvicapilla were possibly associated with the larger type.

- 3. Black Cotton-soil Vlei. The valley between Panda Matenga and the sand-veld is an open vlei of black cotton soil about two miles across, a quagmire after rain. Much of this valley is cultivated and here the commonest birds were Abdim's Stork Sphenorhynchus abdimii and the Capped Wheatear Oenanthe pileata. In a small area of open grass with scattered bushes Cisticolas abounded: three different species were collected there, C. juncidis, C. aridula, C. chiniana, while C. natalensis was found in nearby fields with fewer bushes.
- 4. Khazuma Pan. The rains prevented exploring this extensive pan, 15 miles north-west of Panda Matenga, but three opportunities were used for collecting a little on the southern edge. Here there are wide stretches of open grass land. Most time was spent in pursuit of the Rufous-naped Lark Mirafra africana which competed with Cisticola natalensis for the few available perches; Swainson's Francolin Pternistis swainsoni was common in bushes on the edge of open land.
- 5. A narrow stretch of thorn bush on sand dividing the lands from the sandveld, which yielded a young Dusky Lark *Pinarocorys nigricans*: and 6 was an equally narrow stretch dividing the opposite edge of the sandveld from the open grass of Reprieve Plain. Here instead of thorn bush on sand there was scattered orchard bush on black cotton soil, where on one morning two species were collected, Arnott's Chat *Thamnolea arnotti* and the Yellow-rumped Seedeater *Poliospiza atrogularis* not seen elsewhere.

## AFFINITIES OF LOCAL BIRDS WITH THOSE OF NEIGHBOURING TERRITORIES

The geographical situation of Panda Matenga, lying on the western edge of the bush country, on the eastern limit of Kalahari sand, and, at the same time, on the upper Zambesi river system, suggested that the affinities of the local birds might prove interesting. I obtained only two species, Black-eared Seed-eater Poliospiza mennelli and Grey Penduline Tit Anthoscopus caroli not previously recorded in Bechuanaland, though both would be expected there. It was more unexpected to find Eremomela scotops pulchra, which seems to be the first time

this race has been found south of the Zambesi. In other species which show variation in southern Africa the balance was very even between the eastern avifauna, as represented by races found in Southern Rhodesia and the Transvaal, and the western avifauna as represented by races found in central and northern Bechuanaland. These affinities have been indicated in the Summarised List of the Collection (pages 107-8).

The only species which appears to have a very local race in the Panda Matenga area is *Cisticola natalensis*; for this race an old name *Drymoica holubi* is available. It is possible that further collecting will show that it has a wider range, perhaps similar to that of *Mirafra africana grisescens* with which it was associated in the field.

It will be seen that *M. a. grisescens* is listed as a "western" race, though hitherto this name has been widely used for these larks from Southern Rhodesia. The evidence of the small series which was obtained, which is nearly topotypical, has necessitated some revision in the taxonomy of this species which is discussed in the systematic notes.

From the "western" races represented it is apparent that wherever birds from north-eastern Bechuanaland show distinctive characters the variation is always towards an increase in greyness. This greyness may sometimes be exaggerated in my birds through the freshness of the skins but it is undoubtedly a character associated with the area: similar greyness is found associated with birds of the Etosha Pan in South West Africa and it may be that detailed study of both areas will reveal some common ecological factors to account for this tendency. In my notes on *Pternistis swainsoni* I have suggested that the greyness in this case is associated with the Kalahari Sand: this is not a possible assumption with all the other "grey" races which are not all necessarily found on the sand areas.

### RAINFALL AND BREEDING SEASON

The average rainfall at Panda Matenga is about 30 in. a year and the figures for the 1953/54 season give an idea of its distribution: October, .52 in.; November, 7.63 in.; December, 4.26 in.; January, 8.4 in.; February, 7.0 in.; and March, 1.83 in.

In 1953 the first rain fell on 13 October and when collecting was started on 12 November, there had been very little rain; however, trees were in leaf, the grass fairly high and flowers in bloom. It seemed from the silence of the majority of birds that the breeding season was mostly over. This was confirmed when it appeared that, with very few exceptions, the specimens collected were in post-breeding moult; it seemed then that at Panda Matenga, as Moreau (1950) had found in Southern Rhodesia, many birds had started breeding before the rains. Moreau's observation that the "grass" birds were notable exceptions, the Cisticolas, Prinia and Camaroptera being in breeding plumage was confirmed. The state of the plumage has been listed in the Summarised List of the Collection (page 108) and in that list young birds collected have been referred to as "juv." when they are not fully grown and as "imm." when they are fully grown but not in full adult plumage.

In the systematic notes full references are given only to those races not listed by Sclater (1930).

### ACKNOWLEDGMENTS

So many people gave me help and hospitality during my visit to Africa that I cannot mention all by name but I would like to record my great indebtedness, firstly to the Director of the National Museum of Southern Rhodesia, Mr. R. H. N. Smithers, for help and advice, and for the services of two skinners, Joseph and Danton, and, secondly to Mr. C. R. Dreyer, Ranch Manager at Panda Matenga, and other members of the Colonial Development Corporation Staff.

In the preparation of the systematic notes I have been greatly assisted by opportunities to study specimens from the National Museum, S.R., and from the Transvaal Museum, lent by Dr. G. Rudebeck, and by Captain C. H. B. Grant who has looked at several prob-

lems with me in the British Museum (Natural History).

### SYSTEMATIC NOTES

Pternistis swainsoni

Swainson's Francolin

Pternistis swainsoni chobiensis Roberts, Ann. Trans. Mus., 1932: 15. p. 23. Kabulabula, Chobe River.

19 Panda Matenga (bush), 19 Nov. Wing 173 mm.: bill 31: just completing moult. *Pternistis swainsoni gilli* Roberts, Ann. Trans. Mus., 15, p. 23, 1932: Ondonga, South West Africa.

12 Khazuma Pan, 21 Nov. Wing 176: bill 29: just completing moult.

The first specimen was obtained in typical bush, the other on the edge of the open plain of the Khazuma Pan: the dissimilarity in coloration between the two led me to a detailed study and I was fortunately able to work on the large series in Bulawayo, the smaller, but more widely dispersed, series in the British Museum, and 14 specimens from the Transvaal Museum. It appears that the species divides readily into three groups distinguished chiefly by the underparts. In the first, Group A, the dark centres of the feathers of the breast are broad and diffused, spreading to a dark smudge at the tips: birds of Group A are found in the Transvaal, south eastern Bechuanaland, and Southern Rhodesia north to Bulawayo, Tjolotji, and the Sabi-Lundi junction: they represent P. s. swainsoni (Smith) which was described from the western Transvaal. In Groups B and C the dark centres to the breast feathers are narrow and well-defined: in Group B the outer portion of these feathers and the fluffy feathers of the lower abdomen are browner and darker: in Group C they are paler and greyer, giving a colder appearance: this greyness is apparent to a lesser extent in the head and back. The geographical separation between B and C is not sharply defined and my two specimens, taken within 15 miles of each other, represent the two groups, the one from Panda Matenga being B and the Khazuma bird C. Others of the pale, greyer Group C are found from the Etosha Pan, through northern Bechuanaland, to the Caprivi Strip and Barotseland. This divides the browner and darker Group B into two sections, the smaller of which is in the west, in the Okahandja and Otjiwarongo district of South West Africa, and the larger in the east, from Kasungula, Panda Matenga, the northern districts of Southern Rhodesia and all Northern Rhodesia except Barotseland. As with all francolins there is considerable individual and seasonal variation within these groups; fresh plumaged specimens from within the range of Group B sometimes have a pronounced grey wash on the breast but the grey is darker and the abdomen more mixed with brown than in specimens of C, giving a general impression of a darker bird. Similarly in Group C there are some, usually worn specimens, in which the grey tinge is less marked but which are, nevertheless, generally paler than birds of B.

It appears that there has been an unlucky distribution of specimens of these two groups among museums. The British Museum has three from the Ngami area in which the grey, pale character is marked, but lacks a good series from South West Africa; in the Ngami specimens studied from the Transvaal Museum the grevness is not so pronounced, making them less easily distinguished from Group B; in the Bulawayo collection the greyer birds of Barotseland and the Caprivi Strip stand out from others from the Rhodesias but no comparative material is available from the west. This has resulted in some rather confusing taxonomy: a pale race has been generally recognised, Roberts (1940) and White (1945) calling it P. s. chobiensis, the former confining its range to northern Bechuanaland, and the latter extending the range to the north western districts of the Rhodesias: Macdonald (in press) calls it P. s. damarensis Roberts, the type locality of which is Otjiwarongo, with

a range through South West Africa and Bechuanaland. It will be seen that Roberts has made no distinction between the heavily and lightly streaked groups A and B in the Rhodesias: White no distinction between the grey and brown Groups C and B in the east, and Mac-

donald none between C and B in the west.

I believe that the real taxonomic difficulty has arisen through, firstly, Roberts' unfortunate choice of Kabulabula as the type locality of the race chobiensis, since it is in this area that the grey and brown forms meet; and, secondly, through his associating the birds from Maun, Tsotsoroghe Pan and Mababe with chobiensis. The three British Museum specimens already mentioned from the Ngami area compared with three chobiensis from Kabulabula and Kasungula are clearly greyer and paler, and the differences, once noted, are evident also in the Transvaal Museum specimens from the Ngami area. I therefore feel confident that chobiensis is a name applicable to the browner birds, not the grey, and should be used for Group B in the east. Roberts had previously named birds of the brown group in the west P. s. damarensis and I do not find it easy to distinguish between specimens of chobiensis and dumarensis: the latter, however, are slightly larger and more rufous and since the two areas are widely separated geographically it seems practical to retain the two names.

This leaves *P. s. gilli* from Ondonga as the only name available for the grey Group C and it is interesting to find that in Roberts' original description of both *gilli* and *chobiensis* he distinguished them from *P. s. swainsoni* and from each other on exactly the characters by which I distinguished the corresponding groups C. B and A.

In addition to these races *P. s. lundazi* White was described from Northern Rhodesia as being darker and greyer above and below than *chobiensis*. The specimens I have seen from the Lundazi district do not show this character of greyness, and, though there is a natural tendency for birds from the east to be darker than those which border the paler race, I do not feel there are grounds for recognising a different race.

The finding of specimens of both chobiensis and gilli in the Panda Matenga area but on different types of soil suggests to me that the range of gilli may be linked with the extent of the Kalahari Sand: this idea seems to be borne out by Du Toit (1939: map) who shows the boundary of the Kalahari Sand lying between Mababe, where P. s. gilli is found, and Kabulabula, the type locality of chobiensis, but it is a point which requires further study in the field.

The ranges and characters of the races recognised can be summarised as follows: P. s. swainsoni Transvaal: eastern Bechuanaland north to N'Kate: S. Rhodesia north to Bulawayo, Tjolotji and Sabi-Lundi junction. A large race with underparts dark and

heavily streaked (Group A).

P. s. chobiensis (syn. P. s. lundazi) S. Rhodesia north of the range of P. s. swainsoni: N. Rhodesia except Barotseland: borders of Nyasaland, Portuguese East Africa and Bechuanaland (Kasungula, Kabulabula, Panda Matenga). Similar to P. s. swainsoni in being generally brown in tone but with the centres of the breast feathers narrow and well-defined. Rather smaller (Group B—east).

P. s. gilli Northern South West Africa: northern Bechuanaland east to Mababe and Khazuma Pan: Caprivi Strip: Barotseland. Similar to P. s. chobiensis but paler and

greyer above and below (Group C).

P. s. damarensis South West Africa (Otjiwarongo, Waterberg and Okahandja districts). Very similar to P. s. chobiensis but slightly more rufous and averaging larger (Group B—west).

Streptopelia capicola damurensis (Finsch & Hartlaub), Damaraland. Ring-necked Dove

 $1\ensuremath{\mathfrak{F}}$ 1 juv. Panda Matenga (bush), 17-23 Nov. Wing 150: bill 22: moult just started.

The divisions between the races of the Ring-necked Dove are not very well defined but Macdonald (in press) has shown that this paler race extends to the western Transvaal and Bechuanaland. As far as can be judged my worn specimen fits better with this race than with the darker S. s. tropica (Reichenow) which is the race of the Rhodesias.

Rhinopomastus cyanomelas schalowi Neumann, Usandawe, Tanganyika Terr. Scimitar-bill 13 10 m. N.W. of Panda Matenga (sandveld), 15 Dec. Wing 110: bill 33: tail 130.

This specimen is in moult and only two feathers remain in the tail of the three outer pairs, but these have sufficient white on them to identify it with the eastern race, though the tail is rather short, and not with R, c. cyanomelas (Vivillot). It would appear to mark the western limit of schalowi as Roberts (1935) found specimens from the Tsotsoroghe Pan closer to cyanomelas, and some in the British Museum from Maun are clearly that race.

Tricholaema l. leucomelas (Boddaert), Cape of Good Hope.

Pied Barbet

13, 2♀♀, Panda Matenga (bush), 30 Nov. Wing 3 79, ∓ 74-75: bill 3 20, ♀ 17-19: worn plumage.

Roberts (1935) in reviewing this species recognises several races on slight colour and size differences, including T. l. nkatiensis from northern Bechuanaland, based on a single female with a small wing (73 mm.). My specimens, together with single males in Bulawayo from Matetsi (wing 80) Linyanti (wing 79) and near N Kate (wing 81), show that though there is a tendency for this northern population to be rather smaller than southern birds, the differences are very slight; furthermore it is apparent from Roberts' figures and from material in the British Museum that similarly small populations are found also in Zululand and Angola. The colour differences Roberts gives are not apparent in the series before me and I can see no grounds for recognising a distinct race in northern Bechuanaland.

Dendropicos fuscescens hartlaubii Malherbe, Zanzibar.

Cardinal Woodpecker

2 33, 1 $\stackrel{?}{\downarrow}$ , 1 imm.3, 10 m. N.W. of Panda Matenga (sandveld), 26 Nov.-16 Dec. Wing 3 93-95,  $\stackrel{?}{\downarrow}$  97: bill 319-21,  $\stackrel{?}{\downarrow}$ 19; in moult.

White (Ibis, 1947, p. 606) reviewed the southern races of the Cardinal Woodpecker and, in clarifying the ranges and characters of recognisable races, has eliminated the confusion that previously existed through too many forms being described on scanty material. He reached the conclusion that birds from Angola through the Rhodesias to Nyasaland could be regarded as a single race, D. f. camacupae Bowen, described from Angola, which intergraded in the east with a smaller and vellower race D. f. hartlaubii from the coastal districts of Tanganyika and northern Portuguese East Africa. He had not at that time access to the British Museum material which contains over 200 specimens from within these ranges. I have looked at this series with Captain Grant who, in 1915, originally separated the western population under the name loandae (a name overlooked by White in his review) and we came to the conclusion that no satisfactory distinction can now be made between eastern and western birds. It is true that six out of 60 specimens from scattered localities in Tanganyika have an exceptionally heavy suffusion of yellow on the underparts but the degree of variation among the remainder is the same as that found in series from Angola and the intermediate countries. The slight differences in colour of the upper parts mentioned by White are also not apparent in the larger series, nor are the size differences, eight males from Angola having wings of 86-96 mm. against 84-94 mm. for males from Tanganyika. We feel therefore that D. f. camacupae and D. f. loandae should be considered synonyms of D. f. hartlaubii.

Mirafra africana grisescens Sharpe, Tibakai's Vlei, N.E. Bechuanaland

Rufous-naped Lark

3 ♂, 1 juv. ♀, Khazuma Pan, 13-14 Dec. Wing 97-98: bill 21-22: in moult.

The type of M. a. grisescens was obtained by Oates (1881) on a journey through Matabeleland along the Old Hunters' Road. The type locality, Tibakai's Vlei, is given as lat. 18° 52' S., long. 26° 18' E. and it is shown to the south of Panda Matenga between Hendrick's Vlei and Jolley's Pan. Comparison with a War Office 1933 map on which both the latter localities are marked, shows that these co-ordinates are not quite accurate as Tibakai's Vlei must lie about where the road crosses lat. 19° S.: the map reference should therefore read lat. 19° S., long. 25° 50' E. My specimens were taken about 55 miles north of the type locality and, allowing for age, are close matches with the type.

White (1945) and Benson (1950) discuss some of the taxonomic problems of this lark in southern Africa but both were hampered by lack of a topotypical series of M. a. grisescens the worn condition of the type making it unsatisfactory for comparative purposes. My birds provide this series and show that some further revision is needed as it is clear from them that M. a. grisescens cannot be used for the populations of the greater part of S. Rho-

In addition to the series in the British Museum the collected birds have been compared with 12 specimens from the Transvaal Museum and with the material in Bulawayo. It was found that  $M.\ a.\ grisescens$ , as would be expected from its name, is a grey bird in contrast with all other races in southern Africa, the grey being most pronounced on the lower and middle back, merging into sandy pink on the upper mantle: the greyness is especially marked in the young bird from Khazuma Pan. This grey character is also shown in specimens from Linyanti and Kabuta in the Caprivi Strip, from Livingstone, Barotseland (slightly pinker on the mantle), and the Nata district (slightly paler throughout and less heavily spotted below). Since I do not believe it is practical to sub-divide such variable species as these larks too much on minor characters I consider all these grey birds should be referred to the one race  $M.\ a.\ grisescens$ , at least until more material is available. I have seen no topotypes of  $M.\ a.\ ngamiensis$  (Roberts) from Mababe Flats, the nearest being the Linyanti birds, but from the original description and from the situation of the type locality it seems likely to be a synonym of  $M.\ a.\ grisescens$  and not of the sandy-pink  $M.\ a.\ ghansiensis$  (Roberts) as Vincent (1952) lists it.

With the name grisescens confined to these grey birds, those from further east are without a name. Benson has noted the individual variation found in the birds from Southern Rhodesia in the Bulawayo Museum, some being similar to the rufous M. a. transvaalensis Hartert, while others, less rufous, he calls grisescens, though I found none typical of grisescens as represented by my birds. I would go further and say that even in the least rufous birds from Southern Rhodesia the light edges of the feathers of the back are more heavily pigmented than in other races, giving a richer, warmer tone than any except M. a. transvaalensis: this rich colour is particularly marked in young birds. It is always difficult to know how to treat a variable population taxonomically; in this case the birds of Southern Rhodesia, even the atypical specimens, are so much closer to the rufous transvaalensis than to any other race that this name should be used for them.

The birds collected by Benson at Namwera, Nyasaland, and Unangu, Portuguese East Africa, or those collected by Zimmer from Matenga Plateau, Songea, southern Tanganyika should, however, not be called transvaalensis though all have been previously associated with the birds from Southern Rhodesia as M. a. grisescens. Benson's birds lack much of the warm and rufous tones of transvaalensis, particularly on the head and are smaller as Benson notes; they are not, however, as grey as grisescens but rather a cold brown: in my opinion they are nearest to M. a. zuluensis (Roberts), matching that race closely on the upper parts but being more richly coloured below and slightly smaller (3 wing 87.95 against 93.97, bill 19-20 against 20-22 mm.). The Songea birds were examined through the kindness of the Director of the Naturhistorisches Museum, Vienna: and were found very similar to Benson's specimens but even more richly coloured below: some of this colour is undoubtedly due to soil staining. If the policy of dividing these larks only on broad general characters is to be followed I would include all these specimens with zuluensis and summarise the distribution and general colour of the races discussed as follows.

M. a. grisescens N.E. Bechuanaland: Caprivi Strip: southern districts of north western N. Rhodesia (Livingstone, Barotseland). Greyish.

M. a. transvaalensis Transvaal and Southern Rhodesia. Warm brown or rufous.
M. a. zuluensis Zululand: Swaziland: Portuguese East Africa (Coguna, Unangu):
Nyasaland (Namwera): Tanganyika (Songea). Cold brown.

Mirafra s. sabota A. Smith, Kuruman.

Sabota Lark

5 33, Panda Matenga (bush), 15-29 Nov. Wing 83-86: bill 16-17: moult nearly, or quite, completed.

In South West Africa in 1949/50 we had noticed that the Sabota Larks had a very characteristic horizontal perching position. Though it is difficult to carry an accurate picture in one's mind over some years I formed the impression that these larks at Panda Matenga perched more upright than those seen previously. Soon after leaving Panda Matenga, I went on a journey through northern Cape Province and was again struck by the very horizontal position of the Sabota Larks on the telegraph wires. It is dangerous to make dogmatic generalizations on these limited observations but it is perhaps significant that all those noted for this characteristic perch belong to thick-billed races of Sabota while the Panda Matenga birds are a thin-billed form. This suggests that there may be greater differences between the two groups than are at present realised and it is a point on which the opinion of field workers is required.

The specimens examined show a tendency for birds to the north of the accepted range of M, s, sabota to have wider and darker black centres to the feathers of head and mantle, and to have the underparts whiter with the spots more clearly defined. But these characters are not entirely constant and do not warrant racial recognition.

Pinarocorys nigricans (Sundevall), Aapies River, Transvaal.

Dusky Lark

1 juv. \, 9 m. N.W. of Panda Matenga (thorn bush). 25 Nov.

This was the only Dusky Lark seen though from previous experience it was expected to be one of a party and a search for others was made. It is a young bird with the skull not fully ossified, but it is nearly full grown and cannot therefore be presumed to be still in its breeding quarters, though it is possible that the Dusky Lark winters in this area since Winterbottom (1952) gives a record from Wankie on 4 June. On the other hand this may be a solitary bird on its way south since Chapin (1953) has given May to October as the months of its occurrence in the Belgian Congo where it is believed to breed, though de finite evidence of this is still lacking. Specimens from the Transvaal Museum show that it occurs in the Transvaal from, at least, 29 December to 15 April. From all records of movements and evidence of specimens in the Transvaal, Bulawayo and British Museums, it would seem that the nesting record in Zululand in September mentioned by Roberts (1940) must refer to an abnormal occurrence since Dusky Larks are normally further north at that time of year.

Turdus I. libonyana (A. Smith), Near Zeerust, W. Transvaal.

Kurrichane Thrush

1 & 1 2, 1 juv., 10 m. N.W. of Panda Matenga(sandveld), 17-18 Dec. Wing & 117.

111: bill 3 24. 23: just starting moult.

The worn body plumage makes these unsatisfactory specimens for comparative purposes, but even in this condition they appear darker on the chest and richer on the flanks than examples of *T. l. chobiensis* (Roberts). They are not as richly coloured as the northern race *T. l. tropicalis* Peters and match best the nominate race though they are a little smaller than most specimens from South Africa.

Eremomela icteropygialis polioxantha Sharpe, Swaziland. Yellow-bellied Eremomela

1 3, 1 imm. 3, Panda Matenga (bush), 15-30 Nov. Wing 59-61: bill 13: in moult. These two specimens have rich yellow on the underparts extending to the lower breast

These two specimens have rich yellow on the underparts extending to the lower breast and belly and clearly belong to the race *polioxantha* of the east and not to *E. i. perimacha* Oberholser which is given by Vincent (1952) as the race of Matabeleland and Bechuanaland.

Eremomela scotops pulchra (Bocage), Caconda.

Green-cap Eremomela

1 2, 10 m. N.W. of Panda Matenga (sandveld), 12 Dec. Wing 61: bill 15 In moult. I believe this to be the first record of this race from south of the Zambesi and my specimen shows no sign of intergradation with the yellow-bellied nominate race of southern Africa.

Cisticola chiniana new race

Rattler Cisticola

3 35, 3 27, Panda Matenga area, 20 Nov.-15 Dec. Wing 5 66-68: 2 54-56: bill 5 16-17, 2 15-16. Two males are moulting into breeding dress, other specimens are in full

breeding dress.

Lynes (1930) has noted the greyness of specimens of this Cisticola obtained at Mababe Flats in non-breeding dress and has designated them as intermediates between C. c. chiniana (Smith) and C. c. frater Reichenow, though they are intermediate only geographically, neither of these races having this grey tinge. The grey appearance is due to the loss of the buffish and sandy tones both above and below, and is well marked also in a female from Kabulabula in the Transvaal Museum. The present specimens, the first in breeding dress, from north eastern Bechuanaland, are also appreciably greyer above and in the tail than chiniana and frater in corresponding plumage: in addition the red of the cap is duller and the underparts clearer white suffused with more grey and less buff. Mababe is about 90 miles west of Panda Matenga and it may be assumed that these birds represent the breeding dress of the Mababe birds though it would be valuable to have this confirmed by further

collecting in opposite seasons in both places. These differences from neighbouring races shown in both dresses seem worthy of racial recognition and I name the new race after the Director of the National Museum of Southern Rhodesia who gave me so much help in organising this trip: Cisticola chiniana smithresi new race.

Type. 3 8 miles W.N.W. of Panda Matenga, 15 Dec., 1953. In British Museum,

registered number 1954.27.71.

MEASUREMENTS. Wing 68: tail 62: bill 16.

RANGE. North-eastern Bechuanaland (Panda Matenga: Kabulabula: Mababe Flats). Notes. Specimens from Maun and the Caprivi Strip, in non-breeding dress, show some approach to C. c. smithersi but on the whole are closer to frater; it seems best to refer them to that race at least until some in breeding dress can be examined. Two specimens from N'Kate show no approach to the new race: one in the British Museum being typical of frater and one in the Transvaal Museum closer to chiniana.

### Cisticola natalensis holubi

Croaking Cisticola

Drymoica holubi Pelzeln, Beiträge zur Ornithologie Südafrikas, 1882, p. 76, Panda

5 33, 1 ♀, Panda Matenga area (vleis) and Khazuma Pan, 21 Nov. 17 Dec. Wing 3

73-75, ♀ 60: bill ♂ 17-18, ♀ 15: in breeding dress.

The type of D. holubi was obtained by Holub actually at Panda Matenga; it was not examined, but there is an Oates' specimen from Tibakai's Pan in worn breeding dress in the British Museum which has a label on it in Lynes' writing to say that it was compared with the type of D. holubi and agreed in all respects. Lynes does not list the Oates' specimen in his Review though he lists holubi as a synonym of natalensis (1930).

These two and my birds are, I believe, the only records of C. natalensis from Bechuanaland, and all are in breeding dress. Comparison with specimens of C. n. natalensis in comparable dress from Southern Rhodesia, Portuguese East Africa and Natal shows that the six fresh birds are appreciably greyer and paler, and the worn Oates' specimen slightly paler than all others. The difference seems sufficient to justify reviving the name holubi for this population. Further collecting is needed to see if similar differences are found in the non-breeding dress. A specimen in Bulawayo from Wankie. only a short distance from Panda Matenga on the Rhodesian side of the border, suggests they may be. This bird is a male in fresh non-breeding dress and is exceptionally pale above and below, lacking the warm rufous that is found mixed with the buff in varying degrees in others of C. n. natalensis. Lynes notes the individual variation found in this dress and, since the Wankie bird can be matched by one other of 50 examined (one of three specimens from Umfolosi, Zululand), it may only represent an uncommon variant. On the other hand, taking into account the proximity of Wankie to Panda Matenga, and the fact that it shows the same quality (less pigmentation) as holubi in comparison with natalensis, it may well indicate the non-

Cisticola fulvicapilla dispar <> ruficapilla†

breeding plumage of holubi.

Neddicky

4 33, 3 ♀♀, Panda Matenga area (bush and sandveld), 16 Nov.-15 Dec. Wing 3 46-51,

♀ 44-49: bill ♂♀ 12-13: in moult from non-breeding to breeding dress.

These specimens are in a difficult dress for comparative purposes. They appear closest to some in the British Museum collected by Lynes in southern Angola after the Cisticola Review had been published, and which were identified by him as intermediates between C. f. ruficapilla (Smith) of South Africa and C. f. dispar Sousa of Angola. Also close to them, as would be expected, are two from the Tsotsoroghe Pan identified by Roberts as C. f. dispar. All these seem to lack the warmer, redder tone of the back found in ruficapilla and are rather paler above than dispar in breeding dress (no specimens of dispar in non-breeding dress were examined). It seems that they show the same tendency as other species of Cisticola in northern Bechuanaland to be distinctively pale and grey, but without more fresh plumaged specimens from critical areas no satisfactory identification can be made and it is preferred to leave them under Lynes' designation.

Prinia subflava bechuanae

Tawny-flanked Prinia

Prinia superciliosa bechuanae Macdonald, Bull. Brit. Orn. C1, 1941, 62, p. 28, Mababe Flats.

6 33, 1 ♀, Panda Matenga area, 14 Nov.-17 Dec. Wing & 49-53, ♀ 49: bill & 13-14

♀ 13: moult into breeding dress nearly completed.

In comparison with P. s. affinis (Smith) of the Transvaal and Southern Rhodesia these specimens show the same character of greyness as many of the Bechuanaland Cisticolas; in this case it is most marked on the head and mantle. It seems reasonable to suppose that they thus represent the breeding dress of the grey P. s. bechuanae which was described only on specimens from the type locality in non-breeding dress.

Tchagra australis rhodesiensis

Brown-headed Tchagra

Tchagra australis rhodesiensis Roberts, Ann. Trans. Mus., 1932, 15, p. 31, Kabulabula, Chobe River.

1 3, 10 m. N.W. of Panda Matenga (sandveld), 12 Dec. Wing 79: bill 20. Moult

half completed.

Roberts (1940) summarised the southern races of this species. From a study of the series in the British Museum I do not wholly agree with his conclusions as I can find no significant differences in size or in the colour of the back between T. a. rhodesiensis and T. a. damarensis (Reichenow), both of which are greyer above than T. a. australis (Smith). However I find that rhodesiensis is slightly less buffy below than damarensis and the races can possibly be separated on this character.

Tchagra s. senegala (Linnaeus), Senegal.

Black-headed Tchagra

5 33, 1 ♀, 1 juv. ♀, Panda Matenga area, 17 Nov.-15 Dec. Wing ♂ 86-90, ♀ 90:

bill ♂ 24-25, ♀ 23: in early stages of moult.

Only a detailed study of this species throughout Africa can resolve the vexed question of recognisable races. The present specimens are so similar to ones from West Africa in comparable plumage that I am disposed to agree with those authors who believe that very few of the numerous described races can be maintained.

Anthoscopus c. caroli (Sharpe), Ovaquenyama, Damaraland.

Grev Penduline Tit

13, 10 m. N.W. of Panda Matenga (sandveld), 11 Dec. Wing 54: bill 10: moult nearly completed.

Roberts (1940) includes Ngamiland in the distribution of this species but does not mention any part of Bechuanaland in defining the ranges of the races. There are no specimens in the British Museum from between Ovamboland and Livingstone, neither was it obtained on the Vernay-Lang Kalahari expedition. In Bulawayo there is a recently collected specimen from Francistown.

The Andersson specimens on which the species was described are in the British Museum. In 1909 A. c. robertsi (Haagner) from Portuguese East Africa was distinguished on "the clear olivaceus grey upper-surface and white under wing-coverts". This description is misleading as the race is well defined by the greener tinge above and yellow wash below, but the under wing-coverts are white in caroli as well as in robertsi. When in 1914 Roberts described A. c. hellmayri of the Transvaal he compared it with robertsi only, but later (1940) gave "axillaries and under wing-coverts buff" as the distinctive character of caroli. Since this is not true of the type series and no other differences could be seen, it is suggested that hellmayri be placed in the synonymy of A. c. caroli.

On locality the specimen might be expected to be intermediate between A. c. caroli and A. c. robertsi: the nearest specimen to it geographically being of robertsi from Livingstone. In appearance, however, it is quite distinct from robertsi, lacking entirely the green wash on the back and the yellow tinge on the breast. It is, in fact, even a clearer grey above than A. c. caroli. This is also true of the Francistown bird, which is rather darker. This greyness may be due in part to the freshness of the skins but the possibility of there being a grey race of this species, as of several others, in Bechuanaland should not be entirely overlooked and efforts should be made to obtain more material. In the meanwhile it is

best to refer this bird to the nominate race.

Lamprocolius chalybeus nordmanni Hartert and Neumann, Blue-eared Glossy Starling Mossamedes.

2. Panda Matenga (bush), 19 Nov. Wing 126: bill 24: in worn plumage.

Up to the present the supposed range of this race has been limited to Angola and Ngamiland, but examination of the British Museum series showed that the copper shoulder patch distinctive to this race is found also in all our specimens from north-western Northern Rhodesia, Southern Rhodesia and the Transvaal, and in occasional specimens from northeastern Northern Rhodesia, southern Belgian Congo and northern Portuguese East Africa.

Miss Mary Patterson kindly examined the specimens in Bulawayo for me and found the same. It appeared likely therefore that the range of L. c. nordmanni was wider than had

been supposed, and it seemed advisable to examine a specimen from Angola.

Dr. Dean Amadon lent me one from the American Museum of Natural History, which showed no differences from the Transvaal birds. Dr. Amadon told me that he also had been studying this species and had reached the same conclusions. L. c. nordmanni should therefore be used for all these starlings from Angola to the Transvaal.

It is unfortunate that the type locality of L. c. sycobius Hartlaub should be Tete where the population is not wholly constant, two of eight examined from there having copper shoulder patches. However since the majority have a violet shoulder patch it seems reasonable as well as convenient to retain the name sycobius for the violet-shouldered form.

Anaplectes melanotis rubriceps (Sundevall),

Red-winged Anaplectes

Mohapoani Berg, L. Bechuanaland.

1 &, 10 m. N.W. of Panda Matenga (sandveld), 26 Nov. Wing 79: bill 19. In very

worn plumage and with gonads enlarged.

This bird was one of a party some of which were red-headed males, but this one had a yellow head and throat and I was therefore surprised to find that the testes were in breeding condition.

Uraeginthus a. angolensis (Linnaeus), Angola.

Cordon-bleu

1 3, 1 \, Panda Matenga area, 15-20 Nov. Wing 3 54, \, 52: bill 3\, 12: moult

nearly completed.

Roberts (1935) was followed in naming the birds U. a. angolensis, as they match very well with ones from Mababe Flats and the Chobe. All seem slightly closer to the paler, western race than to the richer coloured U. a. niassensis Reichenow of the east. The differences however are not very great between the two races, even at the extremes of their ranges, and all birds from the centre are more or less intermediate.

Serinus mozambicus vansoni

Yellow-fronted Canary

Serinus mozambicus vansoni Roberts, Ann. Trans. Mus., 1932, 15, p. 33: Zweizwe Waterhole, between Mababe Flats and Chobe River.

5 강, 2 ♀, Panda Matenga area, 14 Nov.-18 Dec. Wing ♂ 71-73, ♀ 70-73: bill ♂♀

12-13: moult nearly or quite completed.

Clancey (1955) in a recent review of this species in southern Africa expresses the opinion that the inadequate material at present available from Bechuanaland does not justify the recognition of S. m. vansoni. The present specimens provide a reasonably good series in fresh plumage. They show some individual variation but in comparison with birds in similar plumage from Portuguese East Africa are generally greyer and paler, particularly in the females, and the dark centres to the feathers of the mantle are reduced, giving a less streaky appearance. This latter character is also evident in the two topotypes of vansoni which I have seen and in a series of Andersson's birds from Elephant Viei: all of these are in worn plumage and therefore more olive and less grey than my series. On this material it is felt that there are grounds for separating the Damaraland and Bechuanaland birds as S. m. vansoni, though admittedly it is not a very well marked race.

Poliospiza mennelli Chubb, Tjoko's Kraal, Shangani River, S. Rhodesia.

Black-eared Seedeater

1 3, 10 m. N.W. of Panda Matenga (sandveld), 18 Dec. Wing 81: bill 11: moult well advanced.

This species is believed not to have been recorded before from Bechuanaland, and this bird was the only one seen.

# SUMMARISED LIST OF SPECIMENS COLLECTED

NAME	Specimens	Country and Sandveld Parties	Geographical Affinities	State of Plumage
(*See Systematic Notes)		(see page 00)	(see page 00) (see page 00)	
Premistis swainsoni chobiensis	12	_	Eastern	In moult
Pternistis swainsoni gilli	1.	4	Western	In moult
Eremialector g. gutturalis	13, 14	cc:		In moult
Streptopelia capicola damarensis	13, 1 juv.	1 (2)	Western	In moult
Slamator jacobinus serratus	151	_		
Halcyon leucocephala pallidiventris	2 juv.	7		
Halcyon c. chelicuti	Ið	7		In moult
Merops apiaster	l imm.∓	4		,
*Rhinopomastus cyanomelas schalowi	16	. S	Eastern	In moult
alba affinis				
*Tricholaema l. leucomelas SR	1♂, 2♀♀	1 (2)		Worn
Indicator indicator	l imm.đ	7		,
Campethera b. bennettii	1♂, 2♀♀	2.6 L	;	In monit
Campethera abingoni smithi	19	2 L',	Eastern	In monit
Thripias n. namaquus	Ið	1 (2) L?		In moult
Dendropicos fuscescens hartlaubii SR	2♂♂, 1÷, 1 imm.♂			In moult
Mirafra africana grisescens SR	355, 1 juv.	4 (3)	Western	In moult
Mirafra rufocinnamomea fischeri SR	7♂♂, 1♀	1.5	Eastern	In moult
Mirafra s. sabota SR	543		Eastern	Finishing moult
Pinarocorys nigricans	l juv.	· o		
Anthus t. trivialis	lð	2		,
Turdoides jardinei tamalakanei	13	s S	Western	In moult
Pycnonotus xanthopygos layardi	253, 1♀	1.2	Eastern	Worn
Muscicapa s. striata	l imm.đ	7		
Bradornis pallidus murinus	<b>344,</b> 14	1.2	ï	In moult
Turdus l. libonyanus	13, 12, 1 juv.	2	Eastern	In moult
Venanthe pileata livingstonii	14	ec.		In moult
I namnojeg a. arnotti	اح.	9		In moult

In moult	In moult	In moult	Moult to breeding dress	Breeding dress	Breeding dress	Breeding dress	Moult to preeding dress Breeding dress	Worn		In moult	In moult	In moult	In moult		•	ln moult	În moult	In moult	In moult	mount in mount	Worn	Worn	In moult	In moult	Non-breeding dress Finishing monte	In moult	Finishing moult	Worn
	Eastern	Northern			Western	Local	Western	n csica n								Western	Eastern		W	western			į	Western	Wootom	W CSICILI		
1.2 1.2	2 L?	2 L	<b>6</b> 7 8	o 00	1.3	1.3.4	1.2 All tymes	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	All types	2 S	s S	S S	1 (2)	4.	1.4.5	2 c	27	1.2.3		7 7 c	7 -	7		1 (2)	] 		19	J
463, 19 2 imm.3. 1 imm. 9	19 14 1 imm 4	19, 1	*0*	233, 19	300, 300	564, 19	466, 44, 10+4	1,000,1±	Jjuv.	10	19	10	10 10	l imm.đ	244, 3 mm.	13, 299, 1 juv.	13	5533, 14, 1 juv.	13, 14	10,	700 100	13	13	15, 19	10+	000, 4∓∓ ]⊀	250	13
Erythropygia leucophrys makalaka SR Phyllogogyus † trochilus	Calamonastes fasciolatus stierlingi	*Eremometa teteropygiaus pouoxaunu *Eremometa scotops puichta	Camaroptera brevicaudata sharpei	Cisticola junciais terresuris Cisticola aridula kalahari SR	*Cisticola chiniana (new race)	*Cisticola natalensis holubi SR	*Cisticola fulvicapilla SK	Trinia suoj iava vecnuanue sir Campenhapa sulphurata	Dicrurus a. adsimilis	Prionops plumatus poliocephalus	Sigmodus r. retzii	Eurocephalus anguitimens	Nilaus b. brubru	Lanius minor	Lanius collurio	Dryoscopus cubla okavangensis	*Tchagra australis rhodesiensis	*Tchagra s. senegala SR	Parus n. niger	*Anthoscopus c. caroli	Linnyricincius teucogaster verreduxi *Lamprocolius chalvheus nordmanni	*Anaplectes melanotis rubriceps	Pytilia m. melba	*Uraeginthus a. angolensis	Steganura p. paradisea	*Serinus mozamoicus vansoni Sn *Doliosnica monaelli	+ Poliospiza atrogularis fitzsimonsi SR	Emberiza f. flaviventris

(All specimens listed are in the British Museum except samples of those forms marked SR which are now in the National Museum of Southern Rhodesia, Bulawayo.)

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