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### **SYSTEMATIC AND DISTRIBUTIONAL NOTES ON SOUTHERN AFRICAN BIRDS**

by

MICHAEL P. STUART IRWIN

(Ornithologist, National Museum of Southern  
Rhodesia, Bulawayo)

#### (1) A REVISION OF THE SOUTH-WEST ARID RACES OF THE COURSER *RHINOPTILUS AFRICANUS* (TEMMINCK)

Two distinct and disjunct population groups of the Double-banded Courser *Rhinoptilus africanus* (Temminck) exist: a southerly one inhabiting the more arid grasslands of the south and west of the South African sub-continent, and the other the Somali Arid region north-eastwards from central Tanganyika, with a distributional hiatus of some 1,200 miles in central Africa.

In this paper only the southern African group of populations is reviewed. It would have been highly desirable to treat the East African group similarly, but this has not been possible due to the lack of material; it is, however, discussed briefly. The status of the southern group has long remained in an unsatisfactory state, disagreement being general in the literature as to how many forms ought to be recognised. This review initially arose through the need to describe an apparently distinctive population inhabiting the

north-eastern portion of the Bechuanaland Protectorate. On initial study it became apparent that it would be impossible to describe any new forms without a proper understanding of racial variation as a whole, and at the same time be able to satisfactorily define the geographic limits of the various taxonomically recognisable forms.

To date, four races have been named from the region under review, these are: *R.a.africanus* (Temminck), *Cat.Syst.Cab.Ornith.*, 1807, pp. 175, 263: Great Namaqualand; *R.a.bisignatus* (Hartlaub), *Proc.Zool.Soc.Lond.*, 1865, p. 87: Benguela; *R.a.sharpei* Erlanger, *J.f.O.*, 53, 1905, p. 60: Windhoek; and *R.a.granti* W. Sclater, *Bull. Brit.Orn.Cl.*, 1921, p. 132: Deelfontein. Of these forms, Sclater (1924) recognised besides *africanus*, the forms *granti* and *bisignatus*, but makes no mention of *sharpei*, which for reasons to be discussed later, he apparently regarded as a synonym of *africanus*. Friedmann (1930), though not directly concerned with the southern African races, upheld the distinctiveness of all the named forms, while Peters (1934) recognised *bisignatus* and *granti*, with *sharpei* as doubtfully distinct from *africanus*, Roberts (1940) accepted *granti* and *sharpei* in addition to the nominate, and in turn, Vincent (1952) accepts *sharpei* and *granti*, but notes that the former is widely considered as doubtfully distinct from *africanus*, while later McLachlan and Liversidge (1957) recognised *granti*, but not *sharpei*. Most recently Mackworth-Praed and Grant (1962) admit, in addition to the nominate subspecies, only *sharpei* and *bisignatus*, the latter of which is considered extra-limital to the territories covered by all the other above-mentioned authors, with the exception of Sclater, Peters and Friedmann.

The description of *Cursorius africanus* by C. J. Temminck was based on a bird collected by Levaillant on his journey north to the Orange River in the years 1783-84 and supposedly came from Great Namaqualand, which territory lies to the north of the river, in southern South-West Africa. Unfortunately the *Type* appears to be no longer in existence, and as so much doubt surrounds this and the other journeys of Levaillant there cannot be any degree of certainty that the original bird did in fact come from Namaqualand. There has long been suspicion that Levaillant in his journeys may not have even reached the Orange River.

The two most recent discussions on Levaillant's northern journeys are those of Grant (1957) and Forbes (1958). Grant, after closely studying Levaillant's works, traces his northern journey, and fully accepts, contrary to some previously expressed opinion, that he both reached and crossed the Orange River, indeed travelling as far as to the north-east of present-day Keetmanshoop. However,

Forbes, *op. cit.*, following upon his previous researches (Forbes, 1950), finds that acceptable geographical evidence for Levaillant ever having even reached the Orange River does not exist in the account of his supposed travels. Whatever the truth, it must nevertheless be accepted that great doubt consequently surrounds the origin of the *Type* of *Cursorius africanus*. If it were argued that Levaillant did not cross the Orange River, but perhaps obtained his bird in Little Namaqualand, then the possibility arises that the name *C.africanus* was originally based on the bird now known as *R.a.granti*. Unfortunately, too few specimens have been available to ascertain whereabouts in the north-western Cape, *R.a.granti* becomes replaced by the paler nominate form, as no specimens have been available between Vanrhynsdorp and Pofadder, leaving a large gap in a critical region. Rather than suggest any change of established names, it would seem best to arbitrarily restrict the type-locality of the nominate form to prevent any further confusion. Unfortunately no material has been available for examination from any of the localities said to have been visited by Levaillant, south at least of the Orange River. However, as the nominate race occurs at Pofadder, close to that river, and to the south-east of Pella Drift, which Levaillant may or may not have reached, it seems convenient that the type-locality should be restricted to Pofadder, Great Bushmanland, northern Cape Province, and that a suitable *Neotype* be chosen, as the *Type* would appear no longer to exist. It is, therefore, proposed that an adult ♂ from Pofadder, north-west Cape Province, collected on 7 June, 1962, and now in the Durban Museum and Art Gallery, Durban Museum Registration No. 14893, should be designated as the *Neotype* of *R.a.africanus*, the type-locality of which is accordingly amended.

The type-locality and validity of Erlanger's *R.a.sharpei* have also had a confused history. Grant (1915) in reviewing the races of *R.africanus*, mistakenly restricted the type-locality of *R.a.sharpei* to Deelfontein, Cape Province. This was because Erlanger, in his original description, gave no precise type-locality, but merely stated that his bird inhabited "Sudosten" Africa, but as pointed out by Macdonald (1957), this was an obvious *lapsus* for "south-western", as Erlanger's *Type* was actually based on a bird collected by Lübbert at Windhoek, in South-West Africa. Grant's restriction, therefore, of the name *R.a.sharpei* to the dark birds of the Cape Province was a confusing procedure. However, Sclater (1921) corrected this error, and at the same time proposed the name *R.a.granti, nom nov.*, with Deelfontein as the type-locality, for the dark populations of the Cape Province and Orange Free State that Grant had previously

called *R.a.sharpei*. Unfortunately following up this action, Sclater then mistakenly chose to treat *R.a.sharpei* as a synonym of the nominate form, this probably being the reason for this form's apparent omission in his *Systema Avium* in 1924.

In the past, the confusion that has surrounded the status of the southern African populations of this species (aside from that arising directly from the problems associated with the type-locality of *R.a.sharpei*), seems to have largely arisen through no single worker having seen at the one time a sufficient number of specimens from a wide range of localities. In this particular study, almost 100 specimens have been available for examination. Even so, though this has revealed the broad picture of variation, much detail remains to be filled in, and there are still large areas within the species' range from which no material has ever been collected; even a thorough perusal of the literature has failed to close these gaps. In mapping individual ranges, therefore, allowance must be made for the fact that these gaps in our knowledge do exist and the limits of range of the different races can only be approximated in certain areas.

Throughout the species' range geographical variation is orthodox, the most heavily saturated birds inhabiting the south and south-west of the Cape Province and Orange Free State, giving way to increasingly pallid populations in South-West Africa, Bechuanaland and Angola. The name *R.a.granti* covers these heavily saturated southern birds with dark backs and cinnamon undersides. The nominate race is an altogether paler version, but it is sometimes difficult to draw a dividing line as intergradation is gradual. *R.a.sharpei* of central and northern South-West Africa continues this trend, but instead takes on an increasingly sandy hue. *R.a.bisignatus* of coastal Angola is not widely differentiated from *R.a.sharpei*, but is a pygmy form. Finally in north-eastern Bechuanaland there exists a whitish grey form to be described in this paper.

Other complications may arise to cause confusion: thus this courser is known to undertake local migratory movements, which, though as yet poorly understood can bring different and nomenclaturally recognisable forms into close geographical contact and thus create the impression of extreme individual variability should a sample comprise both resident and migratory birds. Wear has also been stated to be a factor, since Sharpe (1904) noted that in a series from Deelfontein (the type-locality of *R.a.granti*), six specimens showed a gradation from a dark to a light sandy rufous, the darker specimens being those newly moulted in February, whilst those taken in November had lost much of the intensity of their

colour and were much paler. While wear must be admitted, I have not found that it makes the subspecific allocation of individual specimens in any way difficult. In *R.a.granti* wear seems only to affect the pale feather edges, which tend to bleach somewhat paler, and appear less rusty than in fresh birds, but this in no way otherwise affects the conspicuously darker feather centres. Likewise on the underparts some fading may take place. The nominate race seems to be similarly affected, but not to quite the same degree, as it is to begin with, altogether less heavily pigmented. *R.a.sharpei* and *R.a.bisignatus*, living in dry sandy regions, would seem to lose the sandy buff feather edges which in worn birds take on a washed-out buffish white appearance, but this does not effect the rest of the mantle. The pallid birds of north-eastern Bechuanaland in having almost completely lost the buffy tones are not altered at all through wear.

Before describing the population inhabiting the north-eastern portion of the Bechuanaland Protectorate it is essential at this stage to first review some of the older and more recently expressed opinions appearing in the literature in respect of the status of the forms of this courser.

Despite the fact that the distinctiveness of *R.a.sharpei* has often been in doubt, Seebohm (1888), placed an Andersson bird from Ondongo with *R.a.bisignatus* on the basis of its paler colour, though *bisignatus* has never subsequently been claimed to occur within South African limits. I have examined this bird, which is, of course, the rather similar, but larger *R.a.sharpei* in rather worn plumage. Again, Seebohm noted that two Andersson birds from Great Namaqualand were intermediate, which must have demonstrated intergradation with the nominate form. Much later, Hoesch and Niethammer (1940) listed all their South-West African material as being nominate, but state that of their thirteen specimens from Damara-land and Namaqualand, as well as six others in the Berlin Museum, all exhibited a very marked degree of variation in the mantle colour, some being dark and others lighter. Unfortunately, localities are not mentioned which might correlate this variation, but it seems obvious that these authors must have had both the nominate form and *R.a.sharpei* in their series, especially from the more northerly localities listed. In the most recent treatment, that of Macdonald (*op.cit.*), *R.a.granti* was regarded as a probable synonym. Macdonald stated that from the Deelfontein series, specimens could be closely matched with a specimen from Klipfontein, Little Namaqualand, and by material from the Transvaal (no localities given), and of Andersson specimens from Maltahohe and Otjimbinque, he specifi-

cally remarked that the Otjimbingue bird was as dark as the darkest specimen in the Deelfontein series. These facts are at first difficult to reconcile in view of the present evidence, but it would seem, in view of how Sharpe (*op.cit.*), discussed the individual variability of these Deelfontein birds, that more than one geographical form is represented in this series, and if the birds mentioned by Macdonald were to be critically re-assessed alongside more adequate series, a less conflicting conclusion would almost certainly result. Macdonald then proceeds to discuss further the paler populations, stating that two specimens from Matchless Mine (an Andersson locality near Otjimbingue) are much paler, being almost identical with specimens from Aus, while a bird from the desert west of Ababis is even paler. It is then stated that from northern South-West Africa, an Andersson specimen from Ondonga and two Hoesch specimens from the Etosha Pan are also pale birds. I have examined the Ababis specimen which I concur with Macdonald is referable to *R.a.sharpei*, whilst the more northerly Etosha area is, of course, inhabited by this form. Specimens from the extreme south-western Transvaal and another from the Middle of the Bechuanaland Protectorate are also stated to be paler, "appreciably so than nominate *R.a.africanus*". It would seem, however, that these specimens must have been nominate as here outlined and quite naturally paler than the more composite "nominate" population as understood by Macdonald which included *R.a.granti*. Macdonald then summed up by recognising a widely distributed dark form that tended to become paler along the southern edge of the Kalahari Desert and again appreciably paler along a narrow fringe of the Namib Desert, also that there existed an altogether whiter population in the region of the Etosha Pan which he rightly regarded as *R.a.sharpei*. Macdonald therefore seems to have gone only half way in fully appreciating the trends of subspecific variation and to an understanding of the true position, but was of course initially handicapped through including under the one name *R.a.granti* and the nominate population.

Lastly, Rudebeck (1955), gives most useful data for a series of historical specimens collected in the Nineteenth Century by Axel W. Eriksson, providing detailed descriptions of individual birds. This material consists of four skins; two from Omaruru and one from Okorokambe (this last locality not being traceable); which, though differing slightly among themselves, would appear to represent *R.a.sharpei*. The most interesting specimen, however, is from Inkoane (specimen No. 855). Rudebeck was unable to trace this locality, but suggested, from a study of the dates of Eriksson's specimens, that it must be quite close to the Botletle River. In actual fact

Eriksson's Inkoane would appear to be what is now known as Inkokwane, which lies considerably to the south-east of the Botletle at approximately  $21^{\circ} 25' S.$ ,  $24^{\circ} 40' E.$ , being some 51 miles north-west of Serowe on the road to Lothlekane on one of the old trade and wagon routes to Ngamiland. Eriksson must, therefore, have obtained this bird on his journey north-westwards to Lake Ngami. Especial interest attaches to this Inkokwane bird. It is described by Rudebeck as being generally much greyer than the other specimens discussed, with the broad feather edges pale, almost a silvery grey, and below, on the upper breast grey with a slight tinge of sand-colour. The full significance of this specimen will be discussed shortly.

As set out in the introduction to this revision, the populations inhabiting the north-eastern sector of the Bechuanaland Protectorate do not agree with any of the previously described forms, and differ sharply from the populations of *R.a.africanus* inhabiting the south-west and central Kalahari. Through expeditions undertaken by the National Museum of Southern Rhodesia to the Bechuanaland Protectorate over a number of years, a reasonably good series of this species has been obtained within that territory and its range in consequence extended considerably to the north-east of its previously known limits. When all this material was laid out, it eventually became obvious that these north-eastern birds represented a distinctive and hitherto undescribed geographic race, distinguished by the general greyness of the mantle, with the feathers edged with white instead of buff. These birds it is proposed to name:

*Rhinoptilus africanus traylori*, subsp. nov.

*Type*: ♂ adult. Kedia, Lake Dow, north-eastern Bechuanaland Protectorate ( $21^{\circ} 12' S.$ ,  $24^{\circ} 5' E.$ ). Collected by R. H. N. Smithers, 17 January, 1959, on open short grass plain at the edge of the Lake. In the National Museum of Southern Rhodesia. Collector's No. LD.82. National Museum Registration No. 39949. Named after Melvin A. Traylor, Associate Curator, Division of Birds, Chicago Natural History Museum.

*Description*: Differs markedly from *R.a.africanus* (Temminck) and *R.a.sharpei* Erlanger in its general increased pallor, thus closest to *R.a.sharpei* from which it can at once be distinguished by the general overall greyness of the mantle, due to the almost complete loss of the buffy and sandy tones. The feathers of the forehead, crown, back and scapulars are a pale stone grey-brown, with the sub-terminal transverse dark bars narrower, less blackish, and more clearly demarcated basally. The margins to the feathers are sandy

white, completely lacking the strong buff or sandy tones of all other races. Below, generally much paler, the buffy tones on the upper breast much reduced in extent, and with the abdomen and flanks pure white; under tail-coverts pure white. Tail with outermost rectrices pure white; penultimate pair brownish. Wings with pale chestnut-buff on the inner webs of the primaries and secondaries. A single immature specimen from Nata, not long able to fly and with the chest-bands undeveloped, is at this stage equally as pale as the adults.

*Measurements of the Type:* Wing (flattened) 146, tail 63, culmen (exposed) 12.5, tarsus 52 mm.

*Material examined:* 5 ♂♂, 4 ♀♀. *Bechuanaland:* Masarwanyana Pan, Lake Ngami; Cungera Pan, near Lake Ngami; Xhane, between Odiakwe and Bushmans Pits; Kedia, Lake Dow; Nata; Orapa Well and Murwamusa Pan.

*Range:* North-eastern Bechuanaland from north-west of Serowe to Lake Dow, Lake Ngami and the northern perimeter of the Makarikari Salt Pan. It is quite apparent, too, that the Inkokwane bird described by Rudebeck (*op.cit.*) must also represent *R.a.traylora* as the description fits very closely and further extends its range to the south-east. Material from Murwamusa, in the south-central Kalahari, is near this form, but the southern limits must remain obscure, as there is still a vast area in the central Kalahari from which practically no material is available. Note also that the northern range of the species in this sector would seem to be limited though the replacement of the open grassy plains by enclosed mopane woodland, with the result that this species is not to be expected further to the north-east in western Southern Rhodesia.

*Remarks:* The discovery of this pallid form adds still another subspecies to the already long list of pale endemic races now known to inhabit this portion of the Bechuanaland Protectorate. Ecologically it does not appear to differ from the nominate race inhabiting most of the remainder of the territory, though it may to some extent be associated with the short grassy areas in the vicinity of white calcareous pans.

The following races of the Double-banded Courser may then be recognised:

(a) ***Rhinoptilus africanus africanus*** (Temminck)

*Cursorius africanus* Temminck, *Cat.Syst.Cab.Ornith.*, 1807, pp. 175, 263: Great Namaqualand, herein restricted to Pofadder, Great Bushmanland, north-western Cape Province.



*Synonyms:*

*Tachydromus collaris* Vieillot, *Nouv.Dict.d'Hist.Nat.*, vol. viii, 1817, p. 293: Africa.

*Cursorius bicinctus* Temminck, *Man.d'Ornith.*, 2nd ed., vol. ii, 1820, p. 515.

(Both these descriptions are said to have been based on the original Levaillant bird.)

*Description:* Above, mantle slate-brown, each feather with a sub-terminal blackish band and broadly edged with pale sandy buff; crown of head similarly patterned but rather variable, and the feathers with the sub-terminal blackish area developed to a varying degree; nape sandy buff, with indistinct streaks. Below, throat buffish white, shading to sandy buff on chest, narrowly, but rather variably streaked with blackish. Chest pattern comprising two parallel blackish bands on buffish ground, the lower slightly broader than the upper, rest of under-parts to under tail-coverts very pale buff or buffish-white. Upper tail-coverts immaculate white, extending halfway along tail. Tail brown, tipped with white. Outermost pair of rectrices white, with variable amounts of brown on inner pair, usually, but not always, confined to inner web. Primaries dark brown, changing to pale pinkish cinnamon on inner web; secondaries and scapulars largely so coloured, with dark sub-terminal markings on outer webs.

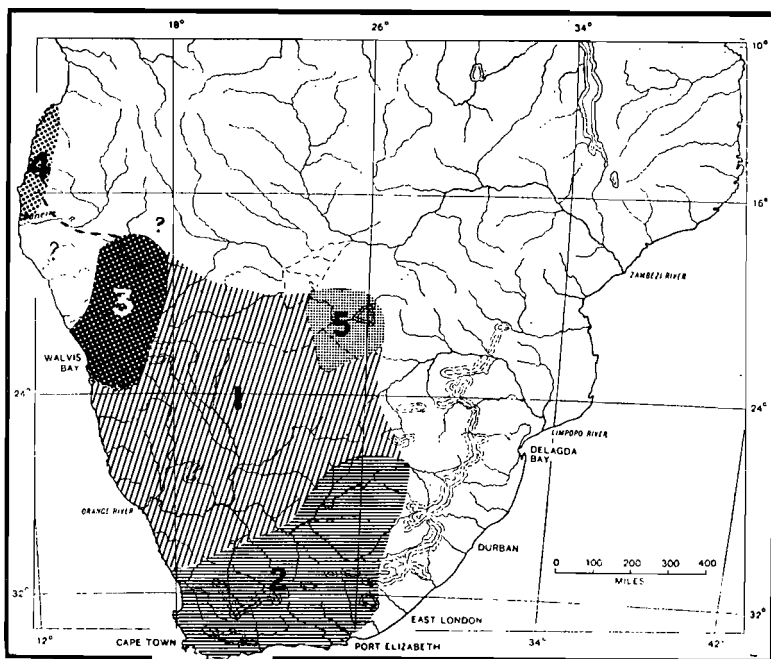
*Measurements:* Wing ♂♂ 147-162 (153.6); ♀♀ 149-157 (152.0); tail ♂♂ 61-70 (66.3), ♀♀ 63-71 (67.0); tarsus ♂♂ 54-62 (57.7), ♀♀ 53-62 (55.0).

*Range:* The south-west and central Kalahari (with a single specimen from near Lake Ngami), Bechuanaland Protectorate, south-westwards through the extreme northern Cape Province to Great Bushmanland, in the north-west Cape, and Great Namaqualand, north of its stated range in South-West Africa intergrades with *R.a.sharpei* from about Windhoek and Okahandja. Though local movement seems to obscure the precise range limits, a further complication being that the type-locality of *R.a.sharpei* lies at the junction of this form's range. Note that two specimens from Glen, on the Modder River in the Orange Free State, collected in early June are of this form, and must be migrants.

*Specimens examined:* *Bechuanaland Protectorate:* 44 miles west of Molepolole, Letlaking-Moshaweng road, Kuke Pan, Sekhuma Pan; 100 miles west of Kanye, Kakia, Kang, Ngwabura Pan, Chawe Pan, Tsane, Mothlatlago. *Cape Province:* Pofadder. *Orange*

*Free State.* Glen, Modder River. *South-West Africa:* Ariams Vlei, Gobabis, and Okahandja. Total 21.

*Note:* McLachlan and Liversidge state that some form of this species has been recorded on red soil veld along the Oliphants River in Portuguese East Africa. This is far outside the species normal range and from a most unusual habitat. Liversidge, *in litt.*, was unable to trace the source of this record, so that it is accordingly rejected.



Approximate ranges of the southern African forms of  
*RHINOPTILUS AFRICANUS*

1. *Rhinoptilus africanus africanus* (Temminck)
2. *Rhinoptilus africanus granti* W. Sclater
3. *Rhinoptilus africanus sharpei* Erlanger
4. *Rhinoptilus africanus bisignatus* (Hartlaub)
5. *Rhinoptilus africanus taylori* Irwin

(b) ***Rhinoptilus africanus granti*** Sclater

*Rhinoptilus africanus granti* W. L. Sclater, *Bull. Brit. Orn. Cl.*, vol. 61, 1921, p. 132: Deelfontein, south of De Aar, central Cape Province.

*Description:* Differs from the nominate race in being overall much darker; feathers on mantle dark earth-brown, not slate; sub-

terminal blackish band usually broader, less clearly demarcated from the feather centre; edging to feathers chestnut-buff. Below, throat pale sandy, but rest of under-parts strongly tinged with chestnut, abdomen and flanks more strongly sandy buff, under tail-coverts similar. Throat and chest streaking variable, but usually more strongly developed, and frequently extending on to chest below the black breast-bands, which are in turn blacker, and in the case of the lower, broader also. Upper tail-coverts less pure white, tinged with buff towards the apices. Primaries deeper cinnamon on the inner web, and secondaries likewise a deep cinnamon. Tail with white variable in extent, but usually reduced, second outermost pair often white only at tip, with brown markings extending to outermost pair.

*Note:* In certain localities in the north-central Cape Province and extreme western Orange Free State occur birds which cannot strictly be referred to either *R.a.granti* or to the nominate race. Eight such birds are available from Vanrhynsdorp, De Aar, Murraysburg, Winburg, Van Wyks Vlei, Kimberley and Mafeking. They resemble *R.a.granti* in the generally dark upper-parts, but have instead the feather centres dark slate-brown, with contrastingly pale sandy, not chestnut, edges, as in *R.a.africanus* but on the under-parts are closely similar to *R.a.granti*. These birds could on colour grounds be considered as intermediates, but occupy a rather broad central zone within the range of *P.a.granti* with a tendency to occur along the northern and western edge of that race's range, but their status must remain unsettled as in almost every case they have been collected alongside normal *R.a.granti*. There seems little chance that they are in any way migrants as all have been collected between September and March and the plumage in every instance shows some degree of wear. Their status must remain unsettled until such time as larger series become available from the northern areas of the Cape Province, from which very little material has ever been collected.

*Measurements:* Wing ♂♂ 147-168 (159.4), ♀♀ 140-158 (152.4); tail ♂♂ 67-76 (70.2), ♀♀ 61-70 (66.0); tarsus ♂♂ 50-61 (55.7); ♀♀ 49-56 (52.2).

*Range:* The Cape Province from just north of Cape Town to Vanrhynsdorp, eastwards through the Karoo to Cradock, Somerset East and Grahamstown, in the eastern Cape, thence northwards to the southern, western and central parts of the Orange Free State, west of about 28°E., but absent to the east thereof, and from the Transkei, Pondoland, Basutoland and Natal, not extending further

east than Rouxville and Aliwal North in the south. It also occurs in the northern Cape Province as far as Kuruman and Vryburg and in the extreme south-western Transvaal from Schweizer Reneke to Potchefstroom.

*Specimens examined: Cape Province:* Malmesbury, Vanrhynsdorp, Oudtshoorn, Loxton, Van Wyks Vlei, Murraysburg, Deelfontein, De Aar, Hopetown, Modder River, Middelburg, Kimberley, River-ton and Vryburg. *Orange Free State:* Rouxville, Bloemfontein and Odendaalsrus. *Transvaal:* Bloemhof, Schweizer Reneke, Wolmaranstad and Potchefstroom. Total 41.

(c) **Rhinoptilus africanus sharpei** Erlanger

*Rhinoptilus africanus sharpei* Erlanger, *Journ.f.Ornith.*, vol. 53, 1905, p. 60: Windhoek, South-West Africa.

*Description:* A pale sandy form, nearest the nominate race, but differing in having the mantle even paler; feather centres greyish slate-brown, with narrower blackish sub-terminal dark bands and conspicuous broad pale sandy buff edges. Below, overall pale whitish, suffused with light buff; streaking on throat variable, but generally reduced in extent and sometimes imperceptible, abdomen and flanks immaculate; under tail coverts white. Secondaries and primaries with inner webs pinkish buff; upper tail coverts pure white. Tail with outermost rectrices pure white, penultimate pair with brown spot on inner web, remainder narrowly edged or tipped with white.

*Measurements:* Wing ♂♂ 138-159 (148.0), ♀♀ 138-152 (145.2); tail ♂♂ 60-70 (65.0), ♀♀ 57-64 (62.4); tarsus ♀♀ 54-57 (55.7), ♀♀ 54-56 (55.0).

*Range:* Not yet clearly defined, but occurs certainly from Ababis, in South-West Africa, northwards to the Brandberg, and inland to Okahandja and Quickborn, thence northwards to Ondonga, Ovamboland, and the region of the Etosha Pan, where the influence of *R.a.traylora* is apparent. No material has been available from either the northern Namib or the Kaokoveld, through which regions it must surely range continuously to intergrade northwards with *R.a.bisignatus* in coastal Angola, while it seems probable that it must also extend into the Huila Province, south-eastern Angola.

*Specimens examined: South-West Africa:* Ababis, Okahandja, Quickborn, Onguma, Ondonga and Namutoni. Total 14.

(d) **Rhinoptilus africanus bisignatus** (Hartlaub)

*Cursorius bisignatus* Hartlaub, *Proc.Zool.Soc.Lond.*, 1865, p. 87: Benguela, Angola.

*Description:* A very diminutive form, in colour showing both a resemblance to *R.a.africanus* and *R.a.sharpei*, but closest to the latter, with broad sandy buff edges to the mantle feathers, brighter than in *R.a.sharpei*, with the feather centres more toned with reddish buff, and the sub-terminal dark bands narrower, less blackish. Below, similar to the nominate race rather than *R.a.sharpei*, with the streaking on the throat finer and the chest-bands narrower. Inner webs of primaries and the secondaries not differing from the other two forms. Tail like the nominate race, with brown confined to the inner web or the penultimate rectrices.

*Measurements:* Wing ♂♂ 135-138 (136.0), ♀♀ 130-138 (135.0); tail ♂♂ 48-57 (52.8), ♀♀ 60-65 (63.0); tarsus ♂♂ 55-57 (56.0), ♀♀ 55-56 (55.3).

*Range:* The coastal desert strip of Angola from Moçamedes to Benguela, presumably intergrading in the south with *R.a.sharpei*.

*Specimens examined:* *Angola:* Benguela and Pico Azevedo. Total 8.

(e) **Rhinoptilus africanus traylori** Irwin

*Rhinoptilus africanus traylori* Irwin, *Durban Mus.Novit.*, vol. vii, 1, 1963, p. 7: Kedia, Lake Dow, Bechuanaland Protectorate.

*Description:* The most pallid form. Differs both from *R.a.africanus* and *R.a.sharpei* through being generally more greyish above, feather centres stone-grey, with narrow blackish-brown sub-terminal bars; feather edges white with little or no trace of buff. Below whiter, with little if any buff on throat and chest, but streaking similar to that of the nominate form; flanks abdomen and under tail coverts white. Inner webs of primaries and the secondaries somewhat paler pinkish buff. Tail variable, but outermost pair of rectrices white, with or without a brown spot on the inner web; penultimate rectrices largely brown; remainder with whitish tips.

*Measurements:* Wing ♂♂ 146-150 (148.3), ♀♀ 148-155 (153.6); tail ♂♂ 59-64 (62.0), ♀♀ 60-65 (63.0); tarsus ♂♂ 55-57 (56.0), ♀♀ 55-56 (55.3).

*Range:* The grasslands of the north-eastern portion of the Bechuanaland Protectorate, from north-west of Serowe to Lake Dow and Lake Ngami and the Makarikari Salt Pan. Birds showing some signs of intergradation have been examined from Murwamusa in the south-central Kalahari, but very large areas remain from which no material has been available for examination.

*Specimens examined:* *Bechuanaland:* Masarwanyana Pan, Lake Ngami; Cungera Pan, near Lake Ngami; Xhane, between Odiakwe

and Bushmans Pits; Kedia, Lake Dow; Nata, Orapa Well and Murwamusa Pan. Total 9.

### Extra-limital Races

Four forms have here to be considered: *R.a.raffertyi* Mearns; *R.a.gracilis* Fischer and Reichenow; *R.a.hartingi* Sharpe and *R.a.illustris* Friedmann. Unfortunately adequate material for a review of this northern group has not been available. Mackworth-Praed and Grant (1952) recognised only *R.a.gracilis* and *R.a.hartingi*, but it would seem that on present evidence that three valid races exist.

White (1953) has discussed the status of *R.a.raffertyi* Mearns which was duly recognised by Friedmann *op.cit.*, but not by Mackworth-Praed and Grant. It seems, however, quite clear that it is a perfectly good form, but unfortunately, I have not personally been able to examine material. On the other hand *R.a.illustris* would appear not to be recognisable. C. M. N. White, *in litt.*, states that he has not been able to judge whether this form differs at all from *R.a.gracilis*, but from inadequate material, regarded them as the same; the type-localities lie in adjacent and similar country, unlikely to produce well differentiated populations.

#### (f) *Rhinoptilus africanus gracilis* (Fischer and Reichenow)

*Cursorius gracilis* Fischer and Reichenow, *Journ.f.Ornith.*, 1884, p. 178: Masailand, north-eastern Tanganyika.

*Synonym:* *Rhinoptilus africanus illustris* Friedmann, *Proc.New Engl.Zool.Cl.*, vol. 10, 1928, p. 80: Kididoma, Dodoma, Tanganyika.

*Description:* A pygmy race. Mantle and head-top sooty grey, the feathers with narrow sub-terminal black bars and contrastingly pale buff edges; nape buff. Below, throat whitish, ranging to rusty buff on chest; abdomen and flanks pale buff, chest-bands equal and narrow. Inner edges to primaries and secondaries cinnamon. Outer tail-feathers variable, but outermost pair always white.

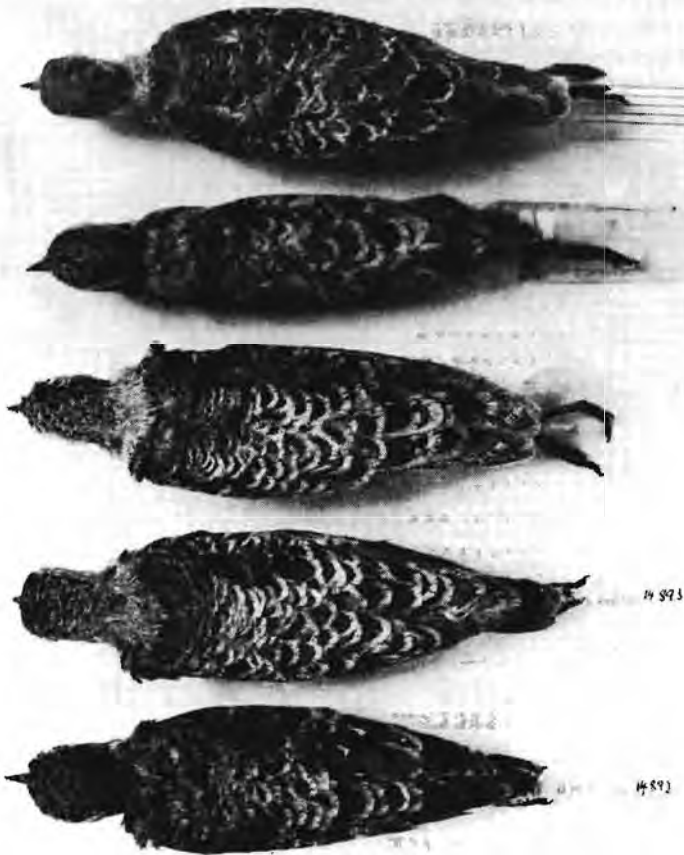
*Measurements:* Wing ♂♂ 129-132 (130.3), ♀ 132; tail ♂♂ 53 (53.0), ♀ 50, tarsus ♂♂ 48, ♀ 47.

*Range:* The dry central areas of Kenya, southwards to about Dodoma, Tanganyika.

*Specimens examined:* Ologasailie, Nairobi-Magadi road, Kenya. Total 3.

#### (g) *Rhinoptilus africanus hartingi* Sharpe

*Rhinoptilus hartingi* Sharpe, *Bull.Brit.Orn.Cl.*, vol. 3, 1893, p. 14: Somaliland.



The races of *RHINOPTILUS AFRICANUS*

From top to bottom;

- Rhinoptilus africanus traylori* Irwin (Type)
- Rhinoptilus africanus bisignatus* (Hartlaub)
- Rhinoptilus africanus sharpei* Erlanger
- Rhinoptilus africanus africanus* (Temminck) (Neotype)
- Rhinoptilus africanus granti* W. Sclater

*Description:* A bright vinaceous cinnamon form. Head-top, nape and mantle a rich pinkish cinnamon, feather edges a paler cinnamon-buff. Below, throat whitish, remainder of under-parts paler cinnamon-buff. Inner webs of primaries and secondaries cinnamon; outer tail-feathers white, and the tail largely tipped with cinnamon.

*Measurements:* ♂ wing 138, tail 58, tarsus 45.

*Range:* Somalia east of the range of *R.a.raffertyi*, south to the Webbe Shibeli, and in the Ogaden in eastern Abyssinia.

*Specimens examined:* *Somalia:* Arori Plains, Burao. One specimen examined.

(h) **Rhinoptilus africanus raffertyi** Mearns

*Rhinoptilus africanus raffertyi* Mearns, *Smiths.Misc.Coll.*, vol. 65, No. 13, 1915, p. 7: Iron Bridge, Hawash River, Abyssinia.

*Description:* Closest to *R.a.gracilis*, and stated to differ from the red *R.a.hartingi* by being dark brownish grey on mantle. Birds collected between Zeila and Harar are said to be paler and more sandy (? another race).

*Range:* North-eastern Abyssinia from Harar to the Hawash Valley and the Danakil country, and Zeila, north-western Somalia.

*Specimens examined:* None.

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### REFERENCES

- FORBES, V. S. (1950), *Le Vaillant's Travels, S.Afr.Geog.Journ.*, vol. 32, pp. 32-51.
- FORBES, V. S. (1958), *The limits of Le Vaillant's Travels in South Africa, Ostrich*, vol. 28, 2, pp. 79-85.
- FRIEDMANN, H. (1930), "Birds collected by the Childs Frick Expedition to Ethiopia and Kenya Colony", *Bull.U.S.Nat.Mus.*, vol. 153.
- GRANT, C. H. B. (1915), "On a collection of Birds from British East Africa and Uganda etc.," part 1, *Ibis*, pp. 1-76.
- GRANT, C. H. B. (1957), "Le Vaillant's Travels in South Africa, 1781-1784," *Ostrich*, vol. 28, 2, pp. 83-97.
- HOESCH, W. and NIETHAMMER, G. (1940), "Die Vogelwelt Deutsch-Sudwestafrikas", *Sonderheft J.f.O.*, vol. 88: 1-404.



- MACDONALD, J. D. (1957), *A Contribution to the Ornithology of Western South Africa*, pp. 1-174. British Museum.
- MACKWORTH-PRAED, C. W. and GRANT, C. H. B. (1952), *Birds of Eastern and North-eastern Africa*, ser. 1, vol. 1. Longmans.
- MACKWORTH-PRAED, C. W. and GRANT, C. H. B. (1962), *Birds of the Southern third of Africa*, ser. 2, vol. 1. Longmans.
- McLACHLAN, G. R. and LIVERSIDGE, R. (1957), *Roberts' Birds of South Africa*. Central News Agency.
- PETERS, J. L. (1934), *Check-List of the Birds of the World*, vol. 2. Harvard.
- ROBERTS, A. (1940), *The Birds of South Africa*. Central News Agency.
- RUDEBECK, G. (1955), *South African Animal Life*, vol. 2: 426-576. Uppsala.
- SCLATER, W. L. (1921), "On the races of the Two-banded Courser", *Bull. Brit. Orn. Cl.*, vol. 41, pp. 132-133.
- SEEBOHM, H. (1888), *The Geographical Distribution of the family Charadriidae or the Plovers, Sandpipers, Snipes and their Allies*. London.
- SHARPE, R. B. (1904), "On a collection of Birds from the Deelfontein District in Cape Colony", *Ibis*, pp. 1-29.
- VINCENT, J. (1952), *A Check-List of the Birds of South Africa*.
- WHITE, C. M. N. (1953), "Systematic Notes on African Birds," *Bull. Brit. Orn. Cl.*, vol. 73: p. 95.

## (2) NOTES ON SOME BIRDS COLLECTED IN THE REGION NORTH OF BEIRA, PORTUGUESE EAST AFRICA.

In the latter part of August and the first part of September, 1962, Mr. R. W. Rankine, accompanied by Mr. R. Peek, undertook a short collecting trip to Portuguese East Africa in the relatively unworked coastal forest region lying northwards from Beira to the Zambesi River. Collecting localities included the well-known Dondo forest; a locality on the coast 20 miles north of Beira; the Chineziwa River, 60 miles north of Beira and inland from the coast at approximately 19° 02' S., 35° 12' E., and finally at Lacerdonia and Marromeu on the south bank of the Zambesi River. In all some 260 specimens were prepared on this expedition, though only those of especial interest are reported on in this paper.

Though practically no collecting seems to have been undertaken in the coastal forest-savannah mosaic to the north of Beira, several papers have appeared dealing with Beira itself and the immediate neighbourhood inland to the forested localities at Dondo and Mzimbiti. This latter region received considerable attention earlier in the century and is the type-locality of several coastal forms. This early exploration is attested by the papers of Sheppard (1909, 1910, 1914), Sclater (1911) on the collections of C. H. B. Grant, and latterly that of Benson (1947). Haagner (1945, 1948) discussed chiefly the larger water birds, waders and raptors etc., seen about Beira itself. Included therein are such species as *Aegyptius percnopterus* and *Poliohierax semitorquatus* that would seem highly unlikely to occur on the Moçambique coastal plain, being considered by Benson and White (1960) of discontinuous distribution in the more arid parts

of the south-west and Somali Arid regions. Though Haagner apparently had specimens brought to him, it seems that these records cannot be accepted at this juncture.

The region covered, receiving an annual rainfall in excess of 60 inches, consists of well-developed *Brachystegia* woodland, interspersed with belts of coastal forest, some of which is apparently particularly rich. There is also much open swampy grassland interspersed with river courses, the whole remaining inundated throughout much of the year.

Though none of the species recorded and discussed hereunder provide other than expected extensions to known geographic ranges, it is thought worth drawing attention to the fact that some of the more local components of this coastal forest fauna are of more widespread distribution. Further work in this area is likely to add other species to the list of those already recorded. Forms such as *Ploceus olivaceiceps* discovered as far south as Panda (Clancey and Lawson, 1960) and *Pogoniulus (Viridibucco) simplex* from Chicomo (Funhalouro) (Rosa Pinto, 1959), are as yet unknown from elsewhere south of the Zambesi River, but must surely have a wider distribution than these single localities would indicate. Consequently, a great deal more collecting needs to be done before the birds of this region can be considered really well known.

#### *Circæetus fasciolatus* Kaup

♀ Chineziwa.

Dead tree at forest edge; contained an unidentifiable snake in crop. Wing 356, tail 240 mm. Clancey informs me that there is a specimen of this eagle from Mzimbiti, near Beira, in the Natal Museum collection (ex P. A. Sheppard coll.).

#### *Francolinus rovumae rovumae* Gray

♀ coast 20 miles north of Beira.

Wing 145, tail 80 mm.

Covey of six in evergreen forest, keeping to the thickest parts of the forest and most difficult to observe. Rankine notes that its call, recorded on tape, is quite readily distinguishable from that of *Francolinus sephaena* with which it has often been suggested that it is conspecific. Though this species has been recorded as far inland as Mzimbiti, to the east of the Urema. On the Zambesi as far downstream as Tambara its place would seem to be taken by *F. sephaena* and it has yet to be precisely determined as to what happens when the two forms meet.

**Charadrius pallidus pallidus** Strickland

♂ coast 20 miles north of Beira.

Clancey (1962) records this small plover from Bela Vista, Maputo, Sul do Save. This record, therefore, further extends its range northwards on the coast, and it seems probable that it may be more widespread in this region than suspected. This specimen which is fully adult agrees with a long series available for examination from the Makarikari Salt Pan in Bechuanaland, and shows no approach to *C.p.venustus* Fischer and Reichenow of the interior saline lakes of East Africa, 3 ♂♂ of which have been available for comparison from lakes Magadi and Manyara. Rankine records this plover as common, so it seems surprising that it has not been recorded more often in Moçambique.

**Charadrius mongolus atrifrons** Wagler

♀ coast 20 miles north of Beira.

Apparently the first record from Portuguese East Africa, though it has been once recorded further south in the Cape Province, Republic of South Africa.

**Mirafraga rufocinnamomea fischeri** (Reichenow)

♂ 20 miles north of Beira.

This specimen was submitted to C. M. N. White for an opinion who states that it appears to be this race, but is in rather worn condition with fairly marked bleaching and abrasion such as sand produces and tends to be rather grey, though the underside does not differ from *fischeri*. It thus shows no approach to *M.r.pintoi* White, from further south.

Though only one specimen was obtained, these larks were heard calling regularly both at this locality and at Chineziwa, frequenting open bush on sandy plain. This species has also been recorded from Mzimbiti.

**Phyllastrephus debilis debilis** (Sclater)

♂ Dondo, 3 ♂♂, 2 ♀♀ Chineziwa.

This bulbul seems to be generally distributed wherever suitable coastal forest occurs, and any apparent hiatus south of the Zambesi would appear to indicate insufficient collecting, though strangely enough it has never subsequently been obtained at the type-locality, Inhambane. Measurements of the material in the National

Museum are: 10 ♂♂ wing 65-73 (68.5), tail 63-68 (64.9); 8 ♀♀ 62-69 (65.6), 58-64 (62.5) mm.

**Sheppardia gunningi gunningi** Haagner

3 ♂♂ Chineziwa.

This is a considerable, but not to be unexpected, extension of range to the northward, and Rankine further records having heard its distinctive song in forest as far north as the Zambesi River. All were collected singly in dense evergreen forest, scratching about the debris on the forest floor, being particularly fond of the vicinity of moss-covered fallen logs. The stomach contents of one individual examined comprised beetles, ants and a grasshopper. Measurements of this series and a further ♂ from Dondo: Wing 73, 74, 75, 75; tail 53, 53, 53, 54 mm.

**Bias musicus changamwensis** van Someren

♂ 20 miles north of Beira, ♂♀ Chineziwa.

In the canopy of coastal forest. Though occurring at Mzimbiti and as far south as Inhambane and reaching the Lusitu-Huroni area of eastern Southern Rhodesia, there remain very few records of this species south of the Zambesi, though it is likely to be more widespread wherever suitable habitat occurs than at present appears to be the case. Wing ♂♂ 84, 85, ♀ 81; tail ♂♂ 45, 48, ♀ 49.

**Camaroptera stierlingi stierlingi** (Reichenow)

2 ♀♀ Chineziwa.

These two females agree with *C.s.stierlingi* in lacking the reddish-brown tones typical of *C.s.irwini*, and, in fact, appear a more earth-brown than is usual in that form and confirm further the differences between it and *C.s.irwini*. This record fills a further gap to the known distribution of this species, and as it occurs also at Boror (Roberts, 1912) in addition to the localities to the north of the Zambesi River as listed by Irwin (1960), it will probably be found to be general on the coastal plain wherever there are ant-hills, or other suitable cover, in *Brachystegia* woodland. Wing 59, 63; tail 45, 46.

**Apalis melanocephala lightoni** Roberts

♂ 20 miles north of Beira, ♀ Chineziwa.

The last locality extends this race's range considerably further to the north than hitherto recorded within Portuguese territory, though

as with other coastal species there is nothing to suggest that it will not be found wherever suitable habitat is available, though to date not south of the Haroni-Lusitu River junction in eastern Southern Rhodesia. Measurements of the series in the National Museum are: wing ♂♂ 49, 52, 52, ♀♀ 47, 47, 49; tail ♂♂ 54, 58, 64, ♀♀ 45, 48, 48 mm.

### **Anthreptes collaris beverleyae** Irwin

♂ 20 miles north of Beira, 2 ♂♂, 2 ♀♀ Chineziwa.

This series are all referable to *A.c.beverleyae*, not *A.c.zambesiana* as might have been expected on geographical grounds, and thus extend the range of this form considerably to the north, as it was previously supposed that this region was occupied by *A.c.zambesiana* (see distribution as given in Irwin (1961)). It should be noted that the type-locality of *A.c.zambesiana*, stated by Irwin *op.cit.* to be "Shupanga, Shiré River, southern Nyasaland", is an error, copied from Mackworth-Praed and Grant (1955). Shupanga (=Chupanga) is not in Nyasaland, but on the south bank of the Zambesi River, in Portuguese territory at 18° 02' S., 35° 36' E.

### **Anomalospiza imberbis** (Cabanis)

♂ coast 20 miles north of Beira.

Found in swampy grassland. There do not appear to be any previous records of this species from the Moçambique coastal plain.

### **Pirenestes minor** Shelley

♂ Chineziwa.

Only previously from south of the Zambesi River at Mzimbiti and the Ruda River, Inyanga, though likely to be more widespread, but highly localised than these few localities would indicate. Wing 59, tail 52, culmen 12, across base of lower mandible 11 mm.

### **Serinus mennelli** (Chubb)

♂ Chineziwa.

From small flock in *Brachystegia* woodland. The only other records from Portuguese East Africa would appear to be at Mauale in the Sul do Save (Rosa Pinto, 1953), from Vila Paiva de Andrada (Rosa Pinto, 1959), and Panda, Inhambane district (Clancey, *in litt.*), though it is probably more widespread in rich *Brachystegia* woodland than these few records would indicate.

**Note on the limits of the distribution of the coastal Avifauna**

No detailed study has ever been made of the avian zoogeography in this sector of Moçambique in relation to the limits of the distribution of coastal forest species. The paper by Frade and Rosa Pinto (1955), though outlining the main ecological and zoogeographical divisions of Moçambique, does not treat in any detail the region under review. Sufficient data, however, is now available to attempt to define the precise distributional limits of this coastal fauna. Previous discussions such as that by Winterbottom (1962), merely attempted to ascertain the relative southward or northward extension of the coastal fauna without determining its limits in the west.

North and west of Beira faunal distribution seems to closely follow the orographical and other natural features of this region. In this sector the 1,000 foot contour inland of the Urema River drainage forms the edge of the interior plateau and runs in a south-westerly direction from due south of Sena to culminate in the Gorongoza highlands, which reach an altitude of over 6,000 ft., then dropping away considerably in altitude as one proceeds southwards until the Chimanimani Range of mountains is reached, where the altitude again rises to over 7,000 ft. East of the Gorongoza Mountain block lies the low-lying drainage of the Urema and Zangue/Mucua troughs, draining southwards to join the Pungwe system and northwards to the Zambesi. This low-lying region, much of which is virtually at sea level, consists of open grass "tandos", interspersed with drier woodland of the *Brachystegia-Julbernardia* type, receiving relatively less rain than either the coastal forests north of Beira, or the escarpment and plateau regions to the west. Between the coastal zone and this low-lying drainage trough, there exists a belt of altogether richer *Brachystegia* occupying an elevated ridge rising to over 1,000 ft. and running due south-west, to trail off gradually near the Urema-Pungwe River confluence. It is not known what part this elevated ridge plays in the zoogeography of the area, but applied in conjunction with the low-lying areas to the west, would seem to form an effective barrier to any general extension further inland of the coastal fauna. This fauna seems to be largely confined to a triangle of low ground east of the elevated inland ridge and thence northwards to the Zambesi River, where the coastal elements again begin to penetrate further inland up the Zambesi valley in broken and isolated forest patches to at least Tambara. This triangle (see map in Keay *et al*, 1958) is dominated by a forest-savannah mosaic, the savannah being mostly rich *Brachystegia*, interspersed with swampy grassland and

drainage lines, which remain inundated throughout a large part of the year.

West of this coastal region the country becomes more well-known ornithologically, and has been summarised by Rosa Pinto (1959). This region, dominated by the Gorongosa massif is, in its avifaunal affinities, an extension of that of the Southern Rhodesian highlands and comprises a most typical plateau *Brachystegia* fauna and through the presence of true montane forest elements. On the whole, however in this sector, there is a strict division between the true highland fauna and that of the coast, especially among the forest fauna, and they do not come into any close physical proximity. As has been shown by Benson *et al.*, (1962), there are distinct differences in the composition of the plateau *Brachystegia* avifauna compared with that of the coastal plain, the fauna of which is richer in the number of species confined thereto, compared with that of the coastal zone, where there is much replacement at the species level, without taking into account the two forest faunas which are even more divergent. Certain coastal forms do, however, extend further westwards than others; thus *Pirenestes minor*, in this sector largely coastal, reaches the foothills of the Inyanga highlands, though it has a much wider altitudinal range in Nyasaland (Benson, 1953). Likewise, *Erythrocerus livingstonei* extends to the lower slopes of Gorongosa Mountain (Irwin, 1956), but no further westwards, so far south, though elsewhere it penetrates far up the Zambesi system. Rosa Pinto (*op.cit.*) further records such forms as *Bias musicus* as far west as Inharicato, whilst *Prionops scopifrons* is known from Vila Paiva de Andrada, *Ploceus subaureus* from the Rio Vunduzi and *Lamprotornis corruscus* from Vila Paiva de Andrada and Inharicato, but on the whole these are the outliers.

While the geographical limits of the component avifaunas are in this sector relatively easily defined by the tendency of the coastal components to be squeezed into a relatively narrow corridor, through the ecological changes brought about by the existence of the drier savannah of the Urema trough and the effect of the Gorongosa highlands. Nevertheless, south of a line of the Beira-Umtali Railway, there exists no such clear-cut division. Here the edge of the plateau continues to run in a south-westerly direction, to culminate eventually in the Chimanimani Mountain range on the border between Portuguese territory and that of Southern Rhodesia. The rivers throughout this area drain in an easterly direction, and as no material barriers appear to exist, the coastal fauna in places extends very much further inland than elsewhere, to reach as far as the confluence of the Haroni and Lusitu Rivers, more than 100 miles from the sea,

at the southern end of the Chimanimani Mountains within Southern Rhodesian territory. Smithers (1956) first listed the coastal forest species recorded from this locality and it is expected that in the future that further collecting will produce still others, as the amount of exploration in this region has so far been very limited.

The precise factors that allow this coastal fauna to extend so far west are not fully understood. To the north of the Beira-Umtali Railway the avifaunal and vegetational divisions closely coincide, as is brought out so well when comparison is made with the vegetation map of Keay, *op.cit.*, and the more detailed data presented by Mendonca (1953). Further south no large scale inland extension of these coastal forests is recorded, though it is presumed that coastal forest must exist rather extensively unless this westward extension represents an isolated island on the escarpment foothills. This seems rather probable to judge by the description of the Lusitu and Buzi River drainages provided by Swynnerton (1908), with its accompanying map with local details in regard to the vegetation, much of which appears in general to be far too dry, though isolated forest patches do, or did then, apparently exist.

An interesting situation arises from the evolutionary standpoint in the Haroni-Lusitu area and adjacent Portuguese territory, in that two contrastingly different and in general not very closely related evergreen forest faunas exist in close juxtaposition, replacing one another altitudinally, a situation unique in this part of Africa. Though certain species may occur both in the montane and lowland forest zones, with or without a racial difference, as with *Pogoniulus bilineatus*, *Nectarinia olivacea* and *Ploceus bicolor*; in most instances the differences are absolute. In the region of the Haroni and Lusitu Rivers, though much of the country is either *Brachystegia-Uapaca* woodland and grassland, forest cover is continuous from 1,000 to 7,000 ft. along the river valleys, thus no isolating factor exists other than altitude to separate the montane and lowland faunas; in consequence the change over must be a gradual one. This unique situation brings several congeneric or otherwise related species into close geographical proximity with apparent contact on what amounts to a narrowly sympatric basis, whereas elsewhere their ranges may be separated widely geographically.

Such pairs are *Phyllastrephus debilis* (ascending to 2,500 ft.) and overlapping with *Phyllastrephus flavostriatus*; *Apalis melanocephala lightoni* and *Apalis chirindensis* (the latter regarded as specifically distinct from the *melanocephala* group); *Batis fratrum* and *Batis capensis*; *Tauraco corythaix* may also be mentioned, for whereas



*T.c.livingstonei* occupies the highlands, birds from 1,000 ft. show a close approach to the coastal *T.c.reichenowi*. Smithers, *et al.*, (1957), includes also *Nectarinia olivacea olivacina* as occurring at the Haroni-Lusitu confluence, but these birds are now considered best referred to *N.o.sclateri* of the highlands; *Sheppardia gunningi* may also confidently be expected to occur, whereas elsewhere in the highlands this genus seems to be replaced by *Pogonocichla stellata* and *Pogonocichla swynnertoni*, which apparently occupy the same or very similar ecological niches.

## REFERENCES

- BENSON, C. W. (1947), "The Birds of Mzimbiti, near Beira, Portuguese East Africa", *Ostrich*, vol. 18, pp. 125-128.  
(1953), *A Check List of the Birds of Nyasaland*. Blantyre and Lusaka.
- BENSON, C. W. and WHITE, C. M. N. (1962), "Discontinuous Distributions (Aves)", *Proc. First Fed. Sci. Congr.*, Salisbury, 1960, pp. 195-216.
- CLANCEY, P. A. (1962), Chestnut-banded Sandplover *Charadrius pallidus pallidus* Strickland in southern Moçambique, *Ostrich*, vol. 33, 1, p. 26.
- CLANCEY, P. A. and LAWSON, W. J. (1961), "The Olive-headed Golden Weaver *Ploceus olivaceiceps* (Reichenow) in Sul do Save — a species new to South Africa", *Ostrich*, vol. 32, p. 95.
- FRADE, F. and ROSA PINTO, A. A. DA (1955), "Avifaunal distribution throughout Moçambique", *Rev. Junta Missoes Geogr. Investig. Ultramar*, vol. 3, pp. 219-224.
- HAAGNER, A. K. (1945-48), "A list of the Birds observed in Beira and neighbourhood", *Ostrich*, vol. 16 pp. 32-43, part 2, *Ostrich*, vol. 19, pp. 211-217.
- IRWIN, M. P. S. (1956), Field Notes on a Collection from Moçambique, *Ostrich*, vol. 27, pp. 28-39.
- IRWIN, M. P. S. (1960), "Relationships within the *Camaroptera fasciolata-stierlingi-simplex* complex of Warblers", *Durb. Mus. Novit.*, vol. 6, 3, pp. 47-60.
- MACKWORTH-PRAED, C. W. and GRANT, C. H. B. (1955), *Birds of Eastern and North Eastern Africa*, ser 1, vol. 2. Longmans.
- MENDONCA, F. A. (1953), "The Vegetation of Moçambique", *Lejeunia*, vol. 16, pp. 127-135.
- ROBERTS, A. (1911-12), "Notes on a collection of Birds in the Transvaal Museum from Boror, Portuguese East Africa", *Journ. S. Afr. Orn. Union*, vol. 7, pp. 57-78; vol. 8, pp. 22-61.
- ROSA PINTO, A. A. DA (1953), "Uma Lista Sistemática das Aves da Região Extremo Sul da Província de Moçambique", *Bol. da Soc. de Estudos Mocambique*, vol. 23, pp. 1-72.
- ROSA PINTO, A. A. DA (1959), "Um Esboço da Avifauna sedentária da Região da Gorongosa, Moçambique", *Ostrich suppl.*, 3, pp. 98-125.
- ROSA PINTO, A. A. DA (1959), "Alguns novos de Aves para o Sul do Save e Moçambique", *Soc. Estudos Prov. Mocambique*, No. 118, pp. 20-21.
- SCLATER, W. L. (1911-12), "On the Birds collected by Mr. Claude H. B. Grant at various localities in South Africa", *Ibis*, 208-316; 405-437; 695-741; 1-63.
- SHEPPARD, P. A. (1909), "A list of, and Notes on, Birds collected and observed in the District of Beira, Portuguese East Africa", *Journ. S. Afr. Orn. Union*, vol. 5, pp. 24-49.
- SHEPPARD, P. A. (1910), "Field Notes on some little-known Birds, including two new species, from Observations made during the Nesting Season of 1909 in Beira, Portuguese East Africa", *Journ. S. Afr. Orn. Union*, vol. 6, pp. 36-45.

- SHEPPARD, P. A. (1914), "Additional List of, and Notes on, Birds collected and observed in the Mzimbiti District, 22 miles from Beira, Portuguese East Africa", *Journ.S.Afr.Orn.Union*, vol. 10, pp. 1-4.
- SMITHERS, R. H. N. (1956), "Some Interesting Rhodesian Records, IV", *Ostrich*, 27, pp. 168-170.
- SMITHERS, R. H. N., IRWIN, M. P. STUART and Paterson, M. L. (1957), *A Check List of the Birds of Southern Rhodesia*. Cambridge, England.
- SWYNNERTON, C. F. M. (1908), "Further Notes on the Birds of Gazaland", *Ibis*, part 1, pp. 1-107.