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# BULLETIN
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# BRITISH ORNITHOLOGISTS' CLUB

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The five hundred and forty-seventh meeting was held jointly with the B.O.U. at the offices of the Zoological Society of London, at Regent's Park, on Thursday, 15th March.

*Chairman:* Dr. W. H. Thorpe.

Members present: B.O.C. 54; B.O.U. 40; Guests 43; Total 137.

## Notes on African Larks
### PART II

*by* Mr. C. M. N. White

*Received 10th October, 1955*

In this second instalment of studies of African larks I deal with two further sections of the genus *Mirafra* which form well defined units, numbering them consecutively with the groups discussed in part 1.

3. *Mirafra africanoides* (Smith). This species stands alone. In its distribution it is analogous to many species of *Mirafra* since it occurs in low rainfall open savanna in south-western Africa and reappears in north-east Africa. The tail pattern is close to the larks in group two since the tail is uniformly dark except for a narrow white outer web to the outermost feather. The wing pattern exhibits well marked bright rufous outer margins on the basal half of the outer webs of the primaries, extending almost to the tips of the outer webs of the outer secondaries, and forming a distinct rufous wing patch. In habits *M. africanoides* is largely arboreal but has no flapping or clapping flight.

4. The clapper larks. The two species *M. apiata* (Vieillot) and *M. rufocinnamomea* (Salvadori) form a distinct group at once recognisable from other groups of the genus by the wing clapping habit. I discussed the general characters of the southern and central African races in Bull. B.O.C. 66. pp. 13–15, 1945. More recently Macdonald (The Ibis : 1952. pp. 629–635) has come to almost identical views for the races in South Africa. It would be tempting to unite all these larks into a single species, but there are certain objections to this course at present. In

the *apiata* group the rufous on the wing forms a broad band across both webs of the primaries, in the *rufocinnamomea* group this is not so, the rufous on the outer webs and that on the inner webs being divided by a dark zone along the shaft. No intergradation between the two types of wing pattern has yet been discovered. Secondly there may be an overlap in the ranges for *M. apiata kalaharica* (Roberts) ranges to Dautsa in Ngamiland (male in my collection collected by L. D. Vesey-Fitzgerald on 27.10.54) and therefore must come very close to the range of *M. rufocinnamomea mababiensis* (Roberts) if in fact overlap does not actually occur. Thirdly there are behavioural differences ; the *apiata* group whistles during its flights, the *rufocinnamomea* group is notoriously silent on the wing and I do not know of any authentic singing on the wing in this species. Finally the *apiata* group is especially associated with more arid and open country than the very adaptable *rufocinnamomea* races.

*Mirafra africanoides* (Smith).

I reviewed the southern races on the basis of material in the Transvaal Museum (Ibis : 1947. pp. 419–420. Since then much more material has come to hand from critical localities which shows that various modifications in the arrangement are needed.

*M.a. africanoides* (Smith).

Roberts proposed to restrict the type locality to Litakun, near Kuruman but Mr. J. D. Macdonald has kindly informed me that Smith's types do not agree with birds from Griqualand West but are darker and agree with specimens from Colesburg, which he would regard as the type locality of the nominate race. He suggests using *harei* Rbts. as the name of the lighter birds from Griqualand West but had no topotypical *harei* from Windhoek. I have a series from Binsenheim, south of Windhoek which are much lighter and less streaked than birds from Griqualand West, and the latter cannot possibly be called *harei.* The darker colour of birds from Colesburg suggests comparison with *M. a. austinrobertsi* White from the Transvaal but no specimens are available in the British Museum of this race.

The racial divisions in this area need study with much more material ; dark and light birds seem to have a rather spotty distribution. 100 miles north west of Colesburg at Hopetown, Mrs. Hall (*in litt.*) informs me that birds are pale like others from Kuruman. Two from Kimberley lent by Mr. R. H. Smithers from the National Museum, Bulawayo are darker than others seen from Griqualand West, and 100 miles north-east of Kimberley at Bloemhof, the Transvaal Museum has dark specimens referable to *austinrobertsi.* I have also seen a lighter bird from Mahalapye, Bechuanaland in the National Museum, Bulawayo which agrees quite well with the pale Griqualand west population. On the material which I have seen, the darker birds seem to have a more eastern range from Colesburg, Kimberley, Bloemhof, Pretoria, Nylstroom and Waterberg in the Transvaal ; west of them occur paler birds at Prieska, Fourteen streams, Barkly West, Kuruman, Hopetown, Mahalapye. But I am not satisfied that clear cut ranges for two or more races can yet be properly defined. Nor is the extension north west into South West Africa of the paler of these populations clear for few specimens seem to be available from that area. Single specimens from Aus and White Rand, near Gibeon are much too pale and lightly streaked above to be assigned there.

*M. a. vincenti* (Roberts).

In 1947 only the very worn original series of the Southern Rhodesia race at Pretoria had been available. More material in good plumage has now been examined through the kindness of Mr. Smithers ; these show that this race is not unlike the birds discussed above under the nominate form. It differs in being duller, less reddish above with heavy black feather centres, especially in the streaking on the head top ; the breast spotting better developed.

*M. a. mossambiquensis* (Pinto).

Described (1952 : Bol. Soc. Est. Mocamb. 2. p. 5) since my revision ; the type locality is Maquese, southern Portuguese East Africa. Dr. Rosa Pinto has kindly enabled me to see two examples. This race is much paler above than either of the foregoing, though apparently locally variable, palest at Maquese and Maue-ele, more reddish to the south and west at Bela Vista, Marracuene and Massingir. (Cf. Lamm. Ostrich : 1953. 24. p. 4). No contiguous populations in the Union of South Africa seem to be known and there is no doubt that the two specimens examined are much paler than *vincenti*, *austinrobertsi* or *africanoides*, varying from a pale reddish to greyish fawn above.

*M. a. harei* (Roberts).

This name has been constantly misapplied in the past ; Roberts always used it for the darkest of the populations of South-west Africa, and I followed him in 1947, although I noted that the type was a pale bird. I have now examined the following new material : 1 White Rand, near Gibeon ; 6 Bissenheim, S. of Windhoek ; 2 plain of Teufelsbach, N. of Windhoek (topotypes of *isseli* Hoesch and Niethammer) ; 4 Osona, Okahandja ; 1 Karibib ; 1 Erongo. All these birds agree well ; they differ from the darkest population to the east and north-east in being much lighter and more yellowish above with less streaking. Roberts, owing to his misapplication of *garei*, named them *M. a. omaruru*, and this name in my view is clearly a synonym of *harei*. This race ranges from Franzfontein to Otjimbinque and Aus, Omaruru, Okahandja, Windhoek and Gibeon ; a single specimen from Eckenberg, 35 miles north-east of Okahandja shows some traces of intergradation with *gobabisensis* (Roberts) in its richer head top and face. I cannot find any grounds to support the recognition of *isseli*.

*M. a. gobabisensis* (Roberts).

Thss race ranges to the east and north-east of *harei* from Alice and Gobabis to Osire and the Waterberg and provisionnally to Outjo. The fresh material now available consists of 4 from Alice (s.w. of Gobabis), 6 from Osire and 1 from Gobabis, the latter lent by the National Msueum, Bulawayo. Compared with *harei* these are all richer and redder in colour, especially on the crown, face and wing margins ; the streaking on the upperside is likewise more pronounced. This race is not entirely uniform ; on the material now to hand the five birds from Alice and Gobabis are rather lighter than the six from Osire suggesting a cline to *M. a. rubidior*. But Mrs. Hall writes that birds from Waterberg and from Gobabis in the British Museum are all richly coloured. These are the dark birds to which the name *harei* was formerly incorrectly applied.

*M. a. rubidior* (White).

Described in Bull. B.O.C. 1955. (75), p. 29 from Ozondache. There

are now four examples of this red race from the type locality and Okaputa. The red of the upperside is a dark foxy red, much darker and richer than in the last mentioned form. So far only known from a comparatively small area north of the Waterberg and Otjiwarongo. More collecting will be needed to work out its full distribution.

*M. a. sarwensis* (Roberts).

Lighter than any of the other populations of South West Africa, being a light pinky rufous above, much lighter than *gobabisensis* and less yellowish red than *harei*. Birds of this type occur from east of Etoscha pan to the western Kalahari as far as Ghanzi, but not in Ngamiland. *Tsumebensis* (Roberts) founded on a single worn bird is a synonym. My conclusions on this race and its range in South West Africa agree with those of Mr. Macdonald.

*M. a. makarikarii* (Roberts).

In 1947 I had only seen a single example ; through the kindness of the National Museum, Bulawayo I have now seen a series from Ngamiland and Makarikari pan. They are an inconstant series, all separable from *sarwensis* by a further loss of red pigment, and on the whole, rather yellowish sandy-grey above. This is noticeable on the head top, wing margins and face especially. Two out of four from Makarikari and Nata are very pale and greyish with light streaking, but the other two are not separable from some Ngamiland birds.

There is probably some intergradation with *sarwensis* from Ngamiland south west which accounts for the slightly less grey range of variation in Ngamiland birds but none of them is as vinous red as *sarwensis*, and a very freshly moulted bird from Tsotsoroga contrasts well with equally fresh *sarwensis*. I believe that it is best to include all these birds under *makarikarii* whilst recognising that Ngamiland birds show traces of intergradation with *sarwensis*.

*M. a. trapnelli* (White).

Colder and more greyish-brown than the last race ; birds from Balovale are markedly brownish above compared with any of the birds included under *makarikarii*. A series of five lent by the National Museum, Bulawayo from south west Barotseland is lighter above. They lack the rusty yellow tinge of many Ngamiland birds but are very near to the palest and greyest extreme of *makarikarii* from Makarikari pan. It would have been easier to define the races if the north Bechuanaland bird had been named from Ngamiland, enabling one to recognise a slight trend to pallor at Makarikari pan. As Balovale birds are a colder and darker brownish shade above, I have no doubt of the validity of *trapnelli*, and I think it advisable to include birds from south west Barotseland with them, recognising a trend to pallor in that area.

*The pattern of colour variation.*

The pattern of colour variation is remarkably constant in Southern Africa. Reddish races occur from the Cape Province to Southern Rhodesia and South West Africa, differing in shade of redness, brownness or yellowness, and in intensity of streaking on the upper surface. Between them from Bechuanaland to western Northern Rhodesia are interposed grey backed populations. Narrow zones of intergradation may exist west of Ngamiland. The population of southern Mozambique is isolated, and apparently inconstant, some birds being very like the grey

backed Bechuanaland birds and others more reddish above. It may well be that the red or grey colour of the back is very simply controlled, and that the process of selection in southern Mozambique is incomplete and the population there still quite unstable.

The East African populations seem likewise to have not yet reached a full degree of stability. I discussed them in Bull. B.O.C. 1953, pp. 87–88. Further data since then confirms the fact that the birds of most of Kenya colony are strongly reddish above, while those from British Somaliland and from southernmost Kenya and northern Tanganyika are colder and more brownish or sandy above. Mr. J. G. Williams of the Coryndon Museum, Nairobi kindly drew my attention to the very richly coloured birds found about Makindu and Simba in eastern Kenya, associated with red soils. But a series from the Matthews range recently collected includes some very similar birds, as well as others paler and pinker. Dr. A. L. Rand has informed me that three from Bali and Arusi in Ethiopia in the Chicago Natural History Museum are very similar to Simba birds. Mr. Williams has also raised the question as to whether *M. a. intercedens* and *M. a. alopex* are really conspecific since he collected both within twenty miles of each other in British Somaliland, *intercedens* in dry bush areas and *alopex* on open grassy plains on red soil. This may well reinforce the evidence that many populations of larks change abruptly with little or no intergradation. But it is difficult to see any other grounds to support the division into two species and the gap is bridged by *M. a. macdonaldi* White from Yavello in south Ethiopia. I believe that we should continue to maintain all as conspecific, and that it would be unsafe at present to sub-divide the birds assigned to *M. a. intercedens*.

*Mirafra rufocinnamomea* (Salvadori).

I reviewed variation in this species in Bull. B.O.C. 1953, 73, pp. 88–91. I then grouped a number of variable populations under *M. r. fischeri* (Rchw.) owing to lack of adequate material in comparable fresh plumage. In the populations included under that name soil staining is rare or non-existent but abrasion in breeding birds produces a dull faded appearance and soot-staining from burnt vegetation is not uncommon. I have since been able to examine more material in fresh plummage and consider that some improvement to the 1953 arrangement is desirable. I still retain under *M. r. fischeri* the birds from the coastal areas of East Africa from Mombasa to the Zambesi mouth and would include with them birds from Nyasaland, Northern Rhodesia (except extreme west) and the Katanga. These populations are all dark both above and below, the upperside being greyish or brownish with well developed blacker feather centres. Intensity of pigment reaches its maximum south of the Zambesi in southern Portuguese East Africa and adjacent Swaziland and north east Transvaal. In addition in these areas the upperside is characterised by a deep vinous pink shade in the majority of specimens which is lacking in any of twenty-three birds from the area now assigned to *fischeri*. Dr. J. P. Chapin recently drew my attention to this feature when visiting Lusaka and I believe that this population should be recognised by name.

*Mirafra rufocinnamomea pintoi* subsp. nov.

*Description :* differs from *M. r. fischeri* (Rchw.) by its usually well

marked dark vinous pink tinge on the upperside ; underside usually very strongly pigmented.

*Type :* adult female collected at Catuane, southern Portuguese East Africa by Dr. A. Rosa Pinto on 3rd January, 1954. In my collection.

*Distribution :* Southern Portuguese East Africa to Swaziland and north-east Transvaal.

In the more western part of their range the populations of this lark formerly grouped under *fischeri* become paler than in East Africa ; the black pigment in the upperside is greatly reduced, the abdomen is much paler, the breast usually so and the breast spotting less heavy. Two of these pale populations inhabit the area from the Kasai to French Equatorial Africa and Southern Rhodesia respectively. The former of these represents the north western periphery of *fischeri*-like populations and there seems no reason to justify retaining it as identical with the much darker East African birds. I therefore propose to describe it as :—

*Mirafra rufocinnamomea schoutedeni* subsp. nov.

*Description :* upperside much lighter than *M. r. fischeri* due to reduction in black pigment, and consistently light warm brown or dark clay brown ; underside also lighter and with the breast spotting much reduced compared with *fischeri.*

*Type :* adult male collected at Luluabourg, Kasai, Belgian Congo on 26th May, 1939 by Fr. Callewaert. In my collection.

*Distribution :* Lower Congo to the Kasai, Gaboon and French Equatorial Africa.

The light birds from Southern Rhodesia are remarkably similar to the above described race although separated from them by quite different populations. In series on the upperside they show a tendency to vinous pink which is absent from *schoutedeni* and is evidently typical of all birds from south of the Zambesi. However, they are much too pale to unite with *pintoi.* If they had a range contiguous with *schoutedeni* I should not feel disposed to name them. As it is one must either recognise two slightly different pale populations widely separated geographically under a single name, or separate the Southern Rhodesian birds. On balance I think the latter course is preferable as the slight difference in colour above is quite perceptible in series of good fresh specimens.

*Mirafra rufocinnamomea smithersi* subsp. nov.

*Description :* A pale form of *M. rufocinnamomea* very similar to *M. r. schoutedeni* but with the upperside brighter and more vinous pink ; much lighter above and below than the vinous pink *M. r. pintoi.*

*Type :* Adult male from Deka Farm, Matetsi, Southern Rhodesia collected on July 10th, 1954. In the National Museum, Bulawayo. Reg. No. N.M. 16374.

*Distribution :* Southern Rhodesia and the northern Transvaal ; probably fusing with adjacent races but no material from any locality where this occurs.

It seems desirable to redefine more accurately the characters of *M. r. mababiensis* (Roberts) as in 1953 I had only seen the example in the Transvaal Museum. Since then I have seen a number of examples ; viz. : 2 from Ngamiland and 2 from south-west Barotseland, all in the National Museum, Bulawayo, and one in my own collection collected by Mr. W. Hoesch at Mupapama, Okovango, South West Africa. Apart

from its very pale colour, this race is much more silvery grey above than other populations. The light edges to the wing feathers are creamy white and the rufous on them much paler than in other races. This further study of the *fischeri*-like populations of *M. rufocinnamomea* has served to confirm that the various races and populations included under this name are much more constant than has been supposed. I can see little evidence of the regular co-existence of colour phases except perhaps in the lowlands of East Africa. Elsewhere sporadic variants may occur but populations are remarkably constant when reasonable samples are available. Variation in the races may be summarised for convenience.

(a) Dark populations strongly pigmented : *fischeri* (mainly grey-brown or dark cold brown) and *pintoi* (dark but with vinous red suffusion above).

(b) Light populations with reduction of pigmentation : *schoutedeni* (light brown) ; *mababiensis* (greyish) *smithersi* (light vinous rusty).

Trends of variation which should be stressed are likewise the presence of pinky vinous in the southern populations as well as the change from dark eastern to light western populations. There is unfortunately very little evidence from areas where intergradation between prevailing colour types might be expected. South of Lusaka in Northern Rhodesia the populations are variable and unstable and sometimes more like *fischeri*, sometimes more like *smithersi*. *M. r. Iwenarum* White also appears in some ways the product of intergradation between *fischeri* and *mababiensis*, and further collecting in eastern Angola is needed to throw light on this. At present it is retained as a light population, lighter and pinker above, and lighter below than *fischeri* and less grey and more richly coloured than *mababiensis*.

To sum up then, I believe that the various populations of clapper lark discussed above should not be lumped under a single name as this masks certain well marked trends of variation which are easily seen in series of fresh plumaged birds. I am much indebted to Mr. R. H. Smithers for the loan of material from Southern Rhodesia, Dr. A. Rosa Pinto for material from Southern Portuguese East Africa and Mr. C. W. Benson for collecting a good series in the northern province of Northern Rhodesia.

*Ecology of M. rufocinnamomea.*

*M. rufocinnamomea* is evidently more adaptable than any other species of the genus in its ability to establish itself in what are not typical lark habitats. In much of its Central African range it occurs in lightly timbered savanna, cultivation and clearings in what is for the most part well timbered country. In south east Nigeria it has colonised man-made clearings in country with much forest, and it is not impossible that there will be found a link between the *buckleyi* populations of south east Nigeria and the *schoutedeni* populations which range north 280 miles beyond Brazzaville to Oka. The nature of the habitats of *rufocinnamomea* would not induce one to expect a close correlation between colour of the bird and ground colour since much of the terrain frequented by *rufocinnamomea* has a permanent grassy and scrubby cover. Over much of Central Africa this seems to be born out by the presence of dark coloured *fischeri* on soils of various colours. The light colour of *lwenarum* may indicate a tendency to correlation with soil since it not only lives on whitish grey sands but the latter are largely covered with fine wiry

*Loudetia* grass which forms a poor soil cover. The reduction in black patterning of the *fischeri* complex of races from east to west has been pointed out above, and it is worth noting also that *buckleyi* is still less strongly patterned than *schoutedeni* on the upperside and the breast. It remains to be discovered whether any of the other races of the species with blackish or very red uppersides do correspond to prevailing soil colours, and if so, whether in such cases the soils are less well covered than in other areas.

# Abnormal Seasonal Assumption of Spring Plumage in the Redshank (*Tringa totanus* Linnaeus) in association with possible Radioactive Contamination

*by* Dr. James M. Harrison and Dr. Jeffery G. Harrison

*Exhibited at the February meeting of the B.O.C.*

In earlier notes [1,3], we have recorded and exhibited an Icelandic Redshank, *Tringa totanus robusta* Schiöler, taken in Kent in November, showing the assumption of advanced summer plumage. Following a note in *The Times* by Mr. J. G. Williams [2], in which it was suggested that this abnormal assumption of breeding plumage might be connected with contamination by radioative substances, we decided if possible to secure further specimens for investigation. Unfortunately we did not realise when the November bird was collected that this matter of radioactive contamination could be involved.

However, on 24th December, 1955 a female Redshank was shot by Richard Jones, in south-east Sussex and was examined by us on the spot. This specimen showed incipient assumption of summer plumage. On dissection the ovary and oviduct appeared somewhat more fully developed than is usual in individuals of this species collected at this time of the year.

Acting upon this slight but important evidence, we submitted the roughly dried part skeleton, consisting of the thorax, pectoral girdle, pelvis and femora to Dr. John Loutit of the Radiobiological Research Unit, the Atomic Energy Establishment, Harwell, for opinion as to radioactive contamination. The dried bones were dissolved in nitric acid and the presence of radioactive contamination was confirmed with a Veall Geiger Counter. A graph was prepared assessing the degree, and was exhibited.

Dr. Loutit's report upon the investigation, which was carried out by Dr. G. E. Harrison and Mr. W. Raymond was that "at least it proves that the bird has been exposed to some radiation". He adds "I think the data are hard facts. However, I personally would be wary of drawing conclusions from them. As I said in my (earlier) letter, the radioactivity found was extremely small; it could be that Continental or domestic birds in their winter plumage have the same degree of contamination as the

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[1] Harrison, James M. and Jeffery G. "*Icelandic Redshank in freshly moulted summer plumage in November*". Bull. B.O.C. Vol. 76, pp. 23–25.
[2] The Times. "*Birds from Siberia in summer plumage*". 10–12–1955.
[3] The Times. "*Birds in Summer plumage*". 14–12–1955.