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MISCELLANEOUS TAXONOMIC NOTES ON AFRICAN BIRDS LI

by

P. A. CLANCEY

(Director, Durban Museum, Durban)

ON THE VALIDITY OF *GUTTERA EDOUARDI SYMONSI* ROBERTS, 1917

The Karkloof forest, Natal, isolate population of the Crested Guineafowl *Guttera edouardi* (Hartlaub), 1867: coast of Natal, was characterized as a new subspecies on the basis of rather bluer spotting to the body plumage and reduction in the intensity of the reddish brown "shadow" spotting to the dorsum under the name *Guttera edouardi symonsi* by Roberts, *Ann. Transv. Mus.*, vol. vi, 1, 1917, p. 3. Paratypical material consisted of a short series taken in the Karkloof forest between March and July, 1917, at elevations of from 1158 to 1615 m. by R. E. Symons. *G.e.symonsi* has been generally accepted as valid by later workers, though few appear to have studied the case closely. Recently, Mr. T. M. Crowe, of the Percy FitzPatrick Institute, intimated during the course of conversation that he did not believe *symonsi* warranted recognition.

Through the kind offices of Dr. A. C. Kemp, Ornithologist of the Transvaal Museum, Pretoria, I have been able to study five paratypes of *G.e.symonsi* in conjunction with a good series of skins of nominate *G.edouardi* in the Durban Museum collection, these from coastal Natal (topotypes), eastern Swaziland, southern Mozambique and eastern Rhodesia (Mount Selinda, Chippinga district).

Compared in even light, the sky overcast, the five paratypes of *symonsi*; now over sixty years old, are seen not to be consistently separable from those of *G.e.edouardi* on the characters as laid out

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in the original diagnosis. While all show reduction of the red-brown "shadow" or underlying spotting to the dorsum, several nominate *G.e.edouardi* skins are similarly lightly marked. In connection with the blueness of the spotting, I find this still less satisfactory, many *G.e.edouardi* being just or even more strongly bluish. In so far as the original characters as given by Roberts are concerned, all that can be said is that viewed in series *symonsi* is rather darker or blacker above as a result of the less well developed red-brown dorsal "shadow" spotting. However, apart from these highly unsatisfactory characters, or rather trends, upon which current recognition of the taxon rests, there is a more trenchant one which has been overlooked by previous students.

G.e.symonsi differs subspecifically from *G.e.edouardi* on the grounds that the two outer stripes on the outer vanes of the secondaries consist of chains of discrete bluish white spots, whereas in nominate *G.edouardi* the same lines have the spots fused together to form unbroken serrated stripes. A comparable development is manifest over the greater-coverts. On the basis of this recently determined criterion, I believe that *G.e.symonsi* should continue to be recognised in our systematic arrangement of the populations of this guineafowl.

While I do not recommend any change in the nomenclature of the two forms of Crested Guineafowl discussed in this short communication, it is important to note that the present population on the Natal coast to the north of Durban stems from re-introductions effected early in the present century. What the original population of the Natal coast, which presumably died out in the second half of the last century, was like is uncertain, but, on faunistic grounds, it conceivably more closely resembled *G.e.symonsi* than the present *G.e.edouardi*.

In studying *G.edouardi* care requires to be exercised in circumventing the serious soil-staining which affects specimens drawn from certain populations. Staining particularly affects eastern Swaziland and eastern Rhodesia birds. Some in the Durban Museum collection from the latter region have the pale wing-bar deep ochraceous-rusty rather than pale buffish white in uncontaminated examples.

FURTHER COMMENTS ON VARIATION IN *ALCEDO SEMITORQUATA* SWAINSON, 1823.

Variation of subspecific moment in the Halfcollared Kingfisher *Alcedo semitorquata* Swainson, 1823: Great Fish R., eastern Cape, was first commented on by Laubmann, *Anz.Ornith.Ges.Bayern*,

No. 9, 1925, pp. 74, 75, his conclusions being revised by the present author in *Ostrich*, vol. xxii, 3, 1951, pp. 176 - 178, in the light of examination of a much larger panel of material available in southern African museums. Benson, *Ostrich*, vol. xxiii, 3, 1952, p. 149, confirmed the conclusions of Clancey on the basis of a study of the series of forty-four specimens in the collection of the British Museum (Nat.Hist.), London.

In this fine African kingfisher, which is not conspecific with the wide-ranging, smaller and greener blue *Alcedo atthis* (Linnaeus), variation of subspecific relevance is confined to mensural characters, namely, in the length of the wing and the mass of the bill as measured from the angle of the gonys. The species has a disjunct range, extending from the southern and eastern Cape and Natal, north in the east to north-eastern Tanzania and the extreme south-east of Kenya, and in the west to southern Angola, Zambia and the south-east of Shaba, Zaïre, with an isolated population occurring in the highlands of Ethiopia. *A.semitorquata* and *A.quadribrachys* Bonaparte appear to be mutually replacing species, the former's range lying to the east and south of that of the latter.

Believing Abyssinian birds to be much larger than those of southern Africa, Laubmann, *loc.cit.*, proposed *A.s.heuglini* from Dire Daoua=Diredawa, Harar, south-eastern Ethiopia. As demonstrated by Chapin, *Birds Belgian Congo*, part ii, 1939, pp. 292, 293, the size-character given for Ethiopian birds by Laubmann does not serve to differentiate them from South African specimens, which are comparably large. As shown in my 1951 paper, Laubmann obviously compared his Ethiopian material with specimens from the coastlands of eastern Africa, which are markedly smaller than both the South African and Ethiopian birds. Resulting from these findings, South African and Ethiopian populations were united in the nominate subspecies, while the eastern coastal representatives were separated as a new subspecies: *A.s.tephria* Clancey, 1951: Zimbiti, near Beira, southern Moçambique.

Resulting from the studies of 1951 and 1952 (see above), the range of the nominate subspecies is seen as geographically disjunct, extending from the Cape and Natal, north to Angola, Zambia, south-eastern Zaïre and south-western Tanzania, re-appearing in the highlands of Ethiopia, while that of *A.s.tephria* is from the lowlands of Moçambique from north of the Save R., to north-eastern Tanzania and south-eastern Kenya. Since 1952 collections formed in Zambia, the eastern Caprivi and Rhodesia have become available, and recent study of the skins of *A.semitorquata* shows that the majority of birds from these territories are both short-winged

and slender-billed, agreeing better with *A.s.tephria*, formerly considered to be restricted to the eastern littoral, than with *A.s.semitorquata* of Africa south of the Limpopo R. Benson, *loc.cit.*, found much the same situation in the case of a Malawi sample of ten specimens in the British Museum (Nat.Hist.) collection, in which nine had wings of 80-83 (90 per cent.), only one with a wing of 85 mm.

The eastern low country race *A.s.tephria* has the wings in freshly moulted adult ♂♀ 78 - 83, whereas in adults of *A.s.semitorquata* in comparable condition from south of the Limpopo the wings in ♂♀ are 83+ - 88. The isolate population in Ethiopia is similarly long-winged to *A.s.semitorquata*, the wings 83 - 88 mm in nine specimens (from the literature). Fifteen specimens from Rhodesia (mainly eastern) measured for this study have wings 80 - 84+, twelve having wings 80 - 82,5 (80 per cent.), only three with the wings 84 (20 per cent.), that is above the upper size limit of 83 mm set for *tephria*. A very similar pattern is described by the bill-mass variable, in which 15 ♂♀ from Rhodesia have the bill-depth as measured from the angle of the gonys 8,45 - 9,20, twelve with the bills 8,45 - 8,80, and only three with the bill-depth greater than 8,80, the upper limit defined for *tephria*. The most massive billed Rhodesian bird is a male from Hartley, south-west of Salisbury, with a wing of 84+ and a bill 9,20 mm in depth. This latter could conceivably have been a bird of South African origin, though, while there is little evidence of post-breeding movement in this kingfisher, such must be expected in the dry season, when stream levels are particularly low and intense cold periodically affects the southern African highveld.

A strictly comparable situation to that outlined in the previous paragraph obtains in respect of the south-central African population (Zambia, Caprivi, northern Botswana, north-western Rhodesia (Victoria Falls)) in which the wings measure 80 - 84+, eleven with wings 83,5 and below (84,6 per cent.), and only two with wings 84 or slightly in excess. The bill-depth character is perhaps less subject to variation than in the case of the Rhodesian sample. In the series of south-central African birds before me, twelve have the bill-depth 8,00 - 8,80 (92,3 per cent.), only one with the bill-depth attaining 9,00 mm. The single specimen with a bill of this mass is a female from Mporokoso, in southern Zambia. As in the case of the Hartley, Rhodesia, specimen mentioned above, it is not clear if the odd large example in samples from Rhodesia and Zambia results from some migratory movement or from introgression. The wing-length of the heavy billed Mporokoso specimen is 84+ mm, which is also longer than the norm for Zambian birds.

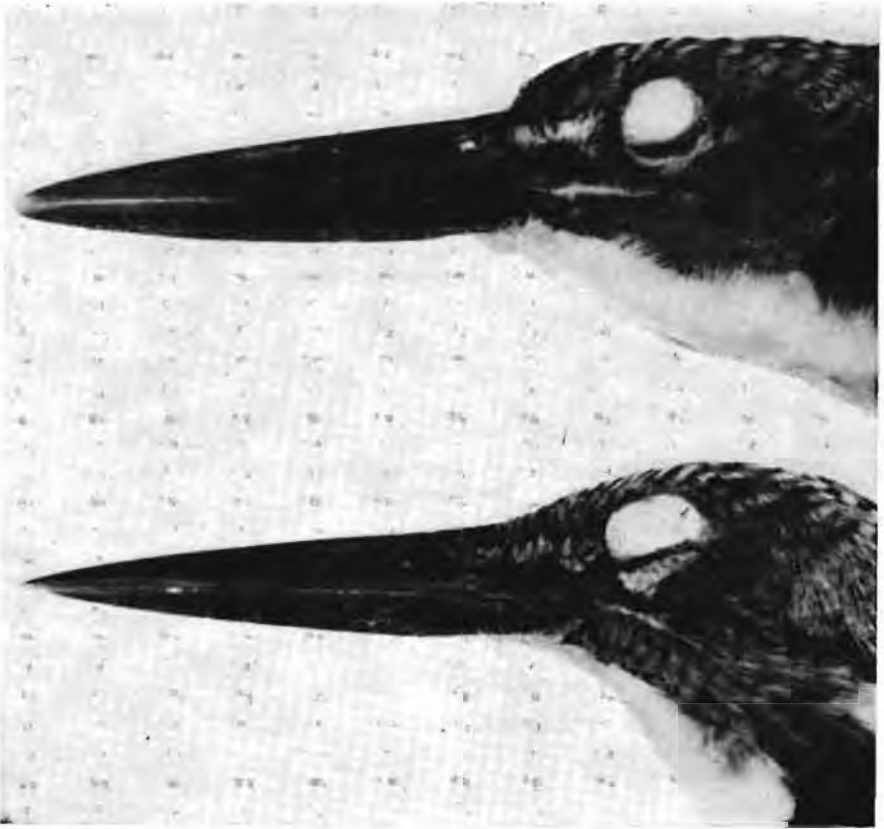


FIG. I

Heads of specimens of two races of the Halfcollared Kingfisher to show variation in bill-depth

Upper: *Alcedo semitorquata semitorquata* Swainson. Specimen from Transkei, southern Africa.

Lower: *Alcedo semitorquata tephria* Clancey. Specimen from Solwezi, Zambia.
Photo: W. S. Yerbury.

In the lowland Moçambique and East African populations grouped initially in *tephria*, comparison of the data shows that this taxon is well-differentiated on the wing-length and bill-mass variables from the larger nominate subspecies from south of the Limpopo. However, they are not subspecifically distinguishable on either score from the interior populations lying to the west of the present taxon *A.s.tephria* currently associated with nominate *A.semitorquata*. Benson, *loc.cit.* dismissed the Malawi birds as intermediate (between *tephria* and the nominotypical race), but from the information now available, and in the light of the discontinuous nature of this kingfisher's distribution, this ascription is physically unten-

able. From the taxonomic viewpoint it seems desirable to extend the range of *tephria* west to embrace the populations of Rhodesia, northern Botswana, Caprivi, Zambia, the south-eastern frontier of Zaïre, and southern Angola. This has the effect of making a polytopic subspecies of *A.s.semitorquata*, unless, of course, characters other than those of wing-length and bill-mass can be found to differentiate the Ethiopian highland population under the name *A.s.heuglini* Laubmann, 1925.

From a study of the localities and their altitudes it would appear that both the wing-length and bill-mass parameters in this kingfisher are neither altitudinal nor temperature correlates, this being borne out by the occurrence of birds with the wing-length as low as 80 and the bill-depth only 8,00 mm up to elevations lying between 1 500 and 2 000 m a.s.l. The possible historical background to the present disposition of the species into two populations of relatively large-sized birds, one restricted to the regions south of the Limpopo R. and the other to the highlands of Ethiopia, sundered from one another by smaller, finer billed birds and a large tract of untenanted country, is not clear.

The revised characters and ranges of the two subspecies of the Halfcollared Kingfisher will now stand as follows:

(a) ***Alcedo semitorquata semitorquata*** Swainson, 1823: Great Fish R., eastern Cape.

?*A.s.heuglini* Laubmann, 1925: Diredawa, Harar, south-eastern Ethiopia.

Wings in adult ♂♀ (82,5) 83 - 88 (89), bill-depth at angle of gonys 8,80 - 9,70 mm.

Range: Southern and eastern Cape, Natal and Zululand, southern Moçambique in Lebombo Range, Orange Free State, and Transvaal. The Ethiopian highland population currently associated with this race, but named *A.s.heuglini*, requires to be critically re-examined with adequate well-prepared material.

Remarks: About a third of the birds from southern and eastern Cape coastal districts examined during the course of this research are distinctly whiter, less orange, buff from breast to crissum than the norm of the adults of the species. The significance of such whitish ventralled variants is currently uncertain.

(b) ***Alcedo semitorquata tephria*** Clancey, 1951: Zimbiti, near Beira, southern Moçambique.

Wings of ♂♀ 78 - 83, bill-depth 7,90 - 8,80 mm.

Range: Moçambique north of the Save, Rhodesia, northern Botswana, the Caprivi Strip, southern Angola, Zambia, south-eastern Shaba, Zaïre, Malawi, south-eastern and eastern Tanzania (in north, west to Moshi and the lower slopes of Mt Kilimanjaro), and south-eastern Kenya (Taveta).

Remarks: The mensural data reveal that as measured by me c. 100 per cent of specimens of *A.s.semitorquata* are distinguishable on the criteria given from *A.s.tephria*. Of 52 specimens of *tephria* considered, c. 88,5 per cent are separable from nominate *semitorquata*, these findings meeting the requirements for the formal recognition of size-differentiated non-clinal races.

For assistance with material to augment the series in the collection of the Durban Museum I am grateful to the following: Director, Natal Museum, Pietermaritzburg, the Transvaal Museum, Pretoria (Dr. A. C. Kemp), and the National Museum of Rhodesia, Bulawayo (Mr. M. P. Stuart Irwin).

ON *ALCEDO LEUCOGASTER LEOPOLDI* (DUBOIS), 1905

The eastern subspecies of the Whitebellied Kingfisher described as *Ispidina leopoldi* by Dubois in 1905, from the region of Lake Leopold II, western Zaïre, was proposed on a single juvenile. In his paper, in which he named *A.l.batesi* from Cameroun, Chapin, *Ibis*, ser.11, vol. iv, 1922, pp. 440-445, established the valid characters of the race *leopoldi* on the limited adult material available in museums at that time. Peters, *Check-List Birds of the World*, vol. v, 1945, p. 177, gives the range of *A.l.leopoldi* as the "upper Congo forests," but more recently it has been found to extend to western Uganda in the east and to north-western Zambia in the far south. In an interesting report on this poorly known race of the Whitebellied Kingfisher, Friedmann, *Contrib. Science*, No. 158, 1969, pp. 1-6, has amply demonstrated that this kingfisher may be locally not uncommon in its restricted ecological niche of small, tree enshrouded streams in tropical lowland forest, and that its alleged rarity has been seriously overstated. This change of emphasis had come about as a result of the use of mistnets for ornithological collecting.

Lippens and Wille, *Oiseaux du Zaïre*, 1976, p. 197, suggest that examples of this small kingfisher from Zambia are almost certainly migrants from further north in equatorial Africa. The species has been collected but twice in north-western Zambia: ♂ ad., Salujinga at 10° 58' S., 24° 07' E., 19 September, 1962 (C.W. Benson), and ♀ ad., Isombu stream, 11° 16' S., 24° 06' E., on 2 August, 1973

TABLE I

Population	No. ♂♀	Wing range	\bar{X}	SD	SE	CV	Bill-depth range	\bar{X}	SD	SE	CV
Cape	12	83,5—88	85,2	<i>Alcedo semitorquata semitorquata</i> 1,41 0,41 1,65			8,80—9,40	9,07	0,20	0,06	2,21
Transvaal and Lebombos	13	82,5—88	85,0	1,84	0,51	2,16	8,80—9,70	9,21	0,27	0,07	2,93
E. Rhodesia	12	80—84	81,8	<i>Alcedo semitorquata tephria</i> 1,17 0,34 1,38			8,45—9,00	8,67	0,20	0,06	2,31
N. W. Rhodesia Botswana, Caprivi	3	81,5—82,5	82,0	—	—	—	8,15—8,80	8,52	—	—	—
Zambia	10	80—84+	82,2	1,34	0,42	1,63	8,00—9,00	8,50	0,32	0,10	3,76
Malawi (after Benson)	10	80—85	81,7	1,77	0,56	2,17	—	—	—	—	—
Moçambique and Tanzania (var. sources)	17	78—83	80,2	1,58	0,38	1,97	7,90—8,60 (5 measured)	8,40	0,28	0,13	3,33

The wing-length and bill-depth variables in samples of the two races of the Halfcollared Kingfisher.

(R. J. Dowsett), both localities in the Mwinilunga district. Mr. C. W. Benson, the expert on Zambian and Malawi birds, felt that the view that this kingfisher's occurrence in Zambia resulted from migratory movements on the part of breeders from further north in the continent was certainly incorrect, and requested that I re-examine the Salujinga specimen in order to determine if it was, firstly, correctly placed as *A.l.leopoldi* and, secondly, to try and determine if the southern records represented a resident population or were migrants from elsewhere. Through the kindness of Mr. M. P. Stuart Irwin, Director of the National Museum of Rhodesia, Bulawayo, I have been able to examine the Salujinga specimen, while Mr. R. J. Dowsett of the National Museum of Zambia, Livingstone, has sent me mensural and other data from the Isombu stream ♀ taken in 1973.

Adult specimens from Zaïre appear to be particularly poorly represented in museums, but through the kindness of Drs. A. Prigogine and M. Louette I have been able to examine three from Botanankasa, near Bolobo, at 2° 10' S., 16° 15' E., Ibembo at 2° 36' N., 23° 40' E., and from Nyamupe in the east of the territory at 3° 21' S., 28° 08' E., all from the Tervuren collection. At the same time, through the courtesy of Dr. H. Friedmann, four of the adequate Bwamba Forest, Uganda, series discussed in his 1969 paper were sent over from the Los Angeles County Museum of Natural History, these representing the two coronal colour variants discussed by him in the said report. When Chapin defined the subspecific characters of *leopoldi*, this was done on a single adult skin from the east of Zaïre at Avakubi in the Ituri (1° 24' N., 27° 20' E.), and later comments on the taxon have all been on specimens from eastern Zaïre, Uganda and north-western Zambia, and not on material of the toptotypical population from the region of Lakes Leopold II and Tumba in the west of the territory.

Compared together, the three from Zaïre from the Tervuren collection, the four Bwamba skins from the Los Angeles County Museum and the singleton from Zambia currently in the collection of the National Museum of Rhodesia, Bulawayo, agree with one another in having the supra-orbital surface blue rather than cinnamon washed with lilac as in the western races: *A.l.batesi* Chapin, 1922: Biteye, Dja R., Cameroun, *A.l.leucogaster* (Fraser), 1843: Clarence, Fernando Póo, and *A.l.bowdleri* Neumann, 1908: Sierra Leone. In this they exhibit the major racial character generally ascribed to *leopoldi*. They also all agree in having the burnt sienna on the venter extended across the upper breast to form a pronounced breast-band. Bill-colour varies, the far western example from

Botanankasa having the bill wholly red, whereas the others have the upper mandible dark or dusky, the lower mandible red, but while bill-colour has been used as a subspecific discriminative character in this kingfisher it may not be so, as Rand *et al.*, in their joint paper on Gabon and Moyen Congo birds in *Fieldiana, Zool.*, vol. xli, 2, 1959, p. 282, record that three February and June examples of *A.l.batesi* — supposedly wholly red billed according to Chapin, *Birds Belgian Congo*, part ii, 1939, pp. 287 - 289 — have the “upper mandible black and the lower red.” That eastern examples of the current *leopoldi* are not consistently dark over the culmen has been demonstrated by Friedmann, who noted in his 1969 paper that two from the Malabigambo Forest, S. of Masaka, southern Uganda, are brighter and more orange-red and less dusky over the dorsal maxilla than in the case of the Bwamba Forest, south-western Uganda, series at his disposal. This all suggests that the assumption of a wholly red bill is associated with breeding, that dark billed birds are in non-breeding condition, and that bill-colour has little or no subspecific relevance.

On the marked variation over the pileum, it would appear that two subspecies of *A.leucogaster* are present over much of Zaïre, with a third, *A.l.batesi*, probably occurring on the lower reaches of the R. Zaïre and in the Mayombe. The single near topotype of *leopoldi* from Botanankasa and to a lesser extent the specimen from Ibembo differ from the singleton from Nyamupe in the east of the territory and from the four from Uganda and the single Zambian specimen in having the pileum darker, the transverse barring violet ultramarine rather than caerulean or dark blue. In the barring of the head-top the western Zaïre population of *leopoldi* agrees with *A.l.batesi*, which has the barring over the dorsal head violet.

While a size character separates the insular nominate subspecies from *A.l.batesi*, there is little evident variation in size within the Zaïre and Uganda populations, though the two specimens available from further south, in Zambia, are on the whole longer winged than Zaïre and Uganda birds. Friedmann gives the wings of 9 ♂♂ from Bwamba as 52 - 56, 3 ♀♀ 53,5 - 57,5. For the two ♂♂ from the Malabigambo Forest he gives 55 and 56,5. The four examples from the Bwamba series, 2 ♂♂ and 2 ♀♀, measured by myself have the wings 55 - 58,5 (56,0), SD 1,68, while the two Zambian specimens have the wings 58,5 and 59 mm, and are on the whole larger than the more northerly birds.

While the evidence suggests that the present subspecies *A.l.leopoldi* should be subdivided into western and eastern races on the basis of variation to the barring to the pileum, a series of adults

is clearly required from the region of Lakes Leopold II and Tumba in order to determine if the revised characters defined for *leopoldi* in this note are stabilized in this region, or if the taxon is based on an intergrading population towards the equally violet barred *A.l. batesi*, which replaces it immediately to the westward.

On the limited data currently available for this small riparian kingfisher there is no indication that any of the populations currently grouped in the race *A.l.leopoldi* are other than resident. The two specimens available from north-western Zambia are here considered to represent a small indigenous population, this linked in its caerulean barred pileum character with the populations of the extreme east of Zaïre and adjacent Uganda.

For the loan of material I am grateful to Dr. M. Louette of the Musée Royal de l'Afrique Centrale, Tervuren, and the Director of the Los Angeles County Museum of Natural History, California, and for the assistance in general to Mr. C. W. Benson (Cambridge), Dr. H. Friedmann (Los Angeles), Mr. M. P. Stuart Irwin (Bulawayo) and Dr. A. Prigogine (Brussels).

THE TROPICAL AFRICAN RACES OF THE REDCAPPED LARK *CALANDRELLA CINEREA* (GMELIN)

The southern African races of the Redcapped Lark were recently reviewed by me in *Durban Mus. Novit.*, vol. xi, 14, 1977, pp. 252-258. In the light of these published findings, Mr. M. P. Stuart Irwin, Director of the National Museum of Rhodesia, Bulawayo queried my inclusion of the Rhodesia and adjacent Moçambique population of this lark in the race *C.c.saturation* Reichenow, 1904: Konde-land, north of L. Malawi, south-western Tanzania, on the grounds that Zambian material in the National Museum collection indicated that true *saturation* was very much blacker and redder, less ochraceous, above than the birds breeding in Rhodesia. Through the kindness of Mr. Irwin I have been able to examine his particularly dark specimens from Salujinga, in the north-west of Zambia, as well as copies of correspondence he had in 1972 with Mr. R. J. Dowsett, Keeper of Natural History at the Livingstone Museum, in Zambia, on the subspecies of *C.c.cinerea* occurring in Zambia. From this correspondence it is clear that Irwin's dark Salujinga specimens are similar to topotypical *C.c.saturation* from the highlands of south-western Tanzania and referred specimens from Solwezi, Kabompo and Balovale, in Zambia, in the Livingstone Museum collection.

Compared directly with birds from Rhodesia breeding grounds, the Salujinga specimens in the Bulawayo collection stand apart