

A revision of the Southern Races of the Swamp Warbler *Acrocephalus gracilirostris* (Hartlaub) of Africa

by

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Dedicated to Dr. Adolf von Jordans, Bonn, the eminent specialist on western Palaearctic birds, on the eve of his seventieth birthday.

The Swamp Warbler *Acrocephalus gracilirostris* (Hartlaub) is a wide-ranging polytypic species of reed-warbler of the Ethiopian Region, which extends in various races from the south-western Cape as far north as the highlands of Abyssinia in the east and Lake Chad in the west. When Sclater (1930) wrote on the forms of swamp warblers, *A. gracilirostris* was only credited with two subspecies, most of its present day component forms being treated as full, independent species. This stemmed mainly from the fact that when the revision was undertaken material of all forms in European and North American collections was fragmentary and already old, while many of the available names had been given in the first instance to single specimens, and adequate samples of single populations for critical appraisal were virtually unknown.

The survey of the forms of *A. gracilirostris* and its larger sibling *A. rufescens* (Sharpe and Bouvier) by Chapin (1953) was a marked improvement on that of Sclater, and apart from considerable adjustment to the criteria and ranges to be accorded the various forms is a reasonable and by no means inaccurate presentation of the geographical variation exhibited by these two species.

Fortunately, as a result of the introduction of the Japanese mist-net for ornithological work, it is now possible to acquire by netting fairly large and adequate samples of this species, something which was not possible when the collecting of material was carried out solely by means of a small-bore shot-gun. Through the collecting efforts of the staffs of both the National Museum of Southern Rhodesia, Bulawayo, and the Durban Museum the minimum material requirements for a detailed revision of the southern forms of *A. gracilirostris* are now available. Resulting from the kindness of Mr. M. P. Stuart Irwin I have had the whole of the National Museum series of this warbler on loan, while additional material for this revision was loaned by Dr. J. M. Winterbottom, Honorary Ornithologist of the South African Museum, Cape Town, and the Director of the Natal Museum, Pietermaritzburg. In all one hundred and forty-five

specimens of *A. gracilirostris* from central, eastern and southern Africa have been studied collectively and in great detail in the Durban Museum to form the basis for the following conclusions.

Geographical variation

In *A. gracilirostris* geographical variation affects both general colouration and size, and the populations here studied, those occurring in the main to the south of the Equator, fall into three major groupings: (a) one in which the rump is redder than the back, the superciliary stripes are prominent, the lower throat and upper breast are unstreaked or almost so, and the flanks and under tail-coverts are variably suffused with buffy (races: *A. g. gracilirostris*, *A. g. zuluensis* and *A. g. leptorhyncha*); (b) another in which the upper-parts are considerably darker and the rump is not redder than the back, the superciliary stripes are obscure or vestigial, the lower throat and upper breast are variably streaked or suffused with light brown, and the flanks and under tail-coverts are darker, less buffish (races: *A. g. winterbottomi*, *A. g. parvus*, *A. g. jacksoni*, etc.); and (c) a third group which has the upper-parts duller and greyer brown, the rump without any red, the superciliary stripes prominent and white, and the under-parts almost entirely white, the throat without any streaking, and the flanks and under tail-coverts just tinged with drab (race: *A. g. cunenensis*). The populations falling into group (a) are found in the extreme south and southeast of South Africa and in the eastern tropical littoral of the continent; those of group (c) are confined to the arid west of southern Africa from western Angola and northern South-West Africa, ranging east north of the Kalahari to south-western Northern Rhodesia, Matabeleland, western Southern Rhodesia, and, perhaps, the western and northern Transvaal. The remaining populations, in (b), are all resident in the interior of the equatorial belt of the continent, back from the eastern littoral.

Mensural variation is of severely limited value in the arrangement of the populations into races, and can only be used in conjunction with plumage colour characters with any degree of satisfaction, owing to overlap in most instances. Large-sized birds with wings in males over 71 mm. range from the Cape Province and Natal, northwards in the interior and west to southern and south-western Angola and south-western Northern Rhodesia (including Barotseland). Similar large-sized birds occur in the Kenya Colony highlands (*A. g. parvus*) and in the highlands of Abyssinia (*A. g. tsanae*). Very small-sized birds (the races *A. g. leptorhyncha* and *A. g. zuluensis*) with wings in males 66 mm. and under occur in the eastern tropical littoral of Africa, and the two mensural extremes meet and intergrade to a limited extent in southern Africa, but further north are linked with one another through populations with intermediate dimensions. An historical study of the taxonomic treatment

accorded the size extremes by workers would be of limited value, but it is noteworthy that some specialists still treat the large-sized bird (*gracilirostris*) as specifically discrete from the small extreme (*leptorhyncha*).

It seems that the most satisfactory arrangement of the populations into races is to be arrived at mainly on ventral colour characters, as will be appreciated from the following treatment of the southern African populations of this species. Skins of the species are prone to fairly rapid foxing, and old specimens are unreliable for research purposes, being redder tinged on the upper-parts than recently shot examples from the same population. Wear and a certain amount of actinic bleaching also tend to make breeding material unsuitable for subspecific taxonomy, while the tails and wings of such specimens are often seriously eroded.

It is unfortunate that lack of material has prevented me from revising the whole species, but it is hoped that the following presentation of the forms of the Swamp Warbler occurring to the south of the Equator will prove a major contribution to our understanding of the complex geographical variation exhibited by the species as a whole.

In the formal arrangement of the southern races which follows I have utilized the colour nomenclature perfected by the American systematist Robert Ridgway (1912). I have given the relevant plate number immediately following each first reference to a colour by name.

Geographical races

(a) *Acrocephalus gracilirostris gracilirostris* (Hartlaub)

Calamoherpe gracilirostris Hartlaub, in Gurney, *Ibis*, vol. vi, 1864, p. 348: no locality. Type from Liesbeck River, Cape Div., Cape Province (in South African Museum, Cape Town).

Upper-parts with mantle colouration about Dresden Brown (pl. xv), reddening over the rump. Superciliary stripes buffy white; lores dusky. On under-parts buffy white, the throat and upper breast usually indistinctly streaked with light brown, and flanks and under tail-coverts Warm Buff (pl. xv). Size large.

Measurements: Wings of 6 ♂♂ 71 — 75 (73.2), culmens frgm base 20 — 21 (20.3), tails 65 — 73 (68.6); 4 ♀♀ wings 68.5 — 71 (69.7), culmens 19 — 20.5 (19.7), tails 64 — 66 (65.1) mm.

Material examined: 10 (Cape Province, 8; Natal, 2).

Range: The western and south-western Cape Province (from about Cape Town, northwards to the lower Orange R.), and Northern Cape (Kuruman), east and north-east to Pondoland and East Griqualand, eastern Cape, Natal and high west of Zululand, the Orange Free State, lowlands of Basutoland, and the highveld of the Transvaal. Intergrades with *A. g. zuluensis* in coastal Natal about Durban, as shown by a short series from that locality and Mount Edgecombe.

Remarks: *Calamoherpe gracilirostris* Hartlaub was described in a paper in the *Ibis* for 1864 by J. H. Gurney, dealing with Natal birds collected by Thomas Ayres. Specimen No. 15 093 in the collection of the

South African Museum, a Layard bird from the Liesbeck River, Cape Division, Cape Province, is marked in red ink as the Type of *C. gracilirostris*, which suggests that Hartlaub had specimens of *A. g. gracilirostris* from both Gurney and Layard at the time he prepared the description of the new warbler. It has been universally assumed that Hartlaub's Type came from Natal, because of the species' description in Gurney's Natal paper, but now that it has been discovered in the South African Museum and came from the south-western Cape and not Natal, the type-locality must be adjusted (as given above). The Type in the South African Museum does not bear an original label, as it was formerly mounted, and the data on the present label were undoubtedly transcribed from the base of its former stand, which original information Layard, a one-time Director of the Museum, undoubtedly had printed on the stand when the specimen was mounted on its return to South Africa by Hartlaub. Fortunately, the change of the type-locality necessitates no nomenclatural adjustment, as south-western Cape and interior Natal birds are of the same subspecific coterie of populations.

My measurements of the Type are — wing 75, tail 68.5, culmen 20.5 mm. Hartlaub, in the original description, gives "alae 3.0, caudae 3.0, rostr. a fronte 0.6, poll. Angl. et dec."

(b) *Acrocephalus gracilirostris cunenensis* (Hartert)

Calamocichla cunenensis Hartert, Bull. Brit. Orn. Club, vol. xiii, 1903, p. 62: Cunene R., southern Angola.

On upper-parts, head-top darker and greyer brown, and mantle and rump distinctly greyer and less reddish than in *A. g. gracilirostris* (mantle about greyish Olive-Brown (pl. xxx), against Dresden Brown in the nominate race). Superciliary stripes distinctly whiter, and more prominent. On under-parts, lower throat without any vestigial streaking, and whole surface markedly whiter, the flanks and under tail-coverts whitish drab, not buff. Averaging a little smaller in size.

A single juv. ♂ from Lake Dow, Bechuanaland Protectorate, is richer and buffier above than adults, but duller than the juveniles of other races considered.

Measurements: Wings of 7 ♂♂ 69.5 — 74 (71.6), culmens 19.5 — 21 (20.3), tails 64 — 71 (66.8), 2 ♀♀ wings 67.5, 70, culmens 18.5, 20, tails 64, 66 mm.

Material examined: 32 (Bechuanaland Protectorate, 1; Barotseland and south-western Northern Rhodesia, 24; Matabelerland, and Zambesi R. valley, Southern Rhodesia, 7).

Range: Arid coast of Mossamedes, western Angola, the valley of the Cunene R. and northern South-West Africa (south to northern Damara-land), eastwards through southern Angola and the Caprivi Strip to northern and eastern Bechuanaland, Barotseland and south-western Northern Rhodesia (east to the Lukanga Swamps, where size tends to approach *A. g. leptorhyncha*), Matabelerland, Southern Rhodesia (east certainly to about Selukwe), and perhaps the dry western and northern Transvaal. Intergrades to the north of its range with *A. g. winterbottomi*, and in the east with *A. g. leptorhyncha*, and, perhaps, *A. g. zuluensis*.

Remarks: It is interesting to note that Benson and White (1957) attach the name *A. g. winterbottomi* (White) to the eastern elements of this race occurring in Barotseland and south-western Northern Rhodesia, which is quite incomprehensible because, as explained in greater detail below, the population to which the name *winterbottomi* was given in the first instance is composed of birds with dark rusty brown upper-parts, a streaky throat and buffy olive flanks and under tail-coverts.

The fine series from the Lukanga Swamps, Northern Rhodesia, at 14°30' S., 28°00' E., in the collection of the National Museum of Southern Rhodesia, Bulawayo, formed by Major I. R. Grimwood is of value, and has already been discussed by Benson (1959), who suggested they might be applicable to *A. g. cunenensis*. Birds from this locality are coloured like *A. g. cunenensis*, but range smaller in size: ♂♂ wings 71.5, 70.5, 69, 68, 67.5, 66.5, ♀♀ 65, 63, 66 mm. Another interesting specimen, a ♂ from the Kasizhi R., in the Balovale district of western Northern Rhodesia, collected on 19 October, 1959 (N.M. No. 41 383), appears to be an intergrade between *A. g. cunenensis* and *A. g. winterbottomi*, having the whitish under-parts and larger size of the former (wing 73.5), but the darker dorsal colouration of the latter. The Type of *A. g. cunenensis* is now in the American Museum of Natural History, New York (ex Tring), and is the only Cunene R. specimen in that collection, which suggests that Hartert's paratypical material was extremely circumscribed. While no topotypical material from the Cunene R. valley has been available to me, the characters given for his form agree so intimately with details of specimens from Ovambo-land, northern South-West Africa, Bechuanaland (Maun) and Barotseland, southwestern Northern Rhodesia, that I have no hesitation in adopting the name for all the populations concerned.

(c) *Acrocephalus gracilirostris zuluensis* (Neumann)

Calamocichla zuluensis Neumann, Bull. Brit. Orn. Club, vol. xxi, 1908, p. 96: Eshowe, Zululand.

Most closely resembles *A. g. cunenensis*, but lighter and more buffish tinged on the head-top and nape, distinctly less dark, and with the mantle paler and more Buffy Olive (pl. xi), and the rump and upper tail-coverts Tawny-Olive (pl. xxix), as against greyish buff-brown in *A. g. cunenensis*. On the under-parts rather purer white, and with the flanks and under tail-coverts faintly tinged with buff, not whitish drab as in *A. g. cunenensis*. Distinctly smaller in size, and with a short tail.

Compared with the nominate race distinctly paler on the upper-parts, less saturated on the mantle, and below markedly whiter, the flanks and under tail-coverts not palpably buffish. Much smaller in size.

Measurements: Wings of 10 ♂♂ 63.5 — 66 (64.7), culmens 18 — 20 (19.2), tails 55 — 62 (58.6), wings of 3 ♀♀ 65, 64, 64, culmens 20, 19, 19, tails 61, 60, 58 mm.

Material examined: 21 (coastal Natal, 4; Maputo, Sul do Save, 15; south-eastern Southern Rhodesia, 2).

Range: The littoral of Natal north from about Durban (where showing the influence of *A. g. gracilirostris*), eastern lowlands of Zululand,

eastern Swaziland, eastern and north-eastern Transvaal, south-eastern Southern Rhodesia, and Sul do Save, Moçambique. Grades into the slightly differentiated *A. g. leptorhyncha* to the north of its range, and presumably with *A. g. cunenensis* in the mid-Limpopo drainage, *i. e.*, in the so-called "Limpopo Gap".

Remarks: This race is noteworthy in that it has very whitish flanks and under tail-coverts, much as in *A. g. cunenensis*, and is interposed between two races with the under-parts more creamy white and the flanks and under tail-coverts strongly buffish tinged.

While *A. g. zuluensis* and *A. g. leptorhyncha* are closely allied, I cannot follow those workers who would synonymize the two, on account of the well-marked whitish flank and under tail-coverts character of the former.

Sclater (1930) places the Ovamboland and Ngamiland populations in *A. g. zuluensis*, presumably on the basis of the similarly white under-parts and virtual lack of buff on the flanks and under tail-coverts, but the marked differences in the dorsal colouration and size preclude the adoption of such a view.

(d) *Acrocephalus gracilirostris leptorhyncha* (Reichenow)

Turdirostris leptorhyncha Reichenow, *Ornith. Centralb.*, 1879, p. 155: Tschara, near mouth of Tana R., eastern Kenya Colony.

Almost exactly *A. g. zuluensis* on the upper-parts in freshly moulted dress, but with a tendency to be slightly more saturated. On the under-parts distinctly less clear and whitish, being creamy white, the lateral surfaces and under tail-coverts strongly buffish, much as in the nominate race. No indication of streaking on the lower throat and breast, and supercilia buffy, not white as in *A. g. zuluensis*. Averaging a little smaller than *A. g. zuluensis*.

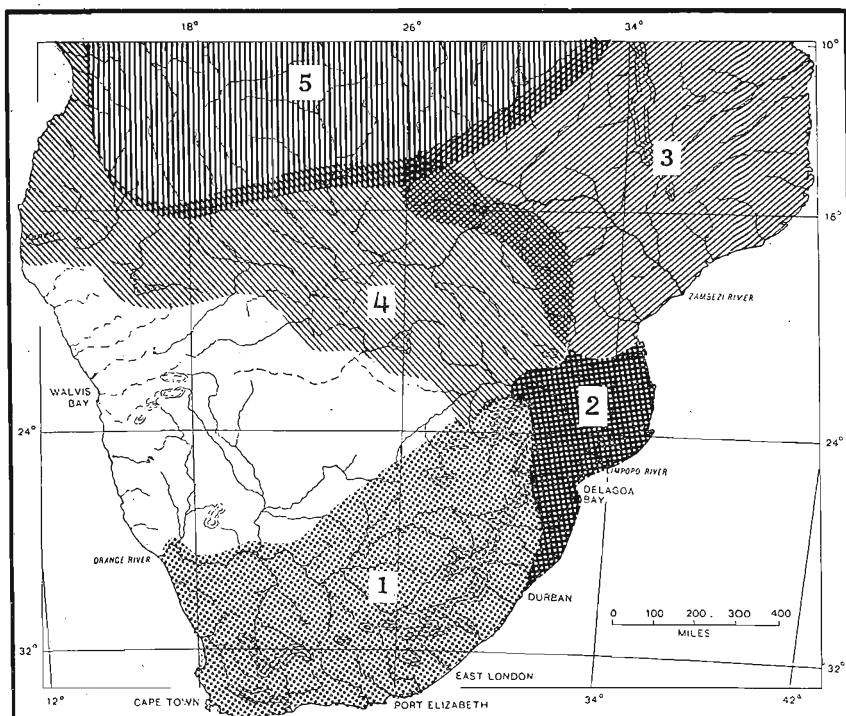
Measurements: Wings of the 6 ♂♂ 60 — 66.5 (63.1), culmens 19 — 21 (19.9), tails 52 — 62 (56.2), 6 ♀♀ wings 61 — 65 (63.1), culmens 18 — 20 (19.2), tails 55.5 — 59 (57.6) mm.

Material examined: 33 (southern Tanganyika, 2; southern Nyasaland, 6; eastern Northern Rhodesia, 16; eastern Southern Rhodesia (mainly from Salisbury), 9).

Range: Eastern Kenya Colony, mainly in the mid and lower Tana R. drainage, and south-western Somalia, certainly in the valleys of the lower Juba R. and Webi Shebeli, southwards through eastern Tanganyika to northern Portuguese East Africa, Nyasaland, eastern Northern Rhodesia, west to the valley of the Luangwa R., and on the Kafue R. to at least Namwala, and on the Zambesi R. to about the Kariba Lake, eastern Southern Rhodesia, and southern Portuguese East Africa to the north of the Save E. In the southern aspects of its range intergrading with the contiguous forms *A. g. winterbottomi*, *A. g. cunenensis* and *A. g. zuluensis*.

Remarks: The populations of *A. g. leptorhyncha* occurring on the eastern plateau of Southern Rhodesia range larger in size than lowland birds, such birds being scarcely distinguishable from the nominotypical race occurring in southern Africa, though just separable in series on the

basis of paler dorsal colouration. This irregularity in the stepping of the size and colour gradients in eastern Southern Rhodesia does not, however, warrant the introduction of a further name.



ACROCEPHALUS GRACILIROSTRIS (Hartlaub)

Sketch-map showing the approximate ranges of the five geographical races of the Swamp Warbler *Acrocephalus gracilirostris* (Hartlaub) occurring in southern Africa.

1. *Acrocephalus gracilirostris gracilirostris*
2. *Acrocephalus gracilirostris zuluensis*
3. *Acrocephalus gracilirostris leptorhyncha*
4. *Acrocephalus gracilirostris cunenensis*
5. *Acrocephalus gracilirostris winterbottomi*

(e) *Acrocephalus gracilirostris winterbottomi* (White)

Calamoecetor leptorhyncha winterbottomi White, Bull. Brit. Orn. Club, vol. lxxviii, 1947, p. 34: Manyinga R., Macondo district, eastern Angola.

Darker and more saturated on the upper-parts than any of the foregoing races. Compared with *A. g. cunenensis* darker and browner on the dorsal surfaces (mantle colour about Mummy Brown (pl. xv)). Rump almost concolorous with the back (as in *A. g. cunenensis*, but unlike the eastern and southern forms). Superciliary stripes obscure and generally vestigial. On under-parts markedly less whitish than *A. g. cunenensis*, the lower throat and upper-breast distinctly streaked with light brown, and lateral surfaces overlaid with greyish or light greyish brown, not off-white. Wings and tail darker. Ranging smaller in size.

Compared with *A. g. leptorhyncha*, considerably darker, browner and more saturated above, less buff, and rump not brighter than the back. On under-parts distinctly streaked over the lower throat and upper breast, and lateral surfaces and under tail-coverts greyer and drabber, less buffy. Wings and tail darker, and size greater.

Nearest *A. g. parvus* but whiter over the medial ventral surface, the throat and upper breast more clearly streaked, and smaller in size.

Measurements: Wings of 20 ♂♂ 66 — 71.5 (68.3), culmens 18.5 — 21 (19.4), tails 62 — 68.5 (64.9), 9 ♀♀ wings 63.5 — 69 (66.0), culmens 17.5 — 20.5 (18.7), tails 59 — 63 (61.7) mm.

Material examined: 46 (from Northern Rhodesia, and mainly the Kabompo district, and adjacent Angola, 45; south-western Tanganyika, 1).

Range: North of the range of *A. g. cunenensis* in central, northern and eastern Angola, certainly in the districts of Malanje, Lunda and Moxico, the Congo to the south of the lower Guinea Forest, Northern Rhodesia in the northern Balovale district and in the northern districts lying north-west of the Muchinga Range, and presumably extending eastwards into parts of western and central Tanganyika (see note below). To the south of its range it intergrades with *A. g. cunenensis*, as shown by some birds from the Balovale district of Northern Rhodesia, and to the south-east and east with *A. g. leptorhyncha*. To the north of its range in the Congo it intergrades with *A. g. nuerensis* (Lynes), 1914: Lake No, Upper Nile, Sudan, or *A. g. jacksoni* (Neumann), 1901: Entebbe, Uganda, if the former is indeed synonymous with the latter, as claimed by White (1960).

Remarks: Of this race I have two or more paratypes ex the collection of C. M. N. White and some later near topotypes, all now in the National Museum of Southern Rhodesia, before me. It is quite evident that this name was given in the first instance to populations the birds of which are saturated mummy brown above, and on the under-parts have the throat distinctly streaked, and the flanks and under tail-coverts olivaceous buffy or brownish, not whitish drab. This observation is important, because both Benson and White, the original describer (1957), place the greyer backed and ventrally whitish populations of the Barotseland Protectorate and southern Balovale district, which are in actual fact the eastern elements of *A. g. cunenensis*, as *A. g. winterbottomi*, and call the dark birds from the northern Balovale district and all northern areas of Northern Rhodesia *A. g. leptorhyncha*! This is a completely indefensible arrangement, and if followed, *A. g. winterbottomi* must automatically become a synonym of *A. g. leptorhyncha*.

A. g. winterbottomi is not closely allied to *A. g. leptorhyncha*, and is now found to resemble *A. g. parvus* (Fischer and Reichenow), 1884: Murentat, near Lake Naivasha, Kenya Colony highlands, differing in having the throat and breast more whitish, the latter less olivaceous buffy, resulting in the streaking of the throat and upper breast being more clearly defined; the flanks and under tail-coverts are also paler, less olive-buff.

In size *A. g. winterbottomi* ranges smaller than *A. g. parvus*, of which we have three topotypical specimens (wings of 2 ♂♂ 76.5, 71.5, ♀ 71.5, tails 69, 72.5 and 67 mm.) White (1960) has suggested that north-central Tanganyika birds with the dimensions of *A. g. winterbottomi* (wings of ♂♂♀♀ as given by White 67—70 mm.), and which I believe are the eastern elements of this latter taxon, should be called *Calamocichla palustris* Reichenow, 1917: Ndjiri Swamp, Masailand, Tanganyika. This name cannot, however, be used in *Acrocephalus* because of pre-occupation by *Sylvia palustris* Bechstein, 1803: Germany, so that the applicability of *A. g. winterbottomi* for such populations is probably unassailable. Strange as it may seem, in suggesting the use of the name *palustris* Reichenow, 1917, for the dark northern Tanganyika birds like *A. g. parvus* but smaller, White makes no mention of his own *winterbottomi*, 1947, which would, by his reasoning, become a synonym were it not saved by the pre-occupation of Reichenow's name when this Swamp Warbler is placed in the genus *Acrocephalus*, and also by the fact that I am not prepared to follow him in lumping most of the interior equatorial populations of *A. gracilirostris* in *A. g. parvus*, and in so doing arriving at a nonsense arrangement.



Acrocephalus gracilirostris (Hartlaub)

Left group: *A. g. winterbottomi*; middle group: *A. g. cunenensis*;
right group: *A. g. zuluensis*.

Note the very white under-parts of *A. g. cunenensis* and *A. g. zuluensis*, and the small size and short tail of the latter. *A. g. winterbottomi* stands apart from the other two in having the under-parts dusky and the lower throat and upper breast streaked.

(Photo: Dennis Cleaver)

Extralimital geographical races

(f) *Acrocephalus gracilirostris parvus* (Fischer and Reichenow)

Phyllostrephus parvus Fischer and Reichenow, J. Orn., 1884, p. 262: Murentat, near Naivasha, Kenya Colony.

Range: The highlands of Kenya Colony.

(Northern Kenya Colony and southern Abyssinian birds resemble this race, but are rather smaller in size and have been separated as a distinguishable race by Mackworth-Praed and Grant (1955) under the name *Bradypterus macrorhynchus* Jackson, 1910 (vide Bull. Brit. Orn. Club, vol. xxvii, 1910, p. 8), founded on a juvenile bird from the Laikipia district of Kenya Colony, but as these two authors consider *gracilirostris* and *rufescens* to be conspecific, and make *parvus* a race, and treat all the smaller sized forms as component races of a species *leptorhyncha*, it is difficult to assess the validity of their conclusions without adequate series, which are just not available).

(g) *Acrocephalus gracilirostris jacksoni* (Neumann)

Calamocichla jacksoni Neumann, Orn. Mber., 1901, p. 185: Entebbe, Uganda.

Range: Uganda, on the northern shores of Lake Victoria.

(h) *Acrocephalus gracilirostris nuerensis* (Lynes)

Calamocichla leptorhyncha nuerensis Lynes, Bull. Brit. Orn. Club, vol. xxxiii, 1914, p. 130: Lake No, Upper Nile, Sudan.

Range: The north-eastern Congo and adjacent Uganda from about Lakes Edward and Albert, northwards to the eastern districts of former French Equatorial Africa, and the upper and mid drainage of the Nile in the Sudan.

(Not a satisfactory race, averaging only a little smaller than *A. g. jacksoni*, and considered a synonym of the latter by White [1960].)

(i) *Acrocephalus gracilirostris tsanae* (Bannerman)

Calamoecetor leptorhyncha tsanae Bannerman, Bull. Brit. Orn. Club, vol. lvii, 1936, p. 57; Achera Marian, Lake Tana, northern Abyssinia.

Range: The northern and central highlands of Abyssinia.

(j) *Acrocephalus gracilirostris neglectus* (Alexander)

Calamocichla neglecta Alexander, Bull. Brit. Orn. Club, vol. xxiii, 1907, p. 63; Lake Chad.

Range: Known only from Lake Chad, north-western Nigeria and Tschad.

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