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The austral races of the Afrotropical Fiery-necked Nightjar *Caprimulgus pectoralis* Cuvier, 1816

by P. A. Clancey

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The two currently recognised subspecies of *Caprimulgus pectoralis* Cuvier, 1816, present in the southern parts of its range are the nominate race, the type-locality of which is George, southern Cape (*ex* Levaillant), and *C. p. fervidus* Sharpe, 1875, described from Damaraland, Namibia, on four C. J. Andersson specimens from the northeast of the territory. Unlike the nominate form, *fervidus* is seen as centred on a major biome, the extensive *Brachystegia* woodland savanna (Miombo) of south-central Africa, south of the Lower Guinea Forest. *C. pectoralis* affects moist woodland and forest edge, lies up in shade on the ground during the day, but seeks relatively open localities at dusk for feeding purposes. A third race, *C. (p.) nigriscapularis* Reichenow, named in 1893 from Songa, west of Lake Albert, eastern Zaire, represents the species in the main to the north of the Equator, reaching western Kenya and adjacent Uganda. Some workers, notably Fry & Harwin (1988), but see also Louette (1990), give it separate species rank, and it is, accordingly, not dealt with in the present contribution.

During nidification, *C. p. fervidus* is sympatric with northern elements of the strongly migratory Rufous-cheeked Nightjar *C. rufigena* A. Smith, 1845, which sojourns (April–September) in the savanna belt of the northern Afrotropics, whereas *C. p. pectoralis* and *C. p. fervidus* are only given to short-range movements and are environmentally more mesic than *rufigena*, which, certainly on its breeding grounds, favours desertic or semi-desertic conditions. Also

occurring alongside these two comparably-sized species is the Mozambique Nightjar *C. fossii* Hartlaub, 1857, which has an austral distribution somewhat analogous to that of *C. pectoralis*, but is still more prone than it to local movements and short-term concentrations. It has been customary to view *C. pectoralis* as a resident nightjar, but it is now well-established that it is subject to rain-front and post-breeding related population shifts, resulting in both localized temporary absences and influxes. Support for this conclusion is furnished by Jackson (1978) and Irwin (1981) who record that in Zimbabwe the species breeds in August–December (63 records) and that later, from November, there is a major exodus of the local population. For Zambia, Benson *et al.* (1971) give comparable breeding times, with peak abundance in the upper Kafue R. basin in April, long after breeding; later and immediately in advance of breeding, concentrations (of returning migrants?) have been noted from Mongu in the west to Chipata in the east.

In South Africa, Maclean (1985) also records seasonal relocation of numbers from the eastern lowlands to the plateau (November–April), the basis of which is debatable, as the dates do not accord with the breeding season given by the same author for the region as a whole. All southern populations of the Fiery-necked Nightjar breeding to the south of 14°S lay from late July or August through to late November and early December, concentrations at other times resulting from rain-front withdrawal movements and short-range migrations. That there is some variability in movement patterns from year to year is clear, as Kemp *et al.* (1985) comment that on the plateau of the Transvaal (at Nylsvley, near Nylstroom) the present nightjar is "common some years and unrecorded in others", comparable irregularity of incidence being likewise recorded from Natal localities. While available data are somewhat inconclusive, it can be postulated that in years of particularly high rainfall local conditions may be temporarily rendered unsuitable for breeding, necessitating a shift to more open and perhaps drier plateau habitats. The breeding season is essentially correlated with the terminal stages of the dry season in the southern Afrotropics and the commencement of the main rains.

Current inadequate understanding of the extent and disposition of the species' post-breeding movements, and particularly the characters and distribution of *C. p. fervidus*, gave rise to the present enquiry. This has shown incontrovertibly that *fervidus* is composite and requires to be re-arranged in three rather than a single subspecies, for one of which a new name is introduced below.

Individual variation is extensive, but the broad general patterns of geographically based variation are not in question, affecting overall colouration, the extent and brightness of the light hind neck-bar, the colour of the ear-coverts, malar streaks, fore-throat and breast, and degree of barring to the underside. Both sexes vary widely in size, with much overlap in size between populations, but with the incidence of short-tailed birds increasing significantly in the east of the range in association with low altitude and perhaps the high level of summer daytime temperatures.

TABLE 1
Wing- and tail-length parameters (in mm) in the four subspecies of the Fiery-necked Nightjar *Caprimulgus pectoralis*

		Wings				Tails		
		n	range	mean	s.d.	range	mean	s.d.
pectoralis	♂♂	12	158–174.5	165.3	5.18	110.5–131	122.7	5.86
	♀♀	10	157–170	161.1	4.71	115–128.5	123.0	3.79
crepusculans	♂♂	12	152–172	160.7	4.99	110–130.5	119.2	6.29
	♀♀	10	153–163	158.1	3.10	110–121	114.6	3.18
fervidus	♂♂	12	158–171.5	164.7	4.46	115–127	121.1	3.99
	♀♀	10	159–172	164.8	4.46	119–127	122.6	2.90
shelleyi	♂♀	10	160–177	168.2	4.66	115–132	123.8	4.56

Notes. It will be appreciated that there is little meaningful size-difference between the sexes in *C. pectoralis*, both structures dealt with varying widely. Variation in size of taxonomic import is to be found in the eastern humid littoral *C. p. crepusculans*, in which the incidence of individual birds with the tail-length 120 mm and below is well in excess of that in the other southern races. Louette (1990) shows *C. (p.) nigriscapularis* is still shorter-tailed than *crepusculans*, with 13 ♂♀ from both eastern and western Zaire having wings 147–158.5, and tails 104–115 mm. The white rectricial apices are also smaller. In the case of the Shaba, Zaire, population herein dealt with as part of *C. p. shelleyi*, Louette gives the wings of 10 ♂♂ as 155–164.5 (160.0), tails 107–129 (118.2), wings of 11 ♀♀ 146–162.5 (158.0), tails of 10 109–123.5 (115.5) mm.

From my recent review of the forms of *C. pectoralis, sensu stricto*, and their seasonal movements, I now recognise four subspecies, as set out below.

Caprimulgus pectoralis pectoralis Cuvier
Caprimulgus pectoralis Cuvier, *Règne Anim.*, vol. i, 1816, p. 376: Africa, based on Levaillant, pl. 49=George, southern Cape. Synonyms: *Caprimulgus africanus* Stephens, 1817; *Caprimulgus atrovarius* Sundevall, 1851.

Over upper-parts generally Deep Mouse Gray (Ridgway 1912), finely vermiculated with darker grey, the medial crown broadly streaked with black and hind-neck with narrow bar of buff. Scapulars boldly marked with jet black subapical segments, edged with buff. Ear-coverts, malar streaks and fore-throat Bone Brown to blackish-brown, the feathers finely sub-terminally banded with cream-buff; lateral throat panels white, the caudad feathers broadly tipped with black; breast similar to fore-throat, i.e. relatively dusky, vermiculated and finely barred with buff and washed with umber brown; rest of ventral surface Cinnamon-Buff transversely barred with dark brown, extending to flanks and crissal surfaces.

Measurements. See Table 1. In a series of 22 ♂♀ from the Cape 27% had tails of 120 mm or less.

Range. Western Cape from northern Little Namaqualand to the Cape of Good Hope, east generally south of the Great Karoo to the eastern

Cape, adjacent interior Transkei and southwestern Orange Free State (on the Orange R.). Partially migratory, ranging after breeding from *c.* April/May to Natal, lowlands of Zululand, eastern Transvaal, southeastern Zimbabwe, with one from Nangweshi, Barotse Province, Zambia (16°22′S, 23°18′E), dated 16 July 1952. Return movement from about early September. Southern and southeastern Cape specimens taken May–September (18 out of a series of 27) confirm post-breeding emigration is only partial.

Remarks. Relatively cold greyish tone to upper-parts, narrow buffy hind neck-bar, heavy black coronal streaking and spotting to scapulars, as well as blackish-brown ear-coverts, fore-throat and breast surfaces and broad ventral barring distinguish this race.

Grant & Mackworth-Praed (1954) discuss this subspecies on the basis of the material then available in the British Museum (Nat. Hist.) collection, recording that a specimen from Ulundi in Zululand is seen as referable to it. They were seemingly unaware of the post-breeding movements of both nominate *pectoralis* and other races, which can result in the taking of two or more different forms in the same general area.

Caprimulgus pectoralis crepusculans subsp. nov.

Type. ♂ adult. On road to Charters Creek, near Hlabisa, Lake St. Lucia, eastern Zululand, sea level, 6 April 1979. Road casualty (*ex* Natal Parks Board). In the collection of the Durban Natural Science Museum, Mus. Reg. No. 32 603.

Description. Compared with *C. p. pectoralis* lighter over upper-parts, ground-colour more cryptic ochraceous-buff, not cold grey brownish-black, coronal shaft-streaking appreciably narrower, and with small black buff-tipped segments to scapulars; hind neck-bar rather broader, more reddish in colour but with deep buff shaft-streaking. On underside with ear-coverts, malar streaks, fore-throat and breast much lighter, less dark greyish, approaching Dresden Brown, breast transversely vermiculated with dusky and buff; rest of underside paler buff, with finer barring, which declines markedly over flanks and crissal surfaces, which are mainly plain. Wings more warmly tinged with reddish-buff, lesser-coverts less blackish. Tail frequently more coarsely banded and vermiculated with brownish-black. Similar in size to nominate race, but tail tending to be shorter (120 mm or less in 73% of 22 ♂♀). Measurements of type: wing (flattened) 161, tail 120 mm. See Table 1.

Material examined. 30. *Natal*: Kokstad, Ixopo, Pietermaritzburg, Durban; *Zululand*: Maphumulo Game Reserve, Hluhluwe Game Reserve, Lake St Lucia, Hlabisa, Gwaliweni Forest (Ingwavuma), Ndumu Game Reserve; *Swaziland*: Umbuluzi Game Reserve (*c.* 26°30′S, 32°00′E): *Transvaal*: Mokeetsi, Louis Trichardt, Sebasa; *Mozambique*: Bela Vista, Chimonzo, Chicumbane, Panda, Rumbaçaça, Inhaminga, Muxe; *Zimbabwe*: Humani Ranch (20°30″s, 32°16′E), Sentinel Ranch (22°09′S, 29°28′E).

Range. Midlands and coast of Transkei to Natal and Zululand, eastern Swaziland, eastern lowveld of Transvaal, southeastern lowlands

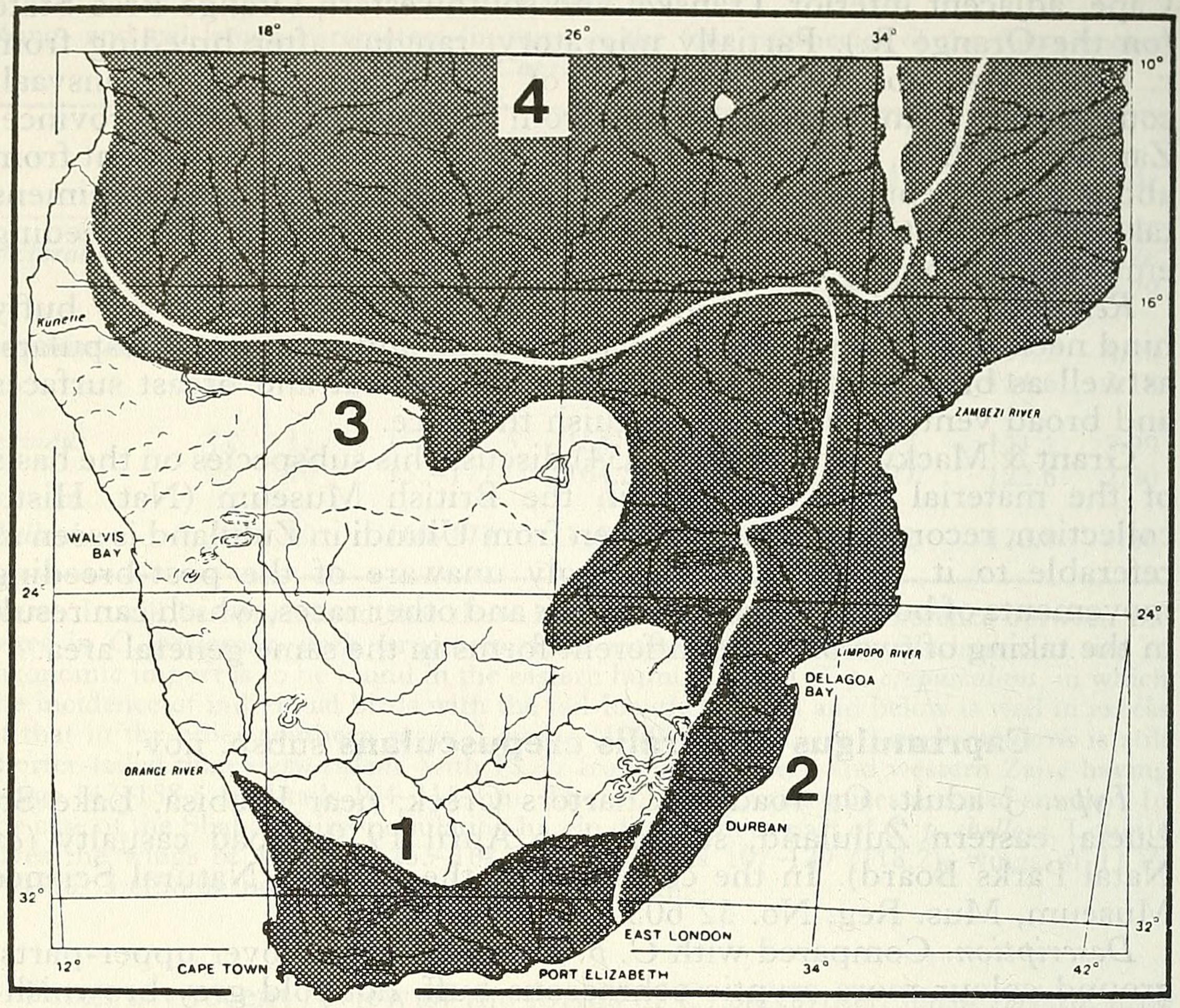

Figure 1. Breeding ranges in southern Africa of the races of the Fiery-necked Nightjar *Caprimulgus pectoralis:* 1, *C. p. pectoralis;* 2, *C. p. crepusculans;* 3, *C. p. fervidus;* 4, *C. p. shelleyi*.

of Zimbabwe (e.g. lower Sabi R. valley), and Mozambique. Northern limits not determined, but probably also southeastern lowland Tanzania. Largely sedentary. Breeds late August–December.

Etymology. *Crepusculans* from Latin, of dusk, i.e. active at sundown or before daybreak, and in the half light of moon-lit nights.

Remarks. The Zululand topotypical population of *crepusculans* is seasonally (May to late August/September) greatly outnumbered by wintering examples of nominate *pectoralis* from further south. McLachlan & Liversidge (1970) record that eggs of what they refer to as *C. p. fervidus* (but probably=*C. p. crepusculans*) are smaller than those of nominate *C. pectoralis*: 23–27.2 × 18–19.4 (*n*=6), *versus* 29.8 × 20.5 and 28.8 × 20 (*n*=2) mm.

Caprimulgus pectoralis fervidus Sharpe

Caprimulgus fervidus Sharpe, in Layard & Sharpe's *Birds of South Africa*, new ed., 1875, p. 86: "Damaraland"=Owamboland (Ovamboland), northern Namibia.

(*Note*. The paratypical series of four specimens collected by C. J. Andersson was taken in Owamboland, Otjoro, at Elephant Vlei (*c* 18°S, 18°E), and "between Owamboland and the Omuramba Omatako" in the northeast of Namibia in 1859.)

Dorsally similar to *C. p. crepusculans*, but ranging paler, this most marked over sides of crown, caudad scapulars and tertials. Black mid-coronal shaft-streaking coarse, and as in nominate *pectoralis*, but sharply edged bright tawny; hind neck-bar broader, lighter and more orange-tawny, the fiery effect heightened by the wider light buff shaft-streaks and tips; mantle and lower back to rump overlaid with tawny, which colour also bleeds into upper tail-coverts and wings (in *crepusculans* the dorsal surface behind the hind neck-bar lacks any tawny suffusion). Differs sharply in having ear-coverts, malar streaks, entire fore-throat and upper breast more or less plain Tawny/Russet, and in reduced light brown vermicular barring on lower breast; rest of underside with still less barring than in *crepusculans*. Wings and tail lighter.

Measurements. See Table 1. Size similar to nominate *pectoralis*; 59% of 22 ♂♀ with tail 120 mm or less.

Range. Southwestern and southern Angola to the south of the Miombo woodland savanna, northern Namibia to north and northeast of the Etosha National Park, east to Kavango and the Caprivi Strip, northern and eastern Botswana, the plateau of Zimbabwe and the western and northern Transvaal to the north of the highveld. Migratory with post-breeding movements seemingly northerly oriented and centred on the south- and east-central African tropics, but precise disposition uncertain, though reaching northern Zambia, southeastern Zaire and Tanzania. Louette (1990) refers to a "rufous morph" from Kinshasa, Lower Zaire, which probably represents *C. p. fervidus* as here defined.

Remarks. Contrary to statements in the standard literature, this race is not largely restricted to the Miombo savanna, as much of the range outlined above lies beyond the Miombo limits. Its general colour suggests a desertic or semi-desertic origin, its currently extended, tenuous and somewhat peripheral range being possibly a secondary outcome of competition with the more xeric *C. rufigena* at some stage in the past. The two nightjar species are closely similar in general appearance and have been consistently confused, even by one as knowledgeable as Reichenow (1900–1901). The paratypical series of *C. p. fervidus* in the collection of the Natural History Museum, Tring, is subspecifically composite, with an Elephant Vlei specimen dated 29 October 1859 an example of *C. p. shelleyi*, as recognised hereunder.

It is of no small evolutionary significance that virtually the entire range of *C. p. fervidus* as here determined is in effect the zone of breeding sympatry of *C. pectoralis* and *C. rufigena*, in which the former species is even more extensively and intensely rufescent than its congener over the lateral and hind surfaces of the head, fore-throat and breast.

Caprimulgus pectoralis shelleyi Bocage

Caprimulgus Shelleyi Bocage, *Jorn. Acad. Sci. Lisboa*, vol. xxiv, 1879, p. 266: Caconda, northern Huila, Angola.

Nyctisyrigmus kwalensis Davis, *Pan American Studies*, vol. i, 2, 1978, p. 266: Kwale, south-eastern Kenya, at 4°10′S, 39°27′E. *Nomen nudum* (see comment below).

Somewhat similar to nominate *pectoralis* over upper-parts, differing in the neck-bar being broader and with redder ground-colour; broad shaft-streaking light buff. Cheeks, malar streaks, fore-throat and breast lighter and browner, much less dusky, i.e., not blackish Bone Brown, and with transverse ventral barring restricted to lateral lower breast; adjacent sides, flanks and crissal surfaces plain buff.

Compared with *C. p. fervidus*, with ear-coverts to malar streaks, fore-throat and breast variegated fuscous brown and buffy, not plain Tawny/Russet, and upper-parts duller, without an extension of tawny overlay to the mantle, rump and upper tail-coverts; longer scapulars and tertials less pallid. Underside with the buff of the breast duller, the lower barring as described in the case of *fervidus*.

Measurements. See Table 1. Similar in size to nominate *pectoralis*, but only 1 of 10 ♂♀ measured with tail less than 120 mm. Rosa Pinto (1983) gives the following measurements of 60 Angolan specimens, most of which were from populations of *C. p. shelleyi* judging by the localities listed in the general text: wings of ♂♀ 157–177, tails 116–136 mm. Weights 42–63 g. It will be noticed that these measurements range greater than those given here for nominate *pectoralis, crepusculans* and *fervidus*.

Range. The plateau of Angola, southern Zaire to the south of the Lower Guinea Forest, Zambia, northern Malawi and southwestern Tanzania. Post-breeding movements in these populations uncertain, but with evidence of some southward, possibly rain-front motivated, occurrence to northern Namibia, northern Botswana, and northwestern Zimbabwe (Mica Hills, near Dett, 1 August 1930).

Remarks. Despite its well-marked characters, *C. p. shelleyi* has never been discussed in the literature, the populations now grouped under it being invariably treated as *C. p. fervidus* and even *C. rufigena*.

Comment on *Nyctisyrigmus kwalensis* Davis, 1978. This proposed additional species of Afrotropical nightjar, named in a privately published journal entitled *Pan American Studies*, is based on a single recording made by G. Stuart Keith at Kwale, south-eastern Kenya, in 1961, and made available to Davis by the late Myles E. W. North; the spectrogram reproduced on p. 48 of Davis's second paper on nightjars in *Pan American Studies*, shown alongside one claimed to be of *C. p. fervidus*, agrees closely in pattern with it, even if very badly faded.

This name, notwithstanding having been based on a song recording, is seemingly valid in terms of Article 23 (f) of the *International Code of Zoological Nomenclature* of 1985. This mandates "that names established on any part or form of an animal or on its works", continues under (i) "even if any part of an animal is named before the whole animal", are available. This can be construed to include a diagnostic vocalisation, even if a recorded version of it. Be that as it may, *N. kwalensis* cannot reliably be used subspecifically and requires to be treated as a *nomen nudum* in line with the views of Vuilleumier *et al.* (1992).

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I am indebted to P. R. Colston, Natural History Museum, Tring for the loan of part of the paratypical series of *Caprimulgus fervidus* Sharpe of 1875. The series in the East London and Transvaal Museums were kindly made available through their resident ornithologists, while H. D. Jackson, now of Auckland, New Zealand, helped with the provision of copies of obscure literature on African nightjars. To all concerned I tender my sincere thanks.

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Avifaunistic results of a subtropical camp in the Cordillera del Condor, southeastern Ecuador

by Niels Krabbe & Francisco Sornoza M.

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Previous ornithological work in the higher parts of the Cordillera del Condor has been confined to the southern (Peruvian) end, where joint field parties from Princeton University and Louisiana State University in the 1970s visited areas between 1900 and 2400 m near San José de Lourdes, Department of Cajamarca (Fitzpatrick *et al.* 1977, 1979, Fitzpatrick & O'Neill 1979, 1986). They never published their