

# Hepatic Lesser Cuckoo *Cuculus poliocephalus* in South Africa, and the field identification of this morph in the Afrotropics

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**Un Petit Coucou *Cuculus poliocephalus* de la forme hépatique en Afrique du Sud, et l'identification sur le terrain de cette forme en Afrique.** La deuxième mention d'un Petit Coucou *Cuculus poliocephalus* de la forme hépatique pour l'Afrique du Sud est documentée. Il s'agit d'un individu photographié à Roodewal, province du Limpopo, le 16 avril 2014. Les critères d'identification pour distinguer cette forme de la forme hépatique du Coucou gris *C. canorus* sont présentés.

**Summary.** The second record of a hepatic (rufous) Lesser Cuckoo *Cuculus poliocephalus* for South Africa—an individual photographed at Roodewal, Limpopo Province, South Africa, on 16 April 2014—is documented. Points of distinction from the more commonly encountered hepatic morph of Common Cuckoo *C. canorus* are presented.

**L**esser Cuckoo *Cuculus poliocephalus* is a non-breeding visitor to Africa from south-central and eastern Asia (Payne 2005, Erritzøe *et al.* 2012). It is rarely encountered in the Afrotropics, but local concentrations have been reported in the late austral summer and early autumn (March–April) in the coastal forests of Kenya and Tanzania (Moreau & Moreau 1937, Backhurst *et al.* 1973, Britton 1980, Pearson 1981, 1984, Pearson & Turner 1998).

The species occurs in two morphs, a common grey morph and a scarcer hepatic or rufous morph, which is restricted to females and juveniles (Payne 2005, Erritzøe *et al.* 2012). The grey morph is exceedingly similar to Madagascar Cuckoo *C. rochii*, and the two taxa were long treated as conspecific (Britton 1980, Clancey 1980, Rowan 1983). Vocal, DNA and some minor plumage evidence coupled with markedly different migratory patterns, however, suggests the two are species (Becking 1988, Turner *et al.* 1991, Sorenson & Payne 2005, Fossøy *et al.* 2016).

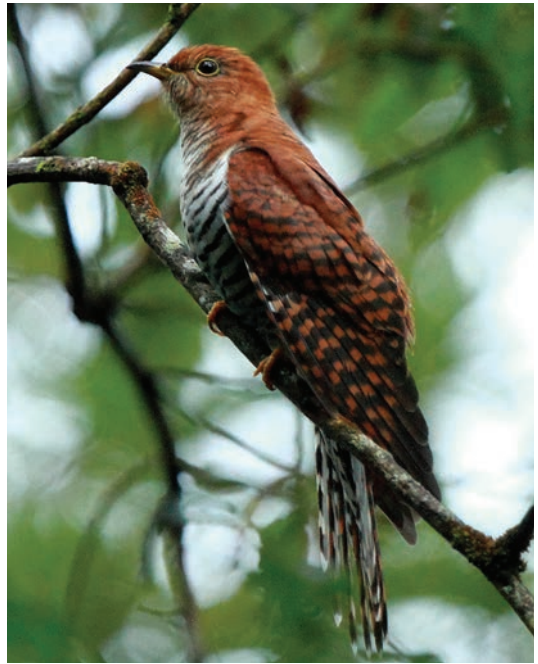
Among the *Cuculus* cuckoos recorded in Africa, a hepatic morph is known only from Common *C. canorus*, Oriental *C. saturatus* and Lesser Cuckoos, and is apparently absent in Madagascar and African Cuckoos *C. gularis* (Becking 1988, Clancey 1992, Payne 2005, Peacock 2014), but a juvenile hepatic morph has been claimed for African Cuckoo (Friedmann 1948, Erritzøe *et al.* 2012, Mann 2013).

From South Africa, an unsexed juvenile specimen (at the Natural History Museum, Tring; NHMUK 1889.6.25.94), collected at Durban,

KwaZulu-Natal (29°51'30.80"S 31°01'32.80"E) in the late 19th century (Sclater & Shelley 1891, Stark & Sclater 1903), has caused confusion over its identity (Spottiswoode 1997, Spottiswoode & Allan 2000). It has been allocated either to Lesser Cuckoo (Clancey 1960, 1962, 1964, 1980, Irwin 1988) or Madagascar Cuckoo (Becking 1988, Clancey *et al.* 1991). Uncertainty over the specimen's identity has continued to linger as demonstrated by the plotting of the record on the distribution maps for both Lesser and Madagascar Cuckoos in Hockey *et al.* (2005).

The Durban specimen is in transitional moult to adulthood and has small measurements (left wing 145 mm, right wing 146 mm, tail 120 mm; M. Adams *in litt.* 2019). Wing length suggests it is *C. poliocephalus*, even allowing for it being a juvenile. Tail and wing values fall outside the range for *C. rochii*, but within those for *C. poliocephalus* (Becking 1988: Appendix 1). Despite this, Becking (1988) allocated the Durban skin to Madagascar Cuckoo, apparently because the shape of the mandibular symphysis resembled that of *C. rochii* more than *C. poliocephalus*.

For our purposes here, the Durban record is treated as a Lesser Cuckoo, pending a thorough multivariate morphometric study of juvenile specimens of both species and/or DNA analysis of the Durban specimen. No other South African claims of Lesser Cuckoo are known to us, but singing Madagascar Cuckoos have occasionally been recorded (Spottiswoode & Allan 2000, Hardaker 2013). The vocalisations of Lesser and Madagascar Cuckoo are strikingly different



**Figures 1–2.** Hepatic Lesser Cuckoo *Cuculus poliocephalus*, Roodewal, Limpopo Province, South Africa, April 2014 (O. Horine). Note the dark eyes, intense brick-red ground colour to the upperparts, unbarred head and rump, and broad black barring on the underparts. The bird appears comparatively small and gracile relative to Common Cuckoo *C. canorus*.

Petit Coucou de la forme hépatique *Cuculus poliocephalus*, Roodewal, Province du Limpopo, Afrique du Sud, avril 2014 (O. Horine). Noter l'œil foncé, les parties supérieures rouge brique intense, la tête et le croupion sans barres, et les larges barres noires sur les parties inférieures. L'oiseau semble relativement petit et élancé comparé au Coucou gris *C. canorus*.

(Becking 1988, Payne 2005, Erritzøe *et al.* 2012) permitting allocation to species using voice alone.

In this note we document the second Lesser Cuckoo record for South Africa, on the basis of a hepatic-morph individual photographed in Limpopo Province by OH ([www.birdfamiliesoftheworld.com](http://www.birdfamiliesoftheworld.com)). The absence of a hepatic morph in Madagascar Cuckoo (Becking 1988, Clancey 1992, Payne 2005) precludes that species as a possibility. Separation of this individual from hepatic Common and Oriental Cuckoos, and putative hepatic juvenile African Cuckoo is discussed below.

### The Roodewal, Soutpansberg cuckoo

On 16 April 2014, a hepatic cuckoo was observed by OH, ED and Samson Mulaudzi at Roodewal, Limpopo Province, northern South Africa (23°01'57.25"S 30°02'28.05"E, 890 m), a locality with several hundred hectares of dense thicket and riparian and mid-altitude forest on the southern

slopes of the Soutpansberg Mountains. It was secretive and shunned the canopy, flying between branches in the midstorey. When perched or stationary, it appeared relatively long-tailed. It was provisionally identified as a hepatic-morph *C. canorus*, but later evaluation suggests it was a hepatic-morph Lesser Cuckoo.

The cuckoo displayed (Figs. 1–2): (1) a brick-red head, sides of neck, nape and upper mantle; (2) plain and unbarred crown to mantle; (3) a dark iris, which appeared black on the photographs; (4) a rather narrow, fine-tipped bill with a yellow-orange base to the (lower) mandible; (5) some diffuse, inconspicuous barring on the lower mantle; (6) brick-red wings with heavy black barring on the median and greater coverts and remiges (which also had broad black tips to the primaries and inner secondaries); (7) uniform, brick-red lesser coverts with little to no black barring, giving the appearance of a plain 'shoulder'; (8) a brick-red, unbarred rump;



**Figures 3–5.** Hepatic morphs of Common Cuckoo *Cuculus canorus* (upper; DNSM 13488, female, Kalichero, Zambia, 28 November 1960) and Lesser Cuckoo *C. poliocephalus* (lower; DNSM 13516, female, Kilifi, Kenya, 18 April 1958) collected in Africa (D. G. Allan, Durban Natural Science Museum). Note the smaller size, deeper and more reddish ground colour and broader black barring to the underparts, and absence of barring on the crown, nape and mantle in Lesser Cuckoo. The Common Cuckoo specimen was originally labelled as an African Cuckoo *C. gularis* by P. A. Clancey, but this was altered by him at an unknown later date.

Formes hépatiques du Coucou gris *Cuculus canorus* (en haut ; DNSM 13488, femelle, Kalichero, Zambie, 28 novembre 1960) et du Petit Coucou *C. poliocephalus* (en bas ; DNSM 13516, femelle, Kilifi, Kenya, 18 avril 1958) collectées en Afrique (D. G. Allan, Durban Natural Science Museum). À noter chez le Petit Coucou la plus petite taille, la couleur de fond plus foncée et plus rougeâtre et les barres noires plus larges sur les parties inférieures, et l'absence de barres sur la calotte, la nuque et le manteau. Le spécimen du Coucou gris avait initialement été étiqueté comme Coucou africain *C. gularis* par P. A. Clancey, mais cela a été changé après par lui-même à une date inconnue.



(9) complex patterning on the tail with a brick-red ground colour, 4–6 black chevron-shaped bands, a thick black subterminal band and distinct white tips to all rectrices with bold white spots along the rachides (especially conspicuous on the outer rectrices); (10) chin and throat suffused brick-red with light black barring; (11) whitish upper breast with brick-red suffusion intruding from the neck-sides, almost suggestive of a half-collar; (12) white lower breast to lower belly with heavy black barring (c.10 bars distinguishable); and (13) yellow-orange feet. Vent and undertail-coverts were not visible.

### Separation of hepatic Lesser, Common, Oriental and African Cuckoos

Little guidance has been provided in the Afrotropical ornithological literature on the separation of hepatic Lesser Cuckoo from the equivalent morph of Common and Oriental Cuckoos, and the juvenile hepatic morph of African Cuckoo. For example, none of the major southern and East African field guides (Zimmerman *et al.* 1996, Stevenson & Fanshawe 2002, Sinclair *et al.* 2011, Chittenden *et al.* 2016) illustrates the hepatic morph of Lesser Cuckoo, nor do these guides provide substantive points of distinction from hepatic Common Cuckoo, the rufous form most likely to be encountered in the Afrotropics.

Features proposed to distinguish hepatic Lesser and Common Cuckoos under field conditions in Africa are presented in Table 1. Observers should direct their attention to head and eye colour, especially the plainer, deeper red head and dark

iris of Lesser Cuckoo. Some of the differences between hepatic Lesser and Common Cuckoos are readily evident in specimens (Figs. 3–5). Collectively, these features should permit hepatic cuckoos to be assigned with reasonable confidence to either *C. canorus* or *C. poliocephalus*. There are probably other subtler features that may aid identification in the field, such as points of physiognomy (jizz). For instance, Lesser Cuckoo gives the impression of having a smaller head relative to the body, with a finer, more gracile bill and a relatively longer tail than Common Cuckoo. These aspects require further substantiation by observations in the field. Birders, especially those in East Africa, are best positioned to expand and refine on the points of distinction between the hepatic morphs.

A hepatic cuckoo specimen from southern Zambia has been attributed to Oriental Cuckoo *C. saturatus optatus* (Mann 2013). This is the only record of this species in the Afrotropics. The hepatic morph of Oriental Cuckoo differs from hepatic Lesser Cuckoo by much the same characters distinguishing the latter from hepatic Common Cuckoo. Hepatic Oriental Cuckoo (of both the nominate subspecies and *saturatus*) is larger than Lesser Cuckoo and has extensive black barring on the crown, nape and rump, a whitish face with copious black barring and (usually) yellow eyes. It is therefore much more similar to the equivalent morph of Common Cuckoo than that of Lesser Cuckoo, and only appears to differ from the former by the broader black barring on the underparts and the absence, in fresh plumage,

**Table 1.** Proposed features for the field separation of hepatic morphs of Lesser *Cuculus poliocephalus* and Common Cuckoos *C. canorus* in the Afrotropical region.

**Tableau 1.** Critères d'identification proposés pour distinguer sur le terrain les formes hépatiques du Petit Coucou *Cuculus poliocephalus* et du Coucou gris *C. canorus* dans la région afrotropicale.

Feature	Lesser Cuckoo	Common Cuckoo
Body size and physiognomy	Small (<60 g) and gracile.	Substantially larger (>80 g) with sturdier physiognomy.
Iris colour	Dark brown, appearing black at a distance or in poor light.	Yellow or amber.
Ground colour of plumage	Intense rufous or brick-red.	Orange-brown and paler in tone than hepatic <i>poliocephalus</i> .
Cheeks, crown, nape and mantle	Plain and unbarred, giving head a 'clean' or 'smooth' appearance. Some show irregular black barring in these areas and whitish supercilium, these are interpreted as remnant juvenile features.	Extensively and conspicuously barred black; cheeks usually with some white or greyish mottling. Head never plain and unbarred.
Underparts	Barring broader.	Barring narrower.
Rump	Brick-red without any black barring.	Orange-brown, with or without black barring.

of white tips to the black barring on the rump (Mann 2013). The features of the Soutpansberg cuckoo thus do not match those displayed by hepatic Oriental Cuckoo.

A hepatic morph has not been accepted in African Cuckoo by most authors (Irwin 1988, Clancey 1992, Payne 2005, Peacock 2014). During a long-term field study in Zambia (ongoing since 2009) investigating African Cuckoo parasitism of Fork-tailed Drongos *Dicrurus adsimilis*, no hepatic morph has been observed in *c.*20 cuckoo chicks that survived to the fully-feathered stage (C. N. Spottiswoode *in litt.* 2019). Such a morph was, however, admitted for the female by Clancey (1964) and Rowan (1983), and in the juvenile (of both sexes?) by Friedmann (1948), Erritzøe *et al.* (2012) and Mann (2013). Clancey (1964) may have based this decision on a specimen (Durban Natural Science Museum 13488; Figs. 3–5) from Kalichero, Chipata District, eastern Zambia, initially identified as an African Cuckoo, but which he later considered to be a Common Cuckoo ('*gularis*' is scratched out and 'hepatic var.' annotated in Clancey's handwriting). Rowan (1983) gave no indication of the material and sightings that substantiated the presence of this morph in African Cuckoo and she was probably merely following Clancey's (1964) position. Erritzøe *et al.* (2012) described the hepatic juvenile as similar to the typical grey juvenile but with the '[g]rey replaced by brownish and white by tawny to buff, although some show grey on dorsal surface (transitional?); a similar description was given by Friedmann (1948). Even if a hepatic morph is accepted in the juvenile of African Cuckoo, the plain, unbarred head, upper mantle and rump of the Soutpansberg individual, its lack of any tawny to buff barring on the upperparts and its small proportions would rule out *C. gularis*.

## Discussion

The cuckoo photographed at Roodewal displayed all the features of a hepatic Lesser Cuckoo and none of those characteristic of hepatic Common and Oriental Cuckoos or putative hepatic juvenile African Cuckoo. Aside from the disputed juvenile skin from Durban, the nearest Lesser Cuckoo records are from eastern Zimbabwe (Clancey 1960, Irwin 1981) at Chirinda Forest, Mount Selinda (20°25'28.46"S 32°41'39.24"E, 1,100 m) and the confluence of the Haroni / Lusitu Rivers

(20°01'43.02"S 32°59'17.70"E, 365 m). Chirinda and the Haroni / Lusitu are *c.*400–450 km north-east of Roodewal and are areas of mid-altitude and lowland forest, respectively (Irwin 1981, Childes & Mundy 1998).

Lesser Cuckoo records appear to be concentrated in high-rainfall, forested or densely wooded localities, often in or close to escarpments or mountainous terrain. Irwin (1988) also underscored the preference for 'much denser cover' than Common Cuckoo. Unlike the latter, Lesser Cuckoo appears to occur far less frequently in savanna or drier, open woodland and perhaps only when on active migration, e.g. when occasionally mist-netted at Ngulia Lodge, Tsavo West National Park, Kenya (Pearson 2016). Habitat may thus be an ancillary identification criterion in conjunction with those described in Table 1.

The Soutpansberg Mountains are topographically diverse with a range of vegetation types. The south-facing slopes tend to be much wetter than the north-facing slopes, with large expanses of thicket and smaller areas of riparian, submontane and montane forest (e.g. Entabeni, Hanglip and Roodewal). Many species characteristic of wetter forests are found on the south-facing slopes of the range (Symes *et al.* 2000) where the observation described herein was made.

It is possible that Lesser Cuckoo has been largely overlooked in southern and East Africa, perhaps because the species is (mostly) silent in Africa, its behaviour tends to be furtive and the hepatic morph has not been clearly distinguished from hepatic Common Cuckoo in the literature. This was also the viewpoint of Irwin (1981, 1988). The suggestion put forward here that Lesser Cuckoo is principally found in areas of forest or moist dense thicket in rugged terrain might also reduce the encounter rate with the species by birders.

The distinctions highlighted in this note between hepatic Lesser and Common Cuckoos indicate that certain previous Afrotropical records may need to be revisited. A cuckoo photographed at Sankuri Ridge, Boni-Dodori Forest, north-east Kenya, in April 2014 (Musina *et al.* 2015: fig. 17), and identified as a female Common Cuckoo, displayed a dark eye, a generally uniform head and a deep red tone to the upperparts, suggesting it was rather a hepatic Lesser Cuckoo. Conversely, a

cuckoo photographed at Tarangire National Park, Tanzania, in April 2016 and identified as a hepatic Lesser Cuckoo ([http://www.tanzaniabirds.net/African\\_birds/cuckoo\\_lesser/lc.htm](http://www.tanzaniabirds.net/African_birds/cuckoo_lesser/lc.htm)) appeared to have bulky proportions and had a pale yellow eye, an orange-brown ground-colour to the upperparts, an extensively barred mantle and crown, and white mottling on the face, suggesting it was a hepatic Common Cuckoo. Refinement of identification criteria will assist in clarifying the status and movements of both these cuckoos in the Afrotropical region.

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