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First records for Congo-Brazzaville of Miombo Pied Barbet *Tricholaema frontata*, Yellow-fronted Tinkerbird *Pogoniulus chrysoconus* and Sladen's Barbet *Gymnobucco sladeni*

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Premières observations pour le Congo-Brazzaville du Barbican du Miombo *Tricholaema frontata*, du Barbion à front jaune *Pogoniulus chrysoconus* et du Barbican de Sladen *Gymnobucco sladeni*. En 2005–06, dans la Réserve de Lesio-Louna, 140 km au nord de Brazzaville, Congo-Brazzaville, nous avons obtenu les premières observations pour le pays du Barbican du Miombo *Tricholaema frontata*, du Barbion à front jaune *Pogoniulus chrysoconus* et du Barbican de Sladen *Gymnobucco sladeni*. Les photos et mensurations proviennent d'individus de chaque espèce pris au filet. Les observations les plus proches se situent à 85 km à l'est pour le Barbion à front jaune, 150 km au nord-est pour le Barbican de Sladen, et 750 km au sud pour le Barbican du Miombo. La présence de ce dernier est particulièrement inattendue du fait que l'espèce est presque exclusivement restreinte aux forêts claires de miombo du centre de l'Afrique australe. A Lesio-Louna, un couple a été observé à plusieurs reprises dans une savane à *Loudetia* parsemée d'arbres *Hymenocardia acida*. Ces découvertes fournissent un argument supplémentaire pour la classification de la région au sein de la zone de transition Guinéo-Congolaise/Zambézienne.

Summary. During field work in 2005–06 in the Lesio-Louna Reserve, 140 km north of Brazzaville, Congo-Brazzaville, we made the first country records of Miombo Pied Barbet *Tricholaema frontata*, Yellow-fronted Tinkerbird *Pogoniulus chrysoconus* and Sladen's Barbet *Gymnobucco sladeni*. Photographs and morphometrics are provided of mist-netted individuals of all three species. The nearest records are 85 km to the east for Yellow-fronted Tinkerbird, 150 km to the north-east for Sladen's Barbet, and 750 km to the south for Miombo Pied Barbet. The presence of Miombo Pied Barbet is particularly unexpected, as the species is almost exclusively restricted to mature miombo woodland in south-central Africa. In Lesio-Louna, a pair was observed on several occasions in *Loudetia* grassland with scattered *Hymenocardia acida* trees. These discoveries provide further support to the classification of the area within the Guinea-Congolian/Zambeian transition zone.

We present observations of three barbet species new to Congo-Brazzaville. All observations were made during 2005 and 2006 in the Lesio-Louna Reserve, 140 km north of Brazzaville, in the vicinity of Iboubikro (03°16'S 15°28'E), the base camp for the reserve management project. Covering c.50,000 ha, the reserve is contiguous with the south-west portion of the larger Lefini Faunal Reserve. The two reserves form part of the Batéké Plateau, an area of rolling savanna and patchy forest extending from south-west Gabon across central Congo and slightly into Congo-Kinshasa (Democratic Republic of Congo) (Dowsett-Lemaire 1997, 2001). The climate of the reserve is similar to that elsewhere on the plateau, with a dry season in late May–September,

the heaviest rains in October–November and March–April, and a drier period around January–February (Moutsamboté 1994, Dowsett-Lemaire 1997, King *et al.* 2004). Altitude ranges from 325 m along the Louna River in the north-west, to 700 m atop the southern cliffs (King *et al.* 2004). The major habitat is savanna grassland (>70%), with gallery and swamp forests along watercourses, plus patches of dry forest on higher ground (Moutsamboté 1994, Dowsett-Lemaire 1997, King *et al.* 2004, Nsongola *et al.* 2006). Savanna within and outside the reserve is burned regularly by local users, perhaps 4–5 times per year in places. These fires can spread into forest patches, particularly in the late dry season.

Miombo Pied Barbet *Tricholaema frontata*

Miombo Pied Barbet is considered endemic to south-central Africa, ranging through central Angola, southern Congo-Kinshasa, most of Zambia, south-west Tanzania and west Malawi (Short & Horne 2001; Fig. 1). It is almost exclusively restricted to mature miombo (*Brachystegia*) woodland (Benson & Irwin 1966, Short & Horne 2001). Lesio-Louna is c.750 km north of its nearest known locality, the Carumbo area of Angola (Dean 2000; Fig. 1).

In Lesio-Louna, the species was first observed on 5 July 2005, in *Loudetia* grassland with scattered *Hymenocardia acida* trees (Fig. 2), 2 km south-east of the Iboubikro base-camp on the Lesio river and c.300 m from a small dry forest patch known locally as Idzoua-Inkou, at an altitude of 440 m. The density of *H. acida* trees here is c.10% or less, and they reach heights of c.3–8 m. This is very different from the typical habitat of the species, mature miombo woodland, which is generally dense, tall and flat-canopied (see photos in, e.g., Benson *et al.* 1971, Dowsett-Lemaire & Dowsett 2006). However, the species has been recorded in other open habitats, including degrad-

ed woodland and clearings in Zambia (Short & Horne 1988, 2001), and patchy woods and scrub in grassy areas of Luanda, north-east Angola (Ripley & Heinrich 1966). It also occurs in *Burkea* woodland in western Zambia (Benson *et al.* 1971).

Six subsequent observations were made at the same location, between 17 September 2005 and 5 February 2006. Two individuals were observed simultaneously on 3 October 2005, although no interaction between them was observed. The birds were feeding on seeds of *H. acida* (Euphorbiaceae), and on unidentified fruits and invertebrates. A single was observed once subsequently, on 30 May 2006, c.500 m from the usual site, feeding on fruits of *Maprounea africana* (Euphorbiaceae).

One of the pair observed on 3 October 2005 was mist-netted (Figs. 4–5). It was an adult, as indicated by the red forecrown and pronounced bill-tooth (Short & Horne 1988). The wing (74 mm) and tail (45 mm) measurements are consistent with the ranges given for females by Short & Horne (2001). The mass (28 g) appears to be only the second published value for the species (Ripley

Captions to plates on opposite page

Figure 1. Approximate distributions of the Guinea-Congo forest (adapted from NASA undated), and of three very closely related 'pied' barbets: Red-fronted Barbet *Tricholaema diademata*, Miombo Pied Barbet *T. frontata* (including the isolated observation in the Lesio-Louna Reserve, Congo-Brazzaville, newly reported here), and Acacia Pied Barbet *T. leucomelas* (after Short & Horne 2001 and this paper).

Distributions approximatives de la forêt Guinéo-Congolienne (basé sur NASA, non daté), et de trois barbicans apparentés: Barbican à diadème *Tricholaema diademata*, Barbican du Miombo *T. frontata* (comprenant l'observation isolée dans la Réserve de Lesio-Louna, Congo-Brazzaville, nouvellement rapportée ici), et Barbican pie *T. leucomelas* (d'après Short & Horne 2001 et cet article).

Figure 2. The *Loudetia* grassland with scattered *Hymenocardia acida* trees where the observations of *T. frontata* were made in the Lesio-Louna Reserve, Congo-Brazzaville. The tall tree in the foreground, with a dead branch with a hole in it, was regularly visited by the barbets (Tony King)

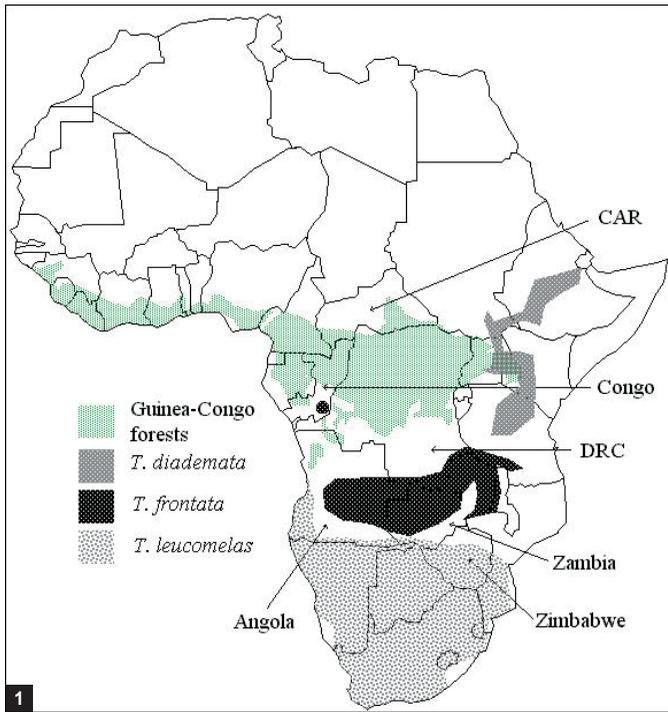
La savane à *Loudetia* avec des arbres *Hymenocardia acida* parsemés où les observations de *T. frontata* ont été faites dans la Réserve de Lesio-Louna, Congo-Brazzaville. Le grand arbre à l'avant-plan, avec une branche morte exhibant un trou, était régulièrement visité par les barbicans (Tony King)

Figure 3. Eight of the nine specimens of Miombo Pied Barbet *Tricholaema frontata* in The Natural History Museum, Tring, UK (Tony King © Natural History Museum, Tring)

Huit des neuf spécimens de Barbican du Miombo *Tricholaema frontata* dans la collection du British Museum à Tring, Royaume-Uni (Tony King © Natural History Museum)

Figures 4–5. Miombo Pied Barbet *Tricholaema frontata* mist-netted in Lesio-Louna Reserve, Congo-Brazzaville, 3 October 2005 (Christelle Chamberlan)

Barbican du Miombo *Tricholaema frontata* pris au filet dans la Réserve de Lesio-Louna, Congo-Brazzaville, 3 octobre 2005 (Christelle Chamberlan)



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& Heinrich 1966 give 24.5 g for a male collected in north-east Angola, though Short & Horne 2001 give 25.5 g as the only recorded weight, also for a male). The Lesio-Louna bird was similar to the descriptions and illustrations in Short & Horne (2001, 2002), though with more extensively yellow underparts, particularly on the throat, chin and belly (Fig. 4). Most illustrations and descriptions of Miombo Pied Barbet agree that the throat is predominantly white (Chapin 1939: 'heavy black spots on the underparts, and a wash of lemon yellow across the breast'; Mackworth-Praed & Grant 1962: 'chin to chest white'; Short & Horne 2001: 'submalar area, throat and chin white with variable fine brown to black scalloping'), although others indicate a faint yellow influence (Short & Horne 1988: 'throat feathers yellowish white with or without fine black tips'; Short & Horne 2002: 'breast yellow, rest of underparts whiter'). The nine specimens at The Natural History Museum (Tring) all have predominantly white throats and bellies, with only a very slight yellow wash in some cases (Fig. 3). It appears, therefore, that the Lesio-Louna individual has underparts more strongly washed yellow than those further south. Further study is clearly required to establish if this morphological variation is of taxonomic significance.

Yellow-fronted Tinkerbird *Pogoniulus chrysoconus*

This widespread species of woodland and wooded grasslands ranges from the coast of West Africa, around the Guinea-Congolian forest block south-west to southern Congo-Kinshasa, Angola and northern Namibia, and south-east to north-east South Africa (Short & Horne 1988). The closest record to Lesio-Louna involved a single isolated sighting in 'savanna' at Kwamouth, Congo-Kinshasa, 85 km to the east (Schouteden 1962). There are few other records within 500 km south or south-east of Lesio-Louna (Chapin 1939, Snow 1978).

A single was mist-netted on 30 May 2006 (Fig. 10; wing: 58 mm; tail: 33 mm; mass: 10 g), in wooded *Loudetia* grassland in the same general area as the *T. frontata* observations given above, though the specific location had a more mixed selection of woody species, particularly *Hymenocardia acida*, *Syzygium guineense* var. *macrocarpum*, *Maprounea africana* and *Annona senegalensis*. The golden forecrown, thick black forehead band and greyish flanks are characteristic of the race *P. c. extoni*, which is widespread in various wooded habitats from Tanzania to southern Africa including Angola and southern Congo-Kinshasa (Chapin 1939, Short & Horne 1988, Dean 2000).

Table 1. Morphometrics of six Sladen's Barbets *Gymnobucco sladeni* and one Grey-throated Barbet *G. bonapartei*, mist-netted in Lesio-Louna Reserve, Congo-Brazzaville, in 2006.

Tableau 1. Mensurations de six Barbican de Sladen *Gymnobucco sladeni* et un Barbican à gorge grise *G. bonapartei*, pris au filet dans la Réserve de Lesio-Louna, Congo-Brazzaville, en 2006.

	Date	Wing (mm)	Tail (mm)	Mass (g)	
Sladen's Barbet <i>Gymnobucco sladeni</i>	18/08/06	85	50	45	Red eyes, bright nasal tufts, crown bare
	04/11/06	87	49	47	
	04/11/06	87	47	48	
	06/11/06	88	51	47	
	06/11/06	87	50	46	
Mean		86.8	49.4	46.6	
Grey-throated Barbet <i>G. bonapartei</i>	04/11/06	86	47	42	Brown eyes, dull nasal tufts, crown slightly feathered
	07/10/06	83	46	45	

* Wing-length was measured to the nearest mm, using a wing-rule and flattening the primaries gently against the rule (following Svensson 1992). Tail-length was measured with the reverse side of the wing-rule, to the base of the tail-feathers above the undertail-coverts. Mass was measured to the nearest g using spring balances.

Sladen's Barbet *Gymnobucco sladeni*

Sladen's Barbet is a social, forest-dwelling barbet, which forms a superspecies with Bristle-nosed Barbet *G. peli* (Short & Horne 1988). Its habits are poorly known, and the species is generally considered uncommon or rare (Short & Horne 2002), being near-endemic to Congo-Kinshasa, with one record from the Central African Republic (Germain & Cornet 1994). The closest records to Lesio-Louna are from Bokalakala and Kunungu, 150 km to the north-east in Congo-Kinshasa, near Bolobo on the Congo River (Schouteden 1962).

Small vocal parties of c.5–15 Sladen's Barbets were regularly observed in June–December 2006, in gallery forest along the Lesio River, near Iboubikro base-camp, feeding on fruits and seeds of various species including *Canthium* sp., *Uapaca* sp., *Vitex* sp. and *Dioscorea* sp. Once, on 4 November, a large foraging group of c.30 was observed and a nesting colony was located in the same area in October, in a standing dead tree which had lost its crown, forming a large open forest gap (Figs. 8–9). Activity at the colony decreased from November. An adult was mist-netted and photographed on 18 August (Fig. 6), and appeared to have an active brood patch. Another five were trapped in November (Table 1), including a slightly smaller individual with brown (not red) irides, dull (not bright) nasal tufts and a lightly feathered (not naked) crown, therefore probably an immature/juvenile. The weights given in Table 1 appear to be the first published for the species (Short & Horne 2001). The species had probably previously been overlooked in Lesio-Louna, perhaps due to confusion with the sympatric Grey-throated Barbet *G. bonapartei* (Fig. 7, Table 1), although the possibility that the species is expanding its range cannot be eliminated.

Discussion

Lesio-Louna Reserve is situated on the Batéké Plateau, an area of undulating grasslands with limited forest cover, nestled within the general range of the large Congolian rainforest block (Fig. 1). The discovery of Miombo Pied Barbet, Yellow-fronted Tinkerbird and Sladen's Barbet illustrates that the area supports a diverse barbet fauna. Nine species have now been recorded in an area of just 1.5 km² at the heart of the reserve, including five species of *Pogoniulus* (*P. scolopaceus*, *P. atroflavus*, *P.*

subsulphureus, *P. bilineatus* and *P. chrysoconus*), two *Gymnobucco* (*G. bonapartei* and *G. sladeni*) and two *Tricholaema* (*T. frontata* and *T. hirsuta*).

This diversity may be attributed to that of the forest and grassland-woodland habitats in the area, which support elements of the Guinea-Congo forest biome and Zambebian biome avifaunas (Fishpool & Evans 2001). Certain near-endemics of the Zambebian biome have previously been identified on the Batéké Plateau, such as Sousa's Shrike *Lanius souzae* and Tinkling Cisticola *Cisticola rufilatus*, prompting Dowsett-Lemaire (2001) to categorise the plateau as part of the Guinea-Congolian/Zambebian transition zone of White (1983). The discovery of Miombo Pied Barbet in Lesio-Louna provides further evidence to support this view. Its apparent isolation from the core population of the species is similar to that of several other woodland species observed in the same area, such as Yellow-bellied Hyliota *Hyliota flavigaster* and Piping Cisticola *Cisticola fulvicapillus*. Yellow-fronted Tinkerbird, on the other hand, appears not to represent an isolated population, but rather that the Batéké Plateau probably constitutes the northern limit of a continuous distribution from the extensive south-central African woodlands. In contrast to the other two barbets, Sladen's Barbet is restricted to the Guinea-Congo forest biome, and is a near-endemic to Congo-Kinshasa, only reaching the Batéké Plateau in its limited gallery forests. Despite these recent discoveries, the avifauna of the area is little known, and further exploration throughout the plateau is encouraged.

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Figure 6. Sladen's Barbet *Gymnobucco sladeni* mist-netted in Lesio-Louna Reserve, Congo-Kinshasa, 18 August 2006 (Tony King)

Barbican de Sladen *Gymnobucco sladeni* pris au filet dans la Réserve de Lesio-Louna, Congo-Brazzaville, 18 août 2006 (Tony King)

Figure 7. Grey-throated Barbet *Gymnobucco bonapartei* mist-netted in Lesio-Louna Reserve, Congo-Brazzaville, 7 October 2006 (Christelle Chamberlan)

Barbican à gorge grise *Gymnobucco bonapartei* pris au filet dans la Réserve de Lesio-Louna, Congo-Brazzaville, 7 octobre 2006 (Christelle Chamberlan)

Figures 8–9. Sladen's Barbet *Gymnobucco sladeni* colony in a dead tree within gallery forest, Lesio-Louna Reserve, Congo-Brazzaville, November 2006 (Tony King)

Colonie de Barbicans de Sladen *Gymnobucco sladeni* dans un arbre mort en galerie forestière, Réserve de Lesio-Louna, Congo-Brazzaville, novembre 2006 (Tony King)

Figure 10. Yellow-fronted Tinkerbird *Pogoniulus chrysoconus* mist-netted in Lesio-Louna Reserve, Congo-Brazzaville, 30 May 2006 (Tony King)

Petit Barbu à front jaune *Pogoniulus chrysoconus* pris au filet dans la Réserve de Lesio-Louna, Congo-Brazzaville, 30 mai 2006 (Tony King)

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References

- Benson, C. W. & Irwin, M. P. S. 1966. The *Brachystegia* avifauna. *Ostrich* suppl. 6: 297–321.
- Benson, C. W., Brooke, R. K., Dowsett, R. J. & Irwin, M. P. S. 1971. *The Birds of Zambia*. London, UK: Collins.
- Chapin, J. P. 1939. The birds of the Belgian Congo. Part II. *Bull. Amer. Mus. Nat. Hist.* 75: 1–632.
- Dean, W. R. J. 2000. *The Birds of Angola: An Annotated Checklist*. BOU Checklist No. 18. Tring: British Ornithologists' Union.
- Dowsett-Lemaire, F. 1997. The avifauna of the Léfini Reserve, Téké Plateau (Congo). *Tauraco Res. Rep.* 6: 125–134.
- Dowsett-Lemaire, F. 2001. Congo. In Fishpool, L. D. C. & Evans, M. I. (eds.) *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation*. Newbury: Pisces Publications & Cambridge, UK: BirdLife International.
- Dowsett-Lemaire, F. & Dowsett, R. J. 2006. *The Birds of Malawi: An Atlas and Handbook*. Liège: Tauraco Press & Aves.
- Fishpool, L. D. C. & Evans, M. I. (eds.) 2001. *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation*. Newbury: Pisces Publications & Cambridge, UK: BirdLife International.
- Germain, M. & Cornet, J.-P. 1994. Oiseaux nouveaux pour la République Centrafricaine ou dont les notifications de ce pays sont peu nombreuses. *Malimbus* 16: 30–51.
- King, T., Tyler, S. & Dallimer, M. 2004. Timing of moult and new species records of birds in the Lesio-Louna Reserve, Republic of Congo. *Malimbus* 26: 1–10.
- Mackworth-Praed, C. W. & Grant, C. H. B. 1962. *Birds of the Southern Third of Africa*. London, UK: Longmans.
- Moutsamboté, J. M., 1994. *Etude botanique de la Lesio-Louna*. Brazzaville: Centre d'Études sur les Ressources Végétales.
- NASA (s.d.) *GAC Vegetation Classes: African Continent*. Baltimore: University of Maryland Dept. of Geography/NASA GSFC Central Africa Project Biodiversity Support Program/AID.
- Nsongola, G., Okandza, L., Ombani, J. & King, T. 2006. *Liste illustrée des plantes des Réserves Lesio-Louna et Lefini*, édition 1.1. Brazzaville: John Aspinall Foundation / Centre d'Études sur les Ressources Végétales.
- Ripley, S. D. & Heinrich, G. H. 1966. Additions to the avifauna of northern Angola, II. *Postilla* 95: 1–29.
- Schouteden, H. 1962. La faune ornithologique du territoire de Mushie. *Mus. Roy. Afr. Centr., Doc. Zool.* 2: 1–86.
- Short, L. L. & Horne, J. F. M. 1988. Family Capitonidae. In Fry, C. H., Keith, S. & Urban, E. K. (eds.) *The Birds of Africa*. Vol. 3. London, UK: Academic Press.
- Short, L. L. & Horne, J. F. M. 2001. *Toucans, Barbets and Honeyguides*. Oxford: Oxford University Press.
- Short, L. L. & Horne, J. F. M. 2002. Family Capitonidae (barbets). In del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the Birds of the World*. Vol. 7. Barcelona: Lynx Edicions.
- Snow, D. W. 1978. *An Atlas of Speciation in African Non-passerine Birds*. London, UK: Br. Mus. (Nat. Hist.).
- Svensson, L. 1992. *Identification Guide to European Passerines*. Stockholm: privately published.
- White, F. 1983. *The Vegetation of Africa*. Paris: UNESCO.
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