

## First records and breeding of Long-tailed Potoo *Nyctibius aethereus* for French Guiana

Vincent Pelletier, Alexandre Renaudier, Olivier Claessens and Johan Ingels

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L'Ibijau à longue queue *Nyctibius aethereus* est un ibijau rare et peu connu. Les localités dispersées où l'espèce a été trouvée suggèrent sa présence dans toute la forêt amazonienne. Sur et autour du plateau des Guyanes, cet ibijau est connu d'Amazonas et Bolívar dans le sud du Vénézuéla, du centre du Guyana et de Roraima et l'est de Pará dans le nord-est du Brésil. Nous présentons ici les premières données de cette espèce en Guyane française. Nous l'avons entendue à Saint-Eugène (04°51'N 53°04'W) en bordure de la retenue du barrage de Petit Saut en 2003 et observée près de Saül (03°37'N 53°12'W) où sa reproduction a été découverte en 2004 et 2005. La découverte et la distribution de cet ibijau en Guyane française sont discutées. La chronologie de la reproduction, l'évolution du plumage et du comportement d'alerte du jeune sont décrites. Les deux adultes vus successivement à Saül présentaient une différence de coloration du plumage. La coexistence de deux phases du plumage pour la sous-espèce *N. a. longicaudatus* est considérée.

Long-tailed Potoo *Nyctibius aethereus* is a rare and poorly known potoo represented by c.60 specimens collected throughout tropical South America<sup>5,12</sup>. The scattered localities in central South America where this species has been found suggest, however, that it occurs throughout the entire Amazonian forest (M. Cohn-Haft *in litt.* 2004). It occurs in both dry and wet, lowland *terra firme* forests and also in gallery forests, inhabiting the interior and edges of forests from understorey to subcanopy, and is also occasionally found in open areas adjacent to forest<sup>8,18</sup>. On the Guianan plateau and in adjacent Venezuela and Brazil *N. aethereus* is found in Amazonas and Bolívar in southern Venezuela<sup>11</sup> and in Roraima and eastern Pará in northern Brazil<sup>9</sup>. From the Guianas, *N. aethereus* was previously known only from four old museum specimens, two of which were collected at Bartica Grove in Guyana. The first of these (BMNH 1888.8.1.10) was collected by H. Whitely on 7 December 1880. The second (BMNH 1922.3.5.1412) by J. V. McConnell in 1912, although it was originally identified as Common Potoo *N. griseus*. A third specimen (MCZ 29989) collected by Warwick and originally held in the Eyton collection, wherein it was mounted, is labelled as being from Guiana, most probably British Guiana. The fourth specimen (RMNH Cat. 1; for list of museum acronyms see the Acknowledgements) is a Demarara trade skin. All are identified as *N. a. longicaudatus*. The species has recently been discovered at two new sites in Guyana, in the western Kanuku Mountains<sup>14</sup> and in Iwokrama Forest<sup>17</sup>. Until now, however, it has not been reported from French Guiana<sup>19</sup> or Suriname<sup>10</sup>. We describe the first confirmed records of Long-tailed Potoo in French Guiana, a bird heard near Saint-Eugène and a breeding occurrence near Saül, both in the interior of the country.

### Study sites

#### Saint-Eugène

In French Guiana, Long-tailed Potoo was first heard near Saint-Eugène (04°51'N 53°04'W, altitude c.50 m), a field research station of the Muséum National d'Histoire Naturelle (Paris) on the Courcibo River, 30 km south of the hydroelectric dam of Petit Saut in northern French Guiana. The region is hilly, with elevations ranging from 50 to 350 m, e.g. Montagnes Plomb. The storage reservoir is surrounded by low-altitude *terra firme* forest, part of the largely undisturbed forest which covers most of French Guiana. A full description of habitats there is presented in Claessens *et al.*<sup>3</sup>. Since construction of the dam, the Saint-Eugène study site comprises numerous islets, at most a few hundred metres apart or from the mainland, and surrounded by dead flooded forest (*ghost forest*). The avifauna, which comprises at least 345 species of which 293 are forest dependent, has been intensively surveyed since 1993<sup>2</sup>.

#### Saül

The region around Saül (03°37'N 53°12'W, altitude c.200 m) in central French Guiana presents a relief of forested hills, with Monts La Fumée and Mont Bœuf Mort (both c.400 m), and Monts Galbao (c.750 m) further away. Human impact is restricted to an airstrip, small, isolated but inhabited clearings and several patches of cultivation, all scattered around and away from the village. Around the village, the forest, where easily accessed, is disturbed by selective logging for local construction needs. The avifauna is rich, with more than 450 species recorded within a 20-km radius<sup>15</sup>.

## Observations

### Saint-Eugène

On 6 November 2003, between 22h00 and 23h00, three days before full moon, two Long-tailed Potoos were heard and one recorded, by OC, on the bank of the Petit Saut reservoir. The song was subsequently identified through reference to Ranft & Cleere<sup>16</sup> and was delivered at irregular intervals, with three songs recorded in a period of 150 seconds. One individual was first heard on the bank of a wide, flooded creek, and later a second answered from the sloping bank opposite. Initially, they were c.400 m apart, but the first bird appeared to move towards the other, crossing the 100 m-wide flooded area. The species was not found again in late October–early November 2004, despite visits to the same area on nights around full moon.

### Saül

On 26 May 2004, at around 00h30 and with a waxing moon, VP came across a large potoo in the vicinity of Saül airstrip. The bird was perched c.5–6 m up, atop a *Phenakospermum guianense* bush, at the edge of young secondary forest resulting from regrowth following complete clearance c.5 years ago. From a distance of c.10 m with a powerful torch, VP observed the potoo for 15 minutes through binoculars. The potoo was larger than a Common Potoo, which is occasionally observed in the same area, and nearly as large as Great Potoo *N. grandis*. However its overall darker, brown-rufous plumage with paler 'shoulders', and its very long, graduated and strikingly barred tail, comprising almost half of the total length and extending well beyond the wingtips, identified it as Long-tailed Potoo. The plumage perfectly matched the illustration of *N. a. longicaudatus* in Holyoak<sup>12</sup>.

On 3 August 2004, AR was walking the trail at Monts La Fumée when he came across a large potoo perched, covering a knot-hole with its belly feathers (Figs. 1–2). The scar, of diameter c.20 cm, marked where an upward-pointing branch had broken away from the bare trunk, c.30 cm in diameter and c.6 m above ground. The tree was well within primary forest, under a canopy of c.30 m height, and c.10 m from a treefall. The long graduated tail with a few broad bars extended well beyond the wingtips. Pale 'shoulders' and black dots on the breast were clearly visible. A whitish moustachial streak above a blackish lower cheek became apparent when the potoo assumed the typical freezing or alarm posture<sup>5</sup> (Figs. 3–4). These characters identified it as Long-tailed Potoo. However, this individual more closely matched the illustration of *N. a. longicaudatus* in del Hoyo *et al.*<sup>8</sup>. The bird was not shy and did not move when approached to within a few metres, suggesting that it was incubating or brooding. On

11 August, AR returned and found the potoo in the same position, further suggesting the presence of a nest, although no egg or chick was visible.

On 28 August, VP observed a chick crouched in the knot-hole, facing the trunk with no sign of an adult. The chick was studied in detail from c.10 m with a 20x telescope. It was c.5–7 cm long and appeared large-headed. The chick was largely covered in whitish down, even around the bill, with small brownish feathers on the eyebrow and cheeks, and blackish feathers fringed buff on the crown and wing-coverts. The underparts were entirely whitish, the eyes greyish, bill and toes pale, and nails flesh-coloured. Mosquitos were harassing the immobile chick, attempting to bite it on the eyelids and base of the bill. On 30 August, the chick was found by VP in the same crouched position as two days before. However, when approached, it raised its head and body and assumed the upright alarm posture. The brownish supercilary feathers had grown, as well as darker feathers on the crown, back and wing-coverts. Dark feathers on the underparts had appeared within the whitish down. The chick occasionally shivered slightly. On 3 September, VP found the chick crouched. When approached, it readily assumed the alarm posture with stretched neck and flattened underparts. The general plumage was now more speckled and mottled, with brownish feathers over the entire body, giving the chick a more cryptic appearance. It swallowed and shivered regularly. On 8 September, it immediately took up the alarm posture when VP arrived. The underparts were now covered with brownish feathers with blackish rachi. Black spots on the breast were clearly visible. On 15 September, the chick again took up the alarm posture facing the tree trunk when VP arrived. Its length was now c.12 cm. Pale brownish undertail-coverts were visible, the black spots on the brownish-rufous breast feathers were more numerous, a fine whitish moustachial streak was visible, and the buffish 'shoulders', diagnostic of the species, were also evident. The irides were pale brownish. No remiges or rectrices were visible.

On all five visits to the nest tree, no adult Long-tailed Potoo was seen brooding the chick, and careful searches for a roosting adult within a radius of c.50 m around the nesting tree were unsuccessful. On 20 September, in the afternoon, JI and VP found the chick missing from the knot-hole. A thorough search of the forest floor and branches of trees within c.50 m around the nest tree failed to produce any remains of the chick or to find a fledgling.

On 29 July 2005, VP found an incubating or brooding Long-tailed Potoo, on the same knot-hole of the same tree as in 2004. This breeding attempt could not be followed regularly. However, on 26

September, VP found the knot-hole empty. If the egg was near hatching or had recently hatched in late July, the young would have fledged before the end of September.

## Discussion

### Occurrence

These observations of Long-tailed Potoo are the first confirmed for French Guiana. Despite regular nocturnal surveys during the last three years, VP had never seen or heard this species previously. There is an unconfirmed observation, made on 2 August 1992 by E. Hansen & M. Mure (*in litt.* 2004) near the Dégrad Demailly, on the Crique Limonade, near Saül, involving a large potoo roosting atop a dead tree stump, a few metres high in the understorey of primary forest. However, the quality of the photographs is inadequate to certainly identify the bird as a Long-tailed Potoo. The paucity of observations suggests that this potoo is rare. However, unless its vocalisation is known and nocturnal surveys are undertaken, this low-density species is easily unrecorded.

### Morphs

The bird observed on 26 May by VP clearly resembled *N. a. longicaudatus*, as illustrated in Holyoak<sup>12</sup>. This subspecies is present throughout Amazonia and in north-east South America north of the Amazon<sup>8</sup>. The potoo photographed by AR on 3 and 11 August in primary forest, 2 km north of Saül, showed more characteristics of *N. a. longicaudatus* as illustrated in del Hoyo *et al.*<sup>8</sup>. A likely explanation for the difference in plumage is the occurrence of greyish and brownish colour variants within interior French Guiana. Individual variability in potoo plumages is considerable, as much amongst individuals of the same population, as between supposedly different subspecies. Colour morphs are described for Grey *N. griseus*, Great *N. grandis* and Northern Potoos *N. jamaicensis*<sup>8</sup>. Additional observations to verify this hypothesis and to clarify the extent of any colour variation within *N. aethereus* are clearly required.

### Breeding

Information on the breeding season of Long-tailed Potoo is available only from Paraguay<sup>13</sup>, where observations of incubating adults, a nestling and a juvenile, in late August–November 1995, have been reported. In Paraguay, the dry season extends from May to September, thus these records coincide with the end of the dry season and the start of the rainy season.

If we accept an incubation and fledgling period of respectively 3–4 weeks and 7–8 weeks<sup>8</sup>, and that

a chick will be left unattended at 17–29 days of age (N. Cleere *in litt.* 2005), as in other potoos, the breeding attempt described here commenced in the first half of July with the laying of the egg. The chick hatched late July–early August. When AR first found the nest, the adult was still incubating or already brooding a few days old chick. When VP first visited the nest tree, the chick being c.3 weeks old, was already unattended. The chick could therefore have fledged normally at the end of September. Thus, this breeding lasted approximately from the mid wet season until well into the first half of the dry season. Although potoo chicks can depart the nest before reaching adult size<sup>8</sup>, when last seen the chick was only c.12 cm and the wings and tail had yet to develop, rather suggesting that predation, not fledging, caused the chick to disappear. Tayra *Eira barbara* or Coatimundi *Nasua nasua*, both common around Saül, or a raptor, are the most plausible predators.

The nest site was well shaded in the understorey of primary forest with a closed canopy. During the day, the knot-hole was never exposed to full sunlight. The first days after being left unattended, the chick with its whitish down was rather conspicuous. However, thereafter, fast-growing dark body feathers gave it a more cryptic appearance.

Observations in 2005 suggest that Long-tailed Potoo re-use suitable nest sites which are probably not readily available inside forest. The second breeding attempt confirms that reproduction by the species in French Guiana extends from approximately early July to late September.

### Distribution

The list of birds known from the region of Saül<sup>15</sup> now includes five potoos: Great and Common<sup>19</sup>, Rufous *N. bracteatus*<sup>6</sup>, White-winged *N. leucopterus*<sup>4</sup> and Long-tailed. Between 26 May and 23 July 2004, VP heard or saw all five along a c.1.5-km trail between the clearing and the village. Previously, the five lowland potoos were known to occur sympatrically only in the nature reserves of the Biological Dynamics of Forest Fragments Project, north of Manaus<sup>7</sup> and in Jaú National Park, west of the rio Negro<sup>1</sup>, both in Amazonas, northern Brazil, as well as in Iwokrama Forest, central Guyana<sup>17</sup>. That all five have now been found together in widely scattered localities throughout Amazonia suggests they will also be found sympatrically elsewhere within Amazonia where tall upland forest occurs on ancient weathered soils (M. Cohn-Haft *in litt.* 2004).

### Note added in proof

On 17 November 2005, during a survey of the Massif Lucifer (04°46'N 53°56'W) by the ONF (Office National des Forêts), Kévin Pineau (*in litt.* 2005) heard a Long-tailed Potoo near the southern edge of the plateau.

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### Vincent Pelletier

Bourg de Saül, F-97314 Saül, (French Guiana), France.

### Alexandre Renaudier

HLM, Bourg d'Awala-Yalimapo, F-97319 Awala-Yalimapo, (French Guiana), France.  
E-mail: alex.renaudier@wanadoo.fr

### Olivier Claessens

46 rue Lagorsse, F-77300 Fontainebleau, France. E-mail: oclaessens@wanadoo.fr

### Johan Ingels

Galgbergenlaan 9, B-9070 Destelbergen, Belgium.  
E-mail: johan.ingels@skynet.be





Figure 1. Incubating or brooding Long-tailed Potoo *Nyctibius aethereus* inside primary forest, in alarm position, Saül, French Guiana, August 2004 (Alexandre Renaudier)



Figure 2. Incubating or brooding Long-tailed Potoo *Nyctibius aethereus* alarmed by the photographer, Saül, French Guiana, August 2004 (Alexandre Renaudier)



Figure 3. Incubating or brooding Long-tailed Potoo *Nyctibius aethereus* in normal position, Saül, French Guiana, August 2004 (Alexandre Renaudier)



Figure 4. Incubating or brooding Long-tailed Potoo *Nyctibius aethereus* in alarm position, Saül, French Guiana, August 2004 (Alexandre Renaudier)