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First field observation of Karimui Owlet-Nightjar *Aegotheles bennettii terborghi*

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Summary.—The owlet-nightjar *Aegotheles bennettii terborghi* was described from a single male specimen given by a local man to Jared Diamond, while he was collecting in the Karimui Basin in the Eastern Highlands of Papua New Guinea, in 1964. There has been no further observation of the taxon, despite extensive field work in 2011–12. In July 2016 we travelled to Karimui with the explicit aim of searching for this taxon, which resulted in the first-ever field observation, including photographs and a possible sound-recording of its call.

Originally described as a subspecies of Barred Owlet-Nightjar *Aegotheles bennettii terborghi*, based on its similarity to the two mainland races—the nominate in southern New Guinea and *wiedenfeldi* in northern New Guinea—*A. b. terborghi* differs mainly in its much larger size—male wing 154 mm vs. 114–128 mm, and tail 142 mm vs. 99–110 mm in the other two subspecies of *A. bennettii* (del Hoyo *et al.* 2017). It is also described as having much darker, blacker upperparts, with the white speckling on the back and upperwing-coverts being somewhat more distinctly organised into a regular transverse (barred) pattern (Diamond 1967, Holyoak 1999). However, there is considerable variation within the other subspecies of *A. bennettii* so any significant plumage differences require confirmation.

The holotype (MCZ 286269, see Acknowledgements; Fig. 1) and only specimen was found by a local man, who stated that he had found it roosting on a branch during the day and had caught it by hand (Diamond 1967). The exact location and altitude where the specimen was caught is unknown, but Karimui station is at *c.*1,100 m. The other races of *A. bennettii* inhabit mainly lowland forest and the nominate subspecies is only rarely recorded to 800 m; *A. b. plumifer* on the D'Entrecasteaux archipelago is mainly found above 500 m (Beehler & Pratt 2016) and has been recorded to 1,100 m (Coates & Peckover 2001).

Dumbacher *et al*. (2003) published the first comprehensive molecular phylogeny of the Aegothelidae based on mitochondrial DNA. Their results reported *A. b. terborghi* to be most closely related to Allied Owlet-Nightjar *A. affinis*, a taxon known only from the Arfak Mountains of the Bird's Head Peninsula in West Papua. *A. affinis* was previously considered a race of *A. bennettii,* but most current authorities treat it as a monotypic species endemic to the Arfak Mountains; the notable exception being del Hoyo & Collar (2014), who included *terborghi* as a subspecies of *affinis*, following the results of Dumbacher *et al*. (2003). This classification yields an odd distribution pattern, with two disjunct populations separated by *c*.1,400 km. However, Beehler & Pratt (2016) retained *terborghi* in *A. bennettii*, pending future studies, and noted that the possible species status of *terborghi* should be investigated.

Rediscovery

On the morning of 18 July 2016 we flew into Karimui from Goroka, with the Mission Aviation Fellowship. During the afternoon and evening we explored the vicinity of Karimui village, where habitat consists mainly of coffee plantations and small patches of secondary forest. The only nightbirds identified were Papuan Boobook *Ninox theomacha*, Papuan

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Figure 1. The holotype (MCZ 286269) of *Aegotheles bennettii terborghi* in ventral and dorsal views (© Museum of Comparative Zoology, Harvard Univ., Cambridge, MA)

Frogmouth *Podargus papuensis* and Marbled Frogmouth *P. ocellatus*. The following morning we set off towards Mount Karimui, with the intention of establishing a camp in the primary forest on the mountain's lower slopes. Both previous expeditions to the area, by Diamond (1964–65) and Freeman & Class Freeman (2011–12), conducted field work along a transect on the north-west ridge of the mountain.

Diamond (1967) did not make any field observations of *terborghi* and in more than 12 weeks of field work Freeman & Class Freeman (2014) had no definite records, although they did hear an *Aegotheles* sp. below 1,500 m which they did not identify to species. Vocalisations heard at 1,420 and 1,910 m were attributed to Feline Owlet-Nightjar *A. insignis*, and an *Aegotheles* sp. heard at 2,520 m was presumed to be Mountain Owlet-Nightjar *A. albertisi*.

Our intention was to concentrate on searching for and identifying *Aegotheles* along the same transect as previous expeditions. However, due to alleged landowner issues, we instead worked the previously unexplored north-east ridge of Mount Karimui. Negotiations with landowners were handled by our local guide, Daniel Wakra. We were not permitted to establish a camp inside the forest, but were instead allowed to stay in a small hut at the edge of primary forest at *c*.1,380 m (06º33.672'S, 144º49.436'E). The different landowner councils were highly suspicious of our motives, and we were initially given permission to remain just one night, but eventually negotiated to stay for two nights.

Forest clearance for small-scale subsistence farming and coffee plantations was rampant in the area, and only smaller forest fragments remain below *c*.1,380 m; above this elevation primary forest was more or less intact. During the first afternoon we searched the trail following the ridge above our camp. We were accompanied by five villagers, among them a hunter with bow and arrow, who without prompting had pointed out both *A. b. terborghi* and *A. insignis* on the plates in our field guide (Pratt & Beehler 2015). At *c*.1,570 m he spotted an old tree with a nest hole and after pulling at a rattan growing by the tree, a large, greyish owlet-nightjar flew from the hole and landed above us (at 06°34.035'S, 144°49.177'E).

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Figure 2A–B. Karimui Owlet-Nightjar *Aegotheles bennettii terborghi*, Mount Karimui, Papua New Guinea, July 2016, showing the darker, less mottled upperparts, compared to other subspecies of Barred Owlet-Nightjar *A. bennettii* (Markus Lagerqvist)

The bird flew after a few seconds, but was immediately identified as *A. b. terborghi*. Fortunately, it only flew a short distance and was swiftly relocated (Fig. 2A). We watched the bird for *c*.1 hour, during which time it moved between different perches in the area and for a short period also entered a second tree hole. When the light started to wane, we left the bird, still perched in the open. We all possess previous field experience of Barred Owlet-Nightjar at Varirata National Park (Central Province, Papua New Guinea), from which the most striking differences to us were the bird's larger size and the less patterned, more blackish, back of the *A. b. terborghi* (Fig. 2B). It is also notable that the record is almost 400 m above the presumed location of the only previous record, and much higher than other races of *A. bennettii.* It is also just above the known upper altitudinal limit for *A. affinis*, which occurs at 80–1,500 m.

The following day was spent along the same ridge, following it to 2,050 m, where the trail ended. One Mountain Owlet-nightjar *Aegotheles albertisi* was seen in a tree hole at 1,980 m (06°34.750'S, 144°48.578'E). No further observations of *A. b. terborghi* were made. At dusk we positioned ourselves close to the tree hole from which the *A. b. terborghi* had been initially disturbed on 18 July 2016, in an attempt to make sound-recordings. As it became dark an owlet-nightjar-like call was heard, and RN made a short sound-recording (Fig. 3) of it before the intensifying sound of cicadas rendered further efforts all but impossible. The call did not emanate from the roost tree, but *c*.15 m away at the forest edge. The bird could

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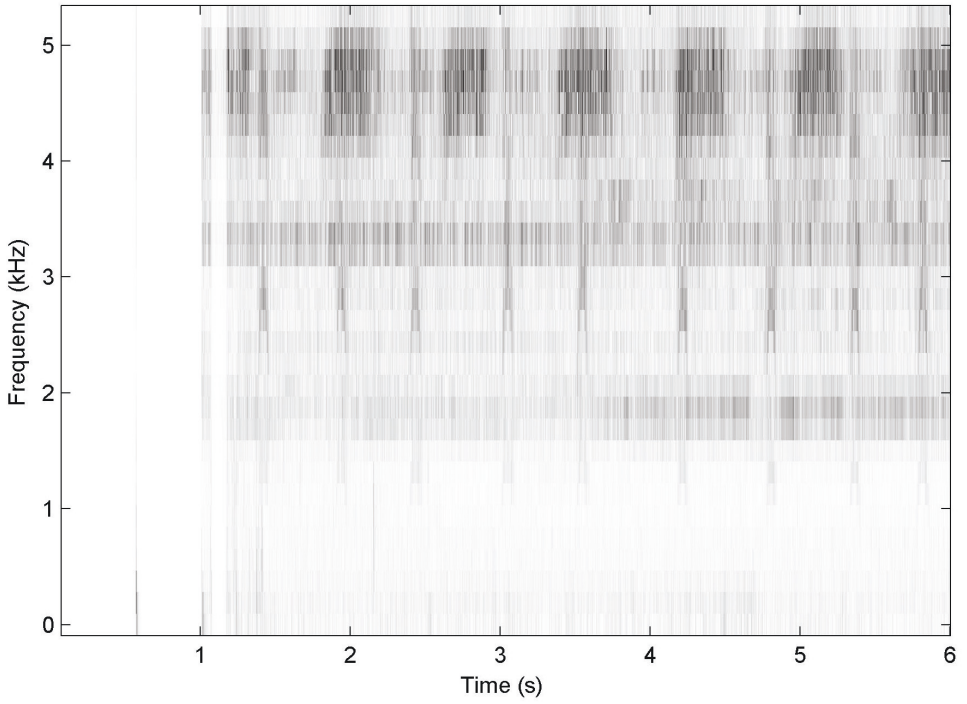

Figure 3. Sonogram of possible Karimui Owlet-Nightjar *Aegotheles bennettii terborghi* vocalisation, recorded at Mount Karimui, Papua New Guinea, July 2016, by Roger McNeill, using a Marantz PMD661 MKII recorder and Sennheiser ME67 shotgun microphone; sonogram produced using Raven Lite v. 2.0.0.

be heard vocalising as it flew off into the distance, and there was no response to playback as it was probably too far away. The recording will be made available at Cornell's Macaulay Library archive; however as the vocalising bird was not observed, definitive identification is impossible under present knowledge.

Other nightbirds recorded around and above our campsite were Sooty Owl *Tyto tenebricosa*, Papuan Boobook, Marbled Frogmouth, Papuan Frogmouth and an unidentified owlet-nightjar.

The next day, 20 July 2016, we had to leave the area in the morning as we were not given permission to stay longer by the local landowners. On reaching the first village en route to Karimui we were interrogated for approximately one hour by the village magistrate and police, supported by the villagers, who were still highly suspicious of our motives. Initial demands for substantial financial compensation and seizure of our photographs were eventually abandoned due to Daniel Wakra's ability to explain the purpose of our visit. In the end all issues were settled amicably, with the villagers stating that they would permit future visits to the area, but nevertheless potential visitors should factor flexibility and possible access issues into their plans. It is our hope that the rediscovery of *A. b. terborghi* will encourage further research into this enigmatic taxon, including its population size, distribution and vocalisations, including qualitative comparisons with *A. b. bennettii* and *A. affinis*.

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