

Short Communications

The Pale-billed Sicklebill *Epimachus bruijnii* in Papua New Guinea

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The Pale-billed Sicklebill *Epimachus bruijnii* is among the least-known birds of paradise (Diamond 1981). The species has been supposed to occur only in the lowlands of northern Irian Jaya; Ripley's (1964) observation of a singing and calling male, and Diamond's (1981) brief observation of a female-plumaged bird are the only published accounts of the Pale-billed Sicklebill. Most of the small number of specimens in museums were apparently taken by native collectors.

Between 3 and 5 August 1983, I found the Pale-billed Sicklebill at several sites in the Vanimo area of north-western Papua New Guinea (141°10'-20'E, 2°40'-50'S). All previous records have been summarised by Diamond (1981). All but one were from Irian Jaya between approximately 136°E and 140°55'E, thus coming close to the Papua New Guinean border (141° E) near the Tami River. Diamond's (1981) brief sighting of a female-plumaged Sicklebill represented a substantial inland range extension as well as a slight upper elevational extension. Apparently the sole specimen from east of 141°E is an old Voogdt skin in the American Museum of Natural History bearing a label from the 'Kaiserin Augustin River' in German New Guinea, which corresponds to the Sepik River in Papua New Guinea (Diamond 1981). The labelled collecting locality of this specimen was assumed by Diamond (1981) to be incorrect on the conservative grounds that there were no other Sepik Basin records, coupled with the fact that he did not encounter the Sicklebill on ornithological surveys he conducted at Vanimo (Diamond *et al.* 1977) and Utai (141°40'E, 3°23'S; Diamond 1969).

Historically, primary rainforest covered the landscape around Vanimo, but logging over the past 15 years or so has cleared or heavily disturbed virtually all of the primary forest in the area. At present, the rainforest than can be reached by road is secondary growth or the remains of primary forest after the largest trees have been removed. Grassland, including native gardens, covers only small, scattered areas, mostly around the town of Vanimo and the airstrip. Hills in the narrow Oenake Range, roughly paralleling the coast, begin to rise above the coastal plain a few kilometres inland but in some places hills come down to

the sea. The Bewani Mountains, some 40 km inland, are about midway between the coast and the vast inland basin of the upper Sepik River. Undisturbed rainforest and low, swampy growth stretch away to the east along the coastal plain. To the west extends tall rainforest but much of this is currently being logged.

I observed the Pale-billed Sicklebill at several sites within about a 15 km drive of Vanimo, ranging in elevation from 50 m to 180 m (± 20 m) above sea-level, the highest point being a short distance below the 'Bewani Workshop' in the foothills of the Bewani Mountains. The previously published upper elevational limit was 143 m at Biri village (137°50'E, 2°49'S; Diamond 1981); thus the upper limit for Sicklebills may be raised slightly. Most areas where I encountered the bird were in gently rolling terrain in disturbed primary forest. As there are no large rivers in the immediate area, I agree with Diamond's (1981) statement that the Sicklebills should not be considered restricted to the vicinity of rivers near the coast.

The Pale-billed Sicklebill is a fairly common bird in the Vanimo area. Although it is secretive and difficult to see well, its vocalisations are loud, conspicuous components of the local bird chorus. Ripley (1964, p. 48) provides the only published description of the voice of the Sicklebill: '... I heard the male bird call, a loud, not unmusical series of descending whistles reminiscent of the rifle bird.' (Ripley must have been referring to the nominate race here, as the more eastern Magnificent Riflebird, *Ptiloris magnificus intercedens* has a very different voice.) 'The first note starts at the tone and pitch of the second note of the rifle bird's call. From this start came a series of descending whistles, repeated over again, several at a time. In between these extremely loud calls, this male as it moved about in the tree gave several gruff, churring notes rather like a typical *Paradisaea*.' This is a fine description of what appears to be the male's primary territorial song. The birds in the Vanimo area did not repeat the loud descending whistles as Ripley describes. Rather, there was usually a pause of one to three minutes between songs, which consisted of one loud, musical descending series of four to ten whistles that sometimes ended with several lower, harsher whistles or

'yuree' phrases. A typical song of about seven descending whistles lasts about five seconds (Fig. 1a and b). On one occasion I watched an undisturbed (i.e. no tape playback or whistled imitation) male, singing about 25 m up in a tree, about 27 m tall. This male sat in a slightly hunched posture on a horizontal limb about 5 cm in diameter. It tipped the head back slightly, then opened its mouth widely with each whistled note in the descending series.

Male Pale-billed Sicklebills seem to have one or two favoured singing trees from which they deliver songs every one to three minutes through the early morning. Less regular singing is done from other trees in the vicinity of the favoured tree(s), possibly at times when the bird is preoccupied with foraging. At least four singing males were spaced at about 200 m intervals along one stretch of road about 15 km ESE of Vanimo. The song is so loud that on at least one occasion the four males could be heard from one place. Song activity dropped off sharply at about 0930 EST, but a couple of birds were heard singing late one afternoon (1630-1730) in an area a few kilometres east of the above site.

My whistled imitation of the song on several occasions caused adult male birds (and some female-plumaged ones that were possibly immature males) to fly towards me, sometimes from up to 200 m. They occasionally stopped in tall leafless or dead trees, actively looked about and made harsh churring sounds. Each male usually responded to my imitation or playback of a tape recording in this manner, after which it remained hidden in tall tree tops in the vicinity of the original song tree, continuing to sing or give churring calls every few minutes. Although a couple of birds did not respond to imitations and/or tape recording playbacks, the males' generally defensive response to my song imitations and tape recording playback indicates that the Pale-billed Sicklebill is a territorial rather than a lek-

king paradisaeid, in keeping with the other three members of the genus.

While I never saw a full display of the Pale-billed Sicklebill, on one occasion I did observe behaviour that may give some indication of the display. Early on the morning of 3 August I presented a whistled song imitation to a singing male Sicklebill (identification unknown at the time). An adult male flew a short distance towards me out of the forest to perch on a dead branch near the top of a dead tree about 50 m from me and 15 m above ground. Immediately upon landing, this male sat upright in an exaggeratedly vertical position and briefly raised and laterally extended the pectoral fans, the whole behaviour lasting just a few seconds before the bird relaxed and retreated into the forest where it resumed singing a few minutes later.

On several occasions I observed foraging behaviour of the Pale-billed Sicklebill, most often in the upper one-third of tall trees. Watched for several minutes, one pair of birds (both female-plumaged) hopped along roughly horizontal limbs in the subcanopy of a tall tree, occasionally peering under the limb and poking the long, curved bill into cracks and knotholes, or into what appeared to be tufts of lichen and clumps of foliage at the end of limbs. This pair of birds appeared to be searching for arthropods, but I did not see them eat anything. Fruit and seeds were found in the stomach of a Van Heurn specimen; this appears to be the only previous information on diet (Diamond 1981). I did not observe Sicklebills taking fruit or seeds.

Although it is a conspicuous singer, the Pale-billed Sicklebills may have been overlooked in many areas by previous workers owing to a basic similarity of its typical songs to one common vocalisation of the Lesser Bird of Paradise *Paradisaea minor*, which may be present everywhere that the Sicklebill occurs. This descending-series

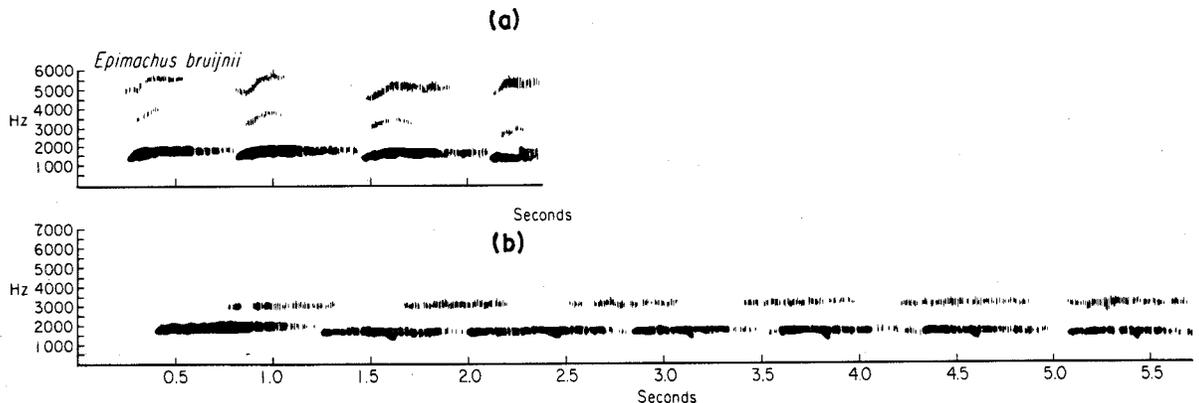


FIGURE 1 Sonograms of (a) a common four-note descending whistled series of an adult male Pale-billed Sicklebill (b) a typical seven-note descending whistled series of an adult Sicklebill (different bird than recorded for Fig. 1a).

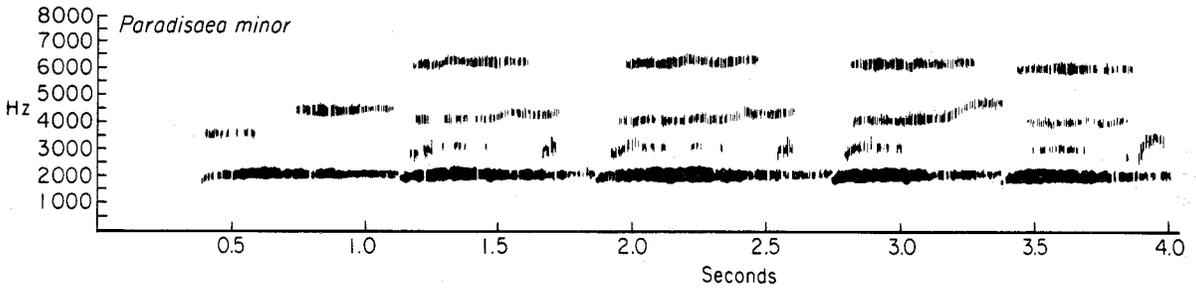


FIGURE 2 Sonagram of a common vocalisation of the Lesser Bird of Paradise; a series of descending whistles, which is often several notes longer than this example. Note close similarity in frequency and spacing of notes in Figure 1b and Figure 2.

vocalisation of the Lesser Bird of paradise is quite similar to the song of the Sicklebill in frequency and spacing of notes (Fig. 2; compared with Fig. 1a and b). There is also complete overlap in the number of notes in the descending series, both species giving vocalisations of from four to twelve or more notes. The two species' voices may be distinguished, however, by the quality of the individual notes in the descending series. These notes are characteristically clear with a plaintive inflection for the Lesser Bird of Paradise as opposed to the richer, hollow notes of the Sicklebill. Additionally, the last few notes of the Sicklebill series often have a slight harshness or raspy quality, as well as being slightly shorter than the early notes of the song. The many other vocalisations of the Lesser Bird of Paradise are quite different from any vocalisation known for the Sicklebill.

The presence of the Pale-billed Sicklebill in the Vanimo region represents in itself only a small range extension. More importantly, it demonstrates that the many smaller ranges and mountains outside the Central Range such as Mt. Bougainville at $\pm 141^\circ\text{E}$ are not necessarily geographic barriers to the dispersal of lowland species as suggested by Diamond (1981) when there is continuous forest surrounding them.

Thus, it is appropriate to resurrect as probably correctly labelled the Voogdt specimen of the Pale-billed Sicklebill from somewhere on the Sepik River of Papua New Guinea. This is certainly a vague designation but mirrors Diamond's (1981) sighting of the Sicklebill in the huge 'mountain-ringed' inland basin of Meervlakte in Irian Jaya in that the Sepik Basin is similarly bordered by mountains, although not as completely enclosed as the Meervlakte Basin. The fact that the lowland avifauna of the Vanimo area is typical of the Sepik Basin (Diamond *et al.* 1977; pers. obs.) at once lends credence to the Voogdt specimen and suggests that the Sicklebill be expected to occur in at least the nearby upper Sepik Basin. Once into the Sepik Basin, there is no geographic barrier to the east for some 500 km, up to the lower Ramu River and perhaps even the western base of the Adelbert Mountains, unless perhaps the

Sicklebill does not inhabit the low-lying swampy forest usually preferred by the Twelve-wired Bird of Paradise *Seleucidis melanoleuca*. In the Sepik Basin region east of about 143°E this type of forest seems to predominate over the slightly higher, gently rolling forest of the upper Sepik that is apparently preferred by the Sicklebill in the Vanimo area. Along the coastal plain east of Vanimo the rainforest extends essentially unbroken to just west of Wewak (*c.* 143°E) where the Prince Alexander Mountains descend nearly to the coast and may represent an elevational barrier to eastward extension. The western-most record for the Sicklebill is about 136°E , where lowland rainforest is interrupted by the Wondiwoi Mountains.

Further field studies of the Pale-billed Sicklebill are needed to ascertain the extent of this species' distribution in New Guinea. It is hoped that this brief report will assist such research by having ascertained the presence of the bird in Papua New Guinea and by having provided some details of the natural history of this little-known bird of paradise.

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References

- Diamond, J.M. (1969). Preliminary ornithological records of the north coastal range, New Guinea. *Am. Mus. Nat. Hist. Novit.* **2362**, 1-57.
- Diamond, J.M. (1981). *Epimachus bruijnii*, the lowland sickle-billed bird-of-paradise. *Emu* **81**, 82-86.
- Diamond, J.M., Raga, M.N. & Waikabu, J. (1977). Report on bird survey in the proposed Vanimo timber area. *Wildlife in Papua New Guinea, Wildlife Publ. no. 77/10*. Wildlife Branch, Dept Nat. Resources, Konedobu, PNG.
- Ripley, S.D. (1964). A systematic and ecological study of birds of New Guinea. *Bull. Peabody Mus. Nat. Hist.* **19**, 1-85.