

The taxonomic status of the three subspecies of Greater Rufous-headed Parrotbill

Paradoxornis ruficeps

BEN KING and CRAIG ROBSON

Deignan (1964) lists three subspecies of *Paradoxornis ruficeps*: *P. r. ruficeps*, eastern Himalayas from Nepal to north-eastern Arunachal Pradesh, India and south-eastern Xizang, Tibet (Cheng 1987); *P. r. bakeri*, north-eastern India hills south of the Brahmaputra River, extreme north-eastern Bangladesh, and south-eastern Arunachal Pradesh, east to northern Myanmar and north-western Yunnan, China, and apparently disjunctly in southern East Myanmar and eastern South Myanmar; and *P. r. magnirostris* in northern Laos and eastern Tonkin, Vietnam. Clements (2000) and Dickinson (2003) concur. There seems to be no hint of dissent from this arrangement except from Robson (2007), who states ‘differences between races *magnirostris* and *bakeri* were very slight, and former race of perhaps dubious validity’.

However, recent tape recordings by BK of *P. r. ruficeps* in Bhutan (Thrumingla National Park, c.27°19.3'N 91°7.7'E) and north-eastern Arunachal Pradesh (Mishmi Hills, c.28°19.4'N 95°58.1'E), *P. r. bakeri* in south-eastern Arunachal Pradesh (Namdapha National Park, c.27°32.9'N 96°31.7'E) and *P. r. magnirostris* in northern

Vietnam (near Tam Dao, c.21°27.2'N 105°38.7'E) suggest that this taxonomy should be revisited.

VOCALISATIONS

The song of *P. r. ruficeps* (Fig. 1) is a clear, sweet whistle of 4–6 similar notes, *tee-tee-tee-tee-tew* tripping down the scale, each successive note at a slightly lower pitch. In Bhutan the second note is often at the same pitch as the first note or slightly higher. In contrast, the song of *P. r. bakeri* and *P. r. magnirostris* is a more complex assemblage of different-sounding notes: one or two short, sharp, staccato introductory notes, followed by somewhat reedy whistled notes, the final ones of which are prolonged. These reedy whistled notes differ in timbre from the sweet whistled notes of *P. r. ruficeps*. In south-eastern Arunachal Pradesh, the song of *P. r. bakeri* (Fig. 1) could be characterised as *chip chip-we-we-weeee-tooeew*, the last note sometimes *tooteew*. The song of *P. r. magnirostris* (Fig. 1) tape-recorded in northern Vietnam in 1997 is similar to that of *P. r. bakeri*: *chip pew-we-we-tooeew*. A variant song tape-recorded in northern Vietnam in 2004 started with two (interchangeable) sharp *whit* or *tuk* notes followed by reedy whistled notes, *tuk whit chewi-to-teeew*. Another variant song tape-recorded by Jonathan Eames in northern Vietnam is superficially similar in structure to that of *P. r. ruficeps*, but still has the sharp introductory note and the reedy quality to the whistled notes of *P. r. magnirostris*. Only the final reedy, downslurred whistled note is missing. While showing a fair amount of variation, the general structure of the songs of *P. r. bakeri* and *P. r. magnirostris* is similar, including the sharp introductory note(s), variable reedy whistled notes in the middle of the song and (usually) final downslurred reedy whistled note.

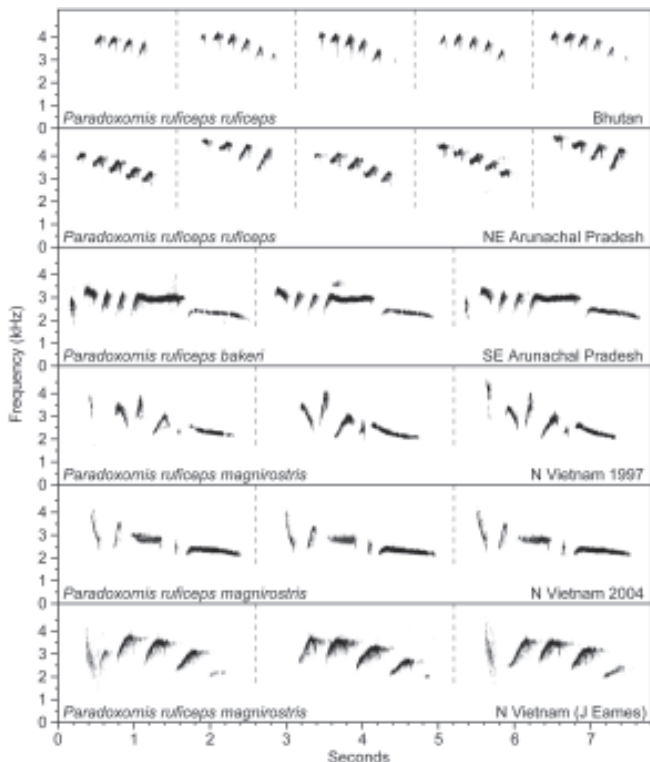


Figure 1. Comparison of the songs of the three subspecies of *Paradoxornis ruficeps*. Note the striking differences between the song of *P. r. ruficeps* and those of *P. r. bakeri* and *P. r. magnirostris*. The song of *ruficeps* consists of sweet whistled notes while that of *bakeri* and *magnirostris* consists of one or two sharp introductory notes followed by variable somewhat reedy whistled notes of differing timbre.

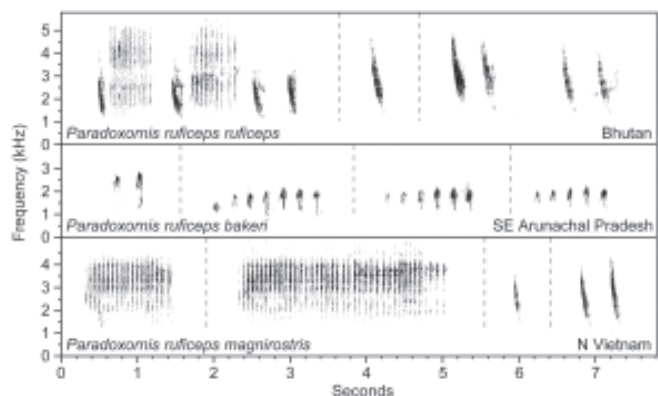


Figure 2. Calls of the three subspecies of *Paradoxornis ruficeps*. A raspy downward *chew* and a hard rattle are shared by *ruficeps* and *magnirostris*. The recording of *bakeri* suggests the *chew* note and a third type of call.

Table 1. Comparison of culmen, wing, tail and tarsus length of the subspecies of *Paradoxornis ruficeps*. All measurements are in mm. *P. r. bakeri* and *P. r. magnirostris* average larger than *P. r. ruficeps*, but there is considerable overlap. *P. r. magnirostris* may average larger than *P. r. bakeri*, but the small sample precludes conclusions. Standard deviations (s.d.) were not calculated for *P. r. magnirostris* because of the small sample size.

Taxon	Culmen (from skull) mean (range) s.d.	Wing (flattened) mean (range) s.d.	Tail mean (range) s.d.	Tarsus mean (range) s.d.
<i>P. r. ruficeps</i> 20 specimens	15.49 (14.8–16.5) 0.48	85.03 (82.5–89.0) 2.0	74.48 (67.0–79.7) 3.42	26.38 (25.0–28.0) 0.94
<i>P. r. bakeri</i> 25 specimens	16.32 (15.5–17.2) 0.51	87.56 (82.0–92.0) 2.49	75.90 (68.0–83.5) 4.18	27.02 (24.4–29.0) 1.35
<i>P. r. magnirostris</i> 3 specimens	16.5 (16.5–16.5)	90.0 (88.0–92.0)	81.3 (81.0–81.5)	28.3 (28.0–28.5)

On numerous occasions (c.10 times), BK played the song and calls of *P. r. magnirostris* from Vietnam to flocks of *P. r. ruficeps* in Bhutan. Very little response was seen by *P. r. ruficeps*, i.e., they mostly ignored the recording and kept moving on. After finally getting a tape-recording of the song of *P. r. ruficeps* and playing it back to *P. r. ruficeps* (on c.6 occasions), the response level was dramatic, i.e., they came closer and sang more. We have not attempted playback of *P. r. ruficeps* song to *P. r. magnirostris* or *P. r. bakeri*.

The Greater Rufous-headed Parrotbill has several call notes (Fig. 2), a raspy downslurred *cheew* and a hard rattle, appearing to be common to all three subspecies. More material is needed to detect any differences between the taxa in the calls.

PLUMAGE AND MORPHOMETRICS

The most striking difference between *P. r. ruficeps* and *P. r. bakeri* is the colour of the underparts: white with a buffy tinge in *ruficeps*, and bright buff, with the centre of the belly paler buff in *bakeri*. There is a sharp contrast between the rufous cheeks and white throat of *P. r. ruficeps*, while in *P. r. bakeri* the rufous cheeks contrast much less

with the bright buff of the throat. In *ruficeps* there is a slight rufescent tinge to the primaries and secondaries which is entirely or nearly missing in *bakeri*. *P. r. magnirostris* is barely distinguishable from *P. r. bakeri* by being slightly darker above.

While *P. r. bakeri* (Table 1, Fig. 3) averages larger than *P. r. ruficeps*, the large overlap in all measurements would make it impossible to differentiate many specimens of the two taxa by measurements alone. The small sample of *P. r. magnirostris* indicates it may be somewhat larger than *P. r. bakeri*, with a marginally thicker bill.

DISCUSSION

The songs of *P. r. bakeri* and *P. r. magnirostris* are strongly and consistently different from that of *P. r. ruficeps*. While *ruficeps* responds dramatically to its own song, it responds very little to playback of the song of *magnirostris*. Furthermore, specimens of *bakeri* and *magnirostris* can be readily distinguished from those of *ruficeps* by their distinctive plumage. Thus we propose that *ruficeps* and *bakeri* be considered distinct species and that *magnirostris* be treated as a subspecies of *bakeri*. We would expect that the strikingly different songs and distinct plumages of *P. r. ruficeps* and *P. r. bakeri* (plus *P. r. magnirostris*) would provide sufficient isolating mechanisms should these forms be sympatric, satisfying the biological species concept for separate species. Moreover, the distinct plumages (and songs) offer 100% diagnosibility to satisfy the phylogenetic species concept.

Ali and Ripley (1971) and Ripley (1982) state that *P. r. ruficeps* ranges east to the Dibang River in north-eastern Arunachal Pradesh, and *P. r. bakeri* lives east of the Dibang River. BK observed and tape-recorded *P. r. ruficeps* near Hunli in the Mishmi Hills at c.28°19.4'N 95°58.1'E at c.1,100 m on 19 November 2004. This site is a few kilometres east of the Dibang River, thus eliminating the Dibang River as a boundary between *P. r. ruficeps* and *P. r. bakeri*. Ripley (1941) failed to find either taxon in the Lohit River drainage somewhat farther east in the Mishmi Hills. Further fieldwork is necessary to define the ranges of these two taxa more clearly and to determine if sympatry occurs.

We propose that the English name Rufous-headed Parrotbill be used for *P. bakeri* (including *P. b. magnirostris*) and the name White-breasted Parrotbill for *P. ruficeps*. The white breast is the best field mark to distinguish *P. ruficeps* from both *P. bakeri* and *P. atrosuperciliaris*. We would further suggest that the English name Pale-billed Parrotbill be introduced for *Paradoxornis atrosuperciliaris*, to indicate its best fieldmark for separation from *P. ruficeps* and *P. bakeri* in the field. These names would shorten the long-winded names currently in use, i.e., Greater Rufous-

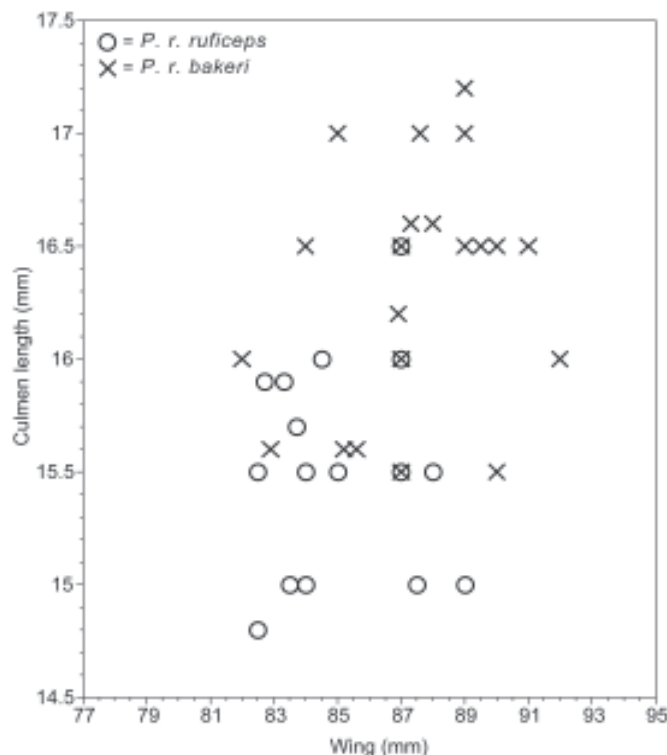


Figure 3. Scatterplot comparing culmen (from skull) and wing (flattened) lengths of *Paradoxornis r. ruficeps* and *P. r. bakeri*. While *P. r. bakeri* averages larger, there is considerable overlap.

headed Parrotbill and Lesser Rufous-headed Parrotbill, and would improve the field utility of the names.

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Vocalisations of the Togian Boobook *Ninox burhani*

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Indrawan and Somadikarta (2004) described the Togian Boobook *Ninox burhani* from the Togian Islands in the Gulf of Tomini in central Sulawesi, Indonesia. While they gave a description of the song, they did not make tape recordings and apparently did not knowingly hear the alarm call. I spent the night of 18/19 September 2005 searching for and tape-recording this species in the low forested hills just outside the town of Batudaka on northeastern Batudaka Island, the westernmost of the larger islands of the Togian group at 00°26.460'S 121°51.456'E, at an elevation of 121 m. I first heard one of these owls calling faintly at about 19h30, about an hour after sunset, but I was initially unable to get a loud enough recording to elicit vocal response or approach. Eventually I obtained high-quality recordings of nearby birds giving both song and alarm call by about 04h30, and got good looks at a presumed pair by flashlight. I heard another six individuals that night, which suggests that the owl is common on Batudaka Island.

The habitat was degraded secondary broadleaf evergreen forest from which most of the original large trees had been removed. The weather was clear and calm. The first songs heard at 19h30 were faint and infrequent. During the first 4–5 hours of my search, I tried to get closer to two birds that called a few times and obtained only a very faint tape recording, to which I got no response after playback. After midnight the owls began calling more

frequently and I eventually got close enough to a calling owl to make a louder tape recording. Once I made the louder recording I played it back to the same bird c.30 times over a period of two hours, shifting my position in relation to the owl several times. In this period the bird

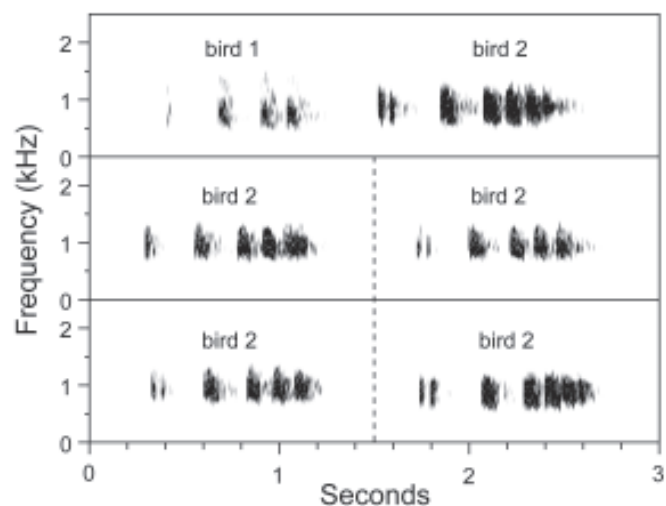


Figure 1. The song of the Togian Boobook *Ninox burhani* is a throaty grating croak *kuk kuk-kukukuk*, the first note often a double note, *kukuk*.