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*

BEN KING

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

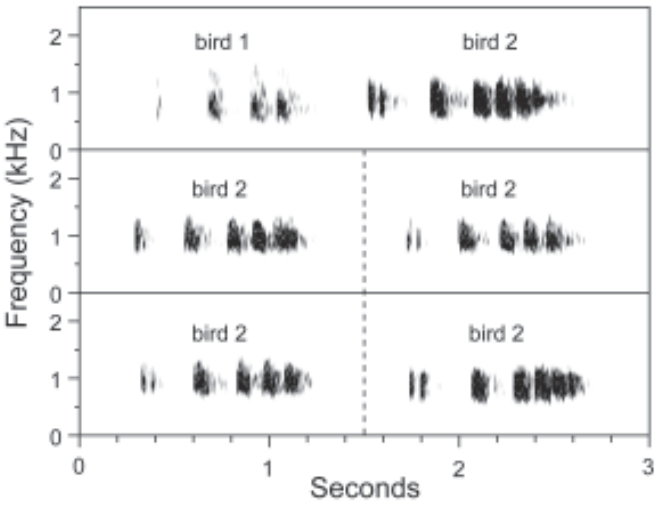

Figure 1. The song of the Togian Boobook *Ninox burhani* is a throaty grating croak *kuk kuk-kukukuk*, the first note often a double note, *kukuk*.

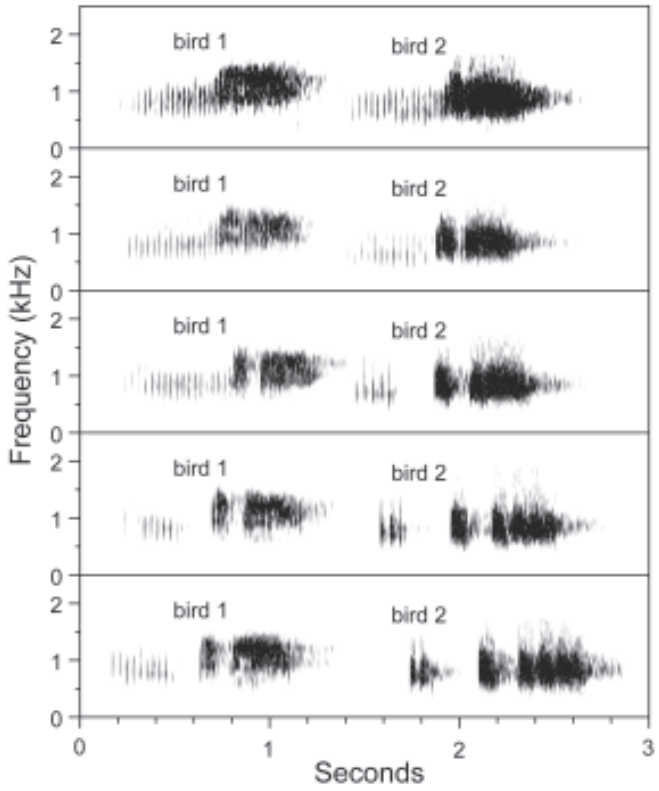

Figure 2. Vocalisations of Togian Boobook *Ninox burhani*. The top line of the sonogram illustrates the alarm notes of two birds, presumably a pair, responding to playback of their calls. Following the calls down the figure from the top, shows a gradual (some calls left out) transition from the alarm call to the song.

moved several times, but not closer. In each instance, the owl responded with the notes that I infer are the song (Fig. 1). Finally the presumed pair flew in close overheard and made the different loud calls that I assume to be the alarm call (Fig. 2). Over time, the owls appeared to calm down and they then gradually shifted from the alarm call back to the song. During the next hour, I played back c.5 times the series of alarm notes grading into the song and each time this elicited the same response, i.e., alarm calls gradually grading into the song.

The song (Fig. 1) is a throaty, grating *kuk kuk-kukukuk,* the first note often a double note. The alarm note (Fig. 2) is a throaty grating croak *rrrrrr-wa-waak.* Fig. 2 (song and alarm notes) shows the calls of two birds, presumably a pair. The presumed female song and alarm notes are similar to that of the male. Only two types of vocalisations were heard. The one I assume is the song was uttered by all eight individuals heard. The second vocalisation, which I assume is an alarm note, was uttered only by the assumed pair that was put under stress by close playback of their song.

Fig. 3 shows sonograms of the songs of all six species of *Ninox* owls known from Sulawesi and its satellite islands (White and Bruce 1986, Rasmussen 1999, and King 2002): Togian Boobook, Rufous Boobook (also known as Cinnabar Hawk-Owl) *N. ios,* Speckled Boobook *N. punctulata,* Northern Boobook *N. japonica,* Chocolate Boobook *N. randi* and Ochre-bellied Boobook *N. ochracea.* This allows comparison and illustrates how different the song of the Togian Boobook is from the other *Ninox* owls in the Sulawesi region. These sonograms and descriptions may also assist field identification. For a discussion of the systematics of *N. scutulata, N. japonica* and *N. randi,* see King (2002).

The provenance of these recordings is as follows. The Rufous Boobook was recorded on Gunong Ambang in North Sulawesi on 15 September 2000 at c.04h30 at 00°46.344′N 124°23.484′E, elevation 1,354 m. The Speckled Boobook was recorded in the Dongi Dongi area of Lore Lindu National Park in Central Sulawesi on 19 July 1985 at c.21h00 at 01°14.637′S 120°13.197′E, elevation 990 m. The Chocolate Boobook was recorded on Karakalong Island of the Talaut group of islands on 2 September 1997 at c.20h00 at c.04°12′N 126°47′E, elevation c.10 m. The Northern Boobook was recorded in Toyohashi Park in Toyohashi City in Honshu, Japan on 13 June 1983 at c.20h00 at c.34°39′N, 137°36′E, elevation unknown. The Ochre-bellied Boobook was recorded in the Kosingolan area of Bogani Nani Wartabone (then Dumoga Bone) National Park on 5 August 1987 at c.19h30 at 00°30.924′N 123°56.373′E, elevation 205 m. All these owls called spontaneously, allowing me to tape-record

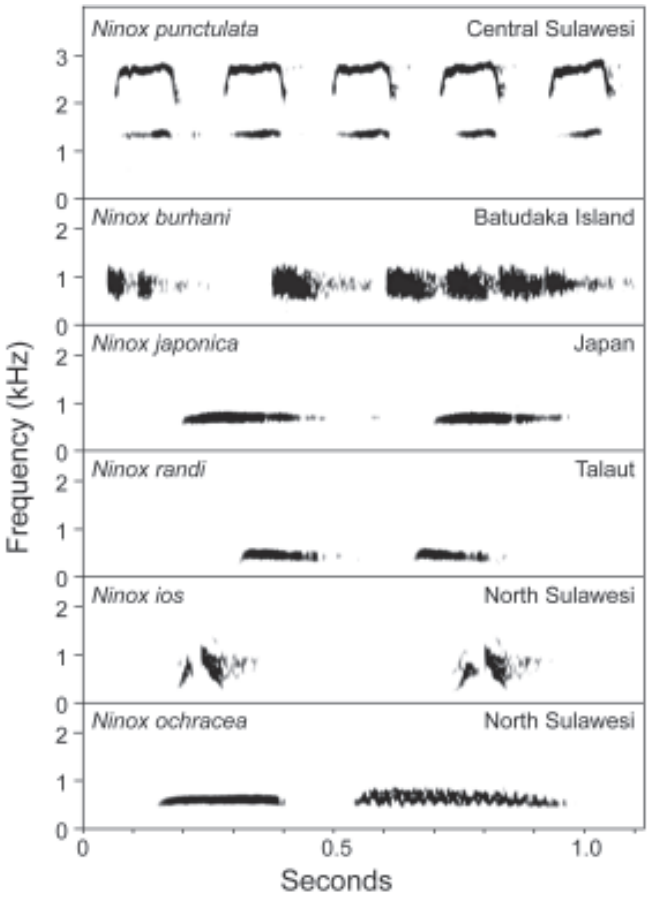

Figure 3. Comparison of the songs of all six species of *Ninox* owls known from Sulawesi and its satellite islands. Speckled Boobook *N. punctulata*: loud, fairly high-pitched volley of 20–25 *too* notes uttered at a rate of c.5 per second, often 8 volleys per minute, 2–8 seconds between volleys. Togian Boobook *N. burhani*: throaty, grating *kuk kuk-kukukuk*, the first note often a double note. Northern Boobook *N. japonica*: mellow-hollow couplet (sometimes triplet) *whoop whoop*, often repeated in a long series. Chocolate Boobook *N. randi*: similar couplet to Northern Boobook, but somewhat lower pitched, each note falling slightly in pitch and more closely spaced, often in a long series. Rufous Boobook *N. ios*: 'hard *wruck wruck*', similar to 'the alarm call notes of Large-tailed Nightjar *Caprimulgus macrourus*' (King 2005). Ochre-bellied Boobook *N. ochracea*: 'mellow hollow couplet *whoo-whoooo*, the second note with a raspy quality' (King 2005).

them. Playback of their vocalisations brought them closer for better recordings.

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I wish to thank Mr Gerard (Herry) Najoan for assisting me in many ways on the trip. Jeff Groth prepared the sonograms. John Fitzpatrick and Greg Budney, of the Macaulay Library of Natural Sounds (where all of my tape recordings will eventually be deposited) at the Cornell Laboratory of Natural Sounds, provided tape recording equipment and other assistance.

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Territorial behaviour of Northern Boobook *Ninox japonica*, on Calayan Island, northern Philippines

BEN KING and NICKY ICARANGAL

King (2002) recommended that the Northern Boobook *Ninox japonica*, of north-eastern Asia, and Chocolate Boobook *N. randi*, of the Philippines and the Talaut Islands of northern Indonesia, be considered species separate from the Brown Boobook *Ninox scutulata*, and presented sonograms and descriptions of their distinctive songs. Dickinson *et al.* (1991) listed the Northern Boobook as occurring in a number of localities throughout the Philippines, including Calayan, but said nothing about its status, while Kennedy *et al.* (2000) repeated the localities and called it a migrant.

We have spent hundreds of hours at night searching for owls on the main islands of the Philippines (Luzon, Mindoro, Palawan, Cebu, Panay, Negros, Bohol, Samar, Mindanao and Tawi-Tawi) and have never heard the Northern Boobook vocalise there. Further, BK has spent hundreds of night hours searching for owls in other parts of the wintering range of the Northern Boobook (Thailand, Vietnam, Malaysia, Sumatra, Kalimantan, Java, Sulawesi and Flores; Vaurie 1965, White and Bruce 1986) and never heard it vocalise there. Further, we are unaware of any published or unpublished record of Northern Boobook heard spontaneously vocalising outside its breeding range. Thus it appears likely that the Northern Boobook does not spontaneously vocalise in the areas where it is a migrant and winter visitor. The characterisation in Kennedy *et al.* (2002) of the species as a migrant in the Philippines is therefore likely correct.

Vaurie (1965) listed the southern subspecies of the Northern Boobook *Ninox japonica totogo* as breeding and apparently resident on the Ryu Kyu Islands, Taiwan, and Lanyu (Botel Tobago), and stated that it probably breeds on the small islands between Taiwan and Luzon. We visited Calayan Island (196 km^2, c.70 km north of Luzon's

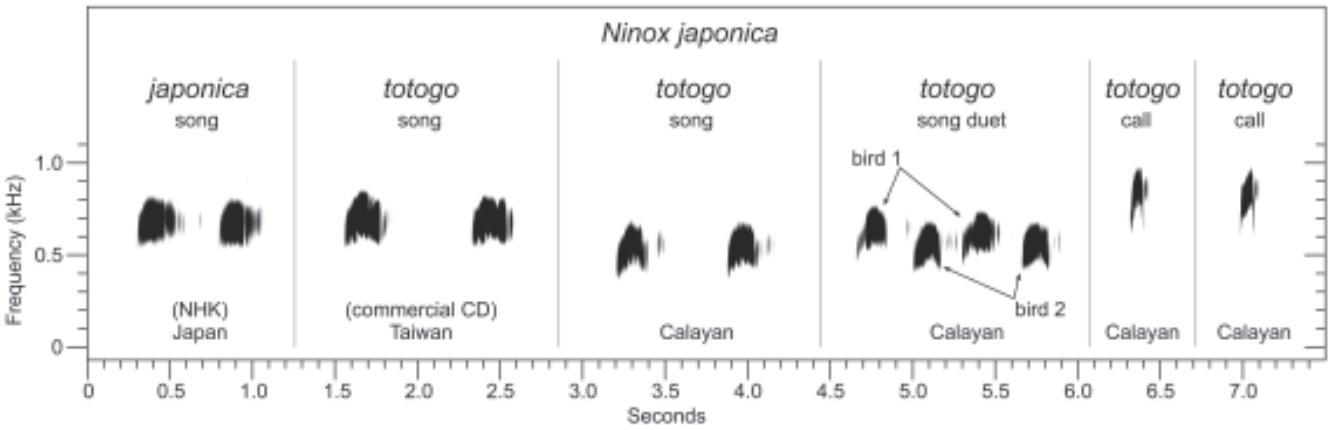

Figure 1. Comparison of songs of Northern Boobook *Ninox japonica* from Calayan, Japan and Taiwan. The call notes (on right) were uttered by a highly agitated bird.