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SYNCHRONIZED ANTIPHOBAL DUETTING BY SHORT-TAILED  
BABBLERS *TRICHASTOMA MALACCENSIS*.

by Stephen V. Nash and Anne D. Nash

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Several babbler species are well known as duet singers, where the male bird's song is accompanied by one or several notes on the same pitch given by the female (Stuebing 1983). Armstrong (1963) divides responsive duelling into three categories: 1) the male's song calls forth an imperfectly coordinated response; 2) birds singing in regular alternation; and 3) the mate adds its utterance so promptly that the sequence sounds like a single stereotyped song. Nash and Nash (1985, 1986) described duetting response in the Abbott's Babbler *Trichastoma abbotti* and in the White-cheated Babbler *T. rostratum* as examples of imperfectly coordinated duets, whereby the male's song and the female's calls are not precisely synchronized, but simply overlapping. In each duet the number and timing of the female's notes are variable. In contrast, the duet between a pair of Short-tailed Babblers (*T. malaccense*) was found to be well synchronized, corresponding closely to the third category, with one bird's sequence immediately followed by the other's.

Tape recordings of the Short-tailed Babbler duet were made on 8 August, 1985, at 0800 hrs, in the Padang-Sugihan Wildlife Reserve, South Sumatra province. The recordings were examined on a Unigon 4500 Uniscan Spectrum Analyzer, and sonograms (audio spectrograms) were made on a Kay Digital Sono-Graph 7800 set to a wide (300 Khz) band range. Figures 1 and 2 were traced from the original sonograms.



FIGURE 1



FIGURE 2

The short-tailed Babbler ranges through southern Burma, peninsular Thailand, peninsular Malaysia, Borneo and Sumatra (King *et al.* 1975), and several reference books include song descriptions for this species. Some descriptions are very incomplete, as in Symthies (1981) where the song is only noted as 'a metallic whistle'. More informative is the description in King *et al.* (1975), a 'loud, clear whistled song consisting of two parts, often heard separately, (a) four or five identical notes, each dropping sharply in pitch, (b) six or more level pitched notes, descending the scale'. Medway & Wells (1967) describe 'a sequence of five or six whistled notes, lasting about four seconds, tii-u, tii-u, tii-u...'. Teesdale (1967) describes 'a short, subdued but varied warble, becoming a twitter that quickly lengthens into several loud whistles on the same note but each falling in pitch at the end; these are followed without pause by a series of deliberately uttered notes in a descending scale'. King *et al.* (1975) is in fact describing the songs of both the male (b) and the female (a), Medway & Wells (1976) only the female's call, and Teesdale (1967) is almost certainly a duet.

In the Padang-Sugihan example, the duet was initiated by the female. In Figure 1, the female starts with a barely audible down-slurred whistle, a short pause, then starts a sequence of six notes; each of these are slurred downwards, and are progressively lengthened. Apart from the pause between the barely audible first note and the second, the pauses between successive notes by the female are all 0.14 seconds in length, and the notes themselves from the second to the sixth are 0.07, 0.14, 0.24, 0.35, 0.43 and 0.46 second in length. In total, the female's sequence lasts 2.58 seconds. Each whistle in the sequence started at approximately 4 KHz/sec. and ended near 2 KHz/sec.

The pause between the female's sequence and the start of the male's was only 0.11 seconds, which is very close to the pauses between each note by the female (0.14 seconds), giving the impression that the whole sequence is one varied song, by one bird, as is interpreted by Teesdale (1967). In the Padang-Sugihan tape the male's song (Figure 2) begins with a rapid seven-note trill (0.27 seconds), followed by nine sharp whistles in a slightly descending scale (0.93 seconds), followed by six even-pitched whistles again slightly descending the scale (2.02 seconds). The trill, sharp whistles and long whistled notes are given in one long continuous series lasting in all 3.44 seconds, and the whole duet lasted 6.13 seconds.

Hartshorne (1973) states that the male bird usually initiates the duet, and Armstrong (1963) mentions that initiation of duets by the female is uncommon, quite possibly, both sexes of the Short-tailed Babbler may initiate a duet, but the precise timing displayed by the Padang-Sugihan birds suggests a lot of practice, so the female-initiated duet is at least frequent in this species. Precisely-timed antiphonal duets are a very specialized form of duetting (Hooker & Hooker 1969), and the authors believe this form of duetting in the short-tailed Babbler indicates very strong bonding between mated pairs.

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We wish to thank Mr, Alien Werden of the Department of Zoology, University of Toronto, Canada, for having made the sonograms from recorded tapes.

## Ringkasan

Duet sinkron antifonal kicauan *Trichastona malaccense* direkam pada jam 08.00, tanggal 8 Agustus 1985 di Cagar Alam Padang-Sugihan, Sumatra Selatan. Rekamannya diperiksa dengan Unigon 4500 Uniscan Spectrum Analyzer dan sonogramnya dibuat dengan Kay Digital Sono-Graph 7800 pada kisaran jarak gelombang 300 KHz. Gambaran sonogram membuktikan bahwa duet kicauan burung betina ( di Padang-Sugihan yang dahulu meaulainya) dan jantan *T. malaccense* adalah sinkron, sedangkan kicauan burung jantan dan betina *T. abbotti* dan *T. rostraturn* bukan merupakan duet sinkron yang tepat.

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