

First nest description of the Wallacean endemic Vinous-breasted Sparrowhawk *Accipiter rhodogaster*, with notes on its vocalizations and intra-species taxonomy

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Ringkasan. Sampai saat ini tidak ada publikasi tentang sarang, musim berbiak, dan waktu aktifitas bersuara Elangalap Dada-merah *Accipiter rhodogaster*, spesies endemik Sulawesi dan pulau sekitarnya. Pada tanggal 29 Maret 2009 kami mengamati sepasang burung ini di hutan sekunder di pulau Peleng, Banggai. Sarangnya terdiri dari ranting pohon dan diletakkan pada cabang pohon berdaun lebar pada ketinggian sekitar 15 m. Vokalisasi burung ini direkam, dijelaskan, dan dibuat grafiknya untuk pertama kali. Meskipun populasi Elangalap Dada-merah di Peleng telah dimasukkan dalam subspecies *sulaensis*, pasangan ini tidak memperlihatkan warna kemerahan sampai abu-abu pada bagian atas dagunya, warna tubuh yang paling membedakan *sulaensis* dari *rhodogaster* pulau Sulawesi. Kami menyarankan agar dilakukan penilaian kembali populasi di kepulauan Sula dan Banggai.

The Vinous-breasted Sparrowhawk *Accipiter rhodogaster* is a little-known bird of prey restricted to the Sulawesi and Sula regions of eastern Indonesia (White & Bruce 1986; Thiollay 1994; Coates & Bishop 1997). It is divided into three subspecies (Thiollay 1994; Ferguson-Lees & Christie 2006): (1) *sulaensis* from the Banggai Islands (at least Peleng and Banggai) and Sula Islands (at least Taliabu, Sanana and Mangole); (2) *butonensis* from the islands of Muna and Butung (van Bemmelen & Voous 1951); and (3) nominate *rhodogaster* from the main island of Sulawesi. Erwin Stresemann and Dean Amadon (in Mayr & Cottrell 1979) synonymized the taxon *butonensis* with the nominate subspecies. Many recent authors (e.g. Coates & Bishop 1997) have followed this treatment and therefore only two subspecies (*rhodogaster* and *sulaensis*) are widely recognized.

As in many other *Accipiter* sparrowhawks of the Australasian Region, little is known about the breeding behaviour of the Vinous-breasted Sparrowhawk. Its vocalization is described as a rapid high-pitched call series (“*hihihihihi*” or “*ti-ti-ti-ti*”) typical for the genus *Accipiter* (Watling 1983; Coates & Bishop 1997; Ferguson-Lees & Christie 2006), but nothing has been published about the timing of vocal activity, breeding and the nest itself (Thiollay 1994; Ferguson-Lees & Christie 2006).

During a visit to the island of Peleng in the Banggai Archipelago in March 2009, we watched birds in a patch of submontane secondary forest at c. 550 m asl in the western district of Buko. On the morning of 29 March 2009 at about 0800h, we noticed a rapid *Accipiter*-like succession of call elements from the canopy (Fig. 1). This call constituted a rapid series of approximately 20 acoustic

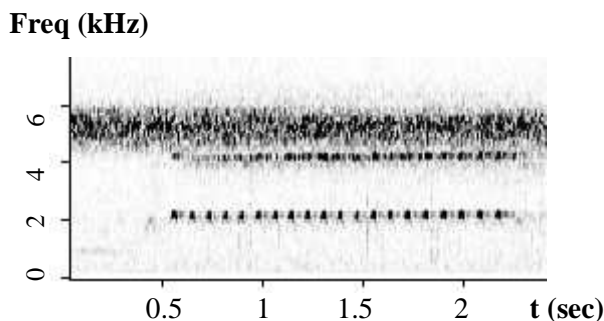


Figure 1. Sonogram of the natural unsolicited vocalization of the Vinous-breasted Sparrowhawk *Accipiter rhodogaster sulaensis* on Peleng; the x-axis refers to time in seconds, the y-axis refers to frequency in kHz; the upper dark band between 5-6 kHz is background noise pollution; recorded by Filip Verbelen.

elements at a frequency of c. 2 kHz uttered over a period of c. 1.8 sec and accompanied by a harmonic frequency of slightly over 4 kHz (Fig. 1). Upon our recording the sound and playing it back, an adult Vinous-breasted Sparrowhawk came flying in and perched closely. After a few more rounds of playback, the bird started changing locations frequently and uttering a more agitated version of its vocalization that consisted of the same call series initiated by a number of slow but accelerating introductory notes (Fig. 2). This agitated version of vocalization also had its main wavelength components at 2 kHz and slightly over 4 kHz. However, in contrast to the unsolicited call series, this vocalization was characterized by up to five additional harmonic bands in intervals of roughly 1.1 kHz above the main frequencies (Plate 2). To the best of our knowledge, these are the first published recordings of a Vinous-breasted Sparrowhawk vocalization.

After repeated playback of its call, a second individual of Vinous-breasted Sparrowhawk came in and perched nearby, where it was promptly photographed (Plate 1). Surprisingly, the bird did not exhibit any noticeable vinous tinge to the grey cheeks as should be typical for the subspecies *sulaensis* (Ferguson-Lees & Christie 2006). There are no other *Accipiter* species recorded from the Banggai Islands, but nearby Sulawesi has several breeding *Accipiter* species, one of which – the high montane Sulawesi Dwarf Sparrowhawk *A. nanus* – closely resembles *A. rhodogaster* in adult plumage. Apart from the fact that the occurrence of *A. nanus* on Peleng, which barely reaches 1000 m asl, would be surprising,

confusion with this species is unlikely on account of the lack of any white spots in the tail of the birds we observed.

Freq (kHz)

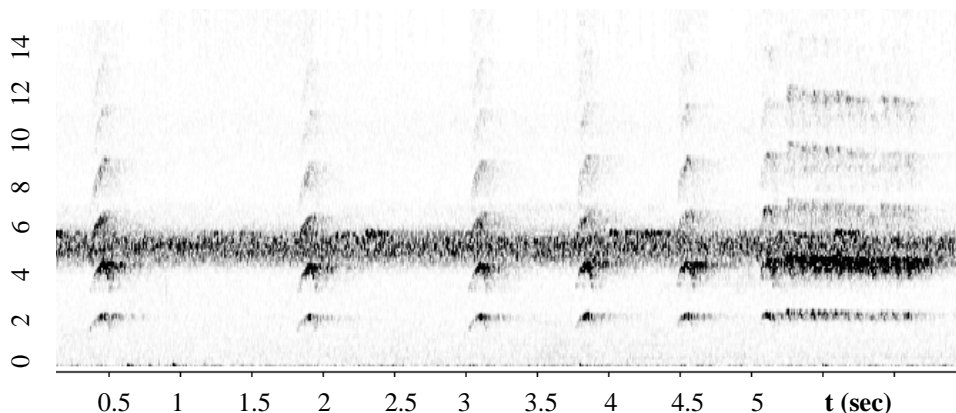


Figure 2. Sonogram of the agitated Vinous-breasted Sparrowhawk *Accipiter rhodogaster sulaensis* vocalization, given after playback of its own call; x-axis is time in seconds, y-axis is frequency in kHz; the dark band between 5-6 kHz refers to background noise pollution; recorded by Filip Verbelen.



Plate 1. Two photos of an adult Vinous-breasted Sparrowhawk *Accipiter rhodogaster sulaensis* on Peleng at 550 m asl. Note that there is no noticeable vinous tinge to the grey cheeks, as should be typical for this subspecies .



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Plate 2. Nest of the Vinous-breasted Sparrowhawk *Accipiter rhodogaster sulaensis* on Peleng.

Sparrowhawk. Rounded nests composed of dead twigs and placed in tree forks high in the canopy are typical of the genus *Accipiter* (Thiollay 1994; Ferguson-Lees & Christie 2006), so the nest structure of the Vinous-breasted Sparrowhawk is not exceptional in the genus. Our documentation of breeding activity in March/April may not apply to the whole range of the species, but may be specific to Peleng or the Banggai Islands, since patterns of climatic seasonality vary greatly among the different sub-regions of the Sulawesi and Sula Archipelagos (RePPPProT 1989).

The population of Vinous-breasted Sparrowhawk on Peleng has been included in the subspecies *sulaensis*, which was described from Sanana (Sula Archipelago) by Schlegel in 1866 (Thiollay 1994; Coates & Bishop 1997; Ferguson-Lees & Christie 2006). Although the Sula Islands are much more distant from Peleng than the mainland of Sulawesi, Peleng shares many bird taxa with the Sula Islands that are – in turn – not represented on the Sulawesi mainland (Coates & Bishop 1997). This is due to the shared geologic history between Peleng and the Sula Archipelago (Hall 2002), and due to the fact that – on account of the deep-sea trench between Peleng and Sulawesi (Becker *et al.* 2009) – there has never been a glacial land connection between these two islands (Lambeck & Chappell 2001; Siddall *et al.* 2003; Thompson & Goldstein 2005; Bintanja *et al.* 2005; Caputo 2007). In contrast, the sea between Peleng, Banggai and the Sula Archipelago is shallower, and a narrow land connection between these islands probably existed several times during glacial maxima within the last 3 million years.

The two individuals eventually led us to discover their active nest by landing on a branch next to it. During our observations of the nest (Plate 2), one of the two birds – but never both of them at the same time – approached the nest closely or entered it for a period of up to 5 min. The nest constituted a rounded structure constructed with dead twigs and positioned in the fork of a broad-leaved tree at a height of c. 15 m. One of us (FV) returned to the location of the nest a week later on 5 April 2009 and found the nest was still occupied by this pair of Vinous-breasted Sparrowhawks, although no evidence of hatched chicks was discernible.

This is the first published nest description of the Vinous-breasted

Despite this shared biogeographic history between Peleng and the Sula Archipelago, the Vinous-breasted Sparrowhawks we observed in Peleng did not display a vinous tinge to the grey cheek (Plate 1). The latter is the plumage trait that sets apart the Sula subspecies *sulaensis* from the Sulawesi mainland subspecies *rhodogaster* (Coates & Bishop 1997; Ferguson-Lees & Christie 2006). This discrepancy may be due to one of several factors. The vinous tinge to the grey cheek in *sulaensis* may be very subtle and only discernible at close range, such that we would have overlooked it in the Peleng birds. Or it may be less noticeable in worn pre-moult plumage stages that are typical of breeding *Accipiter* individuals. Alternatively, the population on Peleng may not be attributable to the race *sulaensis*, but may instead belong to the nominate race from the nearby mainland of Sulawesi, which is only slightly over 30 km away from the nest location at Kokolomboi Village. As a third possibility, the vinous tinge to the cheek may be an unreliable or aberrant plumage trait that is only present in some individuals of *sulaensis*. In this latter case, *sulaensis* may not deserve taxonomic recognition and would have to be synonymized with *rhodogaster*. At any rate, the observation of *rhodogaster*-like Vinous-breasted Sparrowhawks on Peleng suggests that future ornithological research should be aimed at a re-examination of the populations of Vinous-breasted Sparrowhawk in the Sula and Banggai Archipelagos and a re-appraisal of their taxonomic status.

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