

Nest, eggs and breeding season of the Island Thrush *Turdus poliocephalus schlegelii* in West Timor, Lesser Sundas

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Ringkasan. Dengan 50 subspecies yang aneh, Anis Gunung *Turdus poliocephalus* merupakan burung yang memiliki warna paling bervariasi di dunia dan banyak informasinya distribusinya belum secara akurat diketahui. Dua subspecies terdapat di Pulau Timor, namun tanpa informasi berbiak terbaru kecuali dari Hellmayr (1914) atau Mayr (1914) dan tidak ada deskripsi sarang dan telur yang bisa dikonfirmasi. Pada bulan Januari 2010, saya menemukan satu sarang berisi dua telur dan dua anak yang baru lepas dari sarang di Gunung Mutis, Timor Barat. Sarang, warna telur, dan jumlahnya sangat khas seperti yang dimiliki jenis Anis Gunung dari wilayah sebaran lain. Telurnya berwarna biru muda berbintik coklat. Sarang diletakan disuatu bukaan pada pohon *Eucalyptus urophylla* dan terbuat dari ranting, kulit pohon, dan didasari oleh rerumputan, lumut, dan bulu-bulu. Pengamatan ini juga mengkonfirmasi data sebelumnya dari Timor yang menunjukkan waktu berbiak pada awal-pertengahan musim basah oleh spesies ini.

Introduction

The highly polytypic Island Thrush *Turdus poliocephalus* occurs haphazardly on mountains of insular Southeast Asia, Melanesia and Polynesia in bird species-poor (<35 species) habitats, as well as lowland forest on some small islands (Clement & Hathway 2000). Five of the approximately 50 subspecies occur in Wallacea (Coates & Bishop 1997), with possibly undescribed populations on Sulawesi (Coates & Bishop 1997) and Taliabu (Rheindt 2010). Dissimilar looking subspecies often occur in close geographic proximity (Rheindt & Hutchinson 2007; Jones & Kennedy 2008), and surprisingly, the most morphologically similar subspecies are not the most closely related (Jones & Kennedy 2008). Two subspecies occur on Timor, with the nearest neighboring populations found in south Sulawesi. The first ornithological exploration of the mountains of Wetar failed to record Island Thrush (CRT unpubl. data). The West Timor population *schlegelii*, described from Mount Mutis (and perhaps limited to Mutis and the Mount Timau area) has greenish-grey upperparts, while the *sterlingi* population (Plate 1), described from Mount Ramelau in East Timor, has a darker chestnut-brown chest and upperparts (Mayr 1944; White & Bruce 1986).

The breeding seasons of birds on Timor and other islands of the Lesser Sundas are very poorly known. They appear to vary geographically (and perhaps with rainfall patterns) more than on the Greater Sundas (Voous 1950). In western Flores, Verheijen (1964) showed that breeding is concentrated in the late wet

season months of April to June (RePPProT 1989). On Timor, recent and historic records show that many bird species breed during the late dry season and early wet season (November-January) (Noske 2003, 2009). For *T. poliocephalus* limited information on breeding is available only for races on Java and Christmas Island (Clement & Hathway 2000). Noske (2003) extrapolated dates of egg laying for eight Timor records (both subspecies combined) of Island Thrush from Hellmayr (1914) and Mayr (1944).

I visited the Mount Mutis (the highest peak in West Timor) area in January 2010, directly after a visit to Mount Ramelau [given as 'Ramelan' in Mayr (1944) and Noske (2003) and also often called Tatamailau], the highest peak in East Timor (2,963 m asl). I opportunistically encountered and took photos of a nest and fledglings of Island Thrush in the foothills of Mount Mutis. This appears to be the first description of eggs, nest and fledglings of Island Thrush from Timor.

Methods and results

I stayed at Nenas village below Mount Mutis (2,427 m asl) from 2-5 January 2010 and explored montane forest and tall *Eucalyptus urophylla* woodland at elevations of 1,300-2,427 m asl. On 5 January I walked southeast towards Fatumnasi village and located a nest and two non-independent chicks about 2 km and 4 km from Nenas (9°36'06" S; 124°13'01" E), respectively, in *E. urophylla* woodland. The nest was found after a bird flew away from the main trunk of a tree. The nest was in a large vertical fissure about 2.4 m above ground in a large *E. urophylla* tree (~25 m tall, diameter at breast height ~1.4 m). The nest was cup-shaped and about 22 cm wide. By placing a log at the base of the tree I was able to obtain photos of the nest and eggs. The nest was constructed of small sticks and bark, and lined with grass, moss and feathers. The two eggs were light blue with large brown blotches (Plate 2). The nest was directly beside the main road between Nenas and Fatumnasi, and the bird was photographed (from a distance of about 30 m) sitting on the nest on the return walk to Nenas about 4 hrs later (Plate 3).

About a further 2 km closer to Fatumnasi, and again less than 10 m from the main track, a recently-fledged bird was observed and photographed sitting low (c. 2 m) on the branch of a *E. urophylla* tree (Plate 4). This bird was observed sitting for about 5 min. When I walked to within 8 m to take photos it flew only c. 4 m to a nearby branch suggesting that it was not yet independent. My Timorese guides found a second fledgling nearby and wanted to catch them, so to reduce disturbance we continued on the return walk and did not attempt to find the nest that was probably located nearby. The chick had a yellow gape patch and remnant downy feathers on the back of the head, back and wings (Plate 4). The habitat in both areas was similar: mature *E. urophylla* woodland (c. 20-30 m tall) that was heavily grazed and with a sparse understorey. Elevation was 1,600-1,700 m asl.

Discussion

Although the Island Thrush is one of the most ‘dramatically variable’ bird species on earth (Townsend-Peterson 2007) there is relatively little variation among subspecies (where known) in egg color and nest characteristics, though there is much variation in clutch size and nest positioning. As with external morphology (Jones & Kennedy 2008), there appears to be little (or no) phylogenetic signal from egg morphology or from other characteristics of breeding.

Table 1. Comparison of breeding season and egg colour for several subspecies of Island Thrush on Timor and neighboring regions.

Taxon	Breeding season	Eggs	Source
Timor (<i>schlegelii</i> , <i>sterlingi</i>)	November-May	Light blue with brown blotches	This study, Noske (2003)
Seram (<i>deningeri</i>)	August	-	White & Bruce (1986)
Christmas Island (<i>erythropleurus</i>)	October-mid March	Dull pale blue, with hint of green, coarsely blotched with rufous brown	Higgins <i>et al.</i> (2006)
Java (<i>fumidus</i>)	February-September	Clear greenish blue, coarsely marked with brown and reddish brown blotches	Hellebrekers & Hoogerwerf (1967)
Java (<i>stresemanni</i>)	June	Pale blue, marked with yellowish brown blotches	Hellebrekers & Hoogerwerf (1967)

The extrapolated laying dates for the recently fledged birds on Timor would have been between 25 November and 1 December 2009 (Table 1). The Island Thrush has an incubation period of ~18 days, with fledging after 17-19 days (Higgins *et al.* 2006). Of the eight extrapolated laying months available for Timor subspecies of Island Thrush, three are from January, four from February and one from May (Noske 2003). The early wet season breeding pattern seems typical for most passerines on Timor (Noske 2003) and presumably relates to greater prey availability in that season compared to the long drought period of the dry season. Although Noske (2009) describes the peak breeding season of April-June in West Flores as corresponding to the early dry season, these months are actually part of the late wet season with April and May averaging more than 200 mm of rain (>50 year data: RePPPProT 1989). In Sabah, Borneo, nests and eggs

have been found during February and March (Sheldon *et al.* 2001), and from June to September in New Guinea (Coates 1990; Collar 2005).

The use of eucalypts for nesting may not occur elsewhere in the range of the Island Thrush, but is to be expected on Timor due to the dominance of *E. urophylla* in forested montane areas of the island. Apart from this observation, the nest shape and composition and egg colour of *schegelii* are typical of Island Thrush. The nest placement in the tree fissure has not previously been described although they are known to place nests in a wide variety of situations from the ground to about 5 m; in vertical tree forks, horizontal branches, crowns of tree ferns or *Pandanus*, in a tree hole, in epiphytes, on the tops of stumps and the branches of shrubs (Clement & Hathway 2000; Collar 2005; Higgins *et al.* 2006).

In New Guinea, Island Thrushes have been recorded nesting low in shrubs (Coates 1990). The nest shape described here for *schlegelii* is typical of thrushes in general and described as a 'bulky cup' (Coates 1985) typically made of roots, bark, grass and leaves and covered by moss or lichen (Clement & Hathway 2000; Collar 2005) (Table 1). Egg colour of *schlegelii* is also similar to other subspecies. The clutch size on Timor of two ($n=1$ only) is also within the range (1-3 eggs) given for Island Thrush (Collar 2005).

Thanks to Bas van Balen for comment and providing scans of some key references, and to reviewers Filip Verbelen and Frank Rheindt for their comments and suggestions.

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Plate 1. (left) Adult Island Thrush subspecies *sterlingi* at Mount Ramelau, East Timor, on 21 December 2009; **Plate 2.** (right) Nest and eggs of Island Thrush on Mt Mutis, West Timor.

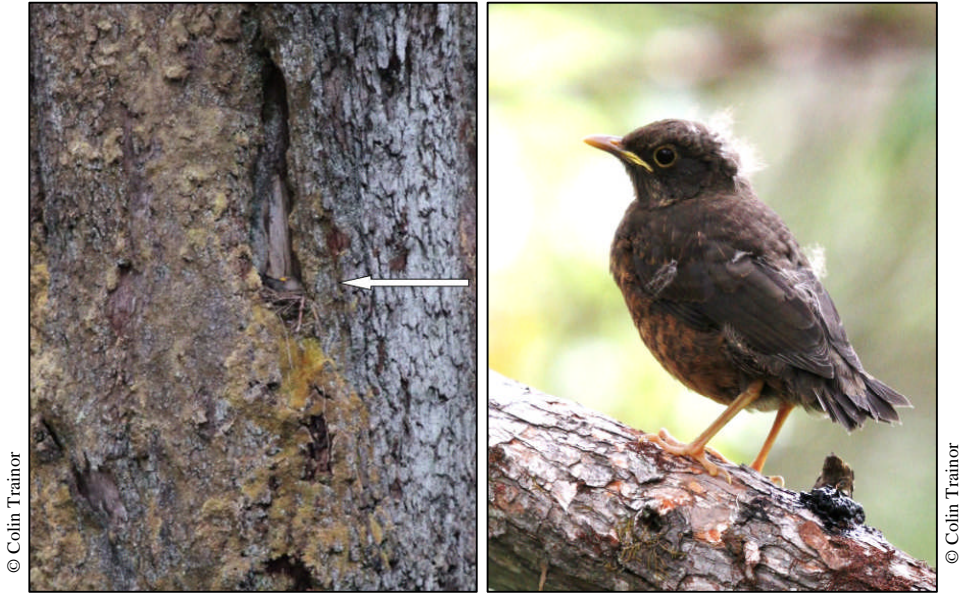


Plate 3. (left). Adult Island Thrush (indicated by arrow) sitting on nest in *Eucalyptus urophylla* tree, on Mt Mutis, West Timor; **Plate 4.** (right) Recently-fledged Island Thrush, Mt Mutis, W Timor.