

## Nest and Eggs of the Plain Gerygone *Gerygone inornata*, a Lesser Sundas-endemic Bird Species

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**Ringkasan.** Tidak ada publikasi mengenai pengamatan biologi kembang-biak Remetuk Timor *Gerygone inornata* yang endemik di Nusa Tenggara sejak dikoleksi sebuah sarang beserta anaknya dari Roti pada bulan Maret 1969 (Verheijen 1976). Selama Desember 2006 dua sarang remetuk ini saya temukan dekat Soe, Timor Barat. Sarang satu masih sedang dibangun, sedangkan yang lain berisi dua butir telur yang mirip dengan telur dari spesies semarga. Berbeda dengan kebanyakan sarang jenis remetuk, sarang ini tidak ada bagian “ekor” lagipula lubang masuk mengarah ke dalam tajuk pohon, bukan ke luar. Pengamatan ini juga membuktikan masa berbiaknya pada awal musim hujan (yaitu *austral summer*) seperti sudah diramal Noske (2003).

### Introduction

In terms of breeding biology, the birds of eastern Indonesia are probably among the least known in the world. Whilst the nests and eggs have been described for most species on Java and Sumatra (Voous 1950; Hellebrekers & Hoogerwerf 1967), those of Wallacea are still largely unknown (Coates & Bishop 1997). Breeding seasons of birds within the Lesser Sundas appear to vary geographically, much more so than within the Greater Sundas (Voous 1950). Verheijen (1964) showed that in western Flores, breeding is concentrated in the early dry season months of April to June. Yet in neighbouring Timor, the largest island in Nusa Tenggara, recent and historic records suggest that many species breed during the late dry season and early wet season (November-January) (Noske 2003).

Of the eleven species of gerygones or fairy-warblers occurring in Indonesia, eight are confined to Irian Jaya (Papua), and all of these are shared with Papua-New Guinea, and in many cases, Australia. Of the remaining three species, two are endemic to Wallacea (Plain Gerygone *G. inornata* and Rufous-sided Gerygone *G. dorsalis*), while the other occurs widely, from Flores to the Malay Peninsula (Golden-bellied Gerygone or Flyeater *G. sulphurea*). While visiting the Soe area (09°47'S, 124°15'E), West Timor, during December 2006, I made opportunistic observations of the breeding behaviour of *G. inornata*, a species endemic to Timor and the neighbouring islands of Sawu, Roti, Atauro and Wetar (Coates & Bishop 1997; Trainor & Soares 2004). This paper describes the eggs of this species for the first time, and provides more detailed information than hitherto available on the composition and site characteristics of its nest, as well as confirming breeding in the early wet season. I also compare what is known of the

breeding biology of the species with that of its close relatives in Flores and northern Australia.

The first nest of the species was described from the small island of Roti, only 11 km from Timor's western tip. During a six-week collecting expedition to the island in 1969, Verheijen (1976) received a nest with two “full-fledged nestlings” on 24 March. He described the nest as purse-like, consisting of “very fine fibres fastened by cobwebs, with a small penthouse above the entrance high in the side wall”, but lacking an “appendix”, and measuring 14.5 x 10 x 5 cm. It was “hung up pre-terminally at a horizontal twig with two leaves in front of it”.

## Methods and results

During early December 2006 I located two nests of *G. inornata* at Balai Diklat Kehutanan (Forestry Camp) near Buat, c. 8 km north of Soe, West Timor. One inaccessible nest was found on 11 December after observing a gerygone carrying plant down to a site partly hidden by foliage c. 9 m from the ground in a 15 m-high gum tree *Eucalyptus alba*. The bird made three visits in 10 min, suggesting that the nest was still under construction. The nest tree was isolated from other gum trees by c. 40 m, in a large weed-infested clearing just outside the camp compound. I had no opportunity to re-visit this nest.

The other nest, discovered on 6 December, contained two eggs. This nest had been built only 1.6 m from the ground in a young unidentified tree (c. 4 m high), situated in a weed-infested garden, c. 25 m from a small building in one direction and 30 m from a tall concrete wall in another. It was suspended from the base of the fork of three leafy twigs, c. 15 cm from the terminal leaves. The nest was composed mainly of dead grass stalks and bark strips, with many grass seeds, and decorated liberally on the outside with small clumps of green moss and caterpillar frass (faecal castings), the latter mainly near the top. It appeared untidy with many grass stalks and bark strips projecting or dangling from the sides and bottom of the nest for up to 150 cm (Plate 1). The nest dimensions were as follows: c. 14 cm long (from the apex to the bottom); 10 cm wide from the



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**Plate 1.** Nest of *Gerygone inornata* at Buat, near Soe, West Timor.

**Plate 2.** Egg of *Gerygone inornata* from nest in Plate 1.

side (at the level of the nest chamber), including the hood (3 cm); and 5 cm wide from the front. The entrance faced the trunk of the tree.

The eggs were dull white, with light red-brown irregularly shaped markings and dots scattered fairly uniformly over most of the surface, but coalescing to form a distinct dark red-brown patch or ring at the larger end (Plate 2). The dimensions of one egg measured were 16.4 x 12.0 mm.

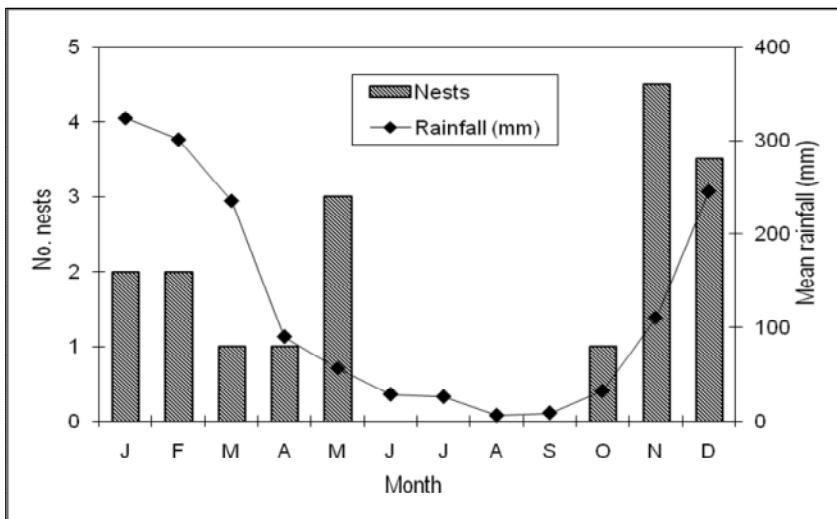
## Discussion

In Australia, gerygones build very characteristic globular-shaped domed nests, which feature a hooded entrance near the top of the nest chamber and a tapering 'tail', mainly consisting of bark strips of varying lengths, suspended from the bottom. Although some material projected from the bottom of the above nest of *G. inornata*, it did not form a proper 'tail' and projected from the side rather than from below the centre. This is consistent with Verheijen's (1976) description of the Roti nest, assuming his 'appendix' is synonymous with a 'tailpiece'. However, a photograph of an active nest from Wetar Island (C. Trainor, unpubl. data) clearly shows a 'tail' of some 30 mm, typical in relative length and shape to that on nests of Australian gerygones. This nest was also smaller than the one described above (10 x 8 cm and 14 x 10 cm, respectively).

Although the nest under construction was very high, nests closer to the ground may be more typical. Colin Trainor (unpubl. data) found a nest being built in Timor-Leste, and another on Wetar (see above) in which a bird was regularly seen to enter, at 3.5 m and 3 m from the ground, respectively. The sites of these nests differed from those described above in that one was built in a mangrove on the edge of a saline lake, and the other 7 m from the edge of a spring. Both the nest with eggs at Soe and the photographed nest in Wetar differed from all nests of four species of gerygones I have observed in Australia in having the entrance facing the centre of the tree, rather than towards the outer edge of the foliage. However, on the Soe nest, there was no evidence of a 'penthouse' to which Verheijen (1976) refers, and indeed, such a feature has never been reported for nests of gerygones in Australia.

The eggs described here resemble those of Australian species of gerygones in colour, size and shape, particularly those of the Green-backed Gerygone *G. chloronotus* (R. Noske and Y. Mulyani, unpubl. data). The two Plain Gerygone nestlings collected by Verheijen from Roti were described as having peculiar white downy feathers sticking out from the brown plumage on the sides of the head, nape, and above the base of the tail (Mees 1975). This is also consistent with the nestling plumage of at least three species of gerygones in Australia (R. Noske and Y. Mulyani, unpubl. data).

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**Figure 1.** Extrapolated egg laying dates for *Gerygone inornata*, based on data presented in Noske (2003), with additional records of active nests from Soe (see text), Roti (Verheijen 1976) and Wetar (C Trainor, unpubl. data). As the clutch in Soe may have been laid in November or December, each month scored 0.5. Monthly rainfall data are for Kupang and Soe (averaged), derived from RePPPProT (1989).

Noske (2003) extrapolated the breeding season of the Plain Gerygone from dates of collection or observations of juveniles in West Timor, as well as Verheijen's (1976) nest. These data indicated that, as with many other passerine species in Timor, the Plain Gerygone lays eggs from November (or possibly earlier) to May, with possible peaks at the start and end of this period (Fig. 1). The above observations confirm that the breeding season includes the early part of the wet season, with the clutch at Soe having been laid during late November or early December, and another potentially being laid during late December. A nest under construction on 6 April 2003 at Lake Maubara, 30 km W of Dili, Timor-Leste (C Trainor, unpubl. data) is consistent with the above breeding season, while the nest on Wetar Island had eggs or young nestlings on 18 October 2008, suggesting that laying may begin even earlier in some parts of the species range.

In western Flores, the peak of breeding activity for most species is the early dry season (April to June), with few species nesting during the early wet season (Verheijen 1964). However, Verheijen (1964) noted that the Golden-bellied Gerygone on Flores had a double peak in its breeding season, and indeed his tabulated data show that 54% of clutches ( $n = 86$ ) were found during May-June, and another 26% during September-October (but see Mees 2006: 22). Moreover, in northwestern Australia, two other species of gerygones show a bimodal

breeding season (Noske & Franklin 1999; Noske 2001; Mulyani 2004), suggesting that this unusual breeding pattern may be characteristic of gerygone species in the seasonal tropics. Nevertheless, as little survey work has been carried out in West Timor between late August and November (Noske 2003), it is feasible that *G. inornata* breeds throughout the year. Further work is needed to determine whether this, and other, species in Timor avoid breeding during the late dry season.

I thank Colin Trainor for his unpublished breeding records from Timor-Leste and Wetar, and acknowledge Columbidae Conservation for supporting his work on Wetar.

## References

- Coates, B.J. & K.D. Bishop. 1997. *A Guide to the Birds of Wallacea*. Dove Publications, Alderley, Queensland.
- Hellebrekers, W.P.J. & A. Hoogerwerf. 1967. A further contribution to our oological knowledge of the island of Java (Indonesia). *Zoologische Verhandelingen* 88: 1-164.
- Hoogerwerf, A. 1949. Bijdrage tot de oölogie van Java. *Limosa* 22: 1-279.
- Mees, G.F. 1975. A list of the birds known from Roti and adjacent islets (Lesser Sunda Islands). *Zoologische Mededelingen Leiden* 49: 115-140.
- Mees, G.F. 2006. The avifauna of Flores (Lesser Sunda Islands). *Zoologische Mededelingen Leiden* 80: 1-261.
- Mulyani, Y.A. 2004. *Reproductive Ecology of Tropical Mangrove-dwelling Warblers: The Roles of Nest Predation, Brood Parasitism and Food Limitation*. PhD thesis, Charles Darwin University, Darwin, NT, Australia.
- Noske, R.A. 2001. The nesting biology of the Mangrove Gerygone *Gerygone laevigaster* in the Darwin region, with notes on brood parasitism by the Little Bronze-Cuckoo *Chrysococcyx minutillus*. *Emu* 101: 129-135.
- Noske, R.A. 2003. The breeding seasons of birds on Timor. *Kukila* 12: 27-38.
- Noske, R.A. & D. Franklin. 1999. Breeding seasons of land birds in the Australian monsoon tropics: diverse responses to a highly seasonal environment. *Australian Biologist* 12: 72-90.
- RePPProT. 1989. *Review of Phase 1 Results: Maluku and Nusa Tenggara. Vol I. Main Report*. Regional Physical Planning Program for Transmigration. Department of Transmigration, Jakarta, Indonesia.
- Trainor, C. R. & T. Soares. 2004. Birds of Atauro Island, Timor Leste (East Timor). *Forktail* 20: 41-48.
- Verheijen, J.A.J. 1964. Breeding seasons on the island of Flores, Indonesia. *Ardea* 52: 194-201.
- Verheijen, J.A.J. 1976. Some data on the avifauna of the island of Roti, Lesser Sunda Islands, Indonesia. *Zoologische Mededelingen Leiden* 50: 1-21.
- Voous, K.H. 1950. The breeding season of birds in Indonesia. *Ibis* 92: 279-287.