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BREEDING RECORD FOR RUFIOUS-CROWNED EMU-WREN

GRAHAM N. HARRINGTON, BRIAN L. VENABLES
& CHRIS ARMSTRONG

On 30th March 2010 we observed a nest of the Rufous-crowned Emu-wren *Stipiturus ruficeps* near Mt. Unbunmaroo, otherwise known as Black Mountain, 54 km north-east of Boulia in western Queensland. The nest contained at least two (possibly three) fully feathered young and was attended by two adults. The location of the nest was 22°34'15" S, 140°16'30" E using datum WGS 84.

The nest was situated 38cm above the ground in a fully exposed position on the top of a spinifex (*Triodia sp.*) hummock (Fig. 1). It was not immediately apparent that this was a bird's nest in current use because the material it was made of was old and bleached. This



Fig. 1. The nest of a Rufous-crowned Emu-wren *in situ*.
Photo: Graham Harrington

is a characteristic of the nests of this species (Higgins *et al.* 2001). However a close approach by GH stimulated at least two young birds to scramble out of the nest and disappear into the hummock. He immediately withdrew without identifying the bird species involved.

Forty minutes later the three of us approached the nesting site cautiously and observed that the young birds were in the hummock close to the entrance to the nest. Once they were aware of our presence they went back down into the spinifex hummock. The presumed parents began calling about 20m away and were seen briefly. It was at this time we positively identified the species involved as Rufous-crowned Emu-wren. We took some hurried photographs and retired from the scene.

On 26th June 2010 two of us returned to the site and made detailed descriptions of the nest and its surrounds (Fig. 2). The nest was collected and lodged with the Queensland Museum in Brisbane (QMO.32916).



**Fig. 2. The breeding site of Rufous-crowned Emu-wrens at Mt. Unbunmaroo near Boulia.
Photo: Graham Harrington**

The breeding site was in a shallow drainage line within the limestone “shelf” which surrounds Mt. Unbunmaroo. The herb layer is dominated by spinifex, with shrubs and a few trees which are largely confined to the drainage lines. The breeding site had not been burnt for an estimated five years (in contrast to the mountain itself, which had mostly been burnt within the last 12 months). There were some patches of very old spinifex.

The area was notable for an unusually high density of Rufous-crowned Emu-wrens and Spinifexbirds *Eremiornis carteri*.

The domed nest was comprised of woven soft grass leaves and inflorescences including awns. There were at least 24 white, membranous, glume-like pieces of material approximately 14 mm long incorporated into the outer parts of the nest (Fig. 3). The base of the interior of the nest was lined with fine, felt like material. The dimensions of the nest were 8cm long, 5cm wide and 6cm deep. The entrance hole at one end was 2cm in diameter (Fig. 4).

Only fourteen breeding attempts by this species have been recorded and they have all been in the cool season August – November (Higgins *et al.* 2001). However it has been suspected that this species responds to favourable weather conditions by breeding at other times (Schodde 1982, Rowley & Russell 1997). This record supports these suggestions as March 2011 followed a wet summer after a period when two of the previous three years had been unusually dry (see Table 1).





Fig 3. Rufous-crowned Emu-wren's nest (side view).
Photo: Graham Harrington



Fig. 4. Rufous-crowned Emu-wren's nest showing entrance hole.
Photo: Graham Harrington

Table 1. Rainfall recorded at Boulia, Qld.
(Bureau of Meteorology website)

Rainfall Period (yrs)	Annual Mean (mm)	Dec.- Feb. Mean (mm)
1886 - 2011	263	131
2009 - 10	273	222
2008 - 9	92	63
2007 - 8	266	177
2006 - 7	96	59

The exposed nature of the nest on the top of a spinifex hummock has been reported previously according to Schodde (1982) and repeated in HANZAB (Higgins *et al.* 2001) although the quoted reference is incorrect.

ACKNOWLEDGMENTS

We would like to thank Rick and Ann Britton of “Goodwood”, near Boulia, for allowing us to access Mount Unbunmaroo. Dr David McFarland commented on an earlier version of this article.

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**AUSTRALIAN SWIFTLET (*AERODRAMUS
TERRAEREGINAE*) BREEDING LIMITED BY
LA NIÑA WEATHER IN NORTH QUEENSLAND**

MICHAEL TARBURTON

Australia experienced an extreme La Niña weather event during summer 2010-2011 and an increased number of cyclones during the normal wet season. The largest, cyclone “Yasi,” crossed the Queensland coast between Cairns and Townsville producing up to 200-300mm of rain in 24 hours. Record amounts of rain fell during the normal breeding period of local populations of Australian Swiftlet (*Aerodramus terraereginae*). The amazing breeding strategy of these swiftlets in seasons of normal rainfall, where parents provide their half-grown nestling with an egg to incubate – thus enabling each pair to raise two young in the short period of insect abundance (Tarburton & Minot 1987) – is now well known. Something of their struggles to raise a family in the dryness of an El Niño season is also known (Tarburton 1988); but little is reported about how the birds cope with the extra water of a La Niña season. Crouther (1983) had found no correlation between wet years and nest degradation, suggested by Smyth (1976) but did find that nest degradation appeared to be advanced by attack from moth larvae in the Finch Hatton Colony above Dooloomai Falls. In this article I report on observations made during several visits to breeding sites to gauge the impact of La Niña on breeding of Australian Swiftlets during the 2010-2011 wet season.

A clue to the impact of the high rainfall first came in a message from Tess Brickhill of Mackay to say that both breeding colonies in Finch Hatton Gorge had been under water for weeks. A second clue surfaced when Chillagoe Caving Club members reported that all the caves they had been to in the Chillagoe-Mungana District in the last six months were either flooded or had pools of water in them. When you realise that in all previous years of my visits only

three or four of the 600 caves were found to have water in them, you begin to understand what the birds have had to put up with in this last La Niña season.

On 17 April 2011 Adrian Slee and I were taken by Daniel Mitchell and Van Christiansen to a new breeding colony, discovered three years previously, where birds had bred in the 2009-2010 wet season. After 30 minutes of caving inside the back entrance to Rescue Cave we discovered that the nesting chamber displayed a high-water line four metres from the floor and that there were no intact nests – only 53 old broken, hanging and waterlogged nests.

A subsequent visit to Swiftlet Scallops Cave on 20 April with Douglas Irwin found that even though swiftlets could still reach the site, the walls where their nests were attached had been so wet, those nests also had lost shape and breeding had failed.

Two days later (during the Australian Speleological Federation Conference being hosted by our Chillagoe Caving Club) Keith Offer, Daniel Mitchell and I visited both colonies at Golgotha Cave. We found that, although the high-water line on the walls below the nests indicated the bottom colony had not been flooded, it had been too wet for any of the nests to hold together. However, the upper colony contained 34 good nests and over 100 birds, so at least some members of one colony had managed to breed despite the La Niña. In previous years the lower colony held 55-112 nests and the upper colony 46-66 good nests.

The following day Keith Offer and I climbed and laddered into the large colony in Swiftlet Swallet, only to find the ladder dropped us into 4m of water. Swimming among the dead swiftlets, micro-bats and guano we reached the census point and were able to count 112 surviving nests. The high-water line indicated that the water had risen to a depth of 8 metres and drowned seven nests.



**Figure 1. Normal nests in Good Black Friday Cave.
(Photo: M. Tarburton 24 April 2011)**

Guano Pot is a cave I have visited more than 200 times. I visited it again on 24th April believing that water would not have covered the usual 71-132 nests, but found that most of the nests had been so wet from water running down the walls that nearly all had been abandoned.

Only ten recently used nests remained more or less intact and may have just fledged young of the year.



**Figure 2. Water-damaged Australian Swiftlet nests in Crocodile Pot.
(Photo: M. Tarburton 25 April 2011).**

On the afternoon of 24 April, Bruce Dane took me to Good Black Friday Cave where we found 22 nests in the upper and 14 in the lower colonies. These nests had probably also been successfully used to produce young in the 2010–2011 breeding season (Figure 1). Bruce and I then looked through Crocodile Pot on the same afternoon. The



Figure 3. An Australian Swiftlet fledgling clinging to a water-logged nest.

(Photo: M. Tarburton 24 April 2011).

two small colonies looked very water damaged as did the main colony in the large chamber (Figure 2). What surprised us was finding a young bird (aged by having pale edges to its primaries) hanging on to one of the badly water damaged nests. Judging from the length of its wings compared to its tail, this bird was two or three days short of fledging, a very late bird (Figure 3). This was the

first [real] proof that La Niña had not completely prevented the swiftlets from breeding during the 2010–2011 season.

It had been my thought that in a La Niña year that the birds might have delayed their breeding, or have re-laid; their close relatives in Samoa breed all year, and I have found Queensland birds will re-lay if they lose an egg early in the season. The drenching rains of the 2010-2011 breeding period has now changed that understanding. From my observations it appears that the Australian Swiftlet is unable to accommodate to breeding successfully in extreme La Niña seasons.

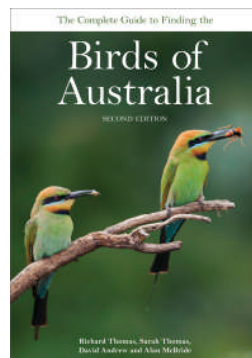
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Book Review



The Complete Guide to Finding the Birds of Australia *SECOND EDITION*

by

Richard Thomas, Sarah Thomas David Andrew & Alan McBride

Published by CSIRO PUBLISHING as Paperback or eBook in
2011, 480 pages, Colour photographs, maps; [http://
www.publish.csiro.au](http://www.publish.csiro.au)

This very popular guide is a boon to bird-watching travellers on the Australian continent. It is now marginally larger and contains significantly more pages and locality maps. Photographs are included for the first time illustrating some habitats and many birds (64 in colour by David Stowe). It is printed on quality paper and is much more appealing and useful than before. The updated coverage of all the Australian states and territories includes new sections on the largest offshore islands and territories and a new glossary of vegetation and landscape terms has joined the appendices in the Bird finder guide. Of course many changes have occurred on the Australian landscape since the 1996 edition and the authors have adjusted the texts accordingly. Changes to bird populations are noted as are the contact details essential for communicating with property owners for responsible bird watching when away from home.

David Rounsevell

NOTES