

## The first reported nest and eggs of the Russet-winged Spadebill *Platyrinchus leucoryphus*

Rob P. Clay and Alberto Madroño N.

El primer nido conocido de *Platyrinchus leucoryphus* fue encontrado en la Estancia Parabel, Parque Nacional San Rafael, Paraguay el 4 noviembre 1996. Estaba situado a 2,45 m en la prominente horqueta de un renoval solitario en una selva relativamente alta (dosel de 25 m) en terreno llano. Casi no existía vegetación terrestre pero había una pronunciada cobertura arbustiva de c. 6 m en las cercanías del nido. El exterior del nido estaba enteramente recubierto de hojas de tacuara *Chusquea* sp., formando una taza poco profunda, entretejido con líquenes fibrosos que, junto con las hojas de

*Chusquea*, colgaban por abajo del nido. El interior era de líquenes fibrosos con un par de hojas semidescompuestas. Las dimensiones eran las siguientes: altura 50 mm; profundidad 15 mm; diámetro interno 46 mm; diámetro externo 71 mm. El 11 noviembre había un huevo puesto en el nido, y 2–3 días después un segundo. La incubación comenzó de inmediato después que el primer huevo fuera puesto.

Ambos huevos eran pardo rosáceo claros, con una banda concentrada de pequeñas manchas pardo oscuras alrededor del polo obtuso y algunas pequeñas manchas esparcidas. El 14 noviembre se pesaron y midieron ambos huevos. El primero en ser puesto era el más grande: 18,8 x 15,6 mm y 2,5 g de peso, mientras que el segundo medía 17,9 x 14,7 mm y 2,1 g de peso. El 7–8 diciembre se encontró que el nido había sido predado, posiblemente por *Cebus apella*.

### Introduction

Russet-winged Spadebill *Platyrinchus leucoryphus* is a poorly known Atlantic Forest endemic, occurring at very low densities in south-east Brazil, north-east Argentina (just two records) and east Paraguay, and is considered vulnerable<sup>1</sup>. Prior to 1992, there had been only three records of *P. leucoryphus* in Paraguay<sup>4</sup>, but since then a spate of records has revealed two sites in particular — Parque Nacional Caaguazú and Parque Nacional San Rafael — to hold populations of global importance<sup>4,5,6</sup>. During fieldwork at Estancia Parabel, Parque Nacional San Rafael in November 1996 (see<sup>5</sup>) a nest of *P. leucoryphus* in the final stages of construction was discovered. The nest of this species was previously undescribed.

Estancia Parabel is located in an area of steep-sided forested valleys within the Cordillera de San Rafael, on the border of the Depts. Itapúa and Caazapá, south-east Paraguay. The flora of this same block of Parque Nacional San Rafael was studied by Keel *et al.*<sup>3</sup>, who found the five most common species at Parabel (0.1 ha plot) to be: *Actinostemon concolor*, *Holocalyx balansae*, *Sorocea bonplandii*, *Patagonula americana* and *Pilocarpus pennatifolius*. The understorey varies from very open to patches of dense bamboo (*Chusquea* sp.) and small shrubs, such as *Sorocea bonplandii*, are common. A more complete vegetation description

can be found in Keel *et al.*<sup>3</sup> and Madroño *et al.*<sup>5</sup>, but of particular note — and unlike the rest of the park — the forest at Parabel has never been logged.

On 4 November 1996, whilst watching a *P. leucoryphus* perched unobtrusively in a small sapling, it flew up and settled on a previously unseen nest. Periodic observations at this nest, generally from dawn until mid-morning, were conducted until the end of fieldwork on 15 November 1996. The nest appeared relatively complete when found, but over the next two days at least, further material was added.

### Nest situation

The nest was placed surprisingly conspicuously in a prominent fork of a lone sapling, with little vegetation concealing it (the nearest leaf vertically above the nest was 6 cm away). The nearest tree of dbh greater than 5 cm to the nest sapling was 1.3 m away, and of dbh greater than 10 cm (and also 25 cm) 2.75 m away. The forest surrounding the nest was relatively tall and on level ground (slope angle of 5° or less), with a canopy height of c. 25 m, and a nearby adjacent fig (*Ficus* sp.) to 30 m — the latter the only tree within a radius of 14 m of the nest with dbh greater than 60 cm. A pronounced shaded layer of small shrubs (notably *Sorocea* sp.) and saplings had a maximum height of c. 6 m, but in contrast the ground flora was virtually

non-existent (2–5 % cover of ferns only). The immediate surroundings were noticeably open: within a radius of 14 m of the nest, there was on average one tree of dbh less than 5 cm per 8 m<sup>2</sup>, one tree of dbh between 5–10 cm per 8 m<sup>2</sup>, and one tree of dbh between 10–60 cm per 80 m<sup>2</sup>. The nearest stand of *Chusquea* sp. bamboo (of which the nest was largely composed) was over 40 m away, and the nearest permanent water — a river — c. 140 m. The habitat surrounding the nest is typical of that in which the species is usually found — tall closed canopy forest with a well-developed middle storey of small to medium trees and shrubs and open undergrowth below (pers. obs.,<sup>2,4</sup>).

### Description of the nest and eggs

The cup-shaped nest was supported in the fork of a small sapling of *Brunfelsia* sp. (Solanaceae), 2.45 m above ground (sapling height 3.50 m). The outer nest was composed almost entirely of *Chusquea* sp. bamboo leaves, forming a shallow cup resting on a matted bed of *Chusquea* leaves, the complete structure interwoven with fibrous lichens. The base also contained several small stalks of *Chusquea* and the platform in which the actual cup nestled was formed by larger *Chusquea* and tree leaves. Suspended from the nest was a dangle of fibrous lichens and *Chusquea* leaves of overall length 160 mm. The nest contained a neatly woven inner cup of fibrous lichens, with a couple of semi-decomposed small leaves as lining. The outside of the nest was “decorated” with several small patches of white silk — probably from spiders’ webs. Dimensions were as follows: height 50 mm; cup depth 15 mm; inner diameter (perpendicular to plane of the crotch) 46 mm, 41 mm with the plane of the crotch; outer diameter (perpendicular to plane of fork) 71 mm, 61 mm with the plane.

On 11 November, one egg was laid in the nest, and on the 13th or 14th a second. Incubation commenced immediately the first egg was laid. Both eggs were pale pinky brown, with a concentrated band of small dark brown spots around the widest part and a few small scattered spots elsewhere. On 14 November, both eggs were weighed and measured. The first egg laid was the largest: 18.8 mm long, width 15.6 mm and fresh weight 2.5 g, whilst the second was 17.9 mm long, width was 14.7 mm and fresh weight 2.1 g.

On the 7–8 December 1996, further fieldwork was conducted at Estancia Parabel, but the nest could not be located, apart from a few remaining leaves stuck to the fork of the sapling. Searches of the remaining area revealed the base of the nest

on the ground 8 m away from the nest sapling. A further 2 m away was the main cup of the nest, still virtually intact, on the ground under a tree. The nest had clearly been predated. Given the manner in which it was removed from the nest sapling, and the lack of egg remains, a large mammalian predator, such as Brown Capuchin *Cebus apella* (which are notably common in the area) seems the most likely culprit. The remains of the nest will be deposited in the Western Foundation of Vertebrate Zoology.

### Acknowledgements

Full acknowledgements for our work at Estancia Parabel are provided in Madroño *et al.*<sup>5</sup>, but here we would like to thank our fieldwork companions: Rob Faucett, Nathan Rice, Mark Robbins and John Simmons. In addition, we are indebted to Luc van Ryckeghem and Monica Fano for their hospitality and permission to work on their property. A previous draft benefited from the comments of an anonymous reviewer.

### References

1. Collar, N. J., Crosby, M. J. & Stattersfield, A. J. (1994) *Birds to watch 2: the world list of threatened birds*. Cambridge, UK: BirdLife International (Conservation Series 4).
2. Collar, N. J., Gonzaga, L. P., Krabbe, N., Madroño Nieto, A., Naranjo, L. G., Parker, T. A. & Wege, D. C. (1992) *Threatened birds of the Americas: the ICBP/IUCN Red Data Book*. Cambridge, UK: International Council for Bird Preservation.
3. Keel, S., Gentry, A. H. & Spinzi, L. (1993) Using vegetation analysis to facilitate the selection of conservation sites in eastern Paraguay. *Conserv. Biol.* 7: 66–75.
4. Lowen, J. C., Bartrina, L., Clay, R. P. & Tobias, J. A. (1996) *Biological surveys and conservation priorities in eastern Paraguay*. Cambridge, UK: CSB Conservation Publications.
5. Madroño N., A., Clay, R. P., Robbins, M. B., Rice, N. H., Faucett, R. C. & Lowen, J. C. (1997) An avifaunal survey of the vanishing interior Atlantic forest of San Rafael National Park, Departments Itapúa/Caazapá, Paraguay. *Cotinga* 7: 45–53.
6. Madroño N., A., Robbins, M. B. & Zyskowski, K. (1997) Contribución al conocimiento ornitológico del Bosque Atlántico Interior del Paraguay: Parque Nacional Caaguazú, Caazapá. *Cotinga* 7: 54–60.

**Rob P. Clay**

*Large Animal Research Group, Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ, UK.*

*E-mail: rc124@hermes.cam.ac.uk or rob@fmbert.una.py*

**Alberto Madroño N.**

*Fundación Moisés Bertoni para la Conservación de la Naturaleza, Procer Carlos Arguello 208, C.C. 714, Asunción, Paraguay.*

*E-mail: amadrono@fmbert.una.py*



1



2



3



4

- 1 Russet-winged Spadebill nest in Parque Nacional San Rafael, Paraguay. (Rob P. Clay)
- 2 Russet-winged Spadebill nest in Parque Nacional San Rafael, Paraguay. (Rob P. Clay)

- 3 Russet-winged Spadebill *Platyrinchus leucoryphus*. (A. Madroño)
- 4 Russet-winged Spadebill *Platyrinchus leucoryphus*. (K. Zyskowski)