

Notes on the nesting of White-shouldered Fire-eye *Pyriglena leucoptera*

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Se comunican observaciones sobre un nido de *Pyriglena leucoptera* descubierto en el Parque Nacional Iguazú, Argentina. El nido se halló en un bosque de Maria Preta *Diatenopteryx sorbifolia* (Sapindaceae), Azota caballo *Luhuea divaricata* (Tiliaceae) y camboatá *Matayba eleagnoides* (Sapindaceae), con alta densidad de bambú *Merostachys clausenii* en el sotobosque, constituyendo un habitat de nidificación diferente a los previamente descritos. El nido era una esfera de hojas, ramitas y vainas enrolladas del bambú *M. clausenii* con entrada en la parte superior. Tanto la entrada como la cavidad tenían 7–8 cm de diámetro y estaban inclinadas 30° respecto de la vertical. La cavidad tenía 12,5 cm de profundidad. La construcción era muy suelta, las paredes y el piso eran gruesos y totalmente de bambú. Entre los materiales se encontraban ramitas y vainas enrolladas de hasta 30 cm de largo. El nido estaba apoyado sobre un nido viejo de hojas que lo elevaban 3 cm sobre el suelo. Tanto la construcción suelta como su elevación contribuían a mejorar la desecación cerca del suelo húmedo. Ambos padres empollaban los huevos alternativamente, dejando para ello la cabeza completamente afuera del nido. El suelo del bosque estaba cubierto de hojas del bambú, asegurando el camuflaje del nido. El mismo tenía dos huevos; su color era blanco con granos finos rufos y manchas castaño rojizas de hasta 10 mm, entremezcladas con algunas áreas blancas del mismo tamaño. Tanto la posición de la entrada como la corta cavidad del nido facilitarían la observación de depredadores aéreos.

Introduction

The nesting ecology of many rainforest species is known from only a few observations made within a restricted part of their distributions. Here I report on a nest of White-shouldered Fire-eye *Pyriglena leucoptera* discovered during field work in Iguazu National Park, Argentina (25°36'S 54°22'W), providing new nesting data for an Atlantic Forest species.

P. leucoptera is common in the undergrowth of humid forests of east Brazil, from Bahia to north Rio Grande do Sul, east Paraguay and Misiones, Argentina⁷. Nest descriptions are few as they are difficult to locate due to their camouflage, but it is an oven-shaped structure, resembling a leafy ball placed on the ground^{1,2,9,10}, or lying on a small dead trunk or fern crown¹. Materials used are leaves and stems, forming a relatively large, loose structure that collapses easily^{1,9,10}, probably as a result of a lack of twisting of the leaves and stems¹, and presumably contributing to the incompleteness of data. Euler¹ is the only author to provide specific details of nesting material: leaves of a Marantaceae species. The better studied White-backed Fire-eye *Pyriglena leuconota* constructs a similar nest^{4–6,11}. Details of nesting materials are available⁴, the mixture of plant material included relatively large leaves and twigs up to 30 cm long.

The position of the entrance in *P. leucoptera*, 'in the middle of the ball'¹ is unclear, and other authors offer no details. The nest entrance in *P. leuconota* is variously described as a 'side entrance'¹¹, 'a long descending entrance'⁵, or 'in the upper part of the

nesting cavity'⁵. The latter is probably based upon a bundled nest shown in plate VI of that study⁵. Measurements, 8–10 cm in external diameter, appear too small for an 18 cm-long bird. The nest must have been compressed when packaged. Pinto⁵ also reported an incubation chamber in the upper part, but it is difficult to interpret the position of the entrance in the nest. Oniki's⁴ detailed data on *P. leuconota* do not elucidate the position of the entrance. Egg measurements and characteristics have been reported for *P. leucoptera*^{1,2,8}, but no studies present nest measurements for a *Pyriglena* in the wild.

Observations of *Pyriglena leucoptera*

On 27 October 1999, I discovered a nest in a bamboo forest, thereby providing a different nesting habitat. It was located in transect T1 L4, 450 m from Timbo trail, c.1 km from the park ranger house. Forest there is characterised by the following dominant trees: *Diatenopteryx sorbifolia* (Sapindaceae), *Luhuea divaricata* (Tiliaceae) and *Matayba eleagnoides* (Sapindaceae). Tree cover is c.70% and there is dense bamboo undergrowth of *Merostachys clausenii*. The nest was a sphere of leaves, petioles and rolled sheaths of *M. clausenii* bamboo placed on the ground. It was 26 cm in diameter with a circular entrance in the upper part (Fig. 1). Due to its loose construction, measurements were made *in situ* to avoid manipulating the material. The entrance and cavity were 7–8 cm in diameter and inclined 30° from the vertical; the cavity was 12.5 cm deep (Fig. 2). It was a loose construction with 10 cm walls



Figure 1. Nest of White-shouldered Fire-eye *Pyriglena leucoptera* showing the upper entrance. Stems and rolled sheaths of bamboo *Merostachys clausenii* are visible (Jorge J. Protomastro)



Figure 2. Cross-section of White-shouldered Fire-eye *Pyriglena leucoptera* nest (Jorge J. Protomastro)



Figure 3. Eggs of White-shouldered Fire-eye *Pyriglena leucoptera* (Jorge J. Protomastro)

and a 13 cm-deep base. No nest lining was observed. Materials included large bamboo stems and rolled sheaths up to 30 cm long. The nest was placed on an old nest of dead leaves, 3 cm deep, discerned by its structure, which was a distinct arrangement of leaves separable from the new nest. Euler¹ noted how small dead trunks or crowns of ferns could be used to raise the nest above ground by several centimetres. The loose construction improved desiccation.

Both adults attended the nest alternately. On 27–28 October, at 09h00, it was attended by the female, and on 29 October by the male: both held the entire head outside the nest while incubating. Bamboo rhizomes and ground debris, principally dead bamboo leaves, made nest camouflage almost perfect (Fig. 1). The adults frequently rearranged the nest materials during successive visits, changing the shape of the entrance or nest surface. There were two eggs (lengths 24.0–25.2, diameters 17.6–17.7 mm, weights 3.8–4.0 g), white with fine rufous marks covered by chestnut-rufous blotches up to c.10 mm long (Fig. 3).

Discussion

The *P. leucoptera* nest had dense leafy walls and a short tunnel inclined 30° from the vertical in its upper part. The nest entrance was incorrectly considered to be lateral by Fraga & Narorsky³, probably because the Euler¹ description is unclear. The top entrance and short cavity make it easier for the adults to locate predators. The lateral entrance observed in *P. leuconota*¹¹ apparently represents a different characteristic, but a long descending entrance⁷ also has been described.

Materials used differed from those observed by Euler^{1,2}, being similar to those on the forest floor, thus ensuring camouflage. The inclusion of long stems and leaves is also observed in *P. leuconota*; it improves camouflage, rendering the nest surface more heterogeneous with the ground. The ground location was interpreted, in *P. leuconota*, as favouring parasitization of the young⁴, but the loose construction and site selection mitigate this feature. It is also possible that the loose nature of the construction may have anti-predator advantages, making discovery of the incubation chamber more difficult. Eggs were similar to previous reports. More observations are required to confirm differences in nesting characteristics within the genus.

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