

## First nesting record of Blue-fronted Parrotlet *Touit dilectissimus* with some ecological notes

Christian Olaciregui and Luis Eduardo Uruña

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Se reporta el primer registro de un nido del Periquito Alirrojo *Touit dilectissimus* con notas de comportamiento, estructura y características vegetales del sitio de anidación. El nido fue hallado en un termitero en interior de bosque; este tipo de cavidades podrían considerarse los principales sitios de anidación para la especie y el género.

*Touit* parrotlets are among the least-studied Neotropical parrots<sup>14</sup>. The genus comprises eight species found in South and Central America, and represented in Colombia by five species<sup>11</sup> all of them little known<sup>10</sup>. They are fast flying and noisy, but are easily overlooked when perched. All five species in Colombia have generally low densities or are difficult to observe, and all of them are usually considered uncommon or rare<sup>9,11</sup>.

The monotypic Blue-fronted Parrotlet *Touit dilectissimus* occurs from Panama across north-east Colombia to Venezuela, and over the Pacific slope to north-west Ecuador. In Colombia, it inhabits the Pacific slope from the Serranía del Baudó to dpto. Nariño, the northern Cordillera Central and the eastern slope of the Cordillera Oriental, at 700–2,000 m<sup>4,5,9,11</sup>. Few nesting data are available, but the breeding season appears to usually commence mid year, based on males collected in breeding condition and juveniles accompanied by adults, in Colombia and Panama, although a bird has also been observed leaving a termite mound in January<sup>3,8</sup>.

Observations on the nesting ecology of Blue-fronted Parrotlet were made in the Arrierito Antioqueño Natural Reserve of Fundación ProAves, near Anorí, dpto. Antioquia, Colombia. The reserve encompasses c.320 ha of premontane humid forest at 1,500–1,800 m, adjoining La Forzosa Reserve (c.300 ha)<sup>4,5,12</sup>. The forest is dominated by *Compsonera* sp., *Protium* sp., *Tovomita weddeliana*, *Tapirira gujanensis* and *Billia rosea*<sup>7</sup> at the elevation where the nest was found. The canopy reaches 20 m, there are few epiphytes and Melastomataceae, Clusiaceae, Araliaceae, Myristicaceae, Rubiaceae, Myrtaceae, Annonaceae, Bombacaceae, Ericaceae, Leguminosae and Palmae are the main tree and shrub families<sup>7</sup>.

The locality has been designated an AZE (Alliance for Zero Extinction) site<sup>10</sup> on account of the presence of the restricted-range and globally threatened Chestnut-capped Piha *Lipaugus weberi*, and is part of La Forzosa Important Bird Area, protecting seven endemic and / or threatened bird species in the Central Andes<sup>6</sup>, as well as several endemic and / or threatened amphibians and mammals.



Figure 1. Blue-fronted Parrotlet *Touit dilectissimus* excavating termite mound, Arrierito Antioqueño Natural Reserve, Anorí, Antioquia, Colombia (Nick Athanas)



Figure 2. Blue-fronted Parrotlet *Touit dilectissimus* nest, Arrierito Antioqueño Natural Reserve, Anorí, Antioquia, Colombia, 11 December 2007 (Luis Eduardo Uruña)

The site has few parrot species: Blue-fronted Parrotlet is the smallest and commonest of those found in the area<sup>5</sup>. At Arrierito Antioqueño Natural Reserve, Blue-fronted Parrotlet is observed overflying the area on a daily basis. At the site, this parrotlet inhabits mature forest and its edges in groups of 8–24 individuals<sup>5</sup>.

Nesting activity was studied between December 2007 and March 2008, on a total of four days for six hours, and general observations of the species' ecology and behaviour were made non-systematically in September 2007–March 2008.

Blue-fronted Parrotlet was only seen foraging in *Clusia* sp. trees. During part of the year the species can be observed roosting in the crowns of *Eucalyptus globulus* at road edges, revealing the importance of these trees as temporary alternatives while natural ecosystems are restored.

On 12 December 2007 a pair of parrotlets was found excavating an arboreal termite mound on a low ridge within mature forest. Further observations confirmed the cavity was being used as a nest. On 14 January 2008 the pair was still engaged in preparing the nest. Both individuals excavated, taking turns. Whilst one bird excavated, the other mostly perched near the cavity entrance. The eggs hatched in the second week of March. The nest was at 1,709 m, in an arboreal termite mound c.7 m above the ground. The termite mound was on a 17-m *Chrysophyllum* sp. (Sapotaceae). The cavity entrance was 10 cm high × 9 cm wide, funnel-shaped and inclined c.110° from the end of the tunnel, which prevented our checking the contents. At the nest site, canopy cover was estimated at 95% vegetation and the undergrowth as 70% vegetation.

This is the first description of a Blue-fronted Parrotlet nest. Use of arboreal termite mounds is common in several species of parrots, and most nest records of *Touit* parrotlets have been in such cavities<sup>2,3,8,11,13</sup>. Nesting in arboreal termite mounds contributes to lower predation rates<sup>1</sup>. The type of entrance to the nest of the Blue-fronted Parrotlet and the difficult access to the inside would favour the latter hypothesis.

Previous data mainly suggested that Blue-fronted Parrotlet breeds in the latter part of the year, although see above<sup>8</sup>. We found that nesting commenced in December with nest building occupying at least one month, and the eggs hatched in March. By this time, groups of parrotlets had ceased roosting in the *Eucalyptus* near the road.

Due to the general lack of data on the biology and seasonal movements of this parrotlet, its ecological requirements cannot be determined precisely. However, the nest was in relatively well-preserved mature forest, which is probably a prerequisite for breeding. Artificial nest experiments might be

considered, to discover more concerning the species' reproductive biology.

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## References

- Brightsmith, D. J. (2005) Competition, predation, and nest niche shifts among tropical cavity nesters: phylogeny and natural history evolution of parrots (Psittaciformes) and trogons (Trogoniformes). *J. Avian Biol.* 36: 64–73.
- Brightsmith, D. J. (2005) Parrot nesting in southeastern Peru: seasonal patterns and keystone species. *Wilson Bull.* 117: 296–305.
- Collar, N. J. (1997) Family Psittacidae (parrots). In: del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, 4. Barcelona: Lynx Edicions.
- Cuervo, A. M., Salaman, P. G. W., Donegan, T. M. & Ochoa, J. M. (2001) A new species of piha (Cotingidae: *Lipaugus*) from the Cordillera Central of Colombia. *Ibis* 143: 353–368.
- Cuervo, A. M., Pulgarín, P. C. & Calderón, D. (2008) New distributional bird data from the Cordillera Central of the Colombian Andes, with implications for the biogeography of northwestern South America. *Condor* 110: 526–537.
- Franco, A. M. & Bravo, G. (2005) Áreas Importantes para la Conservación de las Aves en Colombia. In: Boyla, K. & Estrada, A. (eds.) *Áreas Importantes para la Conservación de las Aves en los Andes tropicales: sitios prioritarios para la conservación de la biodiversidad*. Quito: BirdLife International (Conservation Series 14) & Conservation International.
- Gomez Mesa, D. (2004) *Estructura y composición florística de los bosques premontanos del Municipio de Anorí – Antioquia*. Informe final. Anorí: Corporación Autónoma Regional del Centro de Antioquia.
- Hilty, S. L. & Brown, W. L. (1986) *A guide to the birds of Colombia*. Princeton, NJ: Princeton University Press.
- McMullan, M., Donegan, T. & Quevedo, A. (2010) *Field guide to the birds of Colombia*. Bogotá: Fundación ProAves.
- Ricketts, T. H., Dinerstein, E., Boucher, T., Brooks, T. M., Butchart, S. H. M., Hoffmann, M., Lamoreux, J., Morrison, J., Parr, M., Pilgrim, J. D., Rodrigues, A. S. L., Sechrest, W., Wallace, G. E., Berlin, K., Bielby, J., Burgess, N. D., Church, D. R., Cox, N., Knox, D., Loucks, C., Luck, G. W.,

- Master, L. L. Moore, R., Naidoo, R., Ridgely, R. S., Schatz, G. E., Shire, G., Strand, H., Wettengel, W. & Wikramanayake, E. (2005) Pinpointing and preventing imminent extinctions. *Proc. Natl. Acad. Sci. USA* 51: 18497–18501.
11. Rodríguez-Mahecha, J. V. & Hernández-Camacho, J. (2002) *Loros de Colombia*. Bogotá: Conservación Internacional.
  12. Salaman, P. G. W., Donegan, T. M. & Cuervo, A. M. (2002) New distributional bird records from Serranía de San Lucas and adjacent Central Cordillera of Colombia. *Bull. Brit. Orn. Club* 122: 285–304.
  13. Tobias, J. A. & Seddon, N. (2002) First nest record for Scarlet-shouldered Parrotlet *Touit huetii*. *Cotinga* 18: 104.
  14. Whitney, B. M. (1996) Flight behaviour and other field characteristics of the genera of Neotropical parrots. *Cotinga* 5: 32–42.

**Christian Olaciregui and Luis Eduardo Uruña**  
*Fundación ProAves, Carrera 20 # 36-61 Barrio La Soledad, Bogotá, Colombia. E-mail: colaciregui@proaves.org.*