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Authors: Marks, Jeffrey S., Zirl, Robert, Hudson, Cynthia, Yábar, Ramiro, Gomes, Arthur Monteiro, et al.

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First nest descriptions of Olive-faced Flatbill *Tolmomyias viridiceps*

by Jeffrey S. Marks, Robert Zirl, Cynthia Hudson, Ramiro Yábar, Arthur Monteiro Gomes & Harold F. Greeney

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Summary.—Little is known about the natural history of many species of Neotropical birds, with descriptions of the nests of many species still lacking or incomplete. Published descriptions exist for five of the seven species of *Tolmomyias* flatbills. Here, we provide the first such data for Olive-faced Flatbill *T. viridiceps* on the basis of three nests, one each in Brazil, Ecuador and Peru. As typical for the genus, the nest is a closed, retort-shaped, pensile structure suspended from a limb; in two cases, nests were sited close to an active paper wasp (Vespidae) nest. In each of four instances when we obtained photos as an adult left the Peru nest, it exited the entrance tube backwards, rather than head-first.

Basic natural history data, including nest descriptions, are lacking for many species of Neotropical birds (Fierro-Calderón *et al*. 2021, Greeney 2022). The genus *Tolmomyias* comprises seven species of small Neotropical tyrant flycatchers that occupy forested habitats (Billerman *et al*. 2024, Gill *et al*. 2024). Nests have been described for five of these species; in each case, it is a hanging, 'closed/retort/pensile structure' (*sensu* Simon & Pacheco 2005) with a downward-opening tube (Schulenberg *et al*. 2010) and often is placed close to a wasp nest (Menezes *et al*. 2014, Gomes & Leite 2019). Ochre-lored Flatbill *Tolmomyias flaviventris* and Olive-faced Flatbill *T. viridiceps* are close relatives that formerly were treated as conspecific (del Hoyo *et al*. 2022a,b). The nest of *T. flaviventris* has been described (Haverschmidt 1974) but we found no published description of the nest of *T. viridiceps*. Here, we describe three Olive-faced Flatbill nests, one each from north-eastern Ecuador, north-western Brazil and north-eastern Peru.

Results

Ecuador nest.—On 25 and 26 September 2008, HFG watched two adult Olive-faced Flatbills bringing food to a nest with young at the Shiripuno Research Center, Orellana, Ecuador (01°06′13″S, 76°43′56″W; 230 m elevation). The nest was a tightly woven, closed, retort-shaped pensile ball (11 × 12 cm outside dimensions) with a tubular entrance (10 cm long, 2.5 × 3.0 cm inside diameter) and was composed of thin, pale plant fibres and broadly attached at the top to a thin branch (7 mm diameter); it was also lightly decorated with moss and narrow fibres draped over the main structure (Fig. 1A). The nest was 5.5 m above ground in an unknown species of tree *c*.14 m tall. It was placed 0.4 m from the tip of a nearly horizontal branch, 4.5 m from the trunk of the tree, and was suspended over the Shiripuno River. An active paper wasp (Vespidae) nest was 30 cm away in the same tree, level with the nest. HFG saw no activity at the nest on 28 September (the young presumably having fledged, given the undamaged nest and lack of dead nestlings) and collected it on 1 October to obtain measurements.

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Figure 1. Olive-faced Flatbill *Tolmomyias viridiceps* nests (A) at Shiripuno Research Center, Orellana, Ecuador, 25 September 2008 (Harold F. Greeney); (B) near Iranduba, Amazonas, Brazil, 28 May 2023 (Arthur Monteiro Gomes); and (C) at Napo-Sucusari Biological Reserve, Loreto, Peru, 30 June 2023 (Robert Zirl)

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Brazil nest.—On 13 May 2023, AMG watched an Olive-faced Flatbill carrying plant fibres to a nest in *várzea* forest near Iranduba, Amazonas, Brazil (03°15′44″S, 60°13′14″W; 90 m) on two occasions. AMG returned on 28 May and found that the nest was damaged and apparently abandoned. It was a closed, retort-shaped pensile ball with a downward-facing entrance tube and was attached 30 cm from the apex of a live branch of a tree (Fabaceae) *c*.5 m above ground (Fig. 1B). The nest was difficult to access, and AMG used a tape measure to estimate that the egg chamber was 15 cm high × 10 cm wide, and the damaged entrance tunnel was 5 cm long × 5 cm wide. He saw no wasp nests nearby.

Peru nest.—On 27 June 2023, while birding from the Amazon Conservatory for Tropical Studies canopy walkway (03°15′07″S, 72°54′26″W; 100 m) in the Napo-Sucusari Biological Reserve, Loreto, north-eastern Peru, JSM & CH saw an Olive-faced Flatbill enter a closed, retort-shaped pensile nest high in the canopy of a tornillo *Cedrelinga cateniformis*, presumably to feed the nestlings whose begging calls were audible each time an adult entered it. We did not monitor the nest closely but saw an adult deliver food several times between 15.30 and 17.00 h. The nest was *c*.12 m above viewing platform number 6, which is 36 m above ground, and *c*.2 m below the tree's highest branches; thus, it was *c*.48 m above ground in a 50-m-tall tornillo. A paper wasp nest was *c*.36 cm from the flatbill nest at roughly the same height in the tree (Fig. 1C). We were unable to examine the nest closely, but it appeared to be constructed of small twigs, rootlets and other plant fibres, and was attached to the underside of a branch that was *c*.2 cm in diameter. Begging calls suggested that more than one nestling was present.

We observed the nest again during 08.00–09.30 h on 28 June and 06.40–09.00 h on 30 June, and saw an adult deliver food several times during each visit. We were unable to identify the food items or to determine if both adults provisioned the nestlings (we saw two adults near the nest simultaneously only once, on 28 June, but were unable to determine if both birds carried food). On 30 June, RZ photographed an adult as it exited the nest four times during 07.32–08.29 h. By examining the burst of photos (20 frames per second) he obtained each time the adult left the nest, we determined that the bird backed out of the nest rather than exited the nest head-first (Figs. 2A–D).

Discussion

Olive-faced Flatbill builds the same closed, retort-shaped pensile nest as do congenerics and, in two of three cases known thus far, place their nests close to active wasp nests. All three nests also appeared to be partially covered with black fungal rhizomorphs (*Marasmius* spp.), as has been reported for other Neotropical birds, including *Tolmomyias* flatbills (e.g., Freyman 2007, Anciães *et al*. 2012, Elliott *et al*. 2019, Gomes & Leite 2019, Koch *et al*. 2020). Little new can be said about the breeding biology of Olive-faced Flatbill on the basis of our brief observations. Nestlings were present during the dry season in late June in Peru and late September in Ecuador, and the nest in Brazil was under construction in May at the start of the dry season. This is consistent with observations of fledglings in mid-April during the dry season in southern Colombia (Willis 1988). Orange-eyed Flatbill *T. traylori* is the only *Tolmomyias* whose nest has not been described (Schulenberg & Kirwan 2020), although it presumably builds a retort-shaped pensile nest similar to that of its congeners.

Our observation in Peru that adults backed out of the nest tube was unexpected. Using only binoculars, it was not possible to determine which way birds faced as they exited the nest. We found no information on how birds exit retort-shaped nests and thus have no idea whether such behaviour is common among birds that build this type of nest. One plausible explanation is that the behaviour occurs when older, more mobile nestlings are present so

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Figure 2. Adult Olive-faced Flatbill *Tolmomyias viridiceps* exiting nest after provisioning nestlings, Napo-Sucusari Biological Reserve, Loreto, Peru, 30 June 2023; images in chronological order as the bird backed out of the nest tube (A, B), turned in mid-air (C) and left the nest area (D) (Robert Zirl)

that adults need ascend the entrance tube just far enough for the young to receive food at the chamber entrance. Rather than enter the chamber proper so that they can turn around and exit head-first, the adults exit the nest simply by dropping backwards from the nest tube.

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Addresses: Jeffrey S. Marks, Montana Bird Advocacy, Missoula, Montana 59802, USA, e-mail: jsmarks17@gmail.com. Robert Zirl and Cynthia Hudson, Alberton, Montana 59820, USA. Ramiro Yabar, Cusco, Peru. Arthur Monteiro Gomes, Instituto Nacional de Pesquisas da Amazônia, Departamento de Ecologia, Manaus, Brazil. Harold F. Greeney, Yanayacu Biological Station & Center for Creative Studies, Quito, Ecuador.

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