

'RAISED TAIL' BEHAVIOR OF THE COLLARED TROGON (*Trogon collaris*)

DESPLIEGUE DE LA COLA LEVANTADA EN EL TROGON ACOLLARADO (*Trogon collaris*)

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ABSTRACT

The 'raised tail' behavior of two pairs of Collared Trogon (*Trogon collaris*) was observed in the Coastal Range of Venezuela. In both observations, a male and female rapidly raised their tails to a horizontal position and slowly returned them to a vertical hanging position. During these displays, both individuals simultaneously emitted loud calls approximately every 5 seconds, forming a duet. The first display lasted 30 minutes while the second lasted approximately 45 minutes. This 'raised tail' behavior has been reported for several species of trogons during courtship and when mobbing a predator. Because there were no predators present during both observations, the described 'raised tail' behavior was most likely a courtship display.

Key words: Behavior, Courtship, Display, Trogonidae, Venezuela.

RESUMEN

Dos episodios de despliegue de la 'cola levantada' fueron observados en el Trogon Acollarado (*Trogon collaris*) en la Cordillera de la Costa en Venezuela. En ambos despliegues se observaron a un macho y a una hembra moviendo la cola de forma rápida hasta llevarla a una posición horizontal, mientras emitían llamadas aproximadamente cada cinco segundos. Este despliegue ha sido reportado para varias especies de trogones en dos contextos, de cortejo o como amedrentamiento al depredador. En los casos reportados en esta nota, debido a que no se observó algún factor que amenazara a las aves, probablemente correspondan a parte del cortejo.

Palabras clave: comportamiento, cortejo, despliegue, Trogonidae, Venezuela.

Birds exhibit different types of behavior during their daily activities (Gill 2006). The most complex behaviors are related to courtship, e.g., singing, dancing, specific postures and loud calls. Elaborated courtship displays are shown by several species, e.g., manakins (Fusani *et al.* 2007), cotingas (Snow 1961, Snow 1971), birds of paradise (Irestedt *et al.* 2009), peacocks (Dakin & Montgomerie 2011) and grouses (Baines 1996).

Another common display in birds is the mobbing of a predator, defined as a display performed by a bird against a potential predator (Caro 2005). These displays are composed of stereotyped movements of the wings and tail as well as the emission of calls (Hartley 1950, Curio 1978). There are many families of birds that perform this display including: Tyrannidae (Motta-Junior 2007), Mimidae, Furnariidae, Emberizidae (de Castro-Siqueira 2010), Parulidae (Hurd 1996), Thraupidae, Corvidae and Laridae (Welbergen & Davies 2009), among others.

In many displays, the tail has an extremely important role. Fitzpatrick (1998) suggests that approximately 80%

of bird species, including Momotus (Bitton & Doucet 2014) and trogons (Hall & Karubian 1996), use the tail to perform some kind of display. The 'raised tail' behavior occurs when perched individuals move their tail upward and backward while producing loud calls (Taylor 1994).

The 'raised tail' behavior has been reported to occur during courtship for several Trogonidae species, including: Hispaniolan Trogon (*Priotelus roseigaster*), Slaty-tailed (*T. massena*) Black-throated (*T. massena*), Black-throated (*T. rufus*) (Slud 1964), Elegant (*T. elegans*) (Wetmore & Swales, 1931, Hall & Karubian 1996), and Collared Trogon (*T. collaris*) (Skutch 1956, Inman 2014). Mobbing a predator using the 'raised tail' behavior has also been described for Black-throated and Elegant Trogon (Bitton & Doucett 2014, Collar 2001, Cully 1986, Johnsgard 2000).

In this note, I describe two observations of the 'raised tail' behavior in the Collared Trogon (*Trogon collaris*), a species with a total length of *ca.* 25 cm, and that it is usually found in humid and dry forests from 300 to 2.300 m

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a.s.l. in Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Surinam, Trinidad and Tobago, and Venezuela (Hilty 2003, Inman 2012). This trogon can be found alone, in pairs, or as part of mixed flocks (Stiles & Skutch 1989), and has been reported to participate in calling assemblages (Sainz-Borgo 2014). Although it is a relative common species, its general behavior is not well known.

The Collared Trogon exhibits a strong sexual dimorphism (Hilty 2003). Males have a green back, shoulders, head and breast. The wing-coverts are finely vermiculated black and white. A broad white band separates the green breast from the crimson belly. The undertail is barred black and white. Females have the head, upperparts and breast rufous-olive. A broad white band separates the brown breast from the salmon-orange underparts. The undertail is white with grey scribbling on the sides (Meyer de Schauensee & Phelps 1978, Hilty 2003, Restall *et al.* 2006).

The first *T. collaris* 'raised tail' observation occurred on September 14, 2014 at 07:15 h in a semideciduous forest located at the Avila National Park in the Quebrada Quintero sector of Caracas city, Venezuela (1380 m a.s.l., 10° 30' 62" N, 66° 53' 25" W). The male and female were located in different trees which were separated by approximately seven meters and bordered a foot path. The pair was approximately five meters off the ground. The individuals rapidly wagged their tails to a horizontal position and slowly returned them to the vertical position while emitting loud calls approximately every five seconds, forming a duet. They performed this display for 30 minutes. They subsequently moved to a branch approximately 20 meters further from my position, and continued the display. The display stopped when pedestrians passed by, causing both individuals to fly away.

I also observed a male and a female Collared Trogon on December 2, 2014 at 08:20 h in a fragment of humid forest at the campus of the Universidad Simón Bolívar in Miranda State, Venezuela (10° 24' 49" N, 66° 53' 15" W, 1.200 m a.s.l.). Both birds perched in the same tree, ten meters above the ground and six meters from each other.

They emitted loud calls in a duet while moving their tails upward to a horizontal position and back to a vertical hanging position, as previously described. After performing this behavior for approximately ten minutes, the male caught an insect in flight and returned to the branch. After five minutes, the male caught another insect in the air and returned to the same branch. He then moved to a higher branch a few seconds later. Both individuals continued calling and moving their tails. Approximately three minutes later, the female moved to a branch closer to the male. They continued to display, calling and wagging their tails. Fifteen minutes later, both flew off to a nearby forest.

Crandall (1914) describes this 'raised tail' behavior in individuals of the Collared Trogon as a sexual display without expounding further detail. The current report characterizes the same display and infers its causes. The first observation was made in one of the most crowded sectors of the El Avila National Park. The second observation was made in a patch of forest inside the campus of the Universidad Simón Bolívar, which is rarely visited by humans. However, the behavior and duration of both displays were similar at both locations, suggesting that neither human presence nor a different disturbing factor initiated the displays. The interpretation is, thus, that the displays were part of courtship behavior.

General knowledge of Collared Trogon behavior is rather poor. As follows, it is not clear whether the 'raised tail' behavior is typical courtship or mobbing behavior. The evidence of Crandall (1914) and Bitton & Doucet (2014), along with the description provided in this note, indicate that both causes for the behavior are possible. Further study of this behavior may shed light on the external or internal factors contributing to its initiation and maintenance.

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