



**FIRST NEST REPORT OF VARIED SOLITAIRE (*Myadestes coloratus*),  
AN ENDEMIC BIRD SPECIES OF PANAMA AND COLOMBIA**

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**ABSTRACT**

Here we present the first description of nests for the Varied Solitaire *Myadestes coloratus*, a regional endemic species (Panama and Colombia). We found two nests in Cerro Chucantí Natural Private Reserve (CCNPR), the first nest was seen on May 6, 2019 with three hatchlings inside and the second on May 9, 2020 with three eggs. The nests were constructed out of green mosses and foliaceous liverworts over tree trunks covered with moss, they were cup shaped, at 1.3 and 1.5 meters high. The GPS coordinates of the nests were (8° 47'44.8" N, 78°27'47.4 W, 1276 m) and (8° 48'09.5" N, 78°27'37.0 W, 1393 m) respectively. This report represents the first for this species which is under the Endangered (EN) category of Panama's List of threatened species of Fauna and Flora by Ministerio de Ambiente.

**KEY WORDS**

Breeding ecology, liverworts, mosses, Endemic Bird Areas, threatened

**PRIMER REPORTE DE NIDO DE SOLITARIO VARIADO  
(*Myadestes coloratus*), UNA ESPECIE DE AVE ENDÉMICA DE  
PANAMÁ Y COLOMBIA**

**RESUMEN**

Aquí presentamos el primer registro de nido de solitario variado *Myadestes coloratus* especie endémica regional (Panamá y Colombia). Encontramos dos nidos en la Reserva Natural Privada Cerro Chucantí, el primer nido fue encontrado el 6 de mayo de 2020, en su interior tenía 3 polluelos y el segundo el 9 de mayo de 2019 con 3 huevos. Los nidos fueron construidos con musgos verdes y hepáticas foliáceas, sobre troncos cubiertos con musgos y en forma de copa a alturas de 1.3 y 1.5 metros respectivamente. Las coordenadas de los nidos fueron (8° 47'44.8" N, 78°27'47.4 W, 1276 msnm) para el primero y (8° 48'09.5" N, 78°27'37.0 W, 1393 msnm) para el

segundo. Este reporte representa el primero para esta especie la cual está bajo la categoría de En Peligro (EN) según el listado de especies amenazadas de fauna y flora en Panamá por el Ministerio de Ambiente.

## **PALABRAS CLAVES**

Ecología reproductiva, hepáticas, musgos, Áreas de Aves Endémicas, amenazada

## **INTRODUCTION**

Despite Panama's having some of the most thoroughly studied neotropical avifauna, with several field guides and extensive literature (e.g., Wetmore 1972, Wetmore *et al.*, 1984, Robbins *et al.*, 1985, Ridgely & Gwynne 1989, Angehr 2010), little is known about the breeding ecology of numerous bird species (Christian 2001, Greeney & Halupta 2008). In particular, studies of the endemic highland birds of Eastern Panama are scarce and more focused on checklists resulting from expeditions to massifs such as Cerro Pirre, Alturas de Nique, Cerro Tacarcuna and its spur Cerro Malí (Wetmore 1965, 1968, 1972, Wetmore *et al.* 1984, Robbins *et al.*, 1985, Ridgely & Gwynne 1989, Hruska *et al.*, 2016), Altos de Quía (Wetmore & Galindo 1972), Serranía de Jungurudó (Angehr *et al.* 2004), Serranía de Majé (Angehr & Christian 2000) and the foothills of Cerro Piña (Miller *et al.*, 2011), advocating to the necessity of more studies of nesting behavior of the birds of this endemic bird area (EBA) which is at the same time threaten by deforestation for agricultural activities and logging (Batista *et al.*, 2020).

In Panama's Eastern Highlands the varied solitaire (*Myadestes coloratus*) is an endemic species distributed across Cerro Pirre (1,500–1,600 m), Alturas de Nique, Cerro Quía (900 m), Cerro Malí (1,400–1,600) (Ridgely & Gwynne 1989, Wetmore *et al.*, 1984), Serranía de Majé (c.1,250–1,500 m) and Serranía de Jungurudó (c.1,000 m) (Angehr & Christian 2000, Angehr *et al.*, 2004). Almost nothing is known about its reproductive biology (Wetmore *et al.*, 1984), additionally according to Miller *et al.* (2007) this species' population from Serranía de Majé is isolated from the population of Pirre, exhibiting 2% of difference in mtDNA between these populations. Due to their isolated distribution and the historical difficult access, knowledge of this species has been scarce; but now thanks to the efforts of the Asociación ADOPTA el Bosque Panama that manages the Cerro Chucantí Natural Private Reserve (CCNPR) in Serranía de Majé and the logistical support of this institution, has allowed scientists to visit this place and study the local fauna and flora that inhabit there.

## RESULTS

Since the description of *Myadestes coloratus* as a species by Nelson (1912) there has not been a description of the nest of this specie (Wetmore *et al.*, 1984, Ridgely & Gwyne 1989, 1993). On May 5, 2019 Jorge L. Garzon found a nest in Cerro Chucantí Natural Private Reserve (8° 47'44.8" N, 78°27'47.4 W, 1276 meters) and Arcelio Castillo found another on May 9, 2020 nearby (8° 48'09.5" N, 78°27'37.0 W, 1393 meters). The nests were made with green mosses and foliaceous liverworts, lined with dark fibrous roots and stem of liverworts. Nests were built over tree trunks covered with moss and had a cup shape very similar to that reported for *Myadestes melanops* (Styles & Skutch, 1989). The first nest was in the fork of tree trunk, at 1.3 meters high, with three nestlings inside. The nestling eyes were open, the base of the beak had a yellow color, wing feathers brown and gray, and the back was gray (Fig. 1). The second nest was on a tree trunk at 1.5 m high with three eggs, the measurements of the cup's nest were 4.0 x 3.5 inches. Eggs had an oval shape and buff coloration spotted with rufous brown especially on the large end (Fig. 2).

An improved understanding of the reproductive biology of this particular species may provide authorities the knowledge to make policies to protect this endemic species which is considered Endangered (EN) under the List of threatened species of Fauna and Flora in Panama (Mi Ambiente, 2016). Since *Myadestes coloratus* inhabits humid montane forest with dense cover epiphytes that are used to build nests, forest fragmentation and climate change can reduce the availability of nesting sites, compromising their nesting success (Gradstein, 2008; Loaiza-Muñoz *et al.*, 2017). The present report of nests for this species provides a baseline for further studies on breeding ecology involving questions like nesting success, survival of both hatchings and nestlings, parental care, seasonality, and other factors which have been studied in other members of the genus *Myadestes* (Greeney & Halupta, 2008).

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Fig. 1. Hatchlings of *Myadestes coloratus* inside of a nest constructed out of green mosses and liverworts in the Cerro Chucantí Natural Private Reserve



Fig. 2. Clutch of 3 eggs of *Myadestes coloratus* builded over a trunk at 1.5 high in Cerro Chucantí Natural Private Reserve.

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