



A New Distribution Record and a Previously Undocumented Color Pattern of the Hispaniolan Yellow Treefrog, *Osteopilus pulchrilineatus* (Hylidae), in the Dominican Republic

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The Hispaniolan Yellow Treefrog, *Osteopilus pulchrilineatus* (Cope 1869), is widely distributed on the island of Hispaniola at elevations to 1,697 m asl. (Schwartz and Henderson 1991; Stuart et al. 2008; Sangermano et al. 2015a). Once considered Endangered (EN) by the IUCN (Hedges et al. 2004), the species was reevaluated during the Caribbean Amphibian Ark Conservation Needs Assessment and, based on new locality records and studies of habitat use (Foden et al. 2013; Sangermano et al. 2015a), an estimated occupation area of between 1,351 and 2,000 km², a severely fragmented population, and a continuous decrease in its area of occurrence and habitat quality (Stuart et al. 2008; Henderson and Powell 2009; Powell and Incháustegui 2009; Sangermano et al. 2015a, 2015b), its threat status was reduced to Vulnerable (VU) (IUCN SSC Amphibian Specialist Group 2013b).

Herein we document a new locality record for the species at Rancho de la Guardia, Hondo Valle, Elías Piña, República Dominicana (18.705989°N, 71.660082°W; elev. 370 m asl) at the northern base of the Sierra de Neyba (Fig. 1). This is a well-known historical locality for collecting fossils, insects, and mammals (Fairchild 1980; Borroto-Paéz et al. 2012; Velazco et al. 2013; Woodman 2018; Núñez-Novas et al. 2019); however, very few herpetological surveys have been conducted there.

The new locality is 45 km east of the closest confirmed record in San Juan Province (Sangermano et al. 2015a). Habitat consists of humid forest over rocky soil over limestone bedrock. Human activities have altered the area with pastures and banana (*Musa* sp.) and cacao (*Theobroma* sp.)

plantations, but remnants of natural vegetation persist (Fig. 2), especially along the river, the Charco de Rancho de la Guardia, which traverses the area.

At 2010 h on 1 March 2020, as acoustic activity was just beginning, we heard calling Hispaniolan Yellow Treefrogs. In a shallow backwater covered in a tangle of small plants, dry branches, and lianas, we found seven males perched on low vegetation at heights of 0.2–0.5 m above the water (Fig. 3); some were actively calling. We also found tadpoles (Fig. 2E) in the water and four additional frogs (three calling males and a female with eggs) on emergent vegetation within 300 m of the source of the water. Other species heard and observed were Common Chirping Frogs (*Eleutherodactylus abbotti*), Hispaniolan Laughing Treefrogs (*Osteopilus dominicensis*), and Hispaniolan Green Treefrogs (*Boana heilprini*), the last of which is a threatened species (VU) (IUCN SSC Amphibian Specialist Group 2013a) that had been recorded nearby.

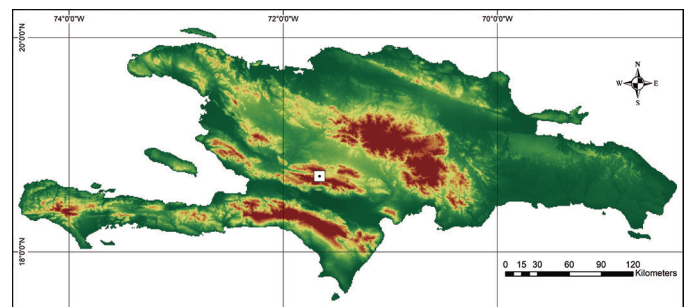


Fig. 1. Map of Hispaniola showing the locality at Rancho de la Guardia, Hondo Valle, Elías Piña, República Dominicana, where the Hispaniolan Yellow Treefrog (*Osteopilus pulchrilineatus*) was documented for the first time.



Fig. 2. Habitat at Rancho de la Guardia, Hondo Valle, Elías Piña, República Dominicana, a new locality for the Hispaniolan Yellow Treefrog (*Osteopilus pulchrrilineatus*) (A–D). A larval Hispaniolan Yellow Treefrog at the site (E). Photographs by Cristian Marte.



Fig. 3. Seven Hispaniolan Yellow Treefrogs (*Osteopilus pulchrrilineatus*) were active in close proximity to one another at Rancho de la Guardia, Hondo Valle, Elías Piña, República Dominicana. Five are visible in this image. Photograph by Cristian Marte.



Fig. 4. A previously unrecorded coloration pattern for the Hispaniolan Yellow Treefrog (*Osteopilus pulchrilineatus*) consists of irregular dark brown spots and blotches on the back (left); typically colored individuals with a uniformly brown (center) or yellow (right) dorsum on which three yellow dorsal lines are often present. Photographs by Cristian Marte.

Two of the Hispaniolan Yellow Treefrogs exhibited a pattern that, to the best of our knowledge, is a new unrecorded coloration pattern for the species (Fig. 4). The typical pattern consists of a uniformly brown or yellow dorsum usually bearing three dorsal lines in various shades of yellow; the lower flanks are yellow and the belly is white to cream (Díaz et al. 2014; Galvis et al. 2016). In contrast, the previously undocumented pattern consists of irregular dark brown dorsal spots and blotches. Two frogs with the newly described pattern were deposited in the Museo Nacional de Historia Natural “Prof. Eugenio de Jesús Marcano” (MNHNSD 23.3893–4). Additional individuals and tadpoles were collected and donated to the Parque Zoológico Nacional, Santo Domingo, República Dominicana. The identity of the frogs was confirmed by Sixto Inchaústegui.

Although the characteristics of the area do not resemble those typically associated with the species (Henderson and Powell 2009; Díaz et al. 2014; Galvis et al. 2015; Sangermano et al. 2015a), this area obviously is capable of sustaining a viable population of Hispaniolan Yellow Treefrogs. In addition, the site is important for herpetofauna, as it has unique biogeographic characteristics that result in populations of species that are morphologically distinct from other known populations elsewhere on the island (Schwartz and Henderson 1991).

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