



Predation by a Cuban Treefrog (*Osteopilus septentrionalis*) on an Adult Tropical House Gecko (*Hemidactylus mabouia*) in Cuba

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Reports of predation on invasive Tropical House Geckos usually are based on fortuitous observations of ephemeral nocturnal events and competitive interactions of sympatric species. Consequently, reports in the literature are rare even for events that occur commonly in nature.

Seven species of geckos have been introduced to Cuba, four of which are house geckos of the genus *Hemidactylus*. The Tropical House Gecko (*H. mabouia*) is the most abundant and widely distributed invasive reptilian species in both urban and rural areas (Borroto-Páez et al. 2015).

The Cuban Treefrog (*Osteopilus septentrionalis*, Hylidae) is native to Cuba, the Cayman Islands, and at least eight Bahamian islands (Henderson and Powell 2009). In the Cuban Archipelago, the Cuban Treefrog is widely distributed on the main island and on at least 15 offshore islands (Estrada 2012; Rivalta González et al. 2014), where it is relatively abundant in rural and some urban areas, associated with some crops, sources of water and other natural and artificial wet places, and is a common commensal species in rural zones (Borroto-Páez and Reyes Pérez 2020). It also has been introduced widely to many Caribbean islands, Costa Rica, and the U.S. states of Florida, Georgia, and Hawaii (Owen et al. 2005; Henderson and Powell 2009; Powell et al. 2011, 2013). Studies of this species have focused largely on introduced populations (e.g., Meshaka 1996, 2001; Owen 2005; Smith 2005; Vargas Salinas 2006).

Cuban Treefrogs are voracious predators with a generalist diet that is highly plastic, consisting primarily of invertebrates (García-Padrón and Rodríguez-Cabrera 2022) but also including small vertebrates such as frogs, lizards, and snakes (Meshaka 1996, 2001, 2011; Owen 2005; Glorioso et al. 2012), as well as cannibalism (Meshaka 2001; Kaiser et al. 2016; Borroto-Páez and Reyes Pérez 2019) and captive birds (Portal Ríos et al 2020). As native Cuban Treefrogs and the invasive Tropical House Geckos (*Hemidactylus mabouia*) are

both commensal species with nocturnal habits that share edificarian spaces, interactions are inevitable.

In July–August 2020, we stayed in a 140 m² fourth-floor apartment in Corralillo (22°58'48"N, 80°36'05"W) in northern Villa Clara Province, Cuba. During our stay, we observed and counted many Cuban Treefrogs (6–7) and a few Tropical House Geckos (3–4) in the apartment, a lower ratio than in previous years (Borroto-Páez and Reyes Pérez 2020).



Fig. 1. Predation by an adult female Cuban Treefrog (*Osteopilus septentrionalis*) on an adult Tropical House Gecko (*Hemidactylus mabouia*) in Corralillo, Villa Clara, Cuba (22°58'48"N, 80°36'05"W), on 26 July 2022. Photograph by Denise Reyes Pérez.

During the night, an indoor light attracted nocturnal insects, principally lepidopterans, and both Cuban Treefrogs and Tropical House Geckos routinely foraged for prey in the living room, kitchen, and bathroom. At 1900 h on 26 July, we detected an adult female Cuban Treefrog (SVL = 96 mm) perched near a water tank and a window in the kitchen in a sit-and-wait foraging position. At 2025 h, we were alerted to a predation event. We took two cellphone photos in the available time (Fig. 1) with the adult House Gecko visible in the mouth of the Cuban Treefrog, which had caught its prey middorsally, swallowed it quickly, and then retreated behind the water tank. During the next three days we checked for related excrement or possible regurgitation but detected none.

Previous records of *Osteopilus septentrionalis* preying on *Hemidactylus mabouia* (Meshaka 2004, 2011; Kingsland 2007; Voirin 2016) all occurred in Florida, where the Cuban Treefrog and Tropical House Gecko are both introduced. Recently, we reported predation of a juvenile Tropical House Gecko within the native range of the Cuban Treefrog (Borrito-Páez and Reyes Pérez 2020) in the same location where we now report predation on an adult gecko.

One possible explanation for the lower number of Tropical House Geckos observed nightly this year could be an increase in the number of Cuban Treefrogs, which not only compete for prey but obviously feed on both juvenile and adult geckos.

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