



# Range Extension of the Checkered Gartersnake, *Thamnophis marcianus* (Baird and Girard 1853), in Costa Rica

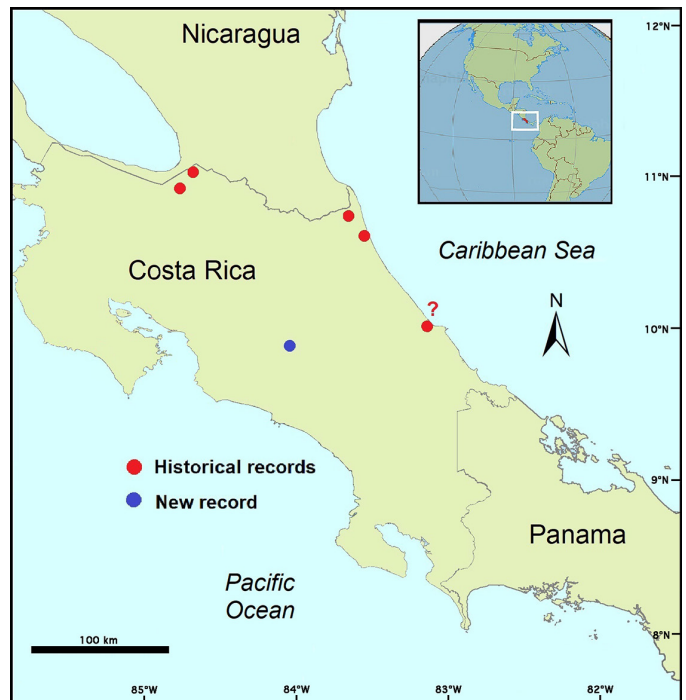
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Gartersnakes in the genus *Thamnophis* (Fitzinger 1843), which are collectively distributed from Canada to Costa Rica (Wallach et al. 2014), comprise 35 currently recognized species of semi-aquatic, diurnally active, viviparous, nonvenomous snakes that feed on fish, amphibians, earthworms, slugs, lizards, birds, and mammals (de Queiroz et al. 2002). Two species (*T. proximus* and *T. marcianus*) have been recorded in Costa Rica (Solórzano 2004; Sasa et al. 2010), where the latter is frequently encountered under windrows of debris that accumulate above the waterline in riverine and coastal habitats (Savage 2002). This species ranges from the southwestern United States to the coastal southeastern portion of Costa Rica from sea level to 1,640 m asl (Köhler 2008). *Thamnophis m. bovalli* occurs in Nicaragua and Costa Rica (Solórzano 2004). Herein we report a new locality in the central valley of Costa Rica.

On 22 May 2020, a gartersnake was encountered in San Juan Norte, Rosario District, Municipality of Desamparados, San José Province (9.7831°N, 85.2639°W; WGS 84; 1,470 m asl). J.A. Campbell, L.W. Porras, and W.W. Lamar confirmed that the snake was *T. marcianus* based on a photo-



**Fig. 2.** Distribution records of the Checkered Gartersnake (*Thamnophis marcianus*) in Costa Rica. Historical records are marked with red dots and the locality of the new record is indicated by a blue dot. The question mark denotes a doubtful record.



**Fig. 1.** A Checkered Gartersnake (*Thamnophis marcianus*) from San Juan Norte, Rosario District, Municipality of Desamparados, San José Province, in the central valley of Costa Rica. Photographer unknown.

graphic voucher (Fig. 1) deposited in the University of Texas at Arlington digital collection (TNHC 114575). The snake was found near a coffee plantation and subsequently released nearby. Little is known about *T. marcianus* in Costa Rica, but the few reports have been mainly in coastal lowlands of the northern Caribbean versant or along the San Juan River on the border with Nicaragua (Fig. 2).

No previous reports place the species in San José Province, with the nearest record in Tortuguero National Park, Tortuguero, Limón Province (10.5833°N, 83.5167°W),

some 100 km NW of Rosario (Solórzano 2004). A record of *T. marcianus* in Peshurst, Limón Province, in the southern Caribbean versant (Savage 2002) is considered doubtful because it originated from a specimen in the collection of the Clodomiro Picado Institute of the University of Costa Rica that received snakes from multiple localities. The Rosario locality is the first record of *T. marcianus* from San José Province in the central valley and first for the species in premontane wet forest. This is one of the most degraded life zones in the country and the few observations of this species indicate that *T. marcianus* occurs only in areas that are seasonally flooded areas or with bodies of water. Identifying and protecting riparian ecosystems is important for species, such as snakes of the genus *Thamnophis*, with very specific habitat requirements.

#### Acknowledgements

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