

New records and defensive behaviour of a rarely seen tarantula, *Trichopelma coenobita* (Simon, 1889) on Trinidad, West Indies

The subfamily Trichopelmatinae of the family Theraphosidae Thorell, 1869 (tarantulas) comprise 31 described species. They are known only from the New World, particularly the Caribbean, Central and South America (Mori and Bertani 2020). However information on the ecology and behaviour of this group is sparse.

Trichopelma coenobita was originally described as *Stothis coenobita* Simon 1889, based on a female specimen from Venezuela. Decades later, a male *T. coenobita* was described for the first time, thanks to a new observation of a male-female pair on Trinidad in February 1964. In this report, we present two additional observations of this tarantula species on Trinidad, expanding its known geographic distribution. These findings supplement the following earlier records of their presence on the island: January 1945 and February 1968, location 10°21'N, 61°13'W; 10-22 February 1964 -Arima Valley; and 14-26 July 1978 - Blanchisseuse (Mori and Bertani 2020). West (1984) misidentified a specimen of *T. coenobita* from the Textel Station, Blanchisseuse Road, as *Cyriocosmus elegans*, which also occurs there (Sherwood *et al.* 2022).

Most striking is the number of distinctive physical features, most notably the abdominal pattern, that distinguish *T. coenobita* from other sympatric theraphosids.

Although Mori and Bertani (2020) described their physical characteristics in detail, not much could be said about *Trichopelma coenobita* reproduction, natural behaviour, prey preference and hunting strategies or conservation status.

Observations

On 26 June 2021, at approximately 1955h, while exploring the forests near the lookout, west of Maracas Beach, S.E. George (SEG) observed and photographed a small, patterned tarantula sitting very still on a leaf. This was later identified as *Trichopelma coenobita* by D. Sherwood (DS) (Fig. 1). While attempting to photograph the tarantula, the leaf on which it was sitting was disturbed. SEG then observed the tarantula retract all its appendages tightly to its body, forming almost a spherical shape and protecting its cephalothorax. This appears to be the first report of defensive behaviour in *T. coenobita*.

Another independent observation of this tarantula was made by T. Prime near Biche Forest on 21 November 2022 at approximately 1818h (iNaturalist observation 172424869, Fig 2). This represents another new distribution record. According to the information received, this specimen was

much smaller and was likely a juvenile. It was found under a rock, and it displayed the same defensive behaviours as previously described.

In recent years, little to no research has been done on the ecology of theraphosids in Trinidad and Tobago, which could be one reason why distribution and ecological data on *T. coenobita* is so limited.

These new distribution records, and the first behavioural observations of the genus contribute towards a better understanding of the ecology of this poorly known species.



Fig. 1. Dorsal view of *Trichopelma coenobita* at the lookout west of Maracas Beach, Trinidad. June 2021. Photo by S.E. George.



Fig. 2. Dorsal view of *T. coenobita* in defensive posture near Biche, Trinidad. November 2022. Photo by T. Prime.

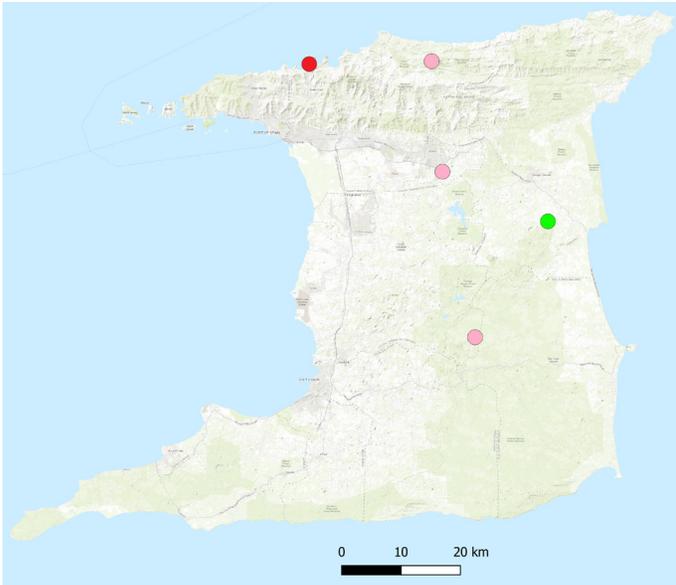


Fig. 2. Distribution of *Trichopelma coenobita* on Trinidad based on previous records and recent observations described in this work. Red circle = new observation by S.E. George reported herein, pink circles = previous literature records (Mori & Bertani, 2020), green circle = general locality of second new observation by T. Prime.

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