Microtityus rickyi (Dwarf Scorpion)

Order: Scorpiones (Scorpions)
Class: Arachnida (Spiders, Scorpions and Mites)
Phylum: Arthropoda (Arthropods)

Fig. 1. Dwarf scorpion, *Microtityus rickyi*.

[www.ntnu.no/ub/scorpion-files/m_rickyi2.jpg, downloaded 23 October 2016]

TRAITS. *Microtityus rickyi* are the smallest scorpions of the Western Hemisphere with an average size of 19mm. A light yellow pigmentation with black to light brown spots is found throughout the carapace (anterior plate that covers the head and thorax) and opisthosoma (segmented mid-body and tail). Its stinger is dark brown. The almost triangular carapace with a distinctly notched margin is characteristic of *Microtiyus rickyi* (Fig. 1). Sexual dimorphism is exhibited in regards to their size; the largest females are 18.6mm and males 16.6mm (Kjellesvig-Waering, 1966)

DISTRIBUTION. *Microtityus rickyi* are endemic to Trinidad and Tobago, found nowhere else, and rather rare, comprising less than 1% of the scorpion population sampled (Kjellesvig-

Waering, 1966). *Microtityus rickyi* can be found at Lady Chancellor Hill, Mt. St. Benedict, Chacachacare Island, Gaspar Grande Island (Fig. 2), and Speyside Tobago (Prendini, 2001).

HABITAT AND ACTIVITY. *Microtityus rickyi* are predominantly found hanging motionless on the underside of rocks within forests, on exposed soil banks or leaf litter though some have been found near the coast and on hills at heights of 200m. They can also be considered as semi-arboreal as some have been found a few metres up tree trunks (Prendini, 2001).

FOOD AND FEEDING. Not much information is available on the specific diet of *Microtityus rickyi*. However, in a study by Lourenco et al. (1999) they were fed crickets and spiders. Like all scorpions, digestion begins as an external complex process until entrance into its preoral cavity (a cavity anterior to the mouth containing digestive juices) and passage to the gut. They have the capability to consume large amounts of food in a single sitting, and the ability to survive for long periods without food due to an extremely low metabolic rate and the efficiency of food storage within the body (Polis, 1990).

REPRODUCTION. Mating between scorpions is characterised by a unique and complex display of behaviour often referred to as a dance; the 'promenade à deux' (walk for two) which is an exclusive courtship and mating ritual to scorpions (Polis, 1990). Typical to *Microtityus rickyi* are small litter sizes; broods of 3-6 juveniles, born live (Figs 1 and 3). Juveniles at birth are comparatively large; on average about one third the length of the mother (Lourenco, 2007). Embryonic development extends over a period of 3-4 months and after birth juveniles climb onto the mother's back where growth and development is continued until they moult for the first time. At this point they leave their mother to exist independently (Polis, 1990). A total of 4 moults extended over an average period of 249 days occur for the attainment of adulthood, at a relatively fast rate as compared to other species of the Buthidae family. Once adult, its lifespan ranges from 30-35 months or even longer (Lourenco et al., 1999).

APPLIED ECOLOGY. The dwarf scorpion is not listed on the IUCN Red List; however incessant deforestation for the sake of development threatens many species including *Microtityus rickyi* that form their habitat within these areas. In regards to the toxicity of the sting of *Microtityus rickyi*; no cases have been reported and therefore they are considered to be non-toxic to vertebrates (Borges, 2013).

REFERENCES

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Posted online: 2016

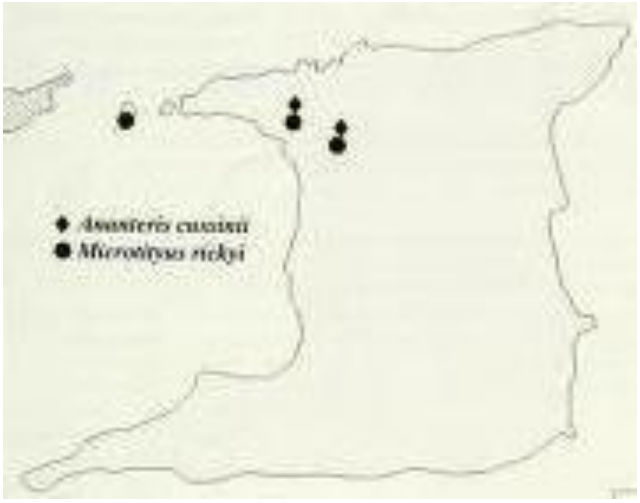

Fig. 2. Map of Trinidad showing distribution of *Microtityus rickyi* (●).

[From Lourenço and Huber, 1999]

Fig. 3. Female *Microtityus rickyi* with young.

[From Lourenço et al., 1999]