

Singapore black tarantula from Central Catchment Nature Reserve

Subject: Singapore black tarantula, *Selenocosmia* sp. (Arthropoda: Araneae: Theraphosidae).

Subject identified by: David Court & Joseph Koh.

Location, date and time: Singapore Island, Central Catchment Nature Reserve, Nee Soon forest; 14 May 2014; ca. 2230 hrs.

Habitat: Mature secondary forest, among leaf litter on forest floor.

Observer: Tan Heok Hui.

Observation: A female of about 50 mm body length (Fig. 1) was observed on the forest floor near a burrow.

Remarks: This Singapore species, a candidate for Red Data Book listing, has previously been identified as *Selenocosmia javanensis* Walckenaer. However, when the genitalia are examined, it appears to be distinct and apparently undescribed. A similar if not identical species occurs in Johor, Malaysia. The related *Selenocosmia tahanensis* Abraham has been described from Taman Negara, Peninsular Malaysia. Old Singapore records for the related selenocosmiine genus *Coremiocnemis* may have in fact referred to *Selenocosmia* sp. There are two other tarantulas recorded from Singapore. The common Singapore tarantula (*Phlogiellus* sp.), which grows up to 23 mm body length, is also ground dwelling. The other, the Singapore blue ornithoctonine tarantula (*Lampropelma violaceopes/Cyriopagopus* sp.), which can grow to 60 mm body length, is an aboreal species. Both the Singapore black and Singapore blue tarantulas appear to be restricted to the Central Catchment Nature Reserve; while the Singapore tarantula can be found in parkland and even home gardens (personal observations). The theraphosid subfamily Selenocosmiinae is currently under taxonomic review.

Very little is known of the biology of the Singapore black tarantula. Females may attain a body length of 55mm and are capable of digging new burrows or enlarging old ones. Burrows are lined with fine silk and may have several entrances. Dead leaves may be pulled in front of the burrow and attached by silk, thus camouflaging the entrance. Prey is likely to compose of crickets, beetles and other terrestrial arthropods, but might also include small frogs and small lizards. Predators could be centipedes, flatworms, scorpions and larger lizards. Adult females may occasionally be seen on the forest floor, well away from their burrow. They can be seen standing on 'tiptoe' whilst clinging on to a large, dirty white silk-enclosed egg cluster (egg-sac). It is not known if this behavior constitutes a dispersal process. Adult males of around 40 mm body length are very seldom seen and may be shorter-lived than the females. We would expect them to leave their burrows on sexual maturation and roam about in search of females.

Selenocosmiine spiders are powerful and may be very quick and aggressive when disturbed. Their fangs (see Fig. 2) are easily capable of penetrating human skin. An overseas case of a bite by a spider of this subfamily included erythema, nausea, vomiting, severe retro-orbital headache, photophobia, urinary frequency, dysuria and rigor (Ahmed et al., 2009).

Reference: Ahmed, N., M. Pinkham & D. A. Warrell, 2009. Symptom in search of a toxin: muscle spasms following bites by Old World tarantula spiders (*Lampropelma nigerrimum*, *Pterinochilus murinus*, *Poecilotheria regalis*) with review. *Quarterly Journal of Medicine*. 102: 851–857.

Note: Other *Selenocosmia* species are listed in Platnick's World Spider Catalogue: <http://research.amnh.org/iz/spiders/catalog/INTRO1.html> (accessed May 2014).

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Fig. 1. Dorsal view of female Singapore black tarantula, around 50 mm body length.



Fig. 2. Ventral view of Singapore black tarantula with close-up of the head showing a pair of long fangs.

Photographs by Tan Heok Hui