

## First observation of *Myrmarachne* species feeding on ants (Araneae: Salticidae: Myrmarachnini)

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*Myrmarachne* MacLeay 1839 is a large genus of salticid spiders, long known to mimic the appearance and mannerism of ants but not previously known to prey on them (Edmunds 1978; Jackson & Willey 1994; Ceccarelli 2007; Ramachandra & Hill 2018). Here I report my observations of predation on ants by two species of *Myrmarachne*.

The first *Myrmarachne* species (*M.* sp. A; Figure 2) was found whilst I was collecting and preparing the fruit of the Roselle (*Hibiscus sabdariffa*; Figure 3:4) from my garden in Chiang Dao province, northern Thailand. This species was discovered to be nesting within the fruit, where the ant that it appeared to mimic (*Dolichoderus* sp.; Figure 1:1) was frequently found. Preparation of the Roselle fruit involved removal of the fleshy outer layer from the seeds inside. Both *Dolichoderus* ants and *Myrmarachne* spiders were found to inhabit the cavity between the outer layer and the seeds. I collected two females of this *Myrmarachne* species for photographic documentation. When I released the first of these females (Figure 2:1-4) onto a wooden chopping board in my kitchen to be photographed it immediately spotted and chased down a small ant (*Tapinoma melanocephala*; Figure 1:2) that happened to be in the same area. The female *Myrmarachne* fed on this ant and then proceeded to capture and to feed on two more of these ants during the same photo session. A second female of the same species (*M.* sp. A; Figure 2:5-7) acted in the same manner, catching and consuming two of the same small ants as I photographed it.



**Figure 1.** Ants from Chiang Dao Province, Thailand. **1,** *Dolichoderus* sp., a larger ant apparently mimicked by *Myrmarachne* sp. A. **2,** Feeding group of smaller ants, *Tapinoma melanocephala*, taken as prey by *Myrmarachne* on a kitchen chopping board.



**Figure 2.** *Myrmarachne* sp. A. from Chiang Dao Province, Thailand. **1-4**, Female feeding on small ants, *Tapinoma melanocephala* (16 DEC 2018). **5-7**, Second female which fed on *T. melanocephala* (19 DEC 2018). **8**, Male found on Roselle plant that appears to be of the same species as the two females (2 JAN 2019).

I later found a male that appeared to be conspecific with these females (*M. sp. A*; Figure 2:8) on the same Roselle plant, but I did not observe this male feeding on the smaller ants as there were none present on the day that I photographed it.

Subsequently I found a female representing a second *Myrmarachne* species (*M. species B*; Figure 3:1-3) on another Roselle plant within my garden. When released on the same kitchen chopping board this female was quick to spot, chase and consume the same ant species (*Tapinoma melanocephala*). This supports the hypothesis that, although predation on larger ants has not been observed, predation on small ants represents a normal behaviour for a number of species in the genus *Myrmarachne*. To date I have not collected a male from the site where this second species was found.



**Figure 3.** *Myrmarachne* sp. B. from Chiang Dao Province, Thailand. **1**, Female feeding on small ant, *Tapinoma melanocephala* (26 DEC 2018). **2-3**, Two more views of the same female *Myrmarachne*. **4**, Roselle fruit (*Hibiscus sabdariffa*).

Some Roselle fruit was occupied by both *Myrmarachne* sp. A and the chrysilline *Siler semiglaucus* (Figure 4). The latter species is known to prey on ants and their brood, including large ants of the genus *Dolichoderus* (Jackson & Van Olphen 1992; Jackson et al. 1998; Grob 2015; Hawes 2018).



**Figure 4.** Adult female *Siler semiglaucus* (Simon 1901) feeding on an ant, Chiang Dao Province, Thailand (30 NOV 2018).

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