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Predation on an ant-mimicking jumping spider (Araneae: Salticidae: *Myrmarachne plataleoides*) by an ant-eating web spider (Araneae: Theridiidae: *Chrysso* sp.)

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Abstract. Predation on an adult male ant-mimicking salticid, *Myrmarachne plataleoides*, by an ant-eating theridiid spider (*Chrysso* sp.) is documented.

Key words. Karnataka, *Myrmaplata*, *Oecophylla smaragdina*

Theridiid spiders are thought to have evolved largely as predators on ants (Liu et al. 2016). Here we report predation on the ant-mimicking jumping spider *Myrmarachne plataleoides* (O. Pickard-Cambridge 1869) by a theridiid (sp. indet.) of the genus *Chrysso* O. Pickard-Cambridge 1882. Related observations (Figure 3:1-5) were documented by one of the authors (Abhijith) at his Indraprastha organic farm, Mysuru, Karnataka, India.

Myrmarachne plataleoides (Figure 1) is widely distributed in tropical south and southeast Asia (Ramachandra & Hill 2018), an ant-mimic that associates with colonies of the Green Tree Ant *Oecophylla smaragdina* Fabricius 1775 (Figure 2), and is known to feed on smaller spiders (Oecobiidae: *Oecobius*; Abhijith, Hill & Pai 2020). Although the association with *Oecophylla* may represent an obligate relationship for *M. plataleoides*, these ants also represent a continuous danger (Ramachandra & Hill 2018).

Since the *Chrysso* shown here fed on ants, including *Oecophylla smaragdina* (Figure 3:4-9), they might also take an ant-mimic like *Myrmarachne plataleoides* from time to time. Here (Figure 3:1-3) we document predation on an adult male *M. plataleoides* by a *Chrysso*, sp. indet. This adds one more factor to the downside of this ant-mimicry. The ants themselves are very dangerous (Ramachandra & Hill 2018), and anything that preys on these ants also represents a danger. The upside of this relationship, almost certainly based on avoidance of these ants by predators that might otherwise threaten the ant-mimicking spiders (*Batesian mimicry*), must be great indeed to counter these disadvantages.

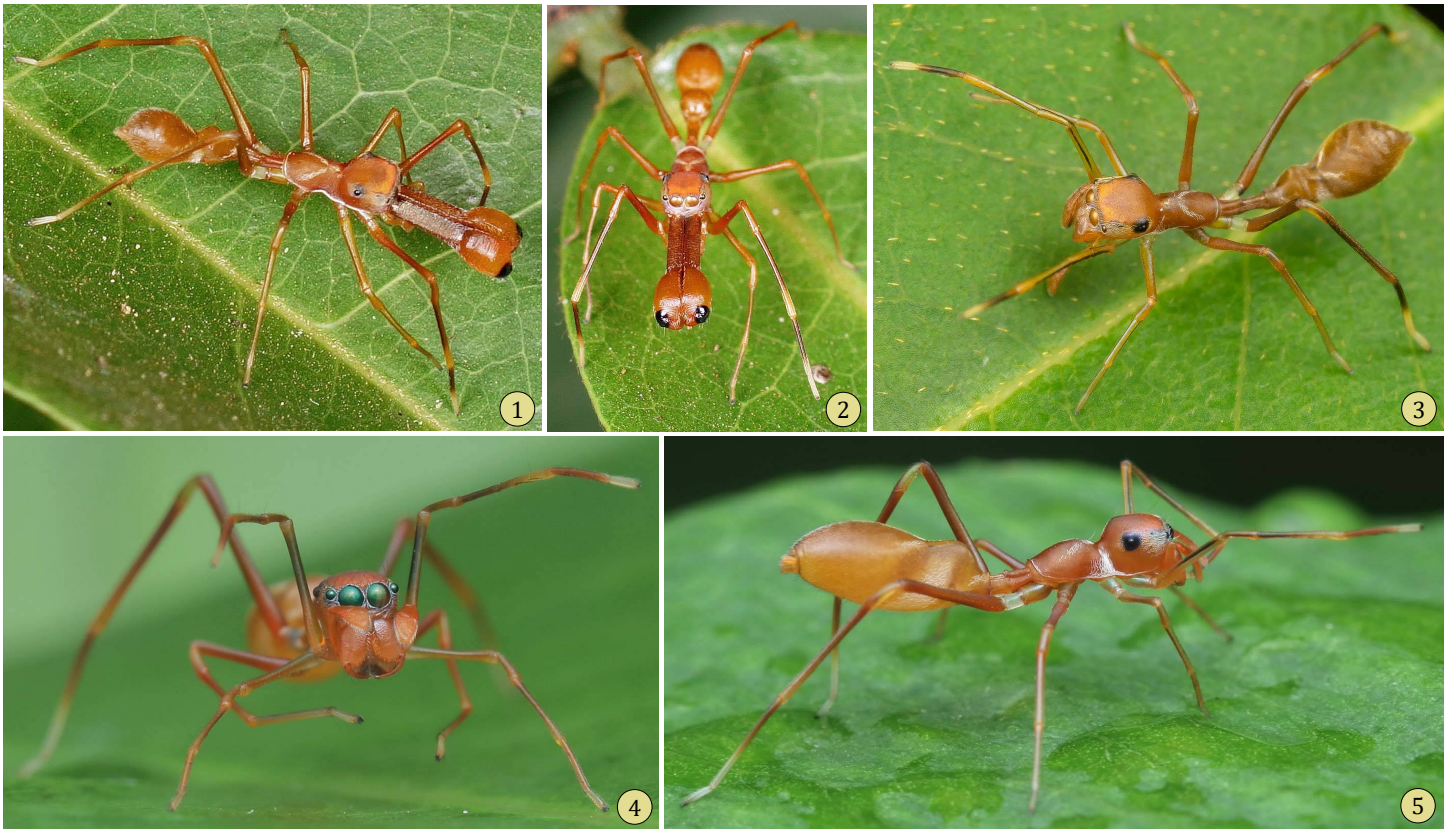

Figure 1. Male (1-2) and female (3-5) *Myrmarachne plataleoides*. The black area around each PLE resembles the compound eye of an *Oecophylla smaragdina* worker. Adult males are thought to resemble worker ants carrying prey. **1-2,** Male, Unawatuna, Sri Lanka, 14 MAR 2020, © vlad50 (iNaturalist). **3,** Female, Eheliyagoda, Sri Lanka, 7 FEB 2020, © Roman Prokhorov. **4-5,** Female, Karnataka, 26 MAY 2020, © Harshith J. V. All photos used under a CC BY-NC license.

Figure 2. Green Tree Ant (*Oecophylla smaragdina*) workers collaborating in the dismemberment of prey. **1,** Luzon Island, Philippines, 12 JUL 2020, © Reynante Martinez, used under a CC BY license. **2,** © Ian Jacobs, used under a CC BY-NC license.

Figure 3 (continued on next page). *Chrysso* sp. indet. with captured prey. **1,** *Chrysso* sp. biting a wrapped adult male *Myrmarachne plataleoides*. **2-3,** The same *Chrysso* sp. near the wrapped *M. plataleoides*. **4-5,** *Chrysso* sp. with captured *Oecophylla smaragdina* worker. **6-7,** *Chrysso* sp. with other captured ants. Photo credits: 1-5, Abhijith A.P.C.; 6, Mohith Shenoy; 7, Jithesh Pai. Photographs 6-7 used with permission.

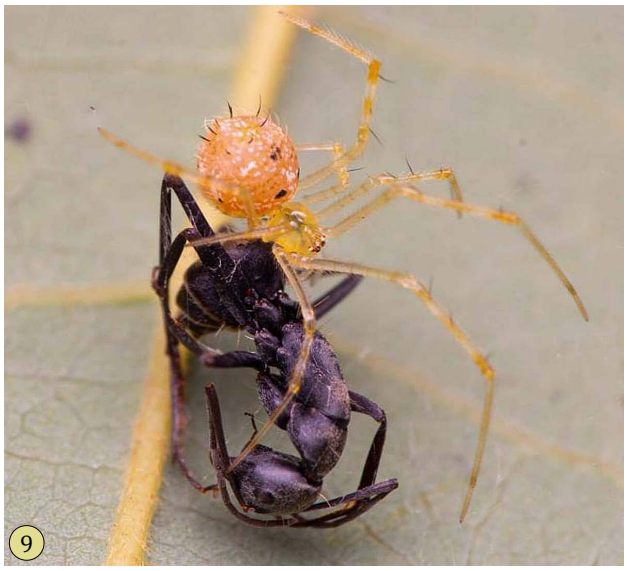

Figure 3 (continued from previous page). *Chrysso* sp. with captured prey. **8-9,** *Chrysso* sp. with other captured ants. Photo credits: 8, Abhijith A.P.C.; 9, Jithesh Pai.

Taxonomic Note

Prószyński recently (2016) created a new genus, *Myrmaplata*, with *Salticus plataleoides* O. Pickard-Cambridge 1869 as the type species. A more recent study of DNA sequences (Maddison & Szűts 2019) placed this species within a clade that includes 19 species presently assigned to *Myrmarachne* MacLeay 1839. A more closely related sub-clade placed *Myrmarachne plataleoides* with 15 other species, all in the genus *Myrmarachne*. Our use of the genus group name *Myrmarachne* for *Myrmarachne plataleoides* is consistent with the view that this large genus should represent a monophyletic group of species.

Acknowledgements

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