

***Chrysilla acerosa* (Araneae: Salticidae: Chrysillini), a dominant jumping spider in the bamboo plantations of Bhubaneswar, Odisha, India**

Ashirwad Tripathy^{1,3} and Animesh Mohapatra²

¹ Entomology Branch, Forest Protection Division, Forest Research Institute, P.O. New Forest, Dehradun, Uttarakhand 248006, India, *email* ashirwadresearch101@gmail.com

² Department of Natural Resource Management, College of Forestry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha 751003, India, *email* animeshmohapatra520@gmail.com

³ Corresponding author

Here we report the presence of the jumping spider *Chrysilla acerosa* Wang & Zhang 2012 in bamboo plantations at Bhubaneswar, Odisha, India. We discovered these spiders in a recent survey of bamboo orchards at Livestock Farm (20.28472°N, 85.78306°E) and the Silviculture Research Station (20.28472°N, 85.78306°E) at Bhubaneswar, from December 2021 to April 2022. Varieties of bamboo cultivated at these plantations include *Bambusa balcoa*, *B. bambos*, *B. nutans*, *B. striata*, *B. tulda*, *B. vulgaris*, *Dendrocalamus strictus* and *Thyrsostachys oliveri*. The major plantations are of *Bambusa bambos*, *B. vulgaris* and *Dendrocalamus strictus*. Our survey revealed the presence of many different arthropods, including four insects that cause major damage to the bamboo culms: *Dinoderus minutus* (Coleoptera: Bostrichidae), *Estigmina chinensis* (Coleoptera: Chrysomelidae), *Neotermes* sp. (Blattodea: Kalotermitidae) and *Xylocopa* sp. (Hymenoptera: Apidae).

The salticids that we encountered most frequently in these plantations were an unidentified *Myrmarachne* sp., apparently associated with ants in the area, and *Chrysilla acerosa* (Figure 1:1-5). Exit holes made by the four major pests identified above served as hiding places for *C. acerosa*. *Estigmina chinensis* and *Xylocopa* sp. exit holes served as a secondary home for *C. acerosa*. *C. acerosa* was primarily found on *Bambusa vulgaris* and *Dendrocalamus strictus*. *B. bambos* have many thorns and are very compact, possibly restricting the free movement and jumps for these spiders. In contrast *B. vulgaris* and *D. strictus* and have long, straight culms, which may facilitate the jumps of *C. acerosa*. Also the infestation of insect borers was greater on *B. vulgaris* and *D. strictus*, possibly correlated with a dependence of *C. acerosa* on the presence of these insects. Exit holes of *Estigmina chinensis* (Figure 2:1) and *Xylocopa* sp. are clean and larger, and thus these can sustain a secondary resident like *Chrysilla acerosa*. In some cases termite damage was also severe, but their exit holes were clogged with mud (Figure 2:2), restricting the access of salticids. The size of *Dinoderus minutus* exit holes is very small (~2 mm; Figure 2:3), too small to support their use by these spiders.

Chrysilla acerosa was first described by Wang and Zhang in 2012 but they did not report the habitat of this species. Their holotype specimen was from Jinyun Mountain Natural Reserve, Chongqing, China, which also has bamboo (Poaceae) forests. Ahmed et al. (2014) described a species as *Chrysilla assamensis*, from sugar cane (Poaceae) fields in Sonitpur, India, later synonymised as *C. acerosa* by Caleb (2016). The present collection and observations were also taken from bamboo plantations. More rigorous statistical sampling will be needed to assess the co-occurrence and possible dependency of *C. acerosa* with Poaceae and the insects that bore into these plants.

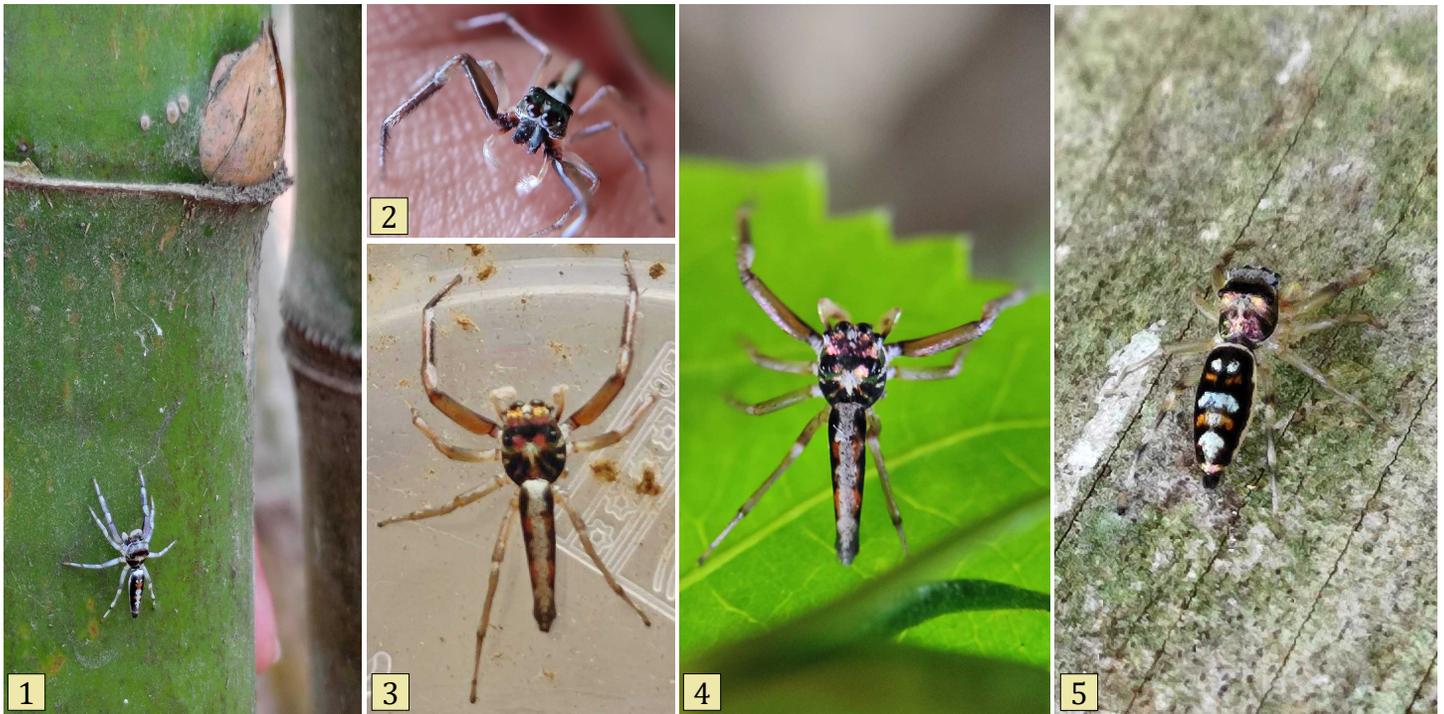


Figure 1. *Chrysilla acerosa* at Bhubaneswar. 1, Penultimate male. 2-4, Adult male. 5, Penultimate female.



Figure 2. 1, Exit hole of *Estigmina chinensis*. 2, Damage caused by termites from inside a culm. 3, Small exit holes of *Dinoderus minutus*.

References

- Ahmed et al. 2014.** M. J. Ahmed, M. J. Anam, M. K. Saikia, S. V. Manthen and P. K. Saikia. Records of new genus *Chrysilla* (group spider: sub-order: Araneae: family: Salticidae) in India at agroecosystem, at Sonitpur, Assam. *Journal on New Biological Reports* 3 (1): 38-43.
- Caleb 2016.** J. T. D. Caleb. New data on the jumping spiders (Araneae: Salticidae) from India. *Arthropoda Selecta* 25 (3): 271-277.
- Wang & Zhang 2012.** L.-Y. Wang and Z.-S. Zhang. A new species of *Chrysilla* Thorell, 1887 from China (Araneae: Salticidae). *Zootaxa* 3243: 65-68.