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First record of the genus *Afraflacilla* Berland & Millot, 1941 in India (Araneae: Salticidae: Chrysillini)

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Abstract: The chrysilline salticid genus *Afraflacilla* (Berland and Millot, 1941) is reported from a garden in Kolkata, West Bengal, representing the first record of this genus from India. Gardens and parks may play an increasingly important role in the conservation of biodiversity

Keywords: microhabitats, planted gardens, West Bengal

One of the authors (SL) recently observed and photographed a spider in an urban garden in Kolkata, West Bengal, India, that we have identified as an adult male of the genus *Afraflacilla* Berland & Millot, 1941 (Figure 1). This identification is based on the following characters provided by Żabka (1993): low cephalothorax, row of stridulatory tubercles on the side of the carapace, strong first pair of legs (leg I) with swollen tibiae bearing short, massive spines, the second pair of legs shortest, and the fourth pair of legs (leg IV) longest. Although jumping spiders of the genus *Afraflacilla* have a wide distribution that includes central and eastern Europe, southern Africa, the Middle East, south and southeast Asia, and Australia (WSC, 2019), this represents the first record of this genus in India.

This spider was first encountered in the early evening as it fed on a mosquito (*Aedes* Meigen, 1818) on the foliage of a *Lantana* L. shrub growing in the gardens of Ballygunge Science College campus, University of Kolkata, situated in one of the busiest, most populated and polluted regions of Kolkata (17:30, 20 AUG 2019, 22°31'37.35"N, 88°21'47.51”E). The particular *Lantana* shrub the spider was found on was located in an open space, with no tree canopy overhead. The spider seemed rather unperturbed by the presence of the observer (SL), and moved around in a slow yet deliberate manner as it crawled on the underside of foliage, pausing intermittently to observe its surroundings between short leaps from one leaf to another. This spider also inhabited the same leaf cluster overnight, and was observed on another branch of the same shrub on the following afternoon (13:00-14:00, 21 AUG 2019). It was regularly observed over a period of four days, and found to be diurnal in nature. Other spiders found inhabiting the same shrub included *Oxyopes* Latreille, 1804 and *Phintella* cf. *vittata* (C. L. Koch, 1846).

The grounds of the Ballygunge Science College campus include well-maintained gardens which offer several vegetation-rich niches in the form of large trees, shrubs and low-growing herbs. The plot in which this *Afraflacilla* was discovered was cultivated primarily as a pollinator habitat for butterflies and native bees, and planted with several species of local as well as exotic plant species such as *Lantana camara* L.,

Mussaenda erythrophylla Schumach. & Thonn. (1827), *Vernonia cinerea* (L.) Less., *Oxalis corniculata* L., *Desmodium triflorum* (L.) DC., *Bauhinia* x *blakeana* Dunn., *Bauhinia tomentosa* L., *Cassia fistula* L., *Crotalaria retusa* L., *Calotropis gigantea* (L.) Dryand., *Murraya koenigii* (L.) Sprenge, *Citrus* L. sp. etc., and surrounded by large trees like *Mangifera indica* L., *Polyalthia longifolia* Sonn., *Mimusops elengi* L., *Callistemon* R. br. sp. and several types of palms.

Figure 1. Adult male *Afraflacilla* sp. from the Ballygunge Science College campus in Kolkata. Photographs by Supratim Laha.

Most of the published literature on this genus is focused on taxonomy (e.g. Żabka & Gray, 2002; Maddison, 2015; Cao et al., 2016). *Afraflacilla* have a propensity for open spaces, such as savannah and desert type ecosystems, where they are known to exploit a wide variety of microhabitats ranging from foliage to tree trunks to the underside of tree bark. Some species are also found living near human habitation and in mangrove marshlands, and at least two species are known to be communal in behaviour, living in large, multi-species nest complexes. (Jackson, 1986; Żabka, 1993). Jackson et al. (2001) demonstrated a strong preference for a sucrose solution over water (control) by two species of *Afraflacilla*, indicating that as in many other salticids plant nectar may play a role in their ecology.

Attention is often rightly focused upon the importance of natural habitats for the conservation of biodiversity. It is easy to overlook the importance of urban and suburban habitats. The role of gardens and parks, particularly when planted to promote the growth of flowering plants and to encourage pollinator species, should not be underestimated. Indeed, planted gardens and parks have the potential

to play an increasingly important role in the conservation of biodiversity (Aronson et al., 2017), of particular value to the conservation of invertebrates which are able to exploit the varied microhabitats so typical of these habitats. As Lowe et al. (2017) noted, urban gardens can support a surprisingly high diversity of spiders, and may harbour species like *Afraflacilla* not previously recorded for the region. Closer inspection of such habitats in West Bengal may increase the number of observations of *Afraflacilla* species and provide new opportunities for the study of this fascinating yet little known genus.

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