SHORT COMMUNICATION

First Record of the Jumping Spider Chrysilla volupe (Karsch, 1879) (Araneae: Salticidae) from Nagpur, India

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Abstract

Nagpur is a densely populated city in Central India. Urban areas like Nagpur can harbour rich biodiversity including arachnid fauna. *Chrysilla volupe*[1] belonging to family Salticidae, is a striking jumping spider with iridescent colouration, which is found in India and a few surrounding countries. It has been reported from eight states of India, which includes Maharashtra state. According to the previous record, *Chrysilla volupe* is unknown from Nagpur. Here, *Chrysilla volupe* is recorded from Nagpur for the first time, thereby adding another species to the salticid fauna of Nagpur, as well as that of Central India.

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1. Introduction

Jumping spiders (Salticidae) represent the largest family of spiders, which has approximately 6742 species in 688 genera[2]. Their common name 'jumping spider' stems from their phenomenal ability to jump. There are other spiders that can jump, but it is only the salticid spiders that can make accurate vision-guided leaps on to prey and other targets[3]. Among invertebrates, jumping spiders are one of the few groups whose representatives have camera-like eyes, and the only group whose representatives have fovea[4]. Complex behaviour and high spatial-acuity vision are tightly interrelated in these spiders[3]. Some male jumping spiders display vibrant iridescent colours that are used in visual communication[5]. *Chrysilla volupe* is a striking iridescent salticid spider species. The present study reports *Chrysilla volupe* from Nagpur for the first time.

2. Materials and Methods

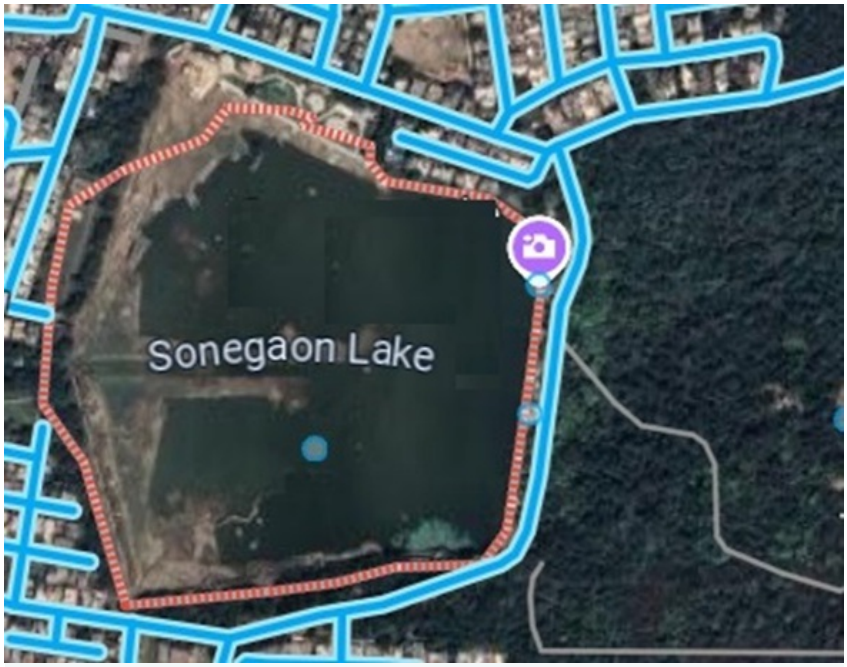
The study site, Sonegaon Lake, has an area of 12.5 hectares. It is located in South-West Nagpur, in Maharashtra state of India, and is surrounded by lush greenery (Map 1). In October 2024, during an excursion to investigate the spider fauna around Sonegaon Lake, an iridescent salticid spider was spotted on a garden wall near the lake. The spider was

photographed with a mobile phone camera for identification, but was not collected to preserve the local biodiversity. Subsequently, with the help of scientific literature, the spider was identified as belonging to the salticid species, *Chrysilla volupe*.

3. Results and Discussion

The *Chrysilla volupe* spider observed was determined to be a male from its appearance and larger pedipalps. It was about 5 mm in length and 2 mm in width. The carapace was bright reddish-orange with two iridescent transverse blue stripes. The legs were covered with iridescent scales and appeared golden-purple in the sunlight. The abdomen was elongated but narrow, covered with iridescent scales, with a mid-dorsal reddish-orange patch. The spider was without the third and fourth legs on the left side. It was assumed that the spider may have lost its legs in an encounter with a predator. This species exhibits sexual dimorphism, and the female appears different from the male[6]. The sex-specific iridescent patterns are brighter in male than in female. No female *Chrysilla volupe* spider was observed in the vicinity of the male spotted. In jumping spiders like *Chrysilla volupe*, iridescent colours are produced by flattened hairs (scales). Iridescent colouration can be a good indicator of a spider's condition and health, as younger and better nourished adult males have brighter and more intense colouration[5]. The biological significance of structural colours in spiders is well understood in the diurnal salticids, where optical signals are exchanged in courtship, usually in bright daylight[7]. Previously, 29 species of salticid spiders have been reported from Maharashtra state[8], and five species of salticid spiders –*Hasarius adandoni*, *Menemerus bivittatus*, *Plexippus paykulli*, *Plexippus petersi*, and *Telamonia dimidiata* have been recorded from Nagpur[9]. So, the present study is the first record of *Chrysilla volupe* from Nagpur, as well as from Central India, wherein Nagpur is located.

The genus *Chrysilla* was erected by Thorell with the type species*Chrysilla lauta*[10]. *Chrysilla volupe* is one of the 11 species currently recognized in the genus *Chrysilla*[11]. It was first described as*Attus volupe* by Karsch[1] from Sri Lanka. This species was later moved to the genus *Phintella*[12]. Eventually, this species was transferred to the genus*Chrysilla*[13]. *Chrysilla volupe* is distributed in Bangladesh, Bhutan, India, Myanmar, Nepal, and Sri Lanka[11]. In India, it has been reported from the following states: Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, Tamil Nadu, Telangana, and West Bengal[6][14][15]. In Maharashtra state, it has been recorded from two places, Mumbai (Thane) and Sangli[6][16]. Both Mumbai and Sangli are located in Western Maharashtra, whereas, Nagpur is located in North-Eastern Maharashtra, which is a part of Central India. Until 2018, when the female of this species was described for the first time, all previous distribution records were of male specimens only[6]. It appears that the female of this species is better camouflaged than the male, and hence, less visible.



Map 1. Sonegaon Lake, Nagpur (Courtesy: Google Maps)

Figures 1 and 2. *Chrysilla volupe* (male)

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