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## Record of Some Spiders (Arachnida: Araneae) from Karhandla in Nagpur District, Maharashtra

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### ABSTRACT

Umred-Karhandla Wildlife Sanctuary is an important conservation area located in Nagpur district of Maharashtra state. Karhandla village is situated very close to this Sanctuary. The spider fauna of Karhandla is being reported for the first time. During some faunal surveys of invertebrates carried out in this region from November 2014 to October 2015, some species of spiders were observed and identified. These spiders are mainly of two types, hunting spiders and web-making spiders. A total of 21 species of spiders in 19 genera of 13 families are being reported from Karhandla.

**Key Words:** Arachnida, fauna, Karhandla, Maharashtra, Nagpur, spider.

### INTRODUCTION

Spiders form one of the most fascinating and diverse animal groups in the world. Many types of spiders can easily be found in any terrestrial habitat. They come in various sizes, sport numerous colours and are found in different types of habitats preying on small invertebrates. In nature, they have a very important role as biological control agents of insects. According to the World Spider Catalogue (2016), 45945 species of spiders belonging to 3982 genera under 114 families are known from the world. According to Siliwal *et al.* (2005), 1442 species of spiders belonging to 361 genera in 59 families are known from India. A review of literature shows that very little work has been done on the spider fauna of Maharashtra.

### MATERIAL AND METHODS

Nagpur (c. 21.06°N 79.03°E) is located in Central India in the eastern part of Maharashtra state. Karhandla village located near Umred-Karhandla Wildlife Sanctuary (c. 20°50'08"N 79°30'40"E) is at a distance of about 55 km. from Nagpur. During some faunal surveys of invertebrates carried out in and around Karhandla from November 2014 to October 2015, spiders were looked for and observed in a variety of places such as forest edge, houses, road-side vegetation, on the bark of trees and underneath stones. Scientific literature including Anon. (2016), Gajbe (2004), Gajbe (2008), Pocock (1900), Tikader (1980, 1982a, 1982b) and Tikader & Malhotra (1980) were used for the identification of spiders. The various spider species were photographed for verification and authentication. In order to preserve biodiversity, specimens were not collected.

## RESULTS

A total of 21 species of spiders under 19 genera of 13 families are being reported from Karhandla. A systematic account of the spiders of Karhandla is as follows:

### Family: Scytodidae

#### 1. *Scytodes* sp.

*Diagnostic Characters:* Body length about 5 mm. Cephalothorax globular with six eyes. Abdomen is brownish and narrower than cephalothorax.

*Habitat:* It is found inside houses and in home gardens.

### Family: Oecobiidae

#### 2. *Oecobius putus* O. P.-Cambridge, 1876

*Diagnostic Characters:* Body length about 3 mm. Cephalothorax pale brown, abdomen mottled with yellow and white, anterior and posterior ends with dark spots. Legs pale brown, without spots or annulations.

*Habitat:* It lives in tiny flat webs made in the wall-corners of houses.

### Family: Pholcidae

#### 3. *Crossopriza lyoni* (Blackwall, 1867)

*Common Name:* Cellar Spider.

*Diagnostic Characters:* Body length about 7 mm. The cephalothorax is greyish with a darker longitudinal band of colour. The abdomen is grey with various dark and light patches, and angular with a small conical hump on the upper back. The Legs are very long and fragile.

*Habitat:* It makes large irregular webs in the corners of rooms or basement, under the ceiling.

### Family: Hersiliidae

#### 4. *Hersilia savignyi* Lucas, 1836

*Common Name:* Two-Tail Spider.

*Diagnostic Characters:* Body length about 14 mm. The body is dorso-ventrally flattened, and the cephalothorax and abdomen are dark brown. It has long spinnerets, which appear like tails.

*Habitat:* It lives on the trunks of trees. Its body colour closely matches the colour of the tree trunk on which it lives.

### Family: Tetragnathidae

#### 5. *Leucauge decorata* (Walckenaer, 1841)

*Diagnostic Characters:* Body length about 12 mm. It is a medium to large, slender orb weaver with black stripes over a silver-coloured abdomen.

*Habitat:* It is found in low vegetation, often near small waterbodies.

#### 6. *Tetragnatha bengalensis* Walckenaer, 1842

*Diagnostic Characters:* Body length about 12 mm. Cephalothorax and abdomen brown with median blackish spots. The first pair of legs is very long. The chelicerae are long and stout.

*Habitat:* It makes orb-webs in vegetation hanging over the edge of fresh waterbodies like ponds and rivers.

### Family: Nephilidae

#### 7. *Nephila pilipes* (Fabricius, 1793)

*Common Name:* Giant Orb-Web Spider, Golden Orb-Web Spider.

*Diagnostic Characters:* It is one of the largest spiders in the world. Females are very large and grow to a body length of 30–50 mm, while males are very small growing to 5–6 mm.

*Habitat:* It is found in forests or wooded areas, where it builds large orb-webs between the trunks of trees. These orb-webs may appear golden in bright sunlight.

### Family: Araneidae

#### 8. *Argiope aemula* (Walckenaer, 1842)

*Common Name:* Signature Spider.

*Diagnostic Characters:* Body length about 15 mm. Cephalothorax is grey, while abdomen is yellowish with intricate transverse black stripes.

*Habitat:* It makes vertical orb-webs, which can be easily recognized by the white-coloured, X-shaped stabilimentum.

#### 9. *Cyrtophora citricola* (Forskål, 1775)

*Common Name:* Tropical Tent-Web Spider.

*Diagnostic Characters:* Body length about 8 mm. Cephalothorax is grey, while abdomen is brown with whitish spots.

*Habitat:* It makes a characteristic horizontal tent-shaped web. Sometimes many females build their webs in close vicinity.

#### 10. *Neoscona nautica* (C. L. Koch, 1875)

*Diagnostic Characters:* Body length about 7 mm. The cephalothorax and abdomen are brown with light and dark coloured patches.

*Habitat:* It is found in home gardens and roadside vegetation. It constructs its orb-web at dusk.

#### 11. *Neoscona theis* (Walckenaer, 1841)

*Diagnostic Characters:* Body length about 8 mm. Cephalothorax brown, abdomen white with blackish patches.

*Habitat:* It is found in vegetation along the road side. It repairs or constructs its orb-web in the evenings.

### Family: Lycosidae

#### 12. *Hippasa agelenoides* (Simon, 1884)

*Common Name:* Wolf Spider.

*Diagnostic Characters:* Body length about 10 mm. Cephalothorax and abdomen dark brown with whitish stripe on lateral sides.

*Habitat:* It is found in funnel webs made over small holes in the ground. These funnel webs can be easily observed on forest floor.

**Family: Oxyopidae****13. *Oxyopes pankaji* Gajbe & Gajbe, 2000**

*Common Name:* Lynx Spider.

*Diagnostic Characters:* Body length about 9 mm. Cephalothorax, legs and abdomen reddish-pink. Legs have long spines.

*Habitat:* It is an agile hunting spider that is found in vegetation.

**Family: Gnaphosidae****14. *Scopoides maitraiae* (Tikader & Gajbe, 1977)**

*Common Name:* Ground Spider.

*Diagnostic Characters:* Body length about 8 mm. Cephalothorax dark brown, abdomen is blackish with fine pubescence.

*Habitat:* It is found in houses and is active at night time looking for insects.

**Family: Sparassidae****15. *Heteropoda venatoria* Linnaeus, 1767**

*Common Name:* Giant Crab Spider.

*Diagnostic Characters:* Body length about 20 to 25 mm. Body is dorso-ventrally flattened and dark brown in colour. The female may be slightly larger than the male, particularly in the abdomen, but the male has longer legs. The legs have erectile setae.

*Habitat:* It commonly lives in houses. It feeds on insects, hunting them directly instead of forming webs.

**Family: Thomisidae****16. *Thomisus* sp.**

*Common Name:* Crab Spider.

*Diagnostic Characters:* Body length about 5 mm. Body shape crab-like. Cephalothorax and abdomen white. The abdomen has lateral protuberances. It can move sideways like a crab.

*Habitat:* It is found on flowers, where it lies in wait for an insect to land.

**Family: Salticidae****17. *Hasarius adansoni* (Audouin, 1826)**

*Diagnostic Characters:* Body length up to 8 mm. The male is mostly black with partly white

pedipalps. A white crescent is present in the posterior region of cephalothorax and another white crescent is present in the anterior region of abdomen.

*Habitat:* It is commonly found on tree trunk and the outside walls of buildings.

**18. *Menemerus bivittatus* Dufour, 1831**

*Diagnostic Characters:* Body length about 8 to 9 mm. The male has a median blackish longitudinal stripe with whitish stripes on either side of the abdomen. The carapace and chelicerae are also black and brownish-white and the legs have transverse bandings of the same colours.

*Habitat:* It is commonly found on tree trunk and the outside walls of buildings.

**19. *Plexippus paykulli* (Audouin, 1826)**

*Diagnostic Characters:* Body length 7 to 9 mm. The male has black cephalothorax and abdomen with a broad white central stripe, and a broad white stripe on both sides and a pair of white spots near the posterior end of the abdomen.

*Habitat:* It is generally found living around man-made structures and can be observed on the outer walls of buildings.

**20. *Plexippus petersi* (Karsch, 1878)**

*Diagnostic Characters:* Body length 7 to 9 mm. The male is similar in appearance to *P. paykulli*, but the white stripes are not complete.

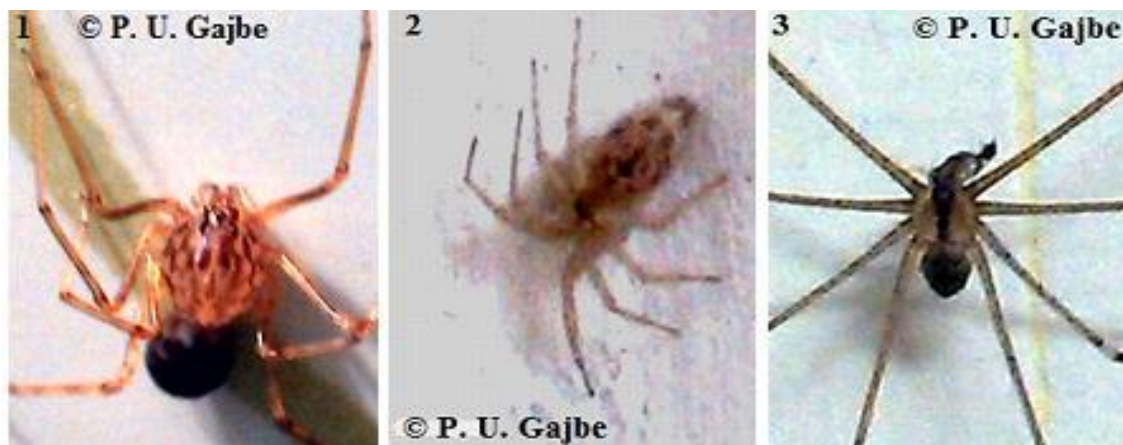
*Habitat:* It is generally observed on the outer walls of man-made structures.

**21. *Telamonia dimidiata* (Simon, 1899)**

*Common Name:* Two-Striped Jumping Spider.

*Diagnostic Characters:* Body length 9 to 11 mm. The female has pale yellowish-white cephalothorax and abdomen. Two longitudinal bright red stripes are present on the abdomen.

*Habitat:* It is found hiding in the leaves of garden plants.



**Figs. 1-3: Spiders of Karhandla. 1. *Scytodes* sp. 2. *Oecobius putus* 3. *Crossopriza lyoni*.**



**Figs. 5-12: Spiders of Karhandla.** 4. *Hersilia savignyi* 5. *Leucauge decorata* 6. *Tetragnatha bengalensis* 7. *Nephila pilipes* 8. *Argiope aemula* 9. *Cyrtophora citricola* 10. *Neoscona nautica* 11. *Neoscona theis* 12. *Hippasa agelenoides*.

## DISCUSSION

As per Table 1, a total of 21 spider species in 19 genera of 13 families have been identified from Karhandla. These spiders include species of the

families Scytodidae, Lycosidae, Oxyopidae, Sparassidae, Hersiliidae, Thomisidae and Salticidae which actively hunt their prey, while the species belonging to the families Oecobiidae, Pholcidae, Tetragnathidae, Nephilidae and Araneidae trap their prey by making webs.



**Figs. 13-21: Spiders of Karhandla.** 13. *Oxyopes pankaji* 14. *Scopoides maitraiae* 15. *Heteropoda venatoria* 16. *Thomisus* sp. 17. *Hasarius adansoni* 18. *Menemerus bivittatus* 19. *Plexippus paykulli* 20. *Plexippus petersi* 21. *Telamonia dimidiata*.

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