Three females of the redback spider, *Latrodectus hasselti* (Araneae, Theridiidae) are recorded for the first time in North India from district Hisar, Haryana, India. This spider has earlier been reported from western and southern India only. The species is identified and described on the basis of morphological characters and the structure of the female genitalia. Currently the genus *Latrodectus* has a total of 31 described species worldwide of which India represents only four species. This documentation of the *Latrodectus hasselti* species from Hisar, Haryana suggests the extension of its distribution range in North India.

**MATERIAL AND METHODS**

The specimens of *L. hasselti* were collected from Adampur, Hisar (29.28°N & 75.43°E), Haryana, India between December 2016 and February 2017 (Fig.-1). Specimens were collected by hand picking and were photographed using 100mm macro lens and were preserved in 80% alcohol and 5% glycerine solution. The measurements in millimeters were taken using the ocular micrometer attached to the micron microscope TMC 220 or Micron Zoom Stereo Trinocular Microscope. Epigynum, the female genitalia was dissected and immersed in 50% KOH solution to study the internal structures following Barrion and Litsinger. The terminology of Baehr and Baehr and Rheims and Brescovit are followed. The specimens are deposited in the collection of the museum of the department of Zoology, Maharshi Dayanand University, Rohtak, Haryana.

**RESULTS AND DISCUSSION**

A total of three female redback spider species of *L. hasselti* were collected from Adampur, Hisar while studying the biodiversity of spiders in Haryana, India. The diagnostic features of the genus and identifying characters of the collected species specimen are provided below.

**Taxonomy:**

**Family:** Theridiidae Sundevall, 1833

**Genus:** *Latrodectus* Walckenaer, 1805

**Diagnosis:** The genus can be identified by the following characters viz. clypeus as high as the ocular area, widely separated lateral eyes, lack of teeth from the chelicerae, first pair of legs longer than the fourth pair, globose abdomen and dumb-bell-shaped seminal vesicles in females.

**Latrodectus hasselti** Thorell, 1870 (Fig. 2 a-d)

**NAAS Rating (2017)** - 4.43
Description: Species hasselti was identified morphologically by the prominent orange red/scarlet band on the dorsal side of the abdomen. The cephalothorax and abdomen were black, the ventral side was having a small transverse reddish band in front of the spinnerets. A yellowish orange to red colour marking posterior to epigynum on the ventral side was present in all the specimens. Area on the either side above the epigynum was faint orange/red. The characteristic hourglass marking on the ventral side may be visible only in the freshly molted female. Our specimen had very faint marking as seen in Fig.-2

The adult female of *L. hasselti* with 10.75 mm total body length, of which prosoma length accounts for 3.20 mm and opisthosoma 7.60 mm. Carapace 3.0 mm long and 4 mm wide. Diameter of anterior median eyes (AME), anterior lateral eyes (ALE) posterior median eyes (PME) and posterior lateral eyes (PLE) of 0.20 mm, 0.26 mm, 0.28 mm and 0.24 mm respectively. Length in mm of the legs: I= 20.4, II= 13.7, III= 11.6, IV = 18.8.

The epigynum had a pair of highly sclerotised dumb-bell-shaped seminal vesicles having widened anterior and narrow posterior lobes. The copulatory ducts were thin-walled and very weakly sclerotised. They were coiled around the intermediate part of the seminal vesicle forming three loops.

The redback spiders were observed and collected beneath the stairs from the building of the Government College, Adampur, Hisar, India. The spiders were also sighted from nearby abandoned area behind the building. Our sighting is in accordance with the natural habitat of *L. hasselti* which is in and around residential buildings and gardens. The habitat of the area is generally semiarid to xerophytic.

This species from Adampur, Hisar, Haryana, North India extends its distribution range for approximately 1000 km northwards from earlier reported sites of Western India and Gujarat.

CONCLUSION

The survey of literature indicates lack of proper surveys for diversity of spiders in Haryana and adjacent states. But the first record of medically important genus *Latrodectus* from Adampur, Hisar, Haryana indicates the possibility of sighting further new species of the genus *Latrodectus* in this poorly studied area. Thus the present finding suggests this region as potential concern for monitoring of the spider biodiversity. Further this expanded range of redback spider may be explored in view of anthropogenic impacts of geographical distribution of the species.

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REFERENCES

Fig.-1: Map showing Adampur, Hisar, Haryana, India.

Fig.-2. a. *Lactrodectus hasselti* Thorell, b. Ventral aspects of spider, c. Epigynum (dorsal view), d. Line diagram of the epigynum (dorsal view)