

First record of *Portia albimana* (Simon, 1900) from Maharashtra, Mumbai (Araneae: Salticidae: Spartaeinae)

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The genus *Portia* Karsch, 1878 is represented by 3 species in India: *P. fimbriata* Doleschall, 1859, *P. albimana* Simon, 1900 and *P. assamensis* Wanless, 1978 (Keswani *et al.*, 2012; Samson and Sebastian, 2014; WSC, 2015). With the exception of *P. fimbriata*, these spiders remain largely overlooked and little studied in their natural environment, and their natural history, including behavior, biology and distribution is little known.

P. albimana was first described from Dehradun (Simon, 1900), which lies in the Doon valley in the Himalayan foot hills of North India, and later reported from Vellore, Tamil Nadu, in South India (Murphy & Murphy, 1983), with the present record extending its known range to the state of Maharashtra, Mumbai, in Western India (Figure 1).

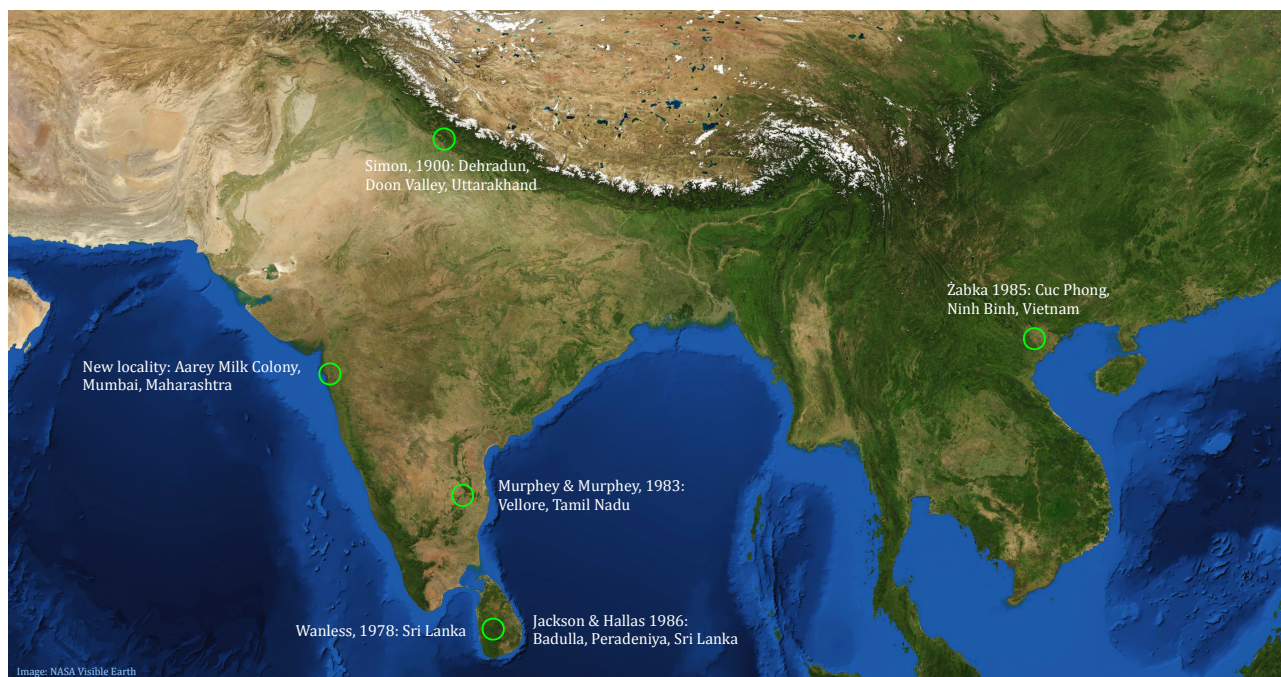


Figure 1. Distribution of *Portia albimana* in south Asia.

The species was first detected during nocturnal surveys conducted to document the Araneae of Aarey Milk Colony, a 4000 acre eclectic mix of highly varied ecosystems, predominated by cultivated grassland, and interspersed with wooded scrub and shrubland. A total of 14 spiders were observed in association with the sheet-funnel webs of *Hippasa lycosina* Pocock, 1900 (Figure 2), *H. partita* (O. Pickard-Cambridge, 1876) (Figure 3), the tent webs of *Cyrtophora* Simon, 1864 sp., and irregular silk constructs of their own making (Figure 4) which were built against mud banks or the root system of trees.

Spiders seen in association with the larger webs of *H. lycosina* lacked any associated silk construct of their own, preferring to directly inhabit the webs of their host (Figure 5), whereas those observed in conjunction with the significantly smaller webs of *H. partita* had small irregular, silk structures attached to the host web (Figure 6). Those found inhabiting the webs of *Cyrtophora* sp. almost always had the host spider missing.

Identification was based on a male spider and enabled by comparing the habitus (Figure 7:1-3) and the distinctive, short palpal embolus (Figure 7:4), as described and illustrated by Wanless (1978) and Žabka (1985). Host spiders were identified using standard keys (Tikader and Malhotra, 1980; Tikader, 1987), and one species, *H. partita*, was recorded in the region, for the first time. All spiders examined were deposited in the repository of the Bombay Natural History Society, Mumbai.



Figure 2. *Hippasa lycosina*, dorsal habitus, with internal genitalia structure(inset).



Figure 3. *Hippasa partita*, dorsal habitus, with epigyne (inset).



Figure 4. Irregular silk construct by *Portia albimana*, with spider, inset, in a cryptic pose.



Figure 5. *Portia albimana* (inset) inhabiting the sheet-funnel web of *Hippasa lycosina*.



Figure 6. Irregular silk construct of *Portia albimana*, seen in association with the small funnel-sheet webs of *Hippasa partita*.



Figure 7. *Portia albimana*, male. **1-3**, Habitus. Anterior (1), lateral (2) and dorsal (3) views. **4**, Ventral view of left pedipalp, showing short embolus.

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References

- Doleschall, L. 1859.** Tweede Bijdrage tot de Kennis der Arachniden van den Indischen Archipel. Acta Societatis Scientiarum Indica-Neerlandica 5: 1-60.
- Jackson, R. R. and S. E. A. Hallas. 1986.** Comparative biology of *Portia africana*, *P. albimana*, *P. fimbriata*, *P. labiata*, and *P. shultzi*, araneophagic, web-building jumping spiders (Araneae: Salticidae): utilisation of webs, predatory versatility, and intraspecific interactions. New Zealand Journal of Zoology 13 (4): 423-489.
- Karsch, F. 1878.** Exotisch-araneologisches. Zeitschrift für die Gesamten Naturwissenschaften 51: 332-333, 771-826.
- Keswani, S., P. Hadole and A. Rajoria. 2012.** Checklist of Spiders (Arachnida: Araneae) from India. Indian Journal of Arachnology 1 (1): 1-129.

- Murphy, J. and F. Murphy. 1983.** More about *Portia* (Araneae: Salticidae). Bulletin of the British Arachnological Society 6: 37-45.
- Pickard-Cambridge, O. 1876.** Catalogue of a collection of spiders made in Egypt, with descriptions of new species and characters of a new genus. Proceedings of the Zoological Society of London (1876): 541-630.
- Pocock, R. I. 1900.** The fauna of British India, including Ceylon and Burma. Arachnida. London. 1-279.
- Samson, P. D. and P. A. Sebastian. 2014.** On the jumping spider *Portia fimbriata* (Doleschall 1859) (Araneae: Salticidae) collected from Kerala, India. International Journal of Science, Environment and Technology 3(1): 273-278.
- Simon, E. 1864.** Histoire naturelle des araignées (aranéides). Paris. 1-540.
- Simon, E. 1900.** Etudes arachnologiques. 30e Mémoire. XLVII. Descriptions d'espèces nouvelles de la famille des Attidae. Annales de la Société Entomologique de France 69: 27-61.
- Tikader, B K. 1987.** Handbook of Indian Spiders. Zoological Survey of India, Calcutta, India.
- Tikader, B. K. and M. S. Malhotra. 1980.** Lycosidae (Wolf-spiders). Fauna India (Araneae) 1: 248-447.
- Wanless, F. R. 1978.** A revision of the spider genus *Portia* (Araneae: Salticidae). Bulletin of the British Museum of Natural History (Zoology) 34: 83-124.
- WSC. 2015.** World Spider Catalog. Natural History Museum Bern. *Online at:* <http://wsc.nmbe.ch>, version 16, accessed on 15 MAY 2015.
- Żabka, M. 1985.** Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. Annales Zoologici, Warszawa 39: 197-485.