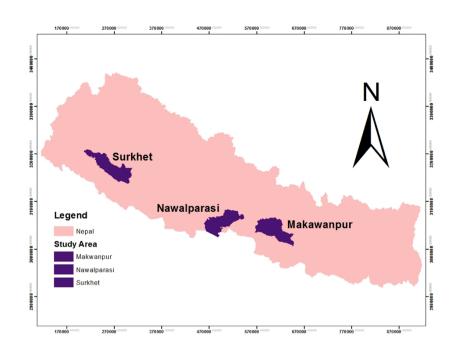
# New additions to the Nepalese spider checklist

Spiders are one of the most diverse terrestrial predators in the world. Globally, over 48,000 species are described (WSC 2021) of which 276 species of 106 genera in 24 families are so far reported from Nepal (Magar et al. 2020; WSC 2021).

The present study was conducted in western, central, & Terai regions of Nepal. The study was conducted in five different locations in three districts (Table 1) during 2018–2020. Most of the study sites fall under tropical climate zone.

Live specimens were photographed using a Nikon D5300 DSLR camera. Spiders were collected and preserved in 70% alcohol. Adult specimens were identified up to species level



with the help of available taxonomic literature and keys as well as general morphological illustration papers (Tikader & Malhotra 1980; Tikader 1982; Pocock 1901; Gravely 1921, 1924; Proszynski & Caleb 2015; Caleb 2020a,b). The nomenclature follows the World Spider Catalog (2021). Specimens are deposited in biology lab of Siddhartha Secondary School, Nawalparasi.

A total of 16 genera and 20 species belonging to six families (Table 2) were recorded of which 18 species belonging to 14 genera are new for Nepal. *Phintella vittata* and *Telamonia dimidiata* are reported from new localities (Magar et al. 2020). Araneidae was the dominant family constituting nine species under eight genera and followed by Oxyopidae with five species under two genera. Similarly,

guild structure analysis revealed four feeding guilds: orb-web weavers, stalkers, ground runners, and foliage runners (Table 2) (Uetz et al. 1999).

In Nepal, the Terai and the western regions are underexplored. Literally there is a no evidence of presence of families Araneidae, Oxyopidae, and Tetragnathidae from Nepal. Except for *Phintella vittata* and *Telamonia dimidiata* all other species are recorded for the first time from Nepal.

This new records of species adds their gap of global distribution. Records of new species are not surprising in Nepal as they are reported from neighboring countries. However, this is not final as there are many species which still await to be discovered.

#### **Family Araneidae Clerck**

- Argiope aemula (Walckenaer, 1841):
   4Q, Locality: C, Habitat: web created in bushes, coll. BRO.
- 2. Argiope anasuja Thorell, 1887: 69, Locality: A, B, C, Habitat: paddy plants, web in forest, coll. MS.
- 3. *Cyrtophora moluccensis* Doleschall, 1857: 3♀, Locality: C, Habitat: branch of tree, coll. BRO.
- Macracantha hasselti (C.L. Koch, 1837): 6♀, Locality: B, C, Habitat: web in forest, high density, coll. MS.

- 5. **Gea spinipes C.L. Koch, 1843:** 19, Locality: B, Habitat: leaf of sal tree (Shorea robusta), coll. MS.
- Herennia multipuncta (Doleschall, 1859): 1♀, Locality: E, Habitat: bark of tree, camouflage, coll. MS.
- 7. **Nephila pilipes (Fabricius, 1793):** 99, Locality: B, C, D, E, Habitat: web created in bushes, coll. MS.
- 8. *Parawixia dehaani* (Doleschall, 1859): 19, Locality: B, Habitat: web created in sal forest, on ground under fallen dry leaves, coll. MS.
- Trichonephila clavata (L. Koch, 1878): 1♂,1♀, Locality: E, Habitat: web created in Kuro plant (Cyathula capitata), coll. MS.

#### **Family Lycosidae**

Hippasa agelenoides (Simon, 1884):
 29, Locality: C, Habitat: web created in open grassland, coll. BRO.

#### **Family Oxyopidae**

- 1. Oxyopes birmanicus Thorell, 1887: 159, Locality: A, Habitat: leaf of rice plant in agricultural field, coll. MS.
- 2. Oxyopes javanus Thorell, 1887: 100, Locality: A, Habitat: leaf of rice plant in agricultural field, coll. MS.
- 3. Oxyopes shweta Tikader, 1970: 100, locality: A, B, Habitat: leaf of Neem tree, Sal tree, coll. MS.

Table 1. Details of the study localities.

	Locality	Code	Habitat		
1.	Nawalparasi West District, Nepal				
a.	Swathi (27.650 N & 83.657 E, 132 m)		Agricultural field, paddy field		
b.	Ramapur (27.623 N & 83.613 E, 148 m)	В	Forest, dominant Sal tree		
2.	Surkhet District, Nepal				
a.	Kakrebihar Forest (28.564 N & 81.621 E, 728 m)	С	Forest		
b.	Satakhani (28.496 N & 81.747 E, 485 m)	D	Forest		
3.	Makwanpur District, Nepal				
a.	Kulekhani (27.623 N & 85.147 E, 1,528 m)	Е	Watershed area, shrubs		

Table 2. List of spider species recorded in study areas.

	Families/Guild	No. of genera	No. of species	Species	
1.	Araneidae (Orb-web Builders)	8	9	Argiope aemula, A. anasuja, Cyrtophora moluccensis, Macracantha hasselti, Gea spinipes, Herennia multipuncta, Nephila pilipes, Parawixia dehaani, Trichonephila clavata	
2.	Lycosidae (Ground Runners)	1	1	Hippasa agelenoides	
3.	Oxyopidae (Stalkers)	2	5	Oxyopes birmanicus, O. javanus, O. shweta, O. sunandae, Peucetia viridana	
4.	Salticidae (Stalkers)	3	3	Phintella vittata*, Telamonia dimidiata*, Thiania bhamoensis,	
5.	Sparassidae (Foliage Runner)	1	1	Olios milleti	
6.	Tetragnathidae (Orb-web Builders)	1	1	Leucauge decorata	
	Total		20	18 species new for Nepal	
Note: * indicate new distributional records within country					

#### 4. Oxyopes sunandae Tikader, 1970:

4♂, 8♀, Locality: A, Habitat: leaf of rice plant, coll. MS.

## 5. Peucetia viridana (Stoliczka, 1869):

5♂, Locality: B, Habitat: leaf of plant in forest, coll. MS.

#### Family Salticidae Blackwall

# 1. Phintella vittata (C.L. Koch, 1846):

6♂, Locality: B, Habitat: leaf of sal tree in forest, coll. MS.

National distribution: Chitwan National Park (Magar et al. 2020) and this paper.



Argiope anasuja



Cyrtophora moluccensis



Macracantha hasselti



Gea spinipes



Nephila pilipes



Parawixia dehaani



Leucauge decorata



Trichonephila clavata



Hippasa agelenoides



Oxyopes birmanicus



Oxyopes shweta



Oxyopes sunandae



Phintella vittata



Telamonia dimidiata



Thiania bhamoensis



Olios milleti

### 2. Telamonia dimidiata (Simon, 1899):

89, Locality: B, Habitat: leaf of sal tree in forest, coll. MS.

National distribution: Chitwan National Park (Magar et al. 2020) and this paper.

Thiania bhamoensis Thorell, 1887:
 2♀, Locality: B, Habitat: leaf of sal tree

in forest, coll. MS.

#### Family Sparassidae Bertkau

 Olios milleti (Pocock, 1901): 19, Locality: A, Habitat: leaf of plant, coll. BRO.

# Family Tetragnathidae Leucauge decorata (Walckenaer, 1842):

20\(\text{Q}\), Locality: A, B, C, Habitat: leaf of paddy plants, web created in bushes, coll. MS.

#### References

Caleb, J.T.D. (2020a). Spiders (Arachnida: Araneae) from vicinity of Araabath Lake, Chennai, India. *Journal of Threatened Taxa* 12(1): 15186–15193. https://doi.org/10.11609/jott.5393.12.1.15186-15193

Caleb, J.T.D. (2020b). Spiders (Arachnida: Araneae) fauna of the scrub jungle in the Madras Christian College campus, Chennai, India. *Journal of Threatened Taxa* 12(7): 15711–15766. <a href="https://doi.org/10.11609/jott.5758.12.7.15711-15766">https://doi.org/10.11609/jott.5758.12.7.15711-15766</a>

**Gravely, F.H. (1921).** Some Indian spiders of the subfamily Tetragnathinae. *Records of the Indian Museum, Calcutta* 22: 423–459.

**Gravely, F.H. (1924).** Some Indian spiders of the family Lycosidae. *Records of the Indian Museum, Calcutta* 26: 587–613.

Magar, K.T., B.R. Shrestha, T.B. Gurung, K.C.R. Bahadur, B.R. Lamichhane, D.E. Hill & A. Thapa (2020). New records of jumping spiders (Araneae: Salticidae) from Nepal. *Peckhamia* 220.1: 1–11.

**Pocock, R.I. (1901).** Descriptions of some new species of spiders from British India. *Journal of the Bombay Natural History Society* 13: 478–498.

**Proszynski, J. & J.T.D. Caleb (2015).** Key to identification of Salticidae (Araneae) of the Indian Subcontinent. <a href="https://salticidae.pl/">https://salticidae.pl/</a> (accessed on 10 April 2022).

**Tikader, B.K. (1982).** Family Araneidae (Argiopidae) typical orb weavers. Fauna of India (Araneae). *Zoological Survey of India, Calcutta* 2: 1–293.

**Tikader, B.K. & M.S. Malhotra (1980).** Lycosidae (Wolfspiders). Fauna of India (Araneae). *Zoological Survey of India, Calcutta* 1: 248–447.

**Uetz, G.W., J. Halaj & A.B. Cady (1999).** Guilt structure of spiders in major crops. *Journal of Arachnology* 27: 270–280.

**WSC (2021).** World Spider Catalog. Version 21.5, Natural History Museum Bern. http://wsc.nmbe.ch. Accessed 18.xi.2021. https://doi.org/10.24436/2..

### Manoj Sharma<sup>1</sup> & Buddhi Ram Oli<sup>2</sup>

<sup>1&2</sup> Central Department of Zoology, Tribhuvan University, Kirtipur, Kathmandu, Nepal.

Email: ¹munu.nepal50@gmail.com (corresponding author), ²buddhiramoli.2049@gmail.com.

**Citation:** Sharma, M. & B.R. Oli. (2022). New additions to the Nepalese spider checklist. Bugs R All #238, In: *Zoo's Print* 37(4): 10–15.

Bugs R All is a newsletter of the Invertebrate
Conservation and Information Network of South Asia (ICINSA)
published with the financial support of
Zoological Society of London.
For communication, Email: zp@zooreach.org





